From: Jeffrey Delapena
To: "Heidi Pozzo"
Cc: Oliver Orjiako; Jose Alvarez
Subject: RE: Comp Plan submission
Date: Thursday, August 27, 2026 3:19:00 PM

Hello Heidi,

Thank you for providing these comments and attachments. Confirming these haver all been received and will be added to the Comprehensive Plan Index of Record.

Best,

Jeff Delapena
Program Assistant
COMMUNITY PLANNING

564.397.4558

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From: Heidi Pozzo <hcpheidi@yahoo.com>
Sent: Thursday, August 27, 2026 2:51 PM
To: Jeffrey Delapena <Jeffrey.Delapena@clark.wa.gov>
Cc: Oliver Orjiako <Oliver.Orjiako@clark.wa.gov>; Jose Alvarez <Jose.Alvarez@clark.wa.gov>
Subject: Comp Plan submission

EXTERNAL: This email originated from outside of Clark County. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Attachments available until Sep 26, 2026

Dear Jeff,

Please find attached my submission for the Comp Plan index of record. I am attaching three files here (the summary document and two traffic studies), the remaining 9 files being in the file upload link you provided. ln terms of order, if you can put the summary file first, then the three traffic studies, then the remainder, that would be appreciated. If

your view looks the same as mine, the documents attached here would be first then the next is the oldest file from today at 1:48 followed by the rest in the order of upload.

Thank you,

Heidi

Click to Download
InProcess_Matrix_Towhee_SalmonCreek_Northridge.pdf
92 KB

Click to Download
Towhee-_Traffic_Study.pdf
19.4 MB

Click to Download
Northridge Traffic Study.pdf
10.2 MB

IN-PROCESS DEVELOPMENTS INCLUDED vs. EXCLUDED — THREE CO-PENDING APPLICATIONS

Towhee Creek · Salmon Creek Apartments · Northridge — scheduled to be heard the same night before the Hearing Examiner; since placed on hold.

Drafted June 30, 2026. The "Actual status" column reflects field / record conditions as of that date — later than when the studies were prepared.

Key Findings

Inclusion range: of the same 33 approved / in-process corridor developments, Towhee counted 24, Salmon Creek Apartments 4, and Northridge 4 (plus 2 the County reclassified as "built-out"). Same corridor, same hearing night.

Same firm, opposite result: on NE 179th St, NE Delfel Rd → NE 15th Ave (Pr-4cb, 1,800 vph), Towhee (PLS, 12/2025) computes 1.009 V/C PM — fails; Northridge (PLS, 4/2026) computes 0.787 PM — passes. The difference is which developments were loaded.

Built ≠ counted: developments treated as complete are not generating their trips — 179th Commercial has not started; Trails is ~75% built; DSHS is built but never occupied; Salmon Creek Memory Care and the South Ridge apartments (31 units available for lease) are not fully occupied. Their trips are in neither the existing counts nor the in-process background.

Comparison Matrix

A green ✓ marks a development counted in that study's 2028 background; a red ✗ marks one left out; B marks a development the County reclassified as "built-out" (removed from in-process). The right-hand column gives actual field / record status as of the draft date.

Development	ID / note	Towhee (PLS, 12/25)	Salmon Creek Apts (Heath, 12/25)	Northridge (PLS, 4/26)	Actual status
IN-PROCESS / APPROVED DEVELOPMENTS — should be in each study's 2028 background under CCC 40.350.020(F)(5)/(F)(7)					
South Ridge Central Apartments	PSR-2023-00158	✓	✓	✗	*not yet built*
Mountain View Ridge PUD	PLD-2023-00053	✓	✗	✗	
Skyview Station Shopping Center	14007 NE 10th Ave	✗	✗	✗	*built; stores still opening — recent occupancy not in counts*
Mill Creek Terrace	PLD-2024-00015	✓	✗	✗	
Mill Creek Meadows	PLD-2024-00092	✓	✗	✗	
Washington State University Master Plan	14204 NE Salmon Creek Ave	✓	✗	✗	*reserved-trip agreement; no count in studies*
Mountain Estates Cluster Subdivision	PLD-2017-00046	✓	✗	✗	
Whipple Creek Village Subdivision		✓ 95%	✗	✗	*~95% built*
Three Creeks North Phase 1 & 2	18701 NE 10th Ave	✓	✓	✓	*(SC lists as "Three Creeks PUD")*
179th Street Commercial Center Ph 1 & 2	Killian; = Three Creeks South	✓	✗	**B**	*NOT STARTED — 0% built (only trees cut)*
Woodbrook Subdivision (Mill Creek PUD)	4519 NE 183rd St	✓ 40%	✗	✗	

Development	ID / note	Towhee (PLS, 12/25)	Salmon Creek Apts (Heath, 12/25)	Northridge (PLS, 4/26)	Actual status
M&H Subdivision	3801 NE 174th St	✓ 20%	✗	✗	
North Haven Subdivision	807 NW 179th St	✓ 85%	✗	✓ 95%	*~85–95% built*
Trails at Whipple Creek Subdivision	1214 NW 166th Way	✓ 55%	✗	**B**	*~75% built — lots still selling*
DSHS NE 50th Behavioral Health	PSR-2021-00183	✗	✗	✗	*built, never occupied — 0 trips*
Majestic Industrial Centre	15017 NE 10th Ave	✓	✗	✗	
Martin's Meadow Subdivision	1114 NW 150th St	✓ 50%/10%occ	✗	✗	*~10% occupied*
NE 29th Avenue Subdivision (Four Creeks South)	18216 NE 29th Ave	✓	✗	✗	
Viers Subdivision	parcel 181682000	✓	✗	✗	
The Highlands at Whipple Creek	818 NW 173rd Cir	✓	✗	✓ 10%	
Maletis Distribution Center	16101 NE 10th Ave	✓	✗	✗	
Mt Vista Logistics	PSR-2023-00008	✓	✗	✗	
Emerald Grove Subdivision	15808 NW 11th Ave	✓	✓	✓	
Skyview Station East	PLD-2018-00034	✓	✓	✗	*not started construction*
Salmon Creek Memory Care	14801 NE 20th Ave	✓	✗	✗	*recently opened — not fully occupied*
Sherwood Landing Subdivision	PLD-2025-00027	✓	✗	✗	
Three Creeks East	approved 3/6/26 HE; Ginn/Stumpf	✗	✗	✗	
Four Creeks North	approved 1/21/26 HE; Ginn/Stumpf	✗	✗	✗	
Kozy Manor Estates	approved 2/27/26 HE; Kittelson	✗	✗	✗	
Legacy Village II	13815 NE 29th Ave; approved Aug 2023	✗	✗	✗	
U-Haul Ridgefield	17601 NE Union Rd; approved Jul 2025	✗	✗	✗	
South Ridge West (NE 179th St Apts – West)	1920/1932 NE 179th St	✗	✗	✗	*leasing: 18 units available — not full*
South Ridge East (NE 179th St Apts – East)	2112 NE 179th St	✗	✗	✗	*leasing: 13 units available — not full*

Development	ID / note	Towhee (PLS, 12/25)	Salmon Creek Apts (Heath, 12/25)	Northridge (PLS, 4/26)	Actual status
COUNTED as in-process (✓) — of 33		**24**	**4**	**4 (+2 built-out)**	**Northridge & Salmon Creek each leave out 29 of 33**
PENDING APPLICATIONS — scheduled to be heard the same night; since placed on hold (each should account for the others)					
174th Street Subdivision	PAC-2025-00047; Ginn/Stumpf	✗	✗	✗	*pending*
Towhee Creek	PLS, 12/30/2025	—	✗	✗	*subject application*
Salmon Creek Apartments	Heath, 12/2/2025	✗	—	✗	*subject application (126 units, NW 11th)*
Northridge Subdivision	PLS, 4/20/2026	✗	✗	—	*subject application*

Built-Percentage Validation — Same Development, Different Studies

Overstating how "built" a development is subtracts its in-process trips from the background. The figures do not reconcile:

Development	Three Creeks East (6/25)	Anderson Dental (10/25)	Towhee (12/25)	Northridge (4/26)	Actual / note
179th Commercial Center Ph 1&2	in-process	in-process	in-process	100% built-out	***NOT STARTED — 0% built.***
Trails at Whipple Creek	~20%	~20%	55%	100% built-out	***~75% built; lots still selling. PLS itself proposed 60% built.***
Martin's Meadow	~10%	~10%	50% / 10% occ.	not listed	***~10% occupied.***
North Haven	~75%	~75%	85%	95%	*~85–95% built (progressing)*
Woodbrook / Mill Creek PUD	~20%	~20%	40%	not listed	*progressing*
Whipple Creek Village	~95%	~95%	95%	not listed	*~95% built (consistent)*

Notes

1. One combined in-process/approved list — every development that belongs in the 2028 background. No development is pre-classified as "already counted"; each row simply shows whether each study included it, with actual field status at right.

2. Three Creeks South is the 179th Street Commercial Center (Killian) — one development, shown on a single row.

3. "Built" is not "occupied" and neither is "counted." 179th Commercial (not started), DSHS (never occupied), Salmon Creek Memory Care (partly occupied), and the South Ridge apartments (units available for lease) generate few or none of their trips in the existing counts, yet are largely absent from the in-process background.

TRANSPORTATION IMPACT STUDY

Northridge Subdivision

Clark County, Washington

Prepared by:

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4/20/2026



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Prepared: April 20, 2026

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Executive Summary

1. The proposed Northridge Subdivision project will include the construction of a residential subdivision on three properties located at 822 NW 179th Street in unincorporated Clark County, Washington. The proposal will include the construction of up to 40 single-family detached houses, where three existing houses will be removed/maintined for a net increase of 37 houses. Access to the site will be provided via new public street connections along NW 11th Avenue and NW 184th Street.
2. The trip generation calculations show that the proposed subdivision is projected to generate 26 net new AM peak hour trips, 34 net new PM peak hour trips, and 337 net new average weekday.
3. The intersection of NE 179th Street at NE Delfel Road (North Leg) currently operates at LOS F during the PM peak hour. However, with the planned closure of this intersection, relocation of the north leg of NE Delfel Road opposite of its south leg, and reconstruction of the intersection as a roundabout (i.e., 2026-2031 TIP Project B) the newly constructed intersection of NE 179th Street at NE Delfel Road is projected to operate acceptably per Clark County standards through the 2028 development year of the site. No additional mitigation is recommended at this intersection.
4. All other study intersections are currently operating acceptably per Clark County standards and are projected to continue operating acceptably through the 2028 development year of the site. Accordingly, no additional operational mitigation is necessary or recommended at the study intersections as part of the proposed development application.
5. All relevant roadway segments are projected to operate acceptably per Clark County standards through the 2028 development year of the site during both the AM and PM peak hours. Accordingly, no roadway capacity-related mitigation is necessary or recommended as part of the proposed development application.
6. No significant trends or crash patterns were identified at any of the study intersections that are indicative of safety concerns. Accordingly, no crash-related mitigation is necessary or recommended as part of the Northridge Subdivision application.

7. Based on the sight distance analysis and provided any obstructions near each respective proposed/future access location are either removed or properly maintained following redevelopment of the site, adequate intersection and stopping sight distances can be made available at the access intersections to allow for safe and efficient operation along NE 184th Street, NE 11th Avenue and NE 179th Street. Specific obstructions at each location include the following:
    a. Proposed Site Access at NW 184th Street:
        i. A tree located immediately to the east on the adjacent property (assessor parcel 116660000).
    b. Future Site Access at NW 179th Street:
        i. Remove any obstruction on-site foliage as well as foliage on the adjacent property to the east (assessor parcel 116600000). Note that no mitigation is necessary at this future access location until parcel 116600000 redevelops and constructs this future access connection.

    No other sight distance related mitigation is necessary or recommended.
8. For the site access intersection along NW 184th Street, the combined eastbound and westbound design hour volumes are well below 300 vehicles per hour under year 2028 post-development conditions for both the AM and PM peak hours. Therefore, the WSDOT volume thresholds for warranting a left-turn lane will not be met at the intersection. No left-turn lane is necessary or recommended.
9. Since the site access intersection and NW 11th Avenue will be restricted to minor-street right-turns only, no left-turn lane is necessary at this intersection.

Section A – Project Description

Introduction

The proposed Northridge Subdivision project will include the construction of a residential subdivision on three properties located at 822 NW 179th Street in unincorporated Clark County, Washington. The proposal will include the construction of up to 40 single-family detached houses, where three existing houses will be removed/maintained for a net increase of 37 houses. Access to the site will be provided via new public street connections along NW 11th Avenue and NW 184th Street.

Based on correspondence with Clark County staff, this report includes safety and capacity/level of service analyses at the following intersections:

1. NW 184th Street at NW 11th Avenue
2. Site Access at NW 184th Street
3. NE 184th Street at NE Delfel Road
4. Site Access at NW 11th Avenue (minor street right-turns only)
5. NW 179th Street at NW 11th Avenue
6. NE 179th Street at NE Delfel Road
7. Interstate 5 (I-5) Southbound Ramps at NE 179th Street
8. I-5 Northbound Ramps at NE 179th Street

The purpose of this study is to determine whether the transportation system within the vicinity of the site is capable of safely and efficiently supporting the surrounding existing and proposed uses, and to determine any mitigation that may be necessary to do so. Detailed information on traffic counts, trip generation calculations, safety analyses, and level of service calculations is included in the appendix to this report.

Location Description

The project site is located north of NW 179th Street, south of NW 184th Street, east of NW 11th Avenue, and west of NE Delfel Road in unincorporated Clark County, Washington. Located within a developing residential area of the County, the site is immediately surrounded by the North Haven residential subdivision to the south, and low density residential uses/undeveloped land in all other directions. The site consists of three properties (assessor parcels 116640000, 116610000 and 116650000) which encompass an approximate total of 11.98 acres. Three single-family detached houses and ancillary storage structures are currently built on-site, all of which will be removed following site redevelopment. Each lot is currently served by individual residential driveways along NE 179th Street, NW 11th Avenue, and NE 184th Street.

Figure 1 presents an aerial image of the nearby vicinity with the project site outlined in yellow.

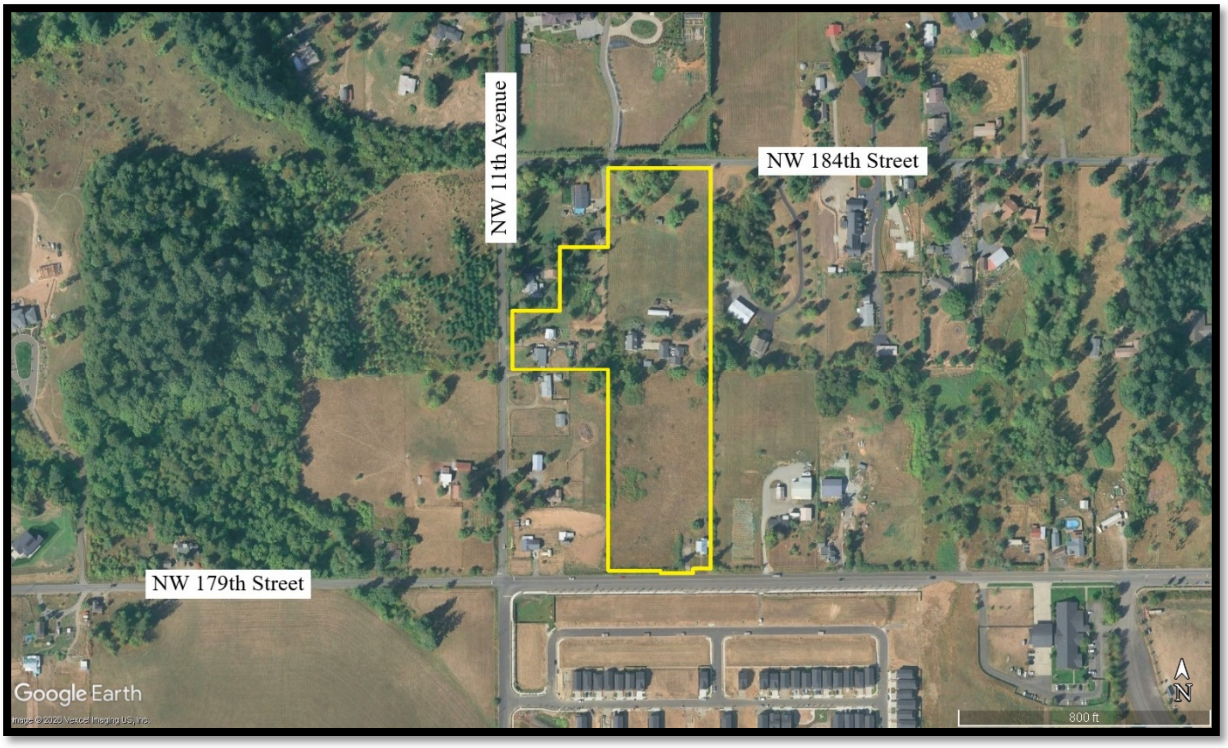


Figure 1 – Aerial Photo of Site Vicinity (Image from Google Earth)

Vicinity Streets

Excluding the I-5 ramps, the study intersections are compared of five roadways. Table 1 provides a description of each vicinity roadway.

Table 1 – Vicinity Roadway Descriptions

Street Name	Jurisdiction	Functional Classification	Speed (MPH)	On-Street Parking	Curbs & Sidewalks	Bicycle Lanes
NW/NE 184th Street	Clark County	Neighborhood Circulator	25*	Not Permitted	None	None
NW/NE 179th Street	Clark County	Principal Arterial/Rural Major Collector	40	Not Permitted	Partial Both Sides	Partial Both Sides
NW 11th Avenue	Clark County	Minor Arterial	35/45	Not Permitted	Partial Both Sides	None
NE Delfel Road	Clark County	Collector	35/50*	Not Permitted	Partial Both Sides	Partial Both Sides
NE 10th Avenue	Clark County	Minor Arterial	50	Not Permitted	None	None

Table Notes: Functional classification based on Clark County's MapsOnline GIS website.

** Statutory speed based on Washington State Code Section RCW 46.61.400.*

Study Intersections

Based on correspondence with agency staff, an analysis of nine existing intersections of significance was conducted. A summarized description of these study intersections under their existing lane configurations is provided in Table 2.

Table 2 – Study Intersection Descriptions

Number	Intersection	Geometry	Traffic Control	Phasing/Stopped Approaches
1	NW 184th Street at NW 11th Avenue	Three-Legged	Stop-Control	Stop-Controlled WB Approach
2	Site Access at NW 184th Street	Three-Legged	Stop-Control	Stop-Controlled NB Approach
3	NE 184th Street at NE Delfel Road	Three-Legged	Stop-Control	Stop-Controlled EB Approach
5	NW 179th Street at NW 11th Avenue	Four-Legged	Stop-Control	All-Way Stop-Control
6	NE 179th Street at NE Delfel Road (South Leg)	Three-Legged	Traffic Signal	FYA WB Left-turn Lane, Protected NB Left-turn Lane
6B	NE 179th Street at NE Delfel Road (North Leg)	Three-Legged	Stop-Control	Stop-Controlled SB Approach
7	I-5 SB Ramps at NE 179th Street	Four-Legged	Traffic Signal	Split EB/WB Phasing
8	I-5 NB Off-Ramp/NE 10th Avenue at NE 179th Street	Four-Legged	Traffic Signal	Protected NB/SB Left-turn Lanes, Overlap SB Right-turn Lane
8B	I-5 NB On-Ramp at NE 179th Street	Three-Legged	None	Uncontrolled

Table Notes: Flashing-Yellow-Arrow denoted as FYA.

A vicinity map showing the project site, vicinity streets, and study intersection configurations are shown in Figure 2.

FIGURE 2

NORTHRIDGE
SUBDIVISION

VICINITY MAP

INTERSECTION LANE & TRAFFIC CONTROL CONFIGURATIONS

LEGEND

- (X) STUDY INTERSECTION
- STOP SIGN
- TRAFFIC SIGNAL
- ROUNDABOUT
- PROJECT SITE
- ARTERIAL STREET
- COLLECTOR STREET
- LOCAL STREET
- FUTURE STREET

EXISTING INTERSECTION CONFIGURATIONS

PLANNED INTERSECTION CONFIGURATIONS

NOT TO SCALE

PLS ENGINEERING

Section B – Site Trips

Proposed Site Trip Generation

The proposed Northridge Subdivision project will include the construction of up to 40 single-family detached houses, where three existing houses will be removed/maintained for a net increase of 37 houses. To estimate the number of trips that are and will be generated by the existing and proposed uses, trip rates from the ITE *Trip Generation Manual, 12th Edition*[1] were used. Data land use code 210, Single-Family Detached Housing, was used to estimate site trip generation based on the number of dwelling units.

The trip generation calculations show that the proposed subdivision is projected to generate 26 net new AM peak hour trips, 34 net new PM peak hour trips, and 337 net new average weekday. The trip generation estimates are summarized in Table 3. Detailed trip generation calculations are included in the technical appendix.

Table 3 – Proposed Site Trip Generation Summary

ITE Land Use Code		Variable	AM Peak Hour			PM Peak Hour			Weekday Total
			Enter	Exit	Total	Enter	Exit	Total	
Existing Conditions									
210	Single-Family Detached Housing	3 units	1	1	2	2	1	3	27
Proposed Conditions									
210	Single-Family Detached Housing	40 units	8	20	28	23	14	37	364
Net Change In Site Trip Generation									
Net New Trips		**37 units**	**7**	**19**	**26**	**21**	**13**	**34**	**337**

Analyzed Site Trip Generation

Note that after completing a majority of the analysis in this transportation study, the size of the proposed subdivision was reduced from 41 units to 40 units due to site constraints. Subsequently, the analysis and figures prepared in this study review impacts of a higher intensive development scenario than what will be built on-site. Therefore, the remaining analysis in this study provides a conservative evaluation of expected site trip impacts to the transportation system.

[1] Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 12th Edition, 2025.

The analyzed trip generation is depicted in Table 4. The trip generation calculations for this higher intensive analyzed development scenario are included in the appendix.

Table 4 – Analyzed Site Trip Generation Summary

ITE Land Use Code		Variable	AM Peak Hour			PM Peak Hour			Weekday Total
			Enter	Exit	Total	Enter	Exit	Total	
Existing Conditions									
210	Single-Family Detached Housing	3 units	1	1	2	2	1	3	27
Proposed Conditions									
210	Single-Family Detached Housing	41 units	8	21	29	24	14	38	373
Net Change In Site Trip Generation									
Net New Trips		**38 units**	**7**	**20**	**27**	**22**	**13**	**35**	**346**

Trip Distribution

The trip distribution used for the proposed development was referenced from the *North Haven Traffic Impact Analysis* (TIA), dated February 2020, which was prepared for the North Haven Subdivision. The North Haven Subdivision is located immediately to the south of the project site across NW 179th Street. Since both projects are located within close proximity to one another and are residential uses, it is expected that trips generated by both subdivisions will distribute throughout the transportation system in a similar manner.

The following trip distribution is estimated:

- Approximately 5% of site trips will travel to/from the west along NW 199th Street, west of NW 11th Avenue.
- Approximately 5% of site trips will travel to/from the north along NE Delfel Road, north of NE 199th Street.
- Approximately 5% of site trips will travel to/from locales along NW 199th Street between NW 11th Avenue and NE Delfel Road.
- Approximately 4% of site trips will travel to/from the west along NE 179th Street, west of NW 11th Avenue.
- Approximately 14% of site trips will travel to/from the south along NW 11th Avenue, south of NW 164th Street.
- Approximately 8% of site trips will travel to/from the north along I-5, north of NE 179th Street.

- Approximately 50% of site trips will travel to/from the south along I-5, south of NE 179th Street.
- Approximately 9% of site trips will travel to/from the east along NE 179th Street, east of I-5.

Based on the site layout, planned access connections/configurations along adjacent roadways, and the existing street infrastructure, site trips were estimated to utilize access connections as follows:

- Approximately 50% of site ingress trips and 10% of site egress trips are estimated to utilize the access along NW 11th Avenue.
- Approximately 50% of site ingress trips and 90% of site egress trips are estimated to utilize the access along NW 184th Street.

Although generally located within a one-mile radius of the site, several regionally significant intersections were determined as not requiring analysis based on limited site trip impacts. The following intersections were determined as not requiring analysis with explanation for removal provided:

The following intersections will either experience no site trip impacts or will be impacted by less than 5 peak hour trips. Therefore, no mitigation can be required as part of the application per Clark County Unified Development Code 40.350.020.G.1.c., not-with-standing safety improvements which may be necessary per section 40.350.030(B)(6):

B. NE 199th Street at NE Delfel Road – 1 AM and 2 PM peak hour trips

D. NE 189th Street at NE Delfel Road – No Impact

Although the following intersections will be impacted by more than 5 peak hour trips, the stop-controlled approaches will experience an increase of less than 5 AM or PM peak hour trips. Therefore, no mitigation can be required at these intersections as part of the application per Clark County Unified Development Code 40.350.020.G.1.c., not-with-standing safety improvements which may be necessary per section 40.350.030(B)(6):

A. NW 199th Street at NW 11th Avenue – 4 AM and 5 PM peak hour trips

C. NW 189th Street at NW 11th Avenue – 4 AM and 5 PM peak hour trips

E. NW 164th Street at NW 11th Avenue – 4 AM and 5 PM peak hour trips

The trip distribution and assignment for the site trips generated during the AM and PM peak hours are shown in Figure 3. Trip assignment is depicted for both the study intersections and the five aforementioned intersections.

PM PEAK HOUR

PM PEAK HOUR

NOT TO SCALE

NET NEW SITE TRIP GENERATION

ANALYSIS SCENARIO	PRIMARY TRIPS		TOTAL
	ENTER	EXIT	
AM PEAK HOUR	7	20	27
PM PEAK HOUR	22	13	35

FIGURE 3

NORTHRIDGE SUBDIVISION

SITE TRIP ASSIGNMENT

AM & PM PEAK HOURS

PLS ENGINEERING

Section C – Traffic Volumes

2025/2026 Existing Volumes

Traffic counts were conducted at the study intersections on the following dates from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM:

- Thursday, December 4, 2025.
- Tuesday, March 24, 2026.

Data was used from each intersection's respective AM and PM peak hours.

Peak hour traffic volumes at the site access locations were estimated using the following methodologies:

- For the site access intersection along NW 11th Avenue, volumes were balanced with those recorded at the intersections of NW 184th Street at NW 11th Avenue and NW 179th Street at NW 11th Avenue. The higher of the directional volumes traveling to/from each of these study intersections were used.
- For the site access intersection along NW 184th Street, site trips generated by the one existing on-site single-family house which currently utilizes the existing access driveway were added to the intersection in a manner consistent with the methodologies described in Section B of this report. Major street volumes were subsequently balanced with those recorded at the intersection of NW 184th Street at NW 11th Avenue.

Figure 4 shows the 2025/2026 existing year traffic volumes at the study intersections during the AM and PM peak hours.

2028 Pre-Development Volumes

Volume Growth

An estimate of future traffic volumes is required to provide analysis of the proposed development impacts to the nearby transportation system. To approximate the future year 2028 traffic volumes at the study intersections, a compounding growth rate of two percent per year for over a two to three-year period was applied to the year 2025/2026 existing traffic volumes.

In-Process Development Data

In addition to the traffic volume growth described above, there are several in-process developments that are currently approved/proposed for construction within the site vicinity that are expected to impact nearby study intersections. These in-process developments include the following:

- Emerald Grove Subdivision
- North Haven Subdivision (95% built, 5% in-process)

- The Highlands at Whipple Creek (10% built, 90% in-process)
- Three Creeks North Phase 1 & 2

The in-process developments are not currently/fully contributing trips to the transportation system but may potentially be by the assumed 2028 development year of the site. Additional trips corresponding to each in-process development were added to the existing year traffic volumes in addition to the two to three years of traffic growth at each of the applicable study intersections. To maintain a conservative analysis of operation at the study intersections, all in-process developments were assumed to be constructed by year 2028. Figure A in the technical appendix shows the in-process development trips at the study intersections during the AM and PM peak hours.

Planned Transportation Infrastructure Revisions

Several planned transportation improvement projects were incorporated in the future year analysis scenarios. According to the Clark County's *Northeast 179th Street Corridor Improvements project website*[2], the Washington Department of Transportation's (WSDOT) *I-5 – 179th Street Interchange – Interchange Improvements* project website[3], and the 2026-2031 Transportation Improvement Program (TIP), these projects include the following:

- Realign NE Delfel Road (North Leg) to a location opposite NE Delfel Road (South Leg) and reconstruct the intersection of the NE 179th Street at NE Delfel Road as a roundabout (2026-2031 TIP Project B). Construction is estimated to occur between 2029 and post-2031.
- The I-5 northbound on-ramp will be reconstructed opposite the existing I-5 off-ramp location along NE 179th Street.
- Reconstruct the I-5/NE 179th Street interchange as roundabouts at the ramp terminals. According to WSDOT the interchange design phase will begin in Spring 2025, construction is expected to begin in 2029 and will be completed by 2031. The anticipated lane configurations of the intersections were referenced from a WSDOT concept design for the NE 179th Street interchange improvement project.
- NE 10th Avenue, just north of NE 179th Street and opposite of the I-5 northbound off-ramp, will be closed and reconstructed at a location opposite of NE 15th Avenue along NE 179th Street (2026-2031 TIP Project C). Construction is estimated to occur between 2028 and 2031.

[2] "Northeast 179th Street Corridor Improvements | Clark County." Clark County, 2 February 2026, https://clark.wa.gov/public-works/northeast-179th-street-corridor-improvements.
[3] I-5 - 179th St. Interchange - Interchange Improvements | WSDOT. 2 February 2026, https://wsdot.wa.gov/construction-planning/search-projects/i-5-179th-st-interchange-interchange-improvements.

It is assumed that the future year 2028 conditions would reflect the aforementioned revisions to the transportation system. Rerouted peak hour traffic volumes associated with the relocation of NE Delfel Road (north segment), NE 10th Avenue, and the I-5 northbound on-ramp are shown in Figure B in the technical appendix. Note that Figure B shows the rerouted 2028 volumes after applying the annual two percent per year growth rates over a three-year period to the existing year traffic volumes.

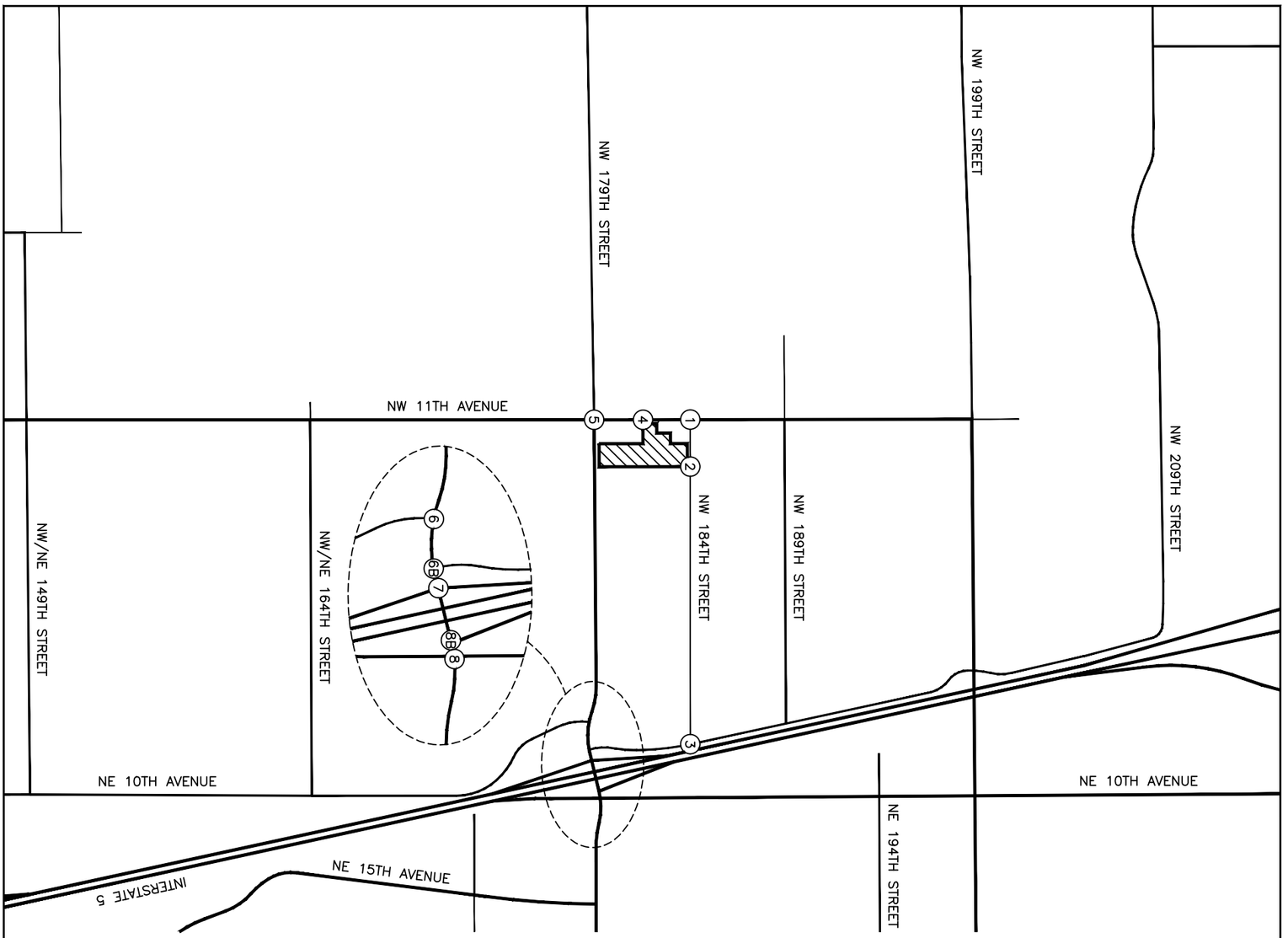
Figure 2 presents the future planned intersection configurations. Figure 5 shows the projected year 2028 pre-development traffic volumes at the study intersections during the AM and PM peak hours.

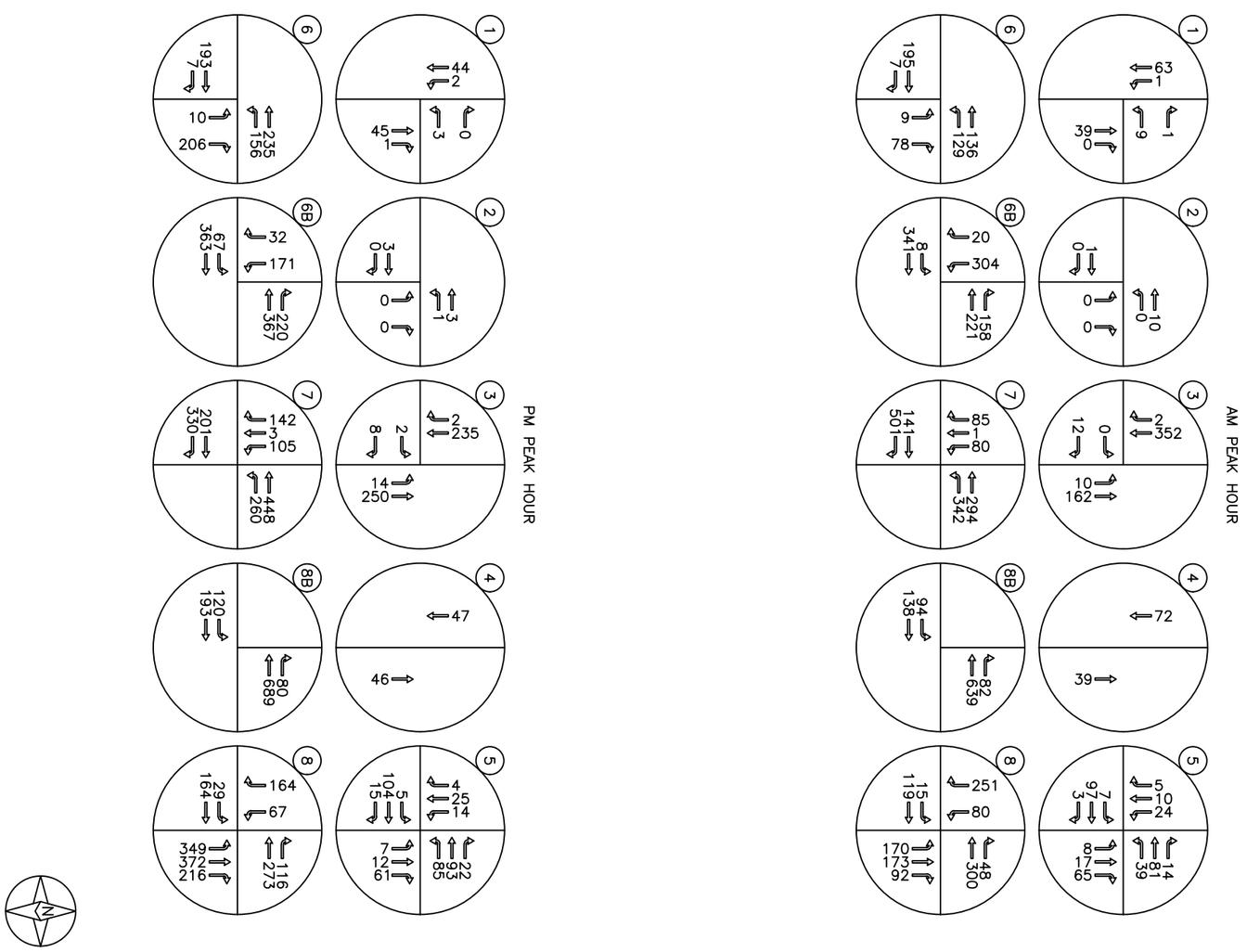
2028 Post-Development Volumes

Peak hour trips calculated to be generated by the proposed development, as described earlier in Section B of this report, were added to the year 2028 pre-development traffic volumes to estimate future traffic conditions with the proposed development in place.

In addition to the above, site trips generated by two existing on-site single-family houses which currently take direct access to NW 179th Street and NW 11th Avenue (i.e., located north of Intersection 4) will reroute to utilize the proposed access intersections along NW 184th Street and NW 11th Avenue. These trips were reassigned to study intersections in a manner consistent with the trip generation and distribution methodologies described in Section B. The rerouted AM and PM peak hour trips are presented in Figure C in the technical appendix.

Figure 6 shows the year 2028 post-development traffic volumes at the study intersections during the AM and PM peak hours.



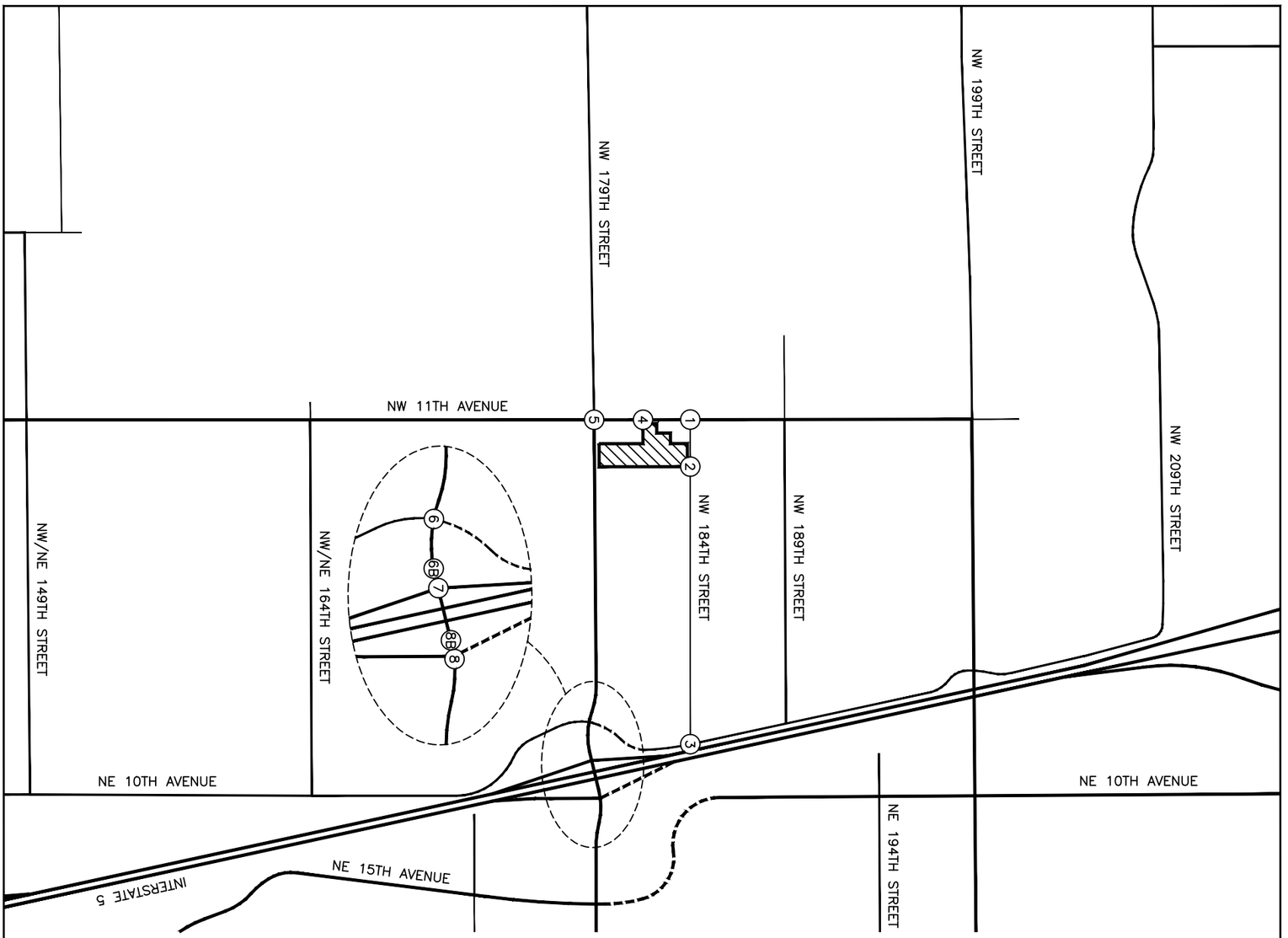


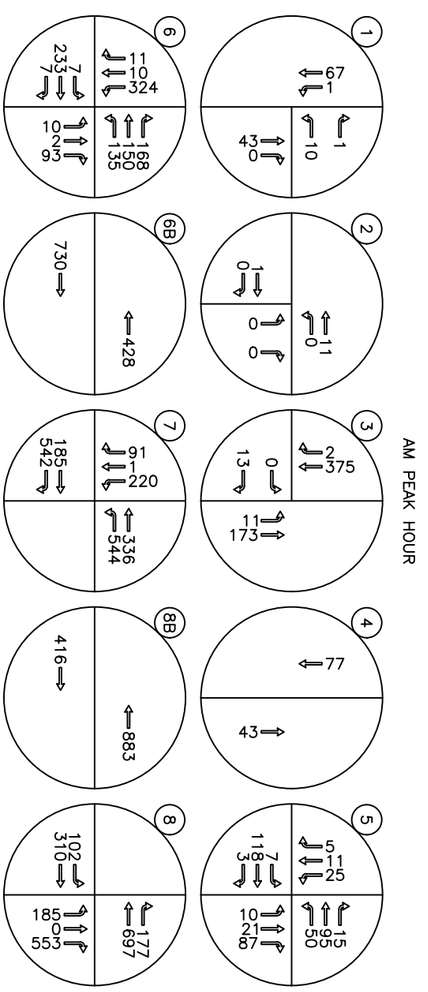
2025/2026 EXISTING VOLUMES

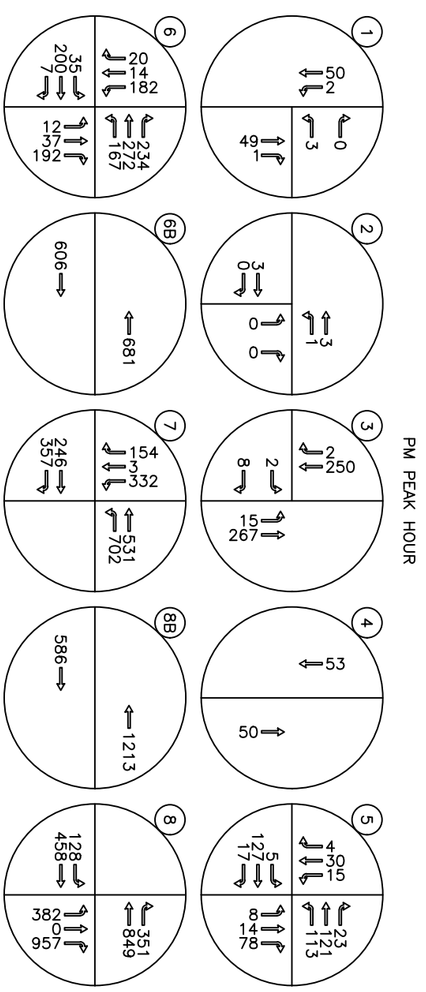
AM & PM PEAK HOURS

FIGURE 4

NORTHRIDGE SUBDIVISION







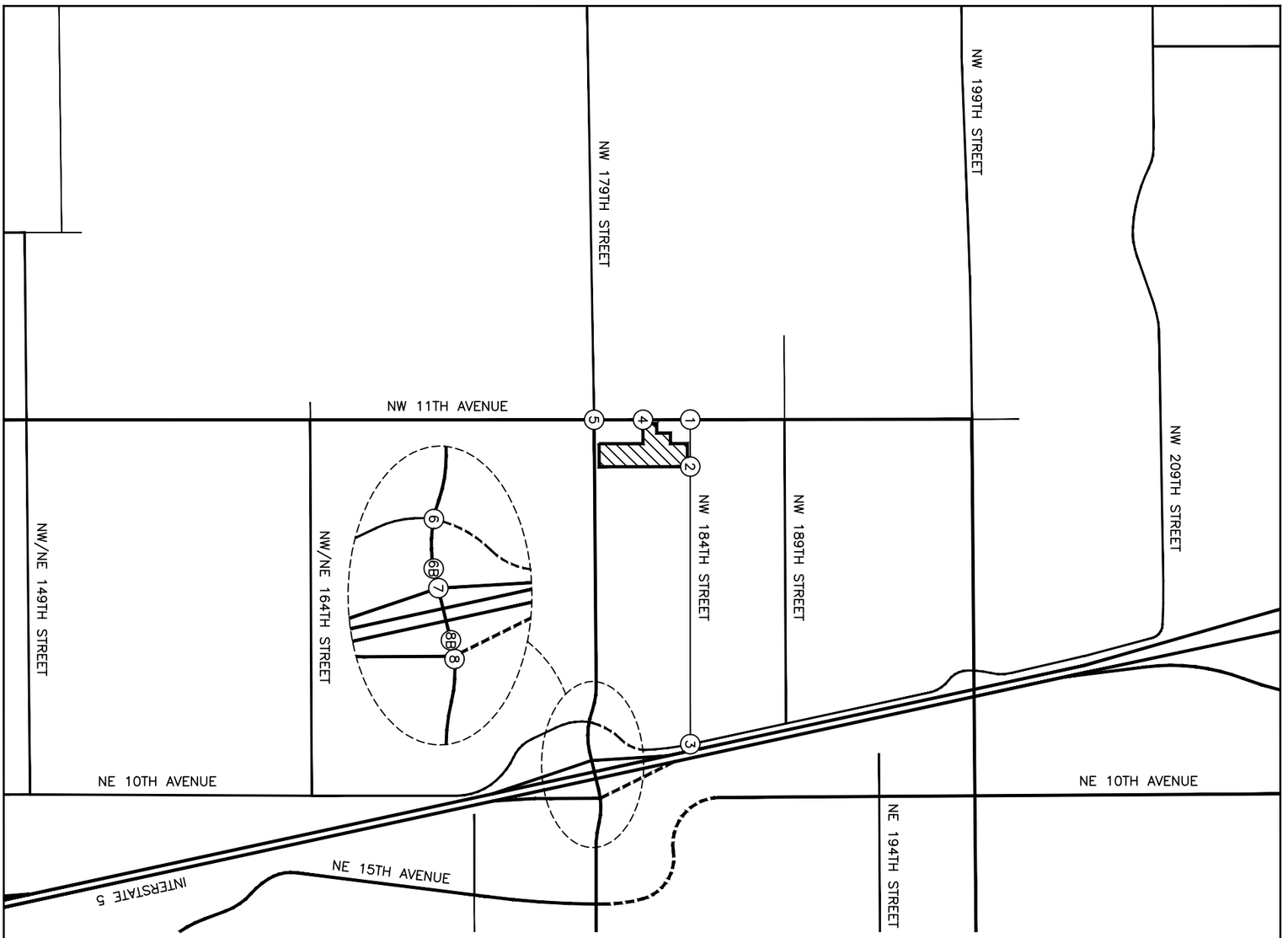
NOT TO SCALE

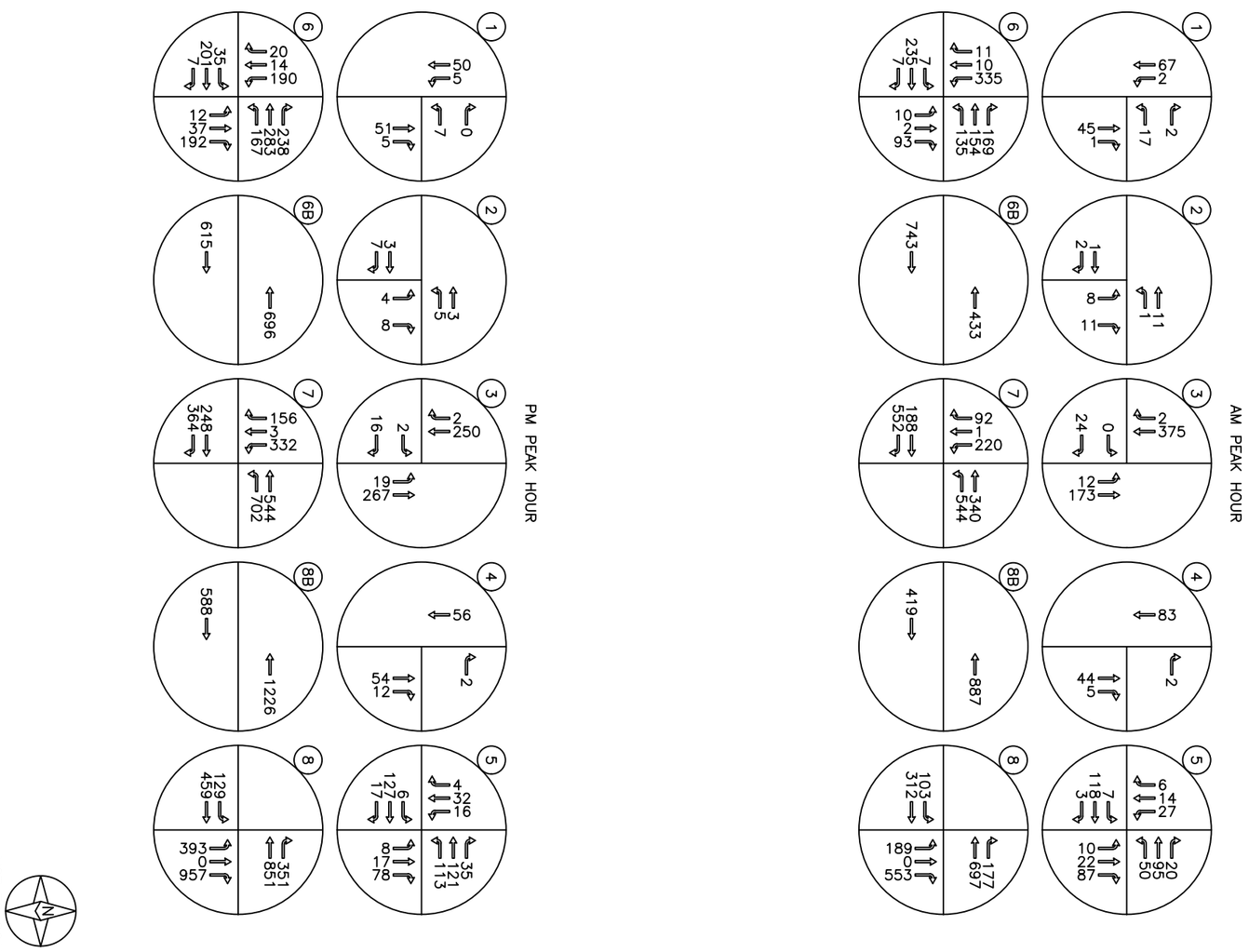
2028 PRE-DEVELOPMENT VOLUMES

AM & PM PEAK HOURS

FIGURE 5

NORTHRIDGE SUBDIVISION





2028 POST-DEVELOPMENT VOLUMES

AM & PM PEAK HOURS

FIGURE 6

NORTHRIDGE SUBDIVISION

Section D – Operations Analysis

Intersection Capacity Analysis

A capacity and delay analysis were conducted for the study intersections per the signalized and unsignalized intersection analysis methodologies in the *Highway Capacity Manual* (HCM)[4]. Intersections are generally evaluated based on the average control delay experienced by vehicles and are assigned a grade according to their operation. The Level of Service (LOS) is a qualitative measure of traffic operational conditions, and can range from LOS A, which indicates little or no delay experienced by vehicles, to LOS F, which indicates a high degree of congestion and delay. The volume-to-capacity (v/c) ratio is a measure that compares the traffic volumes (demand) against the available capacity of an intersection or roadway.

Performance Standards

According to Clark County's Unified Development Code, *Title 40.350 – Transportation and Circulation*, Clark County's performance standards require unsignalized intersections to operate at LOS E or better unless traffic signal warrants are met. If traffic signal warrants are met, the intersection is required to operate at LOS D or better. Individual movements at signalized intersections of regional significance are to operate with average delays of less than two cycle lengths or 240 seconds, whichever is less.

The I-5 ramp study intersections operate under the jurisdiction of WSDOT. According to the Revised Code of Washington (RCW) 47.06.140(2):

> *The department of transportation, in consultation with local governments, shall set level of service standards for state highways and state ferry routes of statewide significance. Although the department shall consult with local governments when setting level of service standards, the department retains authority to make final decisions regarding level of service standards for state highways and state ferry routes of statewide significance. In establishing level of service standards for state highways and state ferry routes of statewide significance, the department shall consider the necessary balance between providing for the free interjurisdictional movement of people and goods and the needs of local communities using these facilities...*

Consistent with other transportation studies conducted in the nearby vicinity, it was assumed the I-5 ramp intersections along NE 179th Street adhere to Clark County mobility standards.

[4] Transportation Research Board, *Highway Capacity Manual*, 7th Edition, 2022.

Delay and Capacity Analysis

The study intersections were analyzed utilizing methodologies and parameters detailed in the *WSDOT Synchro & SimTraffic Protocol* document. Of specific note, the following peak hour factors (PHF) were incorporated in the analysis models:

- For existing year conditions, a PHF of no less than 0.80 was applied to each study intersection.
- For future year conditions, for study intersections where count data recorded a PHF of 0.90 or greater, the PHF was increased to 1.00.
- To better avoid showing a future year scenario with lower delays than under existing conditions, for study intersections where count data recorded a PHF of 0.89 or less the PHF was increased to 0.92.

For future year 2028 conditions, the I-5 ramp intersections and the intersection of NE 179th Street at NE Delfel Road were modeled as roundabouts. In accordance with the *WSDOT Synchro & SimTraffic Protocol* and *WSDOT Sidra Policy Settings* documents, the intersections were modeled using Sidra Intersection 10.0 software.

The LOS, delay, and v/c results of the capacity analysis are shown in Table 5 for the AM and PM peak hours. Detailed capacity calculations as well as the LOS grading descriptions and corresponding delays are included in the appendix to this report.

Table 5 – Intersection Capacity Analysis Summary

Analysis Scenario	AM Peak Hour			PM Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
1. NW 184th Street at NW 11th Avenue						
2025/2026 Existing Conditions	A	9	0.01	A	9	<0.01
2028 Pre-Development Conditions	A	9	0.01	A	9	<0.01
2028 Post-Development Conditions	A	9	0.02	A	9	<0.01
2. Site Access at NE 184th Street						
2025/2026 Existing Conditions	A	0	0.00	A	7	<0.01
2028 Pre-Development Conditions	A	0	0.00	A	7	<0.01
2028 Post-Development Conditions	A	9	0.02	A	9	0.01
3. NE 184th Street at NE Delfel Road						
2025/2026 Existing Conditions	B	11	0.02	B	11	0.02
2028 Pre-Development Conditions	B	11	0.02	B	11	0.02
2028 Post-Development Conditions	B	11	0.04	B	11*	0.03

Table Notes: * *Delay or v/c ratio increased to match previous analysis scenario.*

Table 5 – Intersection Capacity Analysis Summary (Continued)

Analysis Scenario	AM Peak Hour			PM Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
4. Site Access at NW 11th Avenue						
2028 Post-Development Conditions	A	9	<0.01	A	9	<0.01
5. NW 179th Street at NW 11th Avenue						
2025/2026 Existing Conditions	A	9	0.20	A	9	0.29
2028 Pre-Development Conditions	A	9	0.23	A	9	0.35
2028 Post-Development Conditions	A	9	0.24	A	9	0.37
6. NE 179th Street at NE Delfel Road						
2025/2026 Existing Conditions	A	5	-	A	4	-
2028 Pre-Development Conditions[1]	A	8	0.34	A	6	0.23
2028 Post-Development Conditions[1]	A	8	0.35	A	6	0.23
6B. NE 179th Street at NE Delfel Road (North Leg)						
2025/2026 Existing Conditions	D	26	0.67	**F**	51	0.78
7. I-5 Southbound Ramps at NE 179th Street						
2025/2026 Existing Conditions	B	11	-	B	11	-
2028 Pre-Development Conditions[1]	A	7	0.39	A	7	0.48
2028 Post-Development Conditions[1]	A	7	0.39	A	7	0.48
8. I-5 Northbound Ramps at NE 179th Street						
2025/2026 Existing Conditions	B	11	-	B	12	-
2028 Pre-Development Conditions[1]	A	6	0.38	A	6	0.64
2028 Post-Development Conditions[1]	A	6	0.38	A	6	0.64

Table Notes: ***BOLDED*** *text indicates intersection operation above jurisdictional standards.*

[1] *Intersection analyzed as a roundabout.*

Based on the results of the operational analysis, the intersection of NE 179th Street at NE Delfel Road (North Leg) currently operates at LOS F during the PM peak hour. However, with the planned closure of this intersection, relocation of the north leg of NE Delfel Road opposite of its south leg, and reconstruction of the intersection as a roundabout (i.e., 2026-2031 TIP Project B) the newly constructed intersection of NE 179th Street at NE Delfel Road is projected to operate acceptably per Clark County standards through the 2028 development year of the site. No additional mitigation is recommended at this intersection.

All other study intersections are currently operating acceptably per Clark County standards and are projected to continue operating acceptably through the 2028 development year of the site. Accordingly, no additional operational mitigation is necessary or recommended at the study intersections as part of the proposed development application.

Roadway Capacity Analysis

In accordance with Clark County Code Section *40.350.020(G) – Level of Service Standards*, a capacity analysis was conducted for roadway segments within the analysis area of the site. The code section requires all Collector and Arterial roadway segments located within the Vancouver Urban Growth Area, but outside Vancouver city limits, as well as state highways of regional significance to have a maximum v/c ratio no greater than 0.90, measured independently for each direction of travel. Roadway volumes were determined utilizing the 2028 post-development volumes during the AM and PM peak hours. Roadway capacities were referenced from Table 40.350.020-1 of the Clark County code based on the County roadway designation and classification.

The results of the roadway capacity analysis for the projected year 2028 post-development traffic volumes are shown in Table 6. The maximum calculated v/c ratio along each roadway segment is reported for both the AM and PM peak hours.

Table 6 – Roadway Capacity Analysis Summary

Roadway	From	To	Classification	Capacity (veh/hr)	V/C	
					AM	PM
NE/NW 179th Street	NW 41st Avenue	NW 11th Avenue	R-2	800	0.160	0.188
	NW 11th Avenue	NE Delfel Road	Pr-4cb	1,800	0.138	0.175
	NE Delfel Road	NE 15th Avenue	Pr-4cb	1,800	0.492	0.787
NW 11th Avenue	NE 189th Street	NE 179th Street	M-2cb	900	0.093	0.063
	NE 179th Street	NE 164th Street	M-2cb	900	0.132	0.180
NE Delfel Road	NE 189th Street	NE 179th Street	C-2	800	0.471	0.388
	NE 179th Street	NE 164th Street	C-2cb	900	0.169	0.268

Table Notes: ***BOLDED*** *text indicates a roadway capacity in excess of 0.90.*

Based on the results of the roadway capacity analysis, all relevant roadway segments are projected to operate acceptably per Clark County standards through the 2028 development year of the site during both the AM and PM peak hours. Accordingly, no roadway capacity-related mitigation is necessary or recommended as part of the proposed development application.

Section E – Safety Analysis

Crash History Review

Using data obtained from the Washington Department of Transportation (WSDOT) Crash Data and Reporting Branch and online Crash Data Portal, a review of the most recent available five years of crash history (January 2021 through December 2025) 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 analysis 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 PM peak hour represents approximately 10 percent of the annual average daily traffic (AADT) at the intersection. Crash rates in excess of 1.00 crashes per million entering vehicles (CMEV) may be indicative of design deficiencies and therefore require a need for further investigation and possible mitigation.

Regarding crash severity, WSDOT classifies crashes in the following categories:

- No Apparent Injury (NA)
- Possible Injury (P)
- Suspected Minor Injury (SM)
- Suspected Serious Injury (SS)
- Fatality or Fatal Injury

Table 7 provides a summary of crash types while Table 8 summarizes crash severities and rates for each of the applicable study intersections. Crash data is included in the technical appendix to this report.

Table 7 – Crash Type Summary

No.	Intersection	Crash Type						Total
		Rear End	Turn/ Angle	Fixed Object	Side swipe	Ped/ Bike	Other	
1	NW 184th Street at NW 11th Avenue	0	0	0	0	0	0	0
2	Site Access at NW 184th Street	0	0	0	0	0	0	0
3	NE 184th Street at NE Delfel Road	0	0	0	0	0	0	0
5	NW 179th Street at NW 11th Avenue	1	3	0	0	0	0	4
6	NE 179th Street at NE Delfel Road (South Leg)	1	0	0	1	0	0	2
6B	NE 179th Street at NE Delfel Road (North Leg)	1	4	0	0	0	0	5
7	I-5 SB Ramps at NE 179th Street	0	0	0	0	0	0	0
8 / 8B	I-5 NB Ramps at NE 179th Street	1	13	0	0	0	1	15

Table 8 – Crash Severity and Rate Summary

No.	Intersection	Crash Severity						Total Crashes	AADT	Crash Rate
		NA	P	SM	SS	Fatal	Unknown			
1	NW 184th Street at NW 11th Avenue	0	0	0	0	0	0	0	950	0.00
2	Site Access at NW 184th Street	0	0	0	0	0	0	0	70	0.00
3	NE 184th Street at NE Delfel Road	0	0	0	0	0	0	0	5,110	0.00
5	NW 179th Street at NW 11th Avenue	2	1	0	0	0	1	4	4,470	0.49
6	NE 179th Street at NE Delfel Road (South Leg)	1	0	1	0	0	0	2	8,070	0.14
6B	NE 179th Street at NE Delfel Road (North Leg)	5	0	0	0	0	0	5	12,200	0.22
7	I-5 SB Ramps at NE 179th Street	0	0	0	0	0	0	0	14,890	0.00
8	I-5 NB Ramps at NE 179th Street	10	2	3	0	0	0	15	17,500	0.47
8B										

Table Notes: ***BOLDED*** *text indicates a crash rate in excess of 1.00 CMEV.*

Based on a review of the crash data, no significant trends or crash patterns were identified at any of the study intersections that are indicative of safety concerns. Accordingly, no crash-related mitigation is necessary or recommended as part of the Northridge Subdivision application.

Sight Distance Evaluation

Sight Distance Definitions and Methodologies

Intersection and stopping sight distances were measured at the two proposed public street access connections along NW 11th Avenue and NW 184th Street. Although the proposed development is not expected to take direct access to NW 179th Street until properties immediately to the east of the site redevelop, the location of a future public street connection to NW 179th Street is being considered in the preliminary site plan. Therefore, sight distances were also evaluated at this location to verify adequate distances. Sight distances were measured and evaluated at the proposed intersections in accordance with standards established in *A Policy of Geometric Design of Highways and Streets*[5], as well as per Clark County standards.

Intersection sight distance is an operational measure, intended to provide sufficient line of sight along the major street so that a driver can enter the roadway without impeding the flow of through traffic. For intersection sight distance, the driver's eye is assumed to be 15 feet from the near edge of the nearest travel lane (or traveled way) of the intersecting street and at a height of 3.5 feet above the minor-street approach 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.

Stopping sight distance is considered the minimum requirement to ensure safe operation of an intersection with respect to sight lines. This distance allows the driver of a vehicle traveling on the major street to react to a turning vehicle or other object in the roadway and, if necessary, come to a complete stop to avoid a collision. To ensure safe operation, the extent of available intersection sight distance must at least equal the minimum required stopping sight distance. For stopping sight distance, the major street approaching driver's eye height is 3.5 feet while an object height of 2 feet above the street pavement is used.

According to Clark County Unified Development Code section 40.350.030.B.8, the minimum recommended intersection sight distance is based on ten times the posted/statutory speed of the roadway. However, alternative standards may be considered provided intersection sight distance cannot reasonably be met. Stopping sight distances were based on Table 40.350.030-7 of the County's code.

Based on a posted speed of 45 mph along NW 11th Avenue, a Neighborhood Circulator design speed of 25 mph along NW 184th Street, and a posted speed of 40 mph along NW 179th Street, the following minimum intersection and stopping sight distances are applicable to the three proposed/future site access intersections:

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

- NW 184th Street (25 mph)
    - Intersection Sight Distance: 250 feet to the east and west.
    - Stopping Sight Distance: 155 feet to the east and west, considering the major street eastbound and westbound approach grades are less than 3.0% over a 200-foot distance.
- NW 11th Avenue (45 mph)
    - Intersection Sight Distance: 450 feet to the south.
    - Stopping Sight Distance: 360 feet to the south, considering the major street northbound approach grade is less than 3.0% over a 400-foot distance.
    - Since left-turns at this site access intersection will be restricted, only an evaluation of sight distance to the south is applicable to accommodate right-turn vehicles.
- NW 179th Street (40 mph)
    - Intersection Sight Distance: 400 feet to the east and west.
    - Stopping Sight Distance:
        - 280 feet to the west, considering the major street eastbound approach grade is approximately 5.4% uphill over a 350-foot distance.
        - 305 feet to the east, considering the major street westbound approach grade is less than 3.0% over a 350-foot distance.

Sight Distance Measurements

Field measurements were conducted at the proposed site access intersections along NW 11th Avenue and NW 184th Street on Friday, March 6, 2026, while sight distances at the future public access along NW 179th Street were conducted on Thursday, March 19, 2026. Due to on-site/roadside obstructions at the future site access location along NW 179th Street, measurements were conducted at the edge of the roadway rather than the standard 15-foot setback from the edge of the traveled way. However, no other obstructions were noted either on-site or along the roadway which would reduce sight distances to less than those measured in the field had measurements been conducted at the standard 15-foot setback distance.

At the proposed site access along NE 184th Street, intersection and stopping sight distances to the west of the access were measured to be in excess of 250 feet. Provided that a tree immediately to the east of the access on assessor parcel 116660000 is removed, intersection and stopping sight distances of at least 250 feet can be obtained. No other sight distance related mitigation is necessary or recommended.

At the proposed site access along NE 11th Avenue, at least 450 feet of intersection sight distance was measured to be available to the south. Up to 400 feet of stopping sight distance was measured to be available to the south. No sight distance mitigation is necessary or recommended.

At the future access along NE 179th Street, intersection and stopping site distances to the west were measured to be in excess of 400 feet. Intersection sight distance to the east was measured to be in excess of 400 feet while stopping sight distance of at least 350 feet was measured to be available. No sight distance mitigation is necessary or recommended beyond the removal of existing roadside foliage near the planned access connection.

Analysis Summary

Based on the sight distance analysis and provided any obstructions near each respective proposed/future access location are either removed or properly maintained following redevelopment of the site, adequate intersection and stopping sight distances can be made available at the access intersections to allow for safe and efficient operation along NE 184th Street, NE 11th Avenue and NE 179th Street. Specific obstructions at each location include the following:

- Proposed Site Access at NW 184th Street:
    - A tree located immediately to the east on the adjacent property (assessor parcel 116660000).
- Future Site Access at NW 179th Street
    - Remove any obstruction on-site foliage as well as foliage on the adjacent property to the east (assessor parcel 116600000). Note that no mitigation is necessary at this future access location until parcel 116600000 redevelops and constructs this future access connection.

No other sight distance related mitigation is necessary or recommended.

Section F – Warrant Analysis

Left-turn lane warrants were examined for the site access intersection along NW 184th Street where such treatment would be applicable. A left-turn refuge lane is primarily a safety consideration for the major street, removing left-turning vehicles from the through traffic stream. To evaluate left-turn lane warrants, section *1310.02(13) Left-Turn Lanes and Turn Radii* and *Exhibit 1310-9 Left-Turn Storage Guidelines: Two-Lane, Unsignalized* from the WSDOT Design Manual were referenced. Turn lane warrants were evaluated based on the number of advancing and opposing vehicles, the number of turning vehicles, the travel speed, and the number of through lanes.

For the site access intersection along NW 184th Street, the combined eastbound and westbound design hour volumes are well below 300 vehicles per hour under year 2028 post-development conditions for both the AM and PM peak hours. Therefore, the WSDOT volume thresholds for warranting a left-turn lane will not be met at the intersection. No left-turn lane is necessary or recommended.

Exhibit 1310-9 from the WSDOT Design Manual is included in the appendix to this report.

Conclusions

- The intersection of NE 179th Street at NE Delfel Road (North Leg) currently operates at LOS F during the PM peak hour. However, with the planned closure of this intersection, relocation of the north leg of NE Delfel Road opposite of its south leg, and reconstruction of the intersection as a roundabout (i.e., 2026-2031 TIP Project B) the newly constructed intersection of NE 179th Street at NE Delfel Road is projected to operate acceptably per Clark County standards through the 2028 development year of the site. No additional mitigation is recommended at this intersection.
- All other study intersections are currently operating acceptably per Clark County standards and are projected to continue operating acceptably through the 2028 development year of the site. Accordingly, no additional operational mitigation is necessary or recommended at the study intersections as part of the proposed development application.
- All relevant roadway segments are projected to operate acceptably per Clark County standards through the 2028 development year of the site during both the AM and PM peak hours. Accordingly, no roadway capacity-related mitigation is necessary or recommended as part of the proposed development application.
- No significant trends or crash patterns were identified at any of the study intersections that are indicative of safety concerns. Accordingly, no crash-related mitigation is necessary or recommended as part of the Northridge Subdivision application.
- Based on the sight distance analysis and provided any obstructions near each respective proposed/future access location are either removed or properly maintained following redevelopment of the site, adequate intersection and stopping sight distances can be made available at the access intersections to allow for safe and efficient operation along NE 184th Street, NE 11th Avenue and NE 179th Street. Specific obstructions at each location include the following:
    - Proposed Site Access at NW 184th Street:
        - A tree located immediately to the east on the adjacent property (assessor parcel 116660000).
    - Future Site Access at NW 179th Street:
        - Remove any obstruction on-site foliage as well as foliage on the adjacent property to the east (assessor parcel 116600000). Note that no mitigation is necessary at this future access location until parcel 116600000 redevelops and constructs this future access connection.

  No other sight distance related mitigation is necessary or recommended.

- For the site access intersection along NW 184th Street, the combined eastbound and westbound design hour volumes are well below 300 vehicles per hour under year 2028 post-development conditions for both the AM and PM peak hours. Therefore, the WSDOT volume thresholds for warranting a left-turn lane will not be met at the intersection. No left-turn lane is necessary or recommended.
- Since the site access intersection and NW 11th Avenue will be restricted to minor-street right-turns only, no left-turn lane is necessary at this intersection.

APPENDIX A – SCOPING MATERIALS

Scoping Memorandum
Scoping Email Response

PLS ENGINEERING
ENGINEERING | SURVEYING | PLANNING
604 W EVERGREEN BLVD, VANCOUVER, WA 98660
P 360.944.6519 | F 360.944.6539 | PLSENGINEERING.COM

To: Craig Kathol, Clark County

From: Daniel Stumpf, PE

Date: 3/4/2026

RE: Northridge Subdivision
Transportation Scoping Memorandum

Introduction

This memorandum details a proposed scope of work for a Transportation Impact Study (TIS) related to the Northridge Subdivision project. The project site is located on four properties (assessor parcels 116640000, 116610000 and 116650000) addressed at/near 822 NW 179th Street in unincorporated Clark County, Washington. The proposal may include the construction of 41 single-family detached houses, where three existing houses will be removed for a net increase of 38 houses. Access to the site will be provided via new public street connections along NW 11th Avenue and NW 184th Street.

Site Trips

Trip Generation

To estimate the number of trips that are and will be generated by the existing and proposed uses, trip rates from the *Trip Generation Manual, 12th Edition*[1] were used. Data land use code 210, Single-Family Detached Housing, was used to estimate site trip generation based on the number of dwelling units.

The trip generation calculations show that the proposed subdivision is projected to generate 27 net new AM peak hour trips, 35 net new PM peak hour trips, and 346 net new average weekday trips. The trip generation estimates are summarized in Table 1. Detailed trip generation calculations are included in the technical appendix.

[1] Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 12th Edition, 2025.

Table 1 – Site Trip Generation Summary

ITE Land Use Code		Variable	AM Peak Hour			PM Peak Hour			Weekday Total
			Enter	Exit	Total	Enter	Exit	Total	
Existing Conditions									
210	Single-Family Detached Housing	3 units	1	1	2	2	1	3	27
Proposed Conditions									
210	Single-Family Detached Housing	41 units	8	21	29	24	14	38	373
Net Change In Site Trip Generation									
Net New Trips		**38 units**	**7**	**20**	**27**	**22**	**13**	**35**	**346**

Trip Distribution

The trip distribution used for the proposed development was referenced from the *North Haven Traffic Impact Analysis* (TIA), dated February 2020. The North Haven Subdivision is located immediately to the south of the project site across NW 179th Street. Since both projects are located within close proximity to one another and are residential uses, it is expected that trips generated by both subdivisions will distribute throughout the transportation system in a similar manner.

The following trip distribution is estimated:

- Approximately 5% of site trips will travel to/from the west along NW 199th Street, west of NW 11th Avenue.
- Approximately 10% of site trips will travel to/from the east along NW 199th Street, east of NW 11th Avenue.
- Approximately 4% of site trips will travel to/from the west along NE 179th Street, west of NW 11th Avenue.
- Approximately 8% of site trips will travel to/from the south along NW 11th Avenue, south of NW 164th Street.
- Approximately 8% of site trips will travel to/from the north along I-5, north of NE 179th Street.
- Approximately 50% of site trips will travel to/from the south along I-5, south of NE 179th Street.
- Approximately 9% of site trips will travel to/from the east along NE 179th Street, east of I-5.

Based on the site layout, planned access connections along adjacent roadways, and the existing street infrastructure, site trips were estimated to utilize access connections as follows:

- Approximately 75% of site trips are estimated to utilize the access along NW 11th Avenue.
- Approximately 25% of site trips are estimated to utilize the access along NW 184th Street.

Figure A in the attachments depicts the site trip distribution and assignment during the AM and PM peak hours.

Proposed Study Intersections

According to the project's Pre-Application Final Report:

> *Any development generating 10 or more peak hour trips is required to complete a transportation impact study. A general outline is provided in the concurrency administrative manual. A traffic impact study shall analyze impacts according to the following:*
>
> *- 50 or less new peak hour trips; one mile from site*
>
> *- 51-250 new peak hour trips; two miles from the site*
>
> *- 251 or more new peak hour trips; three miles from the site*

Based on the projected trips generated, the preliminary trip distribution, and the anticipated impacts to the transportation system, the following study intersections are suggested for analysis (refer to Figure A for the numbering convention of listed intersections):

7. NW 179th Street at NW 11th Avenue
8. NE 179th Street at NE Delfel Road
9. I-5 Southbound Ramps at NE 179th Street
10. I-5 Northbound Ramps at NE 179th Street
12. Site Access at NW 11th Avenue
13. Site Access at NW 184th Street

Although considered higher classification intersections within a one-mile radius of the site, the following regionally significant intersections are not recommended for analysis, with explanations for removal provided:

The following intersections will either experience no site trip impacts or will be impacted by less than 5 peak hour trips. Therefore, no mitigation can be required as part of the application per Clark County Unified Development Code 40.350.020.G.1.c., not-with-standing safety improvements which may be necessary per section 40.350.030(B)(6):

2. NE 199th Street at NE Delfel Road – 1 AM and 2 PM peak hour trips
4. NE 189th Street at NE Delfel Road – No Impact

Although the following intersections will be impacted by more than 5 peak hour trips, the stop-controlled approaches will experience an increase of less than 5 AM or PM peak hour trips. Therefore, no mitigation can be required at these intersections as part of the application per Clark County Unified Development Code 40.350.020.G.1.c., not-with-standing safety improvements which may be necessary per section 40.350.030(B)(6):

1. NW 199th Street at NW 11th Avenue – 4 AM and 5 PM peak hour trips
3. NW 189th Street at NW 11th Avenue – 4 AM and 5 PM peak hour trips
5. NW 184th Street at NW 11th Avenue – 6 AM and 7 PM peak hour trips
6. NE 184th Street at NE Delfel Road – 4 AM and 6 PM peak hour trips
11. NW 164th Street at NW 11th Avenue – 4 AM and 5 PM peak hour trips

Other Considerations

Please provide in-process development data which should be incorporated in the TIS. If available, the traffic studies for these projects are requested.

PLS Engineering currently has access to data for the following projects (please let me know if any of the following can be removed):

- 179th Street Commercial Center Phase 1 & 2 (located at/near 17714 NE 14th Avenue)
- Emerald Grove Subdivision (located at/near 15810 NW 11th Avenue)
- North Haven Subdivision (90% built, 10% in-process, located at/near 807 NW 179th Street)
- The Highlands at Whipple Creek (located at/near 818 NW 173rd Circle)
- Three Creeks North Phase 1 & 2 (located at/near 18701 NE 10th Avenue)
- Trails at Whipple Creek Subdivision (60% built, 40% in-process, located at/near 1214 NW 166th Way)

Conclusions

Based on the projected trips generated, the preliminary trip distribution, and the anticipated impacts to the transportation system, the following study intersections are suggested for analysis:

7. NW 179th Street at NW 11th Avenue
8. NE 179th Street at NE Delfel Road
9. I-5 Southbound Ramps at NE 179th Street
10. I-5 Northbound Ramps at NE 179th Street
12. Site Access at NW 11th Avenue
13. Site Access at NW 184th Street

Please confirm if the above study area is sufficient for the TIS. Also, please confirm the following:

- In addition to those listed above, are there any other in-process development projects that should be incorporated in the TIS? If yes, could their traffic studies be provided?

If you have any questions or concerns regarding the preparation of this scoping memorandum, please do not hesitate to contact me at daniels@plsengineering.com.

Attachments

- Site Trip Distribution and Assignment (Figure A)
- Trip Generation Calculations
- North Haven Subdivision Trip Distribution Figure

AM PEAK HOUR

PM PEAK HOUR

NET NEW SITE TRIP GENERATION

ANALYSIS SCENARIO	PRIMARY TRIPS		TOTAL
	ENTER	EXIT	
AM PEAK HOUR	7	20	27
PM PEAK HOUR	22	13	35

NOT TO SCALE

FIGURE A

NORTHRIDGE SUBDIVISION

SITE TRIP ASSIGNMENT

AM & PM PEAK HOURS

PLS ENGINEERING

Trip Generation Calculations

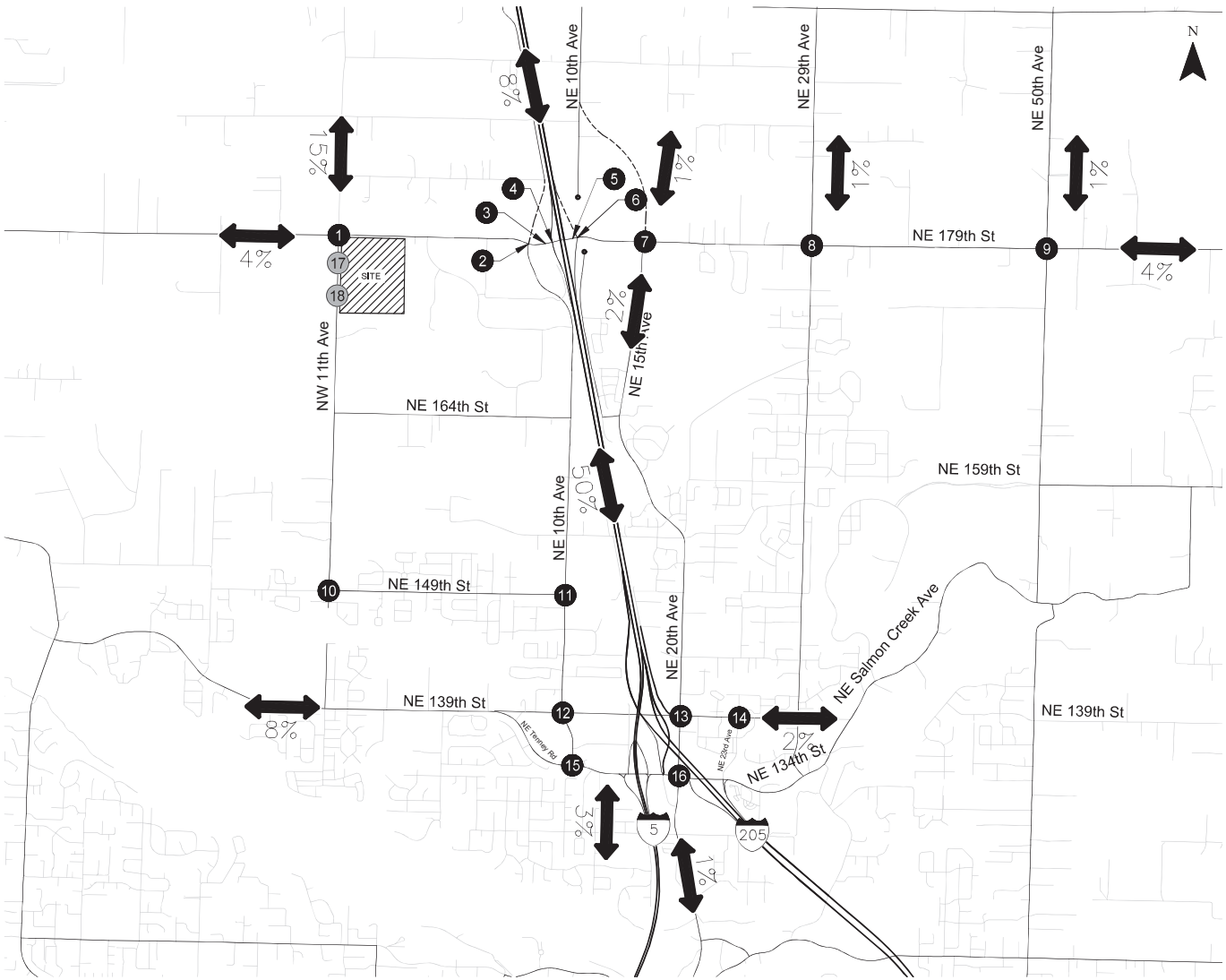
Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 12th Edition

Analysis Scenario: Existing Conditions
Land Use Code: 210, Single-Family Detached Housing
Subcategory: All Sites
Setting/Location General Urban/Suburban
Trip Type: Vehicle
Formula Type: Rate
Variable Type & Quanity: 3 Dwelling Units

Scenario	Trip Rate	Enter (*Percentage Split*)		Exit (*Percentage Split*)		Total
AM Peak Hour	0.70	1	*27%*	1	*73%*	2
PM Peak Hour	0.93	2	*62%*	1	*38%*	3
Weekday	9.09	14	*50%*	13	*50%*	27

Analysis Scenario: Proposed Conditions
Land Use Code: 210, Single-Family Detached Housing
Subcategory: All Sites
Setting/Location General Urban/Suburban
Trip Type: Vehicle
Formula Type: Rate
Variable Type & Quanity: 41 Dwelling Units

Scenario	Trip Rate	Enter (*Percentage Split*)		Exit (*Percentage Split*)		Total
AM Peak Hour	0.70	8	*27%*	21	*73%*	29
PM Peak Hour	0.93	24	*62%*	14	*38%*	38
Weekday	9.09	187	*50%*	186	*50%*	373



Estimated Trip Distribution Pattern
Clark County, Washington

Figure 9

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KITTELSON & ASSOCIATES

Outlook

Re: Northridge Subdivision (PAC-2025-00375) - Traffic Study Scoping

From Daniel Stumpf <daniels@plsengineering.com>
Date Mon 3/16/2026 1:22 PM
To Craig Kathol <Craig.Kathol@clark.wa.gov>
Cc David Jardin <David.Jardin@clark.wa.gov>

Good afternoon Craig,

Awesome, thank you for providing this scoping input. As always, much appreciated on my end.

As a heads up for transparency, we have recently found some sight distance limitations to the north of our proposed access along NW 11th Avenue. We are getting a topo of the road done to see if shifting the access around resolves this issue, but it is possible we may have to restrict the access to right-turns only if sight distances don't improve. If the access is restricted to right-turns only, I'll be reassigning some trips toward our access along NW 184th Street and will be adding the following intersections as part of our study area due to added minor-street approach impacts:

- NW 184th Street at NW 11th Avenue
- NE 184th Street at NE Delfel Road

We'll retain all other study intersections that you have already signed off on.

Thanks and let me know if you have any questions about this.

Daniel

Daniel Stumpf, PE
Transportation Engineer
604 W. Evergreen Blvd, Vancouver, WA 98660
O: 360.944.6519 | **D**: 360.977.5509

From: Craig Kathol <Craig.Kathol@clark.wa.gov>
Sent: Monday, March 16, 2026 1:01 PM
To: Daniel Stumpf <daniels@plsengineering.com>
Cc: David Jardin <David.Jardin@clark.wa.gov>
Subject: RE: Northridge Subdivision (PAC-2025-00375) - Traffic Study Scoping

Good afternoon Daniel,

I have reviewed the scoping memo for Northridge Subdivision and agree with your findings. Please retain the intersections indicated in your memo for analysis. Please retain all others for illustrative purposes for trip assignments/distribution.

The in-process developments looked good to me, however; please see below for adjusted built-out percentage/in-process percentage.

- 179th Street Commercial Center Phase 1 & 2 – **100% built-out, 0% in-process**
- Emerald Grove Subdivision – **0% built-out, 100% in-process**
- North Haven Subdivision – **95% built-out, 5% in-process**
- The Highlands at Whipple Creek – **10% built-out, 90% in-process**
- Three Creeks North Phase 1 & 2 – **0% built-out, 100% in-process**
- Trails at Whipple Creek Subdivision – **100% built-out, 0% in-process**

Please let me know if you have any questions or need anything else.

Thank you,

Craig Kathol, E.I.T.
Transportation Concurrency Engineer
Clark County Public Works

Cell: 360.553.8247

From: Daniel Stumpf <daniels@plsengineering.com>
Sent: Wednesday, March 4, 2026 1:54 PM
To: Craig Kathol <Craig.Kathol@clark.wa.gov>
Cc: David Jardin <David.Jardin@clark.wa.gov>
Subject: Northridge Subdivision (PAC-2025-00375) - Traffic Study Scoping

EXTERNAL: This email originated from outside of Clark County. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon Craig,

I was wondering if you could provide traffic study scoping input for the Northridge Subdivision project (PAC-2025-00375), located at 822 NW 179th Street. The scoping memo was prepared assuming an upper end unit count of 41 single-family detached houses, however, it is possible the lot count could decrease as the development plan is further fleshed out.

Attached is a scoping memorandum for reference, which includes trip gen calcs and a trip assignment figure. Please confirm if the following study intersections are acceptable:

- NW 179th Street at NW 11th Avenue
- NE 179th Street at NE Delfel Road
- I-5 Southbound Ramps at NE 179th Street
- I-5 Northbound Ramps at NE 179th Street
- Site Access at NW 11th Avenue
- Site Access at NW 184th Street

Thanks and let me know if you have any questions or need additional info.

Daniel

Daniel Stumpf, PE
Transportation Engineer
604 W. Evergreen Blvd, Vancouver, WA 98660
O: 360.944.6519 | **D**: 360.977.5509

APPENDIX B – SITE PLAN

Site Plan

Northridge Subdivision

Located in the SW ¼ of Section 10, T3N, R1E, W.M.
Clark County, Washington

SITE ADDRESS/OWNER:
822 NW 179TH St, Ridgefield, WA 98642
PN 116610000
207,758 sq-ft (4.77 acres)
Owner: Ridgefield 822 LLC
Owner Mailing Address: 8103 SE Evergreen Hw, Vancouver WA, 98664

18113 NW 11TH Ave, Ridgefield, WA 98642
PN 116640000
82,235 sq-ft (1.89 acres)
Owner: Catherine & Leo Lee
Owner Mailing Address: 820 Crespi Dr, Pacifica CA, 94044

819 NW 184TH St, Ridgefield, WA 98642
PN 116650000
210,723 sq-ft (4.84 acres)
Owner: William & Genevieve Traub
Owner Mailing Address: 819 NW 184TH St, Ridgefield WA, 98642

EXISTING SITE SIZE:
500,716 sq-ft (11.49 acres)

EXISTING ZONING:
R1-10
Minimum Lot Area = 8,500 sq-ft
Maximum Average Lot Area = 15,000 sq-ft
Average Minimum Lot Width = 70'
Average Minimum Lot Depth = 90'
Density = 5.1 - 2.9 D.U./AC

PROPOSED LOT AREAS:
Minimum: 5250 sq-ft
Maximum: 13243 sq-ft
Average: 6194 sq-ft

SETBACKS:
- 10' front yard setback
- 18' garage setback
- 5' interior side yard setback
- 10' street side setback
- 10' rear yard setback

TRANSPORTATION:
R/W dedication and frontage improvements are proposed for *NW 184th Street meeting the Urban Neighborhood Circulator standard per drawing #12 . R/W dedication and frontage improvements are proposed for NW 179th Street meeting the Urban Principal Arterial standard Pr-4cb per drawing #2. R/W dedication is proposed for NW 11th Avenue meeting Urban Minor Arterial standard M-2cb per drawing #4. Frontage improvements are not proposed for NW 11th Avenue at this time due to the inability to meet intersection and stopping sight distance. A temporary right in, right out configuration is proposed until the profile of NW 11th Avenue is lowered.*

R/W dedication and half-width roadways are proposed for NW 9th Avenue and NW 182nd Street meeting the Urban Neighborhood Circulator standard per drawing #12.

A private tract and roadway are proposed for NW 181st Court & NW 10th Place meeting the Urban Private Road standard per drawing #15. A private tract and roadway are proposed for NW 183rd Court meeting the Urban Private Road standard per drawing #16.

APPLICANT:
Pacific Lifestyle Homes
Contact: Jeremy Quinn
11815 NE 99th Street, Suite #1200
Vancouver, WA 98682
(253) 354-8567
jeremyq@buildplh.com

PROJECT CONTACT:
PLS Engineering
Contact: Matthew Muller
604 W Evergreen Blvd
Vancouver, WA 98660
(360) 944-6519
pm@plsengineering.com

WATER & SEWER:
Nearest fire hydrants are located across the street from the development on NW 179th Street south of the development. One fire hydrant is located approximately 40' east of the site on the south side of NW 179th Street. Another is located approximately 150' west of the site on the south side of NW 179th Street.

There is a well and septic system on each of the three parcels, which will be properly abandoned prior to site development.

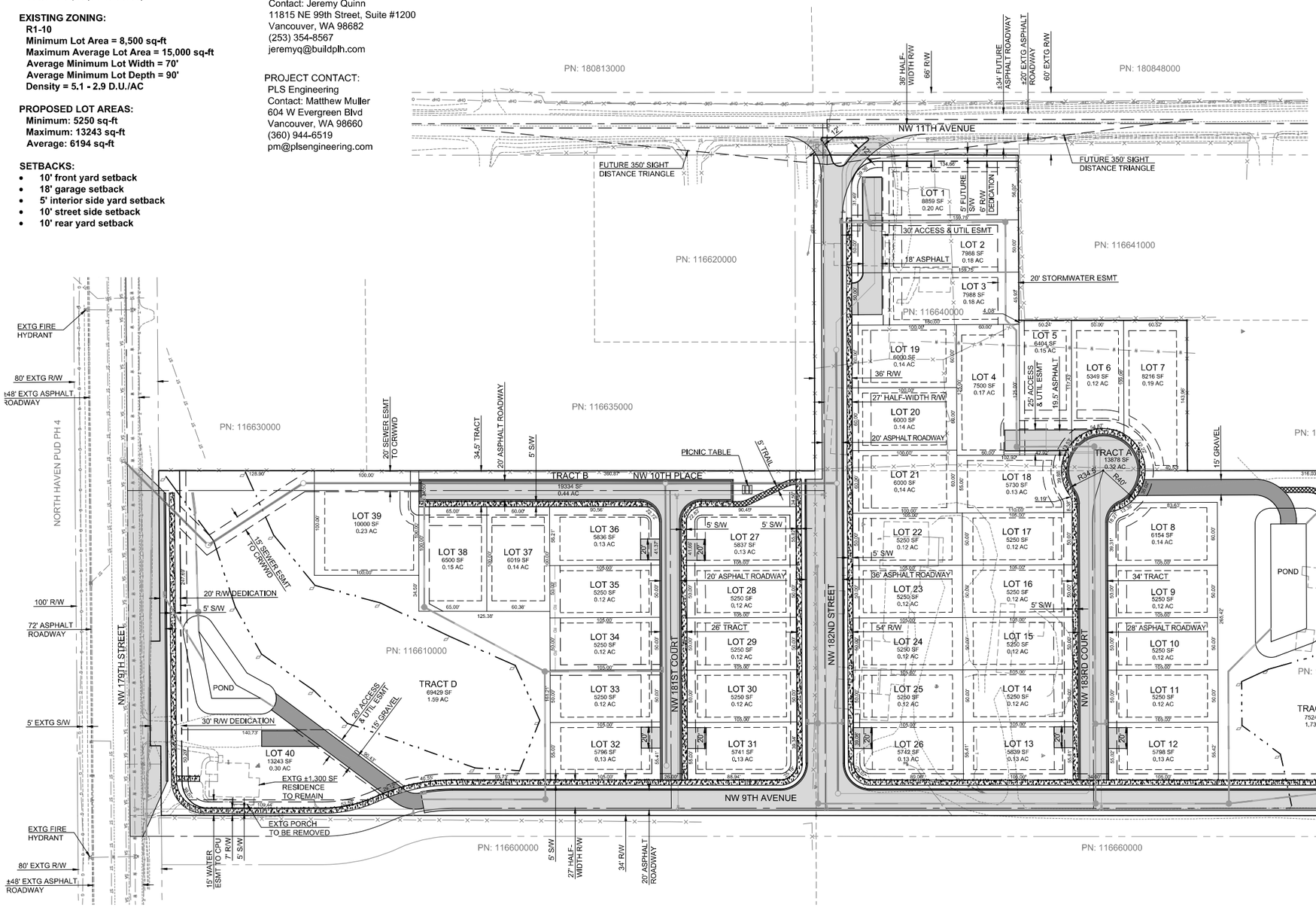
Water Purveyor = Clark Public Utilities
Sewer Purveyor = Clark Regional Wastewater District

ELECTRIC SERVICE:
Clark PUD

TRACT NOTES:
1. Tracts a & b are private street tracts with a public access esmt to clark county, sewer esmt to crwwd, & water esmt to cpu over their entirety.
2. Tracts c & d are private open space tracts with a private stormwater esmt over their entirety.



VICINITY MAP
NOT TO SCALE



Scale 1" = 50'
50 25 0 50

Legend	
Proposed Asphalt	
Proposed Concrete	
Proposed Gravel	
Proposed Trail	

PLS ENGINEERING

Proposed Improvements Plan For:
Northridge Subdivision
A Subdivision Located in Clark County, WA

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

1	2	3	4	5	6

Project No.	4096
SCALE:	H: 1"=50' V: N/A
DESIGNED BY:	MJM
DRAFTED BY:	MJM
REVIEWED BY:	TGJ

2
4

APPENDIX C – SITE TRIPS

Trip Generation Calculations
North Haven Subdivision Trip Distribution

Trip Generation Calculations (Proposed)

Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 12th Edition

Analysis Scenario: Existing Conditions
Land Use Code: 210, Single-Family Detached Housing
Subcategory: All Sites
Setting/Location General Urban/Suburban
Trip Type: Vehicle
Formula Type: Rate
Variable Type & Quanity: 3 Dwelling Units

Scenario	Trip Rate	Enter (*Percentage Split*)		Exit (*Percentage Split*)		Total
AM Peak Hour	0.70	1	*27%*	1	*73%*	2
PM Peak Hour	0.93	2	*62%*	1	*38%*	3
Weekday	9.09	14	*50%*	13	*50%*	27

Analysis Scenario: Proposed Conditions
Land Use Code: 210, Single-Family Detached Housing
Subcategory: All Sites
Setting/Location General Urban/Suburban
Trip Type: Vehicle
Formula Type: Rate
Variable Type & Quanity: 40 Dwelling Units

Scenario	Trip Rate	Enter (*Percentage Split*)		Exit (*Percentage Split*)		Total
AM Peak Hour	0.70	8	*27%*	20	*73%*	28
PM Peak Hour	0.93	23	*62%*	14	*38%*	37
Weekday	9.09	182	*50%*	182	*50%*	364

Trip Generation Calculations (Analyzed)

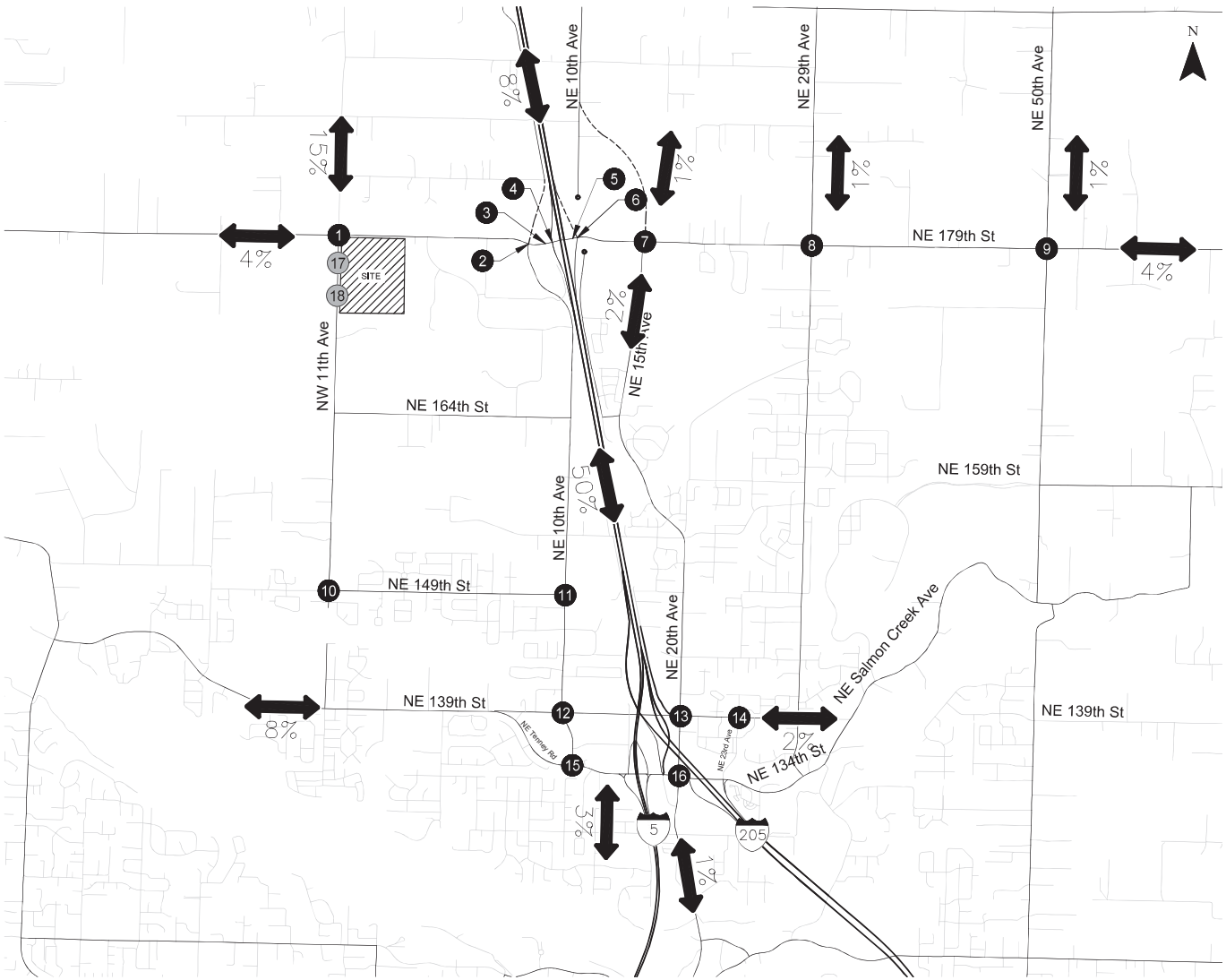
Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 12th Edition

Analysis Scenario: Existing Conditions
Land Use Code: 210, Single-Family Detached Housing
Subcategory: All Sites
Setting/Location General Urban/Suburban
Trip Type: Vehicle
Formula Type: Rate
Variable Type & Quanity: 3 Dwelling Units

Scenario	Trip Rate	Enter (*Percentage Split*)		Exit (*Percentage Split*)		Total
AM Peak Hour	0.70	1	*27%*	1	*73%*	2
PM Peak Hour	0.93	2	*62%*	1	*38%*	3
Weekday	9.09	14	*50%*	13	*50%*	27

Analysis Scenario: Proposed Conditions
Land Use Code: 210, Single-Family Detached Housing
Subcategory: All Sites
Setting/Location General Urban/Suburban
Trip Type: Vehicle
Formula Type: Rate
Variable Type & Quanity: 41 Dwelling Units

Scenario	Trip Rate	Enter (*Percentage Split*)		Exit (*Percentage Split*)		Total
AM Peak Hour	0.70	8	*27%*	21	*73%*	29
PM Peak Hour	0.93	24	*62%*	14	*38%*	38
Weekday	9.09	187	*50%*	186	*50%*	373



Estimated Trip Distribution Pattern
Clark County, Washington

Figure 9

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KITTELSON & ASSOCIATES

APPENDIX D – TRAFFIC VOLUMES

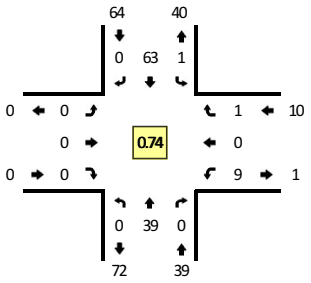
Traffic Count Data
In-Process Development
Planned Intersection Projects – Rerouted Trips
Existing Site Trips – Rerouted Trips

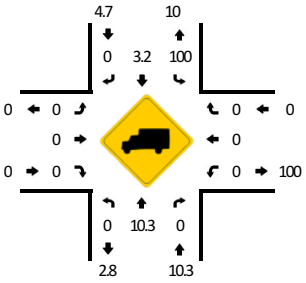
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: NW 11th Ave -- NW 184th St
CITY/STATE: Clark, WA

QC JOB #: 17519403
DATE: Tue, Mar 24 2026

Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 7:40 AM -- 7:55 AM





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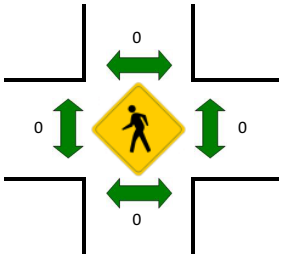
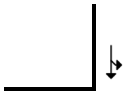
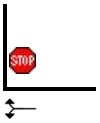
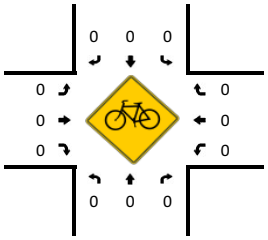
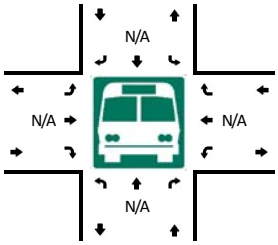
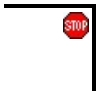


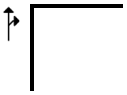


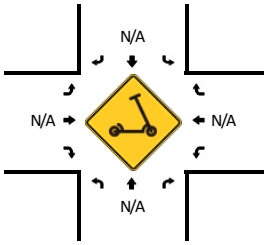












5-Min Count Period Beginning At	NW 11th Ave (Northbound)				NW 11th Ave (Southbound)				NW 184th St (Eastbound)				NW 184th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
7:05 AM	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5	
7:10 AM	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	0	5	
7:15 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3	
7:20 AM	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	6	
7:25 AM	0	2	1	0	0	4	0	0	0	0	0	0	0	0	0	0	7	
7:30 AM	0	4	0	0	0	3	0	0	0	0	0	0	2	0	0	0	9	
7:35 AM	0	0	0	0	0	5	0	0	0	0	0	0	1	0	0	0	6	
7:40 AM	0	6	0	0	0	4	0	0	0	0	0	0	3	0	0	0	13	
7:45 AM	0	4	0	0	0	8	0	0	0	0	0	0	1	0	0	0	13	
7:50 AM	0	1	0	0	0	11	0	0	0	0	0	0	0	0	0	0	12	
7:55 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6	87
8:00 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	89
8:05 AM	0	3	0	0	0	6	0	0	0	0	0	0	1	0	0	0	10	94
8:10 AM	0	6	0	0	0	5	0	0	0	0	0	0	1	0	0	0	12	101
8:15 AM	0	5	0	0	0	6	0	0	0	0	0	0	0	0	0	0	11	109
8:20 AM	0	2	0	0	0	4	0	0	0	0	0	0	2	0	1	0	9	112
8:25 AM	0	3	0	0	1	3	0	0	0	0	0	0	0	0	0	0	7	112
8:30 AM	0	4	0	0	0	6	0	0	0	0	0	0	0	0	0	0	10	113
8:35 AM	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0	5	112
8:40 AM	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0	6	105
8:45 AM	0	4	0	0	0	9	0	0	0	0	0	0	1	0	0	0	14	106
8:50 AM	0	5	0	0	0	7	0	0	0	0	0	0	0	0	0	0	12	106
8:55 AM	0	6	0	0	0	3	0	0	0	0	0	0	0	0	1	0	10	110

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	44	0	0	0	92	0	0	0	0	0	0	16	0	0	0	152
Heavy Trucks	0	4	0		0	4	0		0	0	0		0	0	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/31/2026 1:02 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

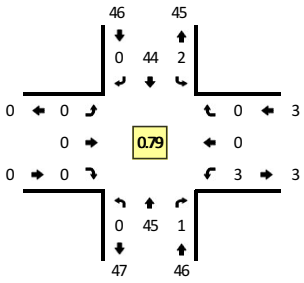
Type of peak hour being reported: Intersection Peak

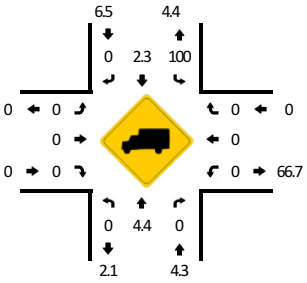
Method for determining peak hour: Total Entering Volume

LOCATION: NW 11th Ave -- NW 184th St
CITY/STATE: Clark, WA

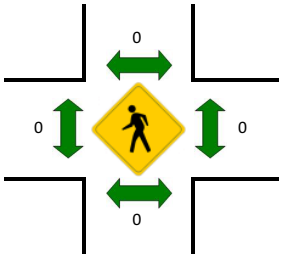
QC JOB #: 17519404
DATE: Tue, Mar 24 2026

Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:15 PM -- 4:30 PM

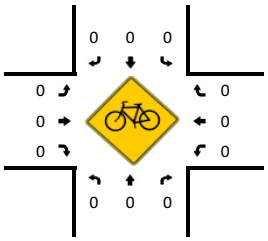


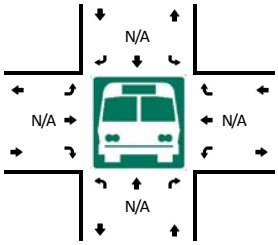


TRUE DATA TO IMPROVE MOBILITY

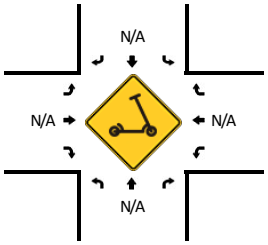












5-Min Count Period Beginning At	NW 11th Ave (Northbound)				NW 11th Ave (Southbound)				NW 184th St (Eastbound)				NW 184th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	2	0	0	1	6	0	0	0	0	0	0	1	0	0	0	10	
4:05 PM	0	3	0	0	0	4	0	0	0	0	0	0	1	0	0	0	8	
4:10 PM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5	
4:15 PM	0	5	0	0	1	3	0	0	0	0	0	0	0	0	0	0	9	
4:20 PM	0	3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	7	
4:25 PM	0	8	0	0	0	5	0	0	0	0	0	0	1	0	0	0	14	
4:30 PM	0	4	1	0	0	1	0	0	0	0	0	0	0	0	0	0	6	
4:35 PM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	10	
4:40 PM	0	5	0	0	0	7	0	0	0	0	0	0	0	0	0	0	12	
4:45 PM	0	3	0	0	0	5	0	0	0	0	0	0	0	0	0	0	8	
4:50 PM	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4	
4:55 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	95
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	86
5:05 PM	0	5	0	0	0	6	0	0	0	0	0	0	0	0	0	0	11	89
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	84
5:15 PM	0	3	0	0	0	5	0	0	0	0	0	0	0	0	0	0	8	83
5:20 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	8	84
5:25 PM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	8	78
5:30 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	77
5:35 PM	0	4	0	0	0	7	0	0	0	0	0	0	0	0	0	0	11	78
5:40 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3	69
5:45 PM	0	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	7	68
5:50 PM	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	6	70
5:55 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	72

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	64	0	0	4	48	0	0	0	0	0	0	4	0	0	0	120
Heavy Trucks	0	4	0		4	4	0		0	0	0		0	0	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/31/2026 1:02 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

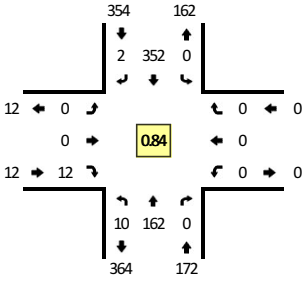
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

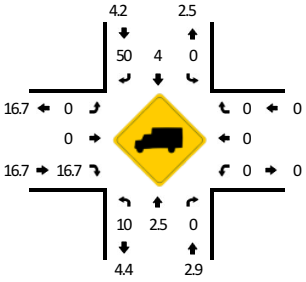
LOCATION: NE Delfel Rd -- NE 184th St
CITY/STATE: Clark, WA

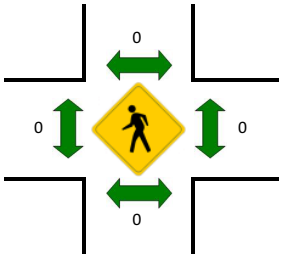
QC JOB #: 17519401
DATE: Tue, Mar 24 2026

Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

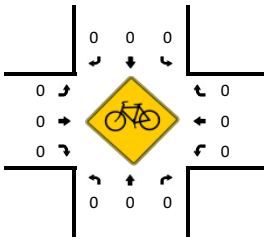


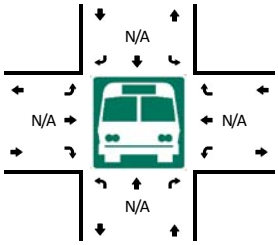




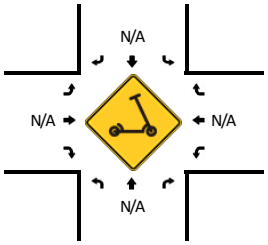












5-Min Count Period Beginning At	NE Delfel Rd (Northbound)				NE Delfel Rd (Southbound)				NE 184th St (Eastbound)				NE 184th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	2	0	0	0	19	0	0	0	0	0	0	0	0	0	0	21	
7:05 AM	2	7	0	0	0	20	0	0	0	0	0	0	0	0	0	0	29	
7:10 AM	2	16	0	0	0	24	0	0	0	0	1	0	0	0	0	0	43	
7:15 AM	1	14	0	0	0	32	0	0	0	0	2	0	0	0	0	0	49	
7:20 AM	1	20	0	0	0	28	1	0	0	0	0	0	0	0	0	0	50	
7:25 AM	0	15	0	0	0	19	0	0	0	0	1	0	0	0	0	0	35	
7:30 AM	1	14	0	0	0	20	0	0	0	0	1	0	0	0	0	0	36	
7:35 AM	0	11	0	0	0	29	0	0	0	0	1	0	0	0	0	0	41	
7:40 AM	1	11	0	0	0	23	0	0	0	0	0	0	0	0	0	0	35	
7:45 AM	0	12	0	0	0	20	1	0	0	0	1	0	0	0	0	0	34	
7:50 AM	1	17	0	0	0	38	0	0	0	0	0	0	0	0	0	0	56	
7:55 AM	2	11	0	0	0	35	0	0	0	0	0	0	0	0	0	0	48	477
8:00 AM	1	11	0	0	0	42	0	0	0	0	3	0	0	0	0	0	57	513
8:05 AM	0	10	0	0	0	42	0	0	0	0	2	0	0	0	0	0	54	538
8:10 AM	2	8	0	0	0	26	0	0	0	0	0	0	0	0	0	0	36	531
8:15 AM	1	14	0	0	0	25	0	0	0	0	2	0	0	0	0	0	42	524
8:20 AM	1	12	0	0	0	25	0	0	0	0	0	0	0	0	0	0	38	512
8:25 AM	0	14	0	0	0	19	0	0	0	0	1	0	0	0	0	0	34	511
8:30 AM	0	15	0	0	0	18	0	0	0	0	0	0	0	0	0	0	33	508
8:35 AM	0	9	0	0	0	20	0	0	0	0	0	0	0	0	0	0	29	496
8:40 AM	0	17	0	0	0	22	0	0	0	0	1	0	0	0	0	0	40	501
8:45 AM	2	14	0	0	0	15	0	0	0	0	2	0	0	0	0	0	33	500
8:50 AM	0	8	0	0	0	32	0	0	0	0	0	0	0	0	0	0	40	484
8:55 AM	0	14	0	0	0	26	1	0	0	0	0	0	0	0	0	0	41	477

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	156	0	0	0	460	0	0	0	0	12	0	0	0	0	0	644
Heavy Trucks	4	0	0		0	32	0		0	0	4		0	0	0		40
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/31/2026 1:02 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

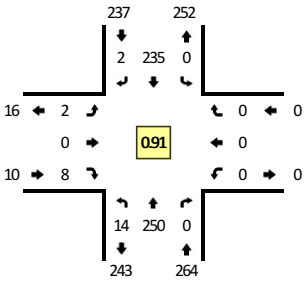
Type of peak hour being reported: Intersection Peak

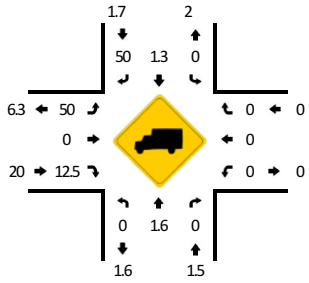
Method for determining peak hour: Total Entering Volume

LOCATION: NE Delfel Rd -- NE 184th St
CITY/STATE: Clark, WA

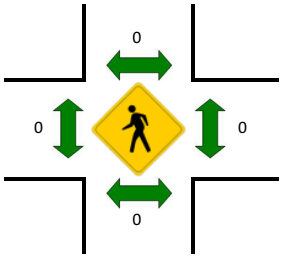
QC JOB #: 17519402
DATE: Tue, Mar 24 2026

Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

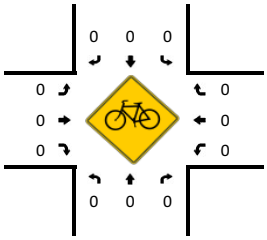


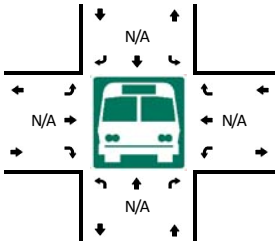


TRUE DATA TO IMPROVE MOBILITY

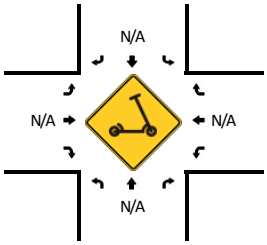












5-Min Count Period Beginning At	NE Delfel Rd (Northbound)				NE Delfel Rd (Southbound)				NE 184th St (Eastbound)				NE 184th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	20	0	0	0	29	0	0	0	0	1	0	0	0	0	0	51	
4:05 PM	0	30	0	0	0	14	0	0	1	0	1	0	0	0	0	0	46	
4:10 PM	2	15	0	0	0	25	1	0	0	0	1	0	0	0	0	0	44	
4:15 PM	1	29	0	0	0	14	0	0	0	0	0	0	0	0	0	0	44	
4:20 PM	2	23	0	0	0	18	0	0	0	0	1	0	0	0	0	0	44	
4:25 PM	0	25	0	0	0	22	0	0	0	0	0	0	0	0	0	0	47	
4:30 PM	1	14	0	0	0	23	0	0	0	0	1	0	0	0	0	0	39	
4:35 PM	0	25	0	0	0	26	0	0	0	0	1	0	0	0	0	0	52	
4:40 PM	1	17	0	0	0	16	0	0	0	0	1	0	0	0	0	0	35	
4:45 PM	1	17	0	0	0	14	1	0	0	0	1	0	0	0	0	0	34	
4:50 PM	2	14	0	0	0	17	0	0	1	0	0	0	0	0	0	0	34	
4:55 PM	3	21	0	0	0	17	0	0	0	0	0	0	0	0	0	0	41	511
5:00 PM	0	24	0	0	0	16	0	0	2	0	0	0	0	0	0	0	42	502
5:05 PM	0	20	0	0	0	22	0	0	0	0	1	0	0	0	0	0	43	499
5:10 PM	0	24	0	0	0	14	0	0	0	0	0	0	0	0	0	0	38	493
5:15 PM	2	22	0	0	0	19	0	0	0	0	0	0	0	0	0	0	43	492
5:20 PM	3	26	0	0	0	17	0	0	1	0	1	0	0	0	0	0	48	496
5:25 PM	3	23	0	0	0	20	0	0	0	0	0	0	0	0	0	0	46	495
5:30 PM	0	21	0	0	0	14	0	0	0	0	1	0	0	0	0	0	36	492
5:35 PM	0	15	0	0	0	14	0	0	0	0	0	0	0	0	0	0	29	469
5:40 PM	1	28	0	0	0	23	1	0	2	0	0	0	0	0	0	0	55	489
5:45 PM	0	22	0	0	0	18	0	0	0	0	0	0	0	0	0	0	40	495
5:50 PM	1	21	0	0	0	17	0	0	0	0	1	0	0	0	0	0	40	501
5:55 PM	2	24	0	0	0	25	0	0	0	0	0	0	0	0	0	0	51	511

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	260	0	0	0	272	4	0	4	0	12	0	0	0	0	0	564
Heavy Trucks	0	0	0		0	0	0		4	0	0		0	0	0		4
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

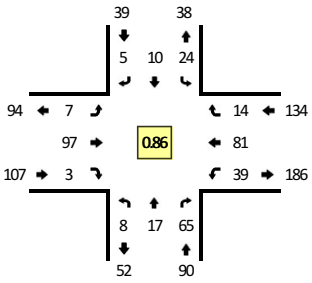
Report generated on 3/31/2026 1:02 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

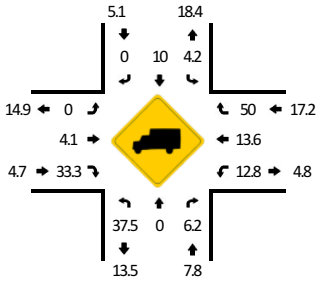
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

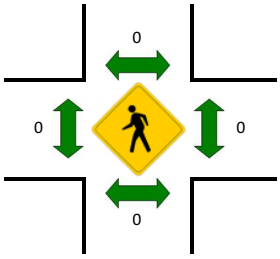
LOCATION: 1. NW 11th Ave -- NW 179th St | **QC JOB #:** 17363001
CITY/STATE: Clark, WA | **DATE:** Thu, Dec 4 2025

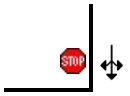
Peak-Hour: 7:55 AM -- 8:55 AM
Peak 15-Min: 8:35 AM -- 8:50 AM

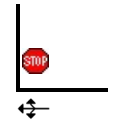


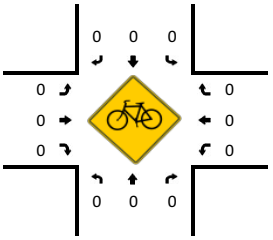
TRUE DATA TO IMPROVE MOBILITY

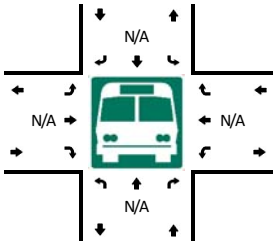


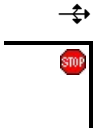


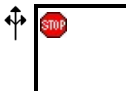


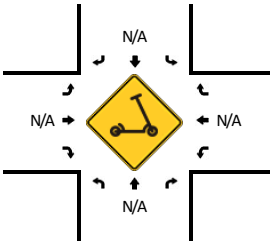












5-Min Count Period Beginning At	1. NW 11th Ave (Northbound)				1. NW 11th Ave (Southbound)				NW 179th St (Eastbound)				NW 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	3	0	1	0	0	0	0	6	1	0	3	2	2	0	19	
7:05 AM	0	1	8	0	2	0	0	0	0	7	0	0	1	1	0	0	20	
7:10 AM	0	0	13	0	0	1	0	0	0	9	0	0	0	2	0	0	25	
7:15 AM	0	1	6	0	4	1	0	0	0	5	0	0	2	2	3	0	24	
7:20 AM	0	1	8	0	1	3	0	0	2	12	0	0	4	1	0	0	32	
7:25 AM	0	0	10	0	1	0	1	0	1	7	0	0	2	3	0	0	25	
7:30 AM	2	1	3	0	5	0	0	0	1	11	0	0	2	4	0	0	29	
7:35 AM	2	0	8	0	3	0	0	0	2	10	0	0	6	3	0	0	34	
7:40 AM	1	2	9	0	2	1	0	0	0	13	1	0	1	7	0	0	37	
7:45 AM	0	2	8	0	0	2	0	0	0	13	0	0	5	1	1	0	32	
7:50 AM	1	0	4	0	2	1	1	0	0	3	1	0	2	3	0	0	18	
7:55 AM	0	0	7	0	4	1	0	0	0	10	1	0	6	8	1	0	38	333
8:00 AM	0	0	4	0	2	3	0	0	1	5	0	0	5	5	0	0	25	339
8:05 AM	1	2	5	0	1	1	0	0	3	5	0	0	3	7	1	0	29	348
8:10 AM	1	1	4	0	2	0	0	0	1	9	0	0	2	5	1	0	26	349
8:15 AM	0	0	7	0	2	0	0	0	0	8	0	0	1	4	1	0	23	348
8:20 AM	0	2	7	0	4	0	3	0	0	10	0	0	2	6	0	0	34	350
8:25 AM	0	3	5	0	2	0	0	0	0	9	0	0	4	11	0	0	34	359
8:30 AM	1	1	7	0	2	1	0	0	1	7	1	0	1	7	0	0	29	359
8:35 AM	2	0	2	0	1	1	1	0	1	9	0	0	2	5	2	0	26	351
8:40 AM	0	1	4	0	4	1	0	0	0	11	0	0	7	7	3	0	38	352
8:45 AM	2	2	8	0	0	2	0	0	0	10	1	0	1	13	4	0	43	363
8:50 AM	1	5	5	0	0	0	1	0	0	4	0	0	5	3	1	0	25	370
8:55 AM	0	1	10	0	2	4	0	0	1	9	0	0	2	4	0	0	33	365

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	12	56	0	20	16	4	0	4	120	4	0	40	100	36	0	428
Heavy Trucks	8	0	0		0	4	0		0	12	4		0	12	24		64
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

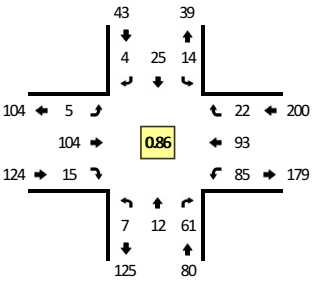
Report generated on 12/10/2025 2:12 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

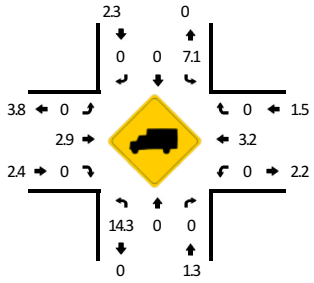
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

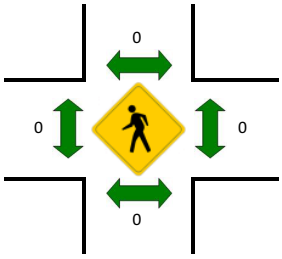
LOCATION: 1. NW 11th Ave -- NW 179th St
CITY/STATE: Clark, WA

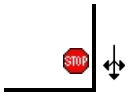
QC JOB #: 17363002
DATE: Thu, Dec 4 2025

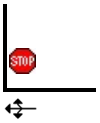
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:20 PM -- 5:35 PM

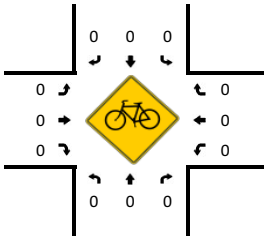


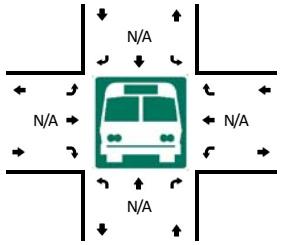


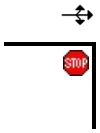


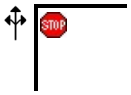


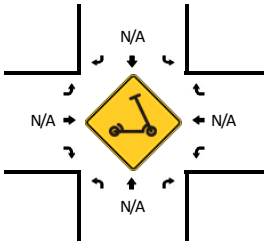












5-Min Count Period Beginning At	1. NW 11th Ave (Northbound)				1. NW 11th Ave (Southbound)				NW 179th St (Eastbound)				NW 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	2	3	0	0	3	0	0	0	11	0	0	5	10	2	0	36	
4:05 PM	1	1	8	0	1	1	0	0	1	8	2	0	9	7	2	0	41	
4:10 PM	0	1	5	0	1	0	2	0	0	16	2	0	3	8	1	0	39	
4:15 PM	1	0	5	0	1	1	1	0	0	8	1	0	4	7	1	0	30	
4:20 PM	0	2	2	0	3	0	1	0	1	8	0	0	4	3	1	0	25	
4:25 PM	0	1	2	0	1	2	2	0	1	4	0	0	10	9	3	0	35	
4:30 PM	0	0	4	0	0	1	0	0	0	10	0	0	5	11	0	0	31	
4:35 PM	0	0	7	0	1	0	1	0	2	10	0	0	6	4	2	0	33	
4:40 PM	0	2	4	0	2	1	0	0	0	10	2	0	5	10	0	0	36	
4:45 PM	0	1	2	0	1	1	0	0	0	10	4	0	5	10	2	0	36	
4:50 PM	0	0	6	0	1	2	0	0	0	7	1	0	5	14	0	0	36	
4:55 PM	2	0	7	0	0	4	0	0	0	7	0	0	6	3	1	0	30	408
5:00 PM	0	1	6	0	0	0	0	0	0	12	2	0	4	3	3	0	31	403
5:05 PM	0	0	6	0	1	3	1	0	0	8	2	0	11	12	4	0	48	410
5:10 PM	0	1	3	0	0	3	0	0	0	4	1	0	7	5	3	0	27	398
5:15 PM	2	1	5	0	4	2	1	0	0	10	0	0	6	7	2	0	40	408
5:20 PM	0	2	5	0	1	4	0	0	1	5	1	0	15	7	1	0	42	425
5:25 PM	0	2	5	0	2	2	1	0	0	8	1	0	7	7	3	0	38	428
5:30 PM	3	2	5	0	1	3	0	0	2	13	1	0	8	11	1	0	50	447
5:35 PM	0	0	5	0	4	1	0	0	0	4	0	0	2	6	1	0	23	437
5:40 PM	1	2	6	0	1	0	1	0	1	7	0	0	8	9	3	0	39	440
5:45 PM	0	2	3	0	3	2	0	0	0	3	0	0	6	8	1	0	28	432
5:50 PM	0	3	3	0	0	1	0	0	1	9	3	0	7	9	4	0	40	436
5:55 PM	0	1	2	0	0	0	0	0	1	9	0	0	1	11	1	0	26	432

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	24	60	0	16	36	4	0	12	104	12	0	120	100	20	0	520
Heavy Trucks	4	0	0		0	0	0		0	0	0		0	4	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:12 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

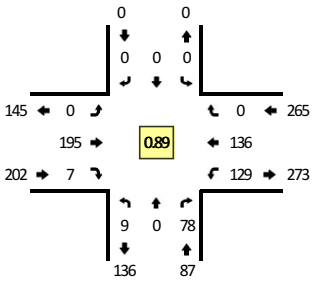
Type of peak hour being reported: Intersection Peak

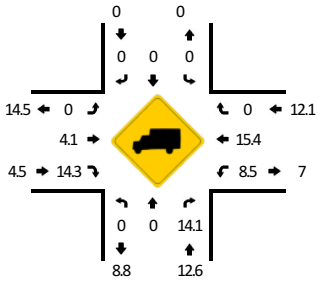
Method for determining peak hour: Total Entering Volume

LOCATION: 2. NE Delfel Rd (S) -- NE 179th St
CITY/STATE: Clark, WA

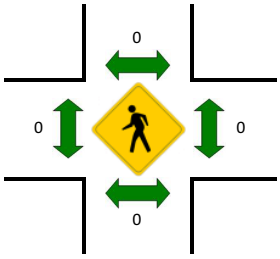
QC JOB #: 17363003
DATE: Thu, Dec 4 2025

Peak-Hour: 7:50 AM -- 8:50 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

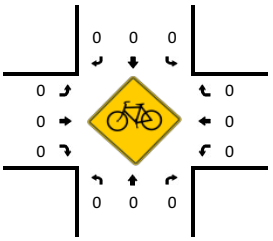


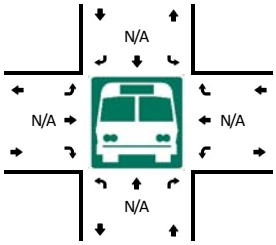


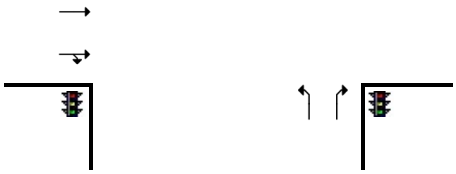
TRUE DATA TO IMPROVE MOBILITY

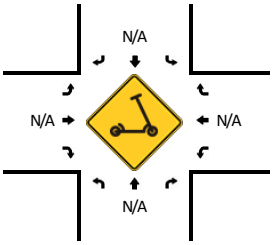












5-Min Count Period Beginning At	2. NE Delfel Rd (S) (Northbound)				2. NE Delfel Rd (S) (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	2	0	0	0	0	0	0	10	2	0	11	8	0	1	34	
7:05 AM	0	0	0	0	0	0	0	0	0	16	0	0	10	4	0	0	30	
7:10 AM	0	0	6	0	0	0	0	0	0	22	1	0	15	7	0	0	51	
7:15 AM	0	0	3	0	0	0	0	0	0	22	0	0	6	3	0	0	34	
7:20 AM	0	0	5	0	0	0	0	0	0	21	1	0	11	5	0	0	43	
7:25 AM	1	0	5	0	0	0	0	0	0	21	1	0	10	5	0	0	43	
7:30 AM	0	0	3	0	0	0	0	0	0	18	0	0	10	7	0	0	38	
7:35 AM	0	0	7	0	0	0	0	0	0	23	1	0	10	10	0	0	51	
7:40 AM	0	0	4	0	0	0	0	0	0	23	0	0	12	7	0	0	46	
7:45 AM	0	0	6	0	0	0	0	0	0	17	2	0	12	6	0	0	43	
7:50 AM	0	0	3	0	0	0	0	0	0	17	0	0	10	7	0	0	37	
7:55 AM	0	0	2	0	0	0	0	0	0	17	1	0	11	13	0	0	44	494
8:00 AM	1	0	11	0	0	0	0	0	0	17	0	0	9	9	0	0	47	507
8:05 AM	1	0	6	0	0	0	0	0	0	12	0	0	15	12	0	0	46	523
8:10 AM	1	0	8	0	0	0	0	0	0	16	1	0	5	7	0	0	38	510
8:15 AM	0	0	11	0	0	0	0	0	0	13	2	0	11	6	0	0	43	519
8:20 AM	1	0	11	0	0	0	0	0	0	20	0	0	13	11	0	0	56	532
8:25 AM	3	0	4	0	0	0	0	0	0	19	0	0	13	18	0	0	57	546
8:30 AM	0	0	3	0	0	0	0	0	0	15	1	0	6	8	0	0	33	541
8:35 AM	0	0	5	0	0	0	0	0	0	15	0	0	5	10	0	0	35	525
8:40 AM	0	0	4	0	0	0	0	0	0	14	2	0	12	22	0	0	54	533
8:45 AM	2	0	10	0	0	0	0	0	0	20	0	0	19	13	0	0	64	554
8:50 AM	0	0	3	0	0	0	0	0	0	7	1	0	11	9	0	0	31	548
8:55 AM	1	0	1	0	0	0	0	0	0	20	2	0	10	8	0	0	42	546

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	0	104	0	0	0	0	0	0	208	8	0	148	140	0	0	624
Heavy Trucks	0	0	16		0	0	0		0	4	0		0	28	0		48
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:12 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

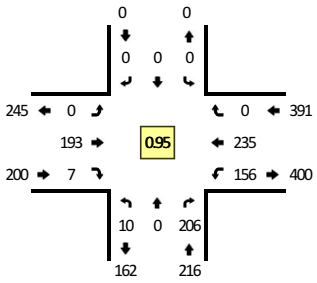
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

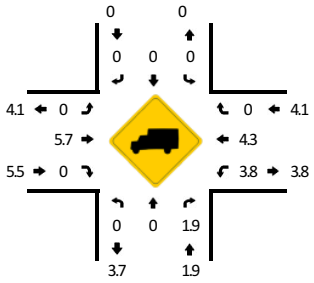
LOCATION: 2. NE Delfel Rd (S) -- NE 179th St
CITY/STATE: Clark, WA

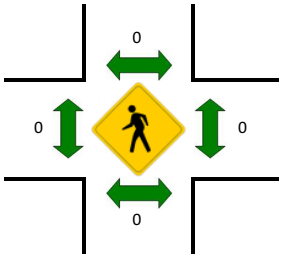
QC JOB #: 17363004
DATE: Thu, Dec 4 2025

Peak-Hour: 4:10 PM -- 5:10 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

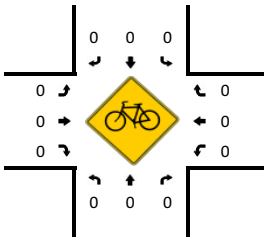


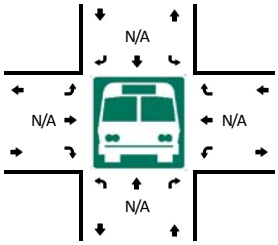




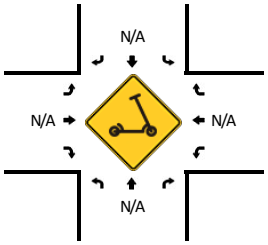












5-Min Count Period Beginning At	2. NE Delfel Rd (S) (Northbound)				2. NE Delfel Rd (S) (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	23	0	0	0	0	0	0	14	2	0	13	14	0	0	66	
4:05 PM	1	0	15	0	0	0	0	0	0	19	0	0	7	20	0	0	62	
4:10 PM	1	0	18	0	0	0	0	0	0	27	0	0	12	19	0	0	77	
4:15 PM	0	0	16	0	0	0	0	0	0	11	0	0	17	13	0	0	57	
4:20 PM	1	0	14	0	0	0	0	0	0	20	1	0	11	13	0	0	60	
4:25 PM	1	0	18	0	0	0	0	0	0	3	1	0	18	23	0	0	64	
4:30 PM	1	0	17	0	0	0	0	0	0	15	1	0	12	18	0	0	64	
4:35 PM	1	0	16	0	0	0	0	0	0	17	1	0	13	18	0	0	66	
4:40 PM	1	0	23	0	0	0	0	0	0	13	0	0	10	16	0	0	63	
4:45 PM	3	0	23	0	0	0	0	0	0	15	0	0	10	20	0	0	71	
4:50 PM	1	0	13	0	0	0	0	0	0	18	0	0	15	25	0	0	72	
4:55 PM	0	0	17	0	0	0	0	0	0	12	1	0	14	24	0	0	68	790
5:00 PM	0	0	14	0	0	0	0	0	0	24	2	0	9	24	0	0	73	797
5:05 PM	0	0	17	0	0	0	0	0	0	18	0	0	14	22	0	1	72	807
5:10 PM	1	0	9	0	0	0	0	0	0	11	0	0	10	14	0	0	45	775
5:15 PM	1	0	14	0	0	0	0	0	0	16	0	0	11	21	0	0	63	781
5:20 PM	1	0	9	0	0	0	0	0	0	10	0	0	17	24	0	0	61	782
5:25 PM	1	0	14	0	0	0	0	0	0	17	3	0	4	29	0	0	68	786
5:30 PM	0	0	19	0	0	0	0	0	0	17	1	0	8	17	0	0	62	784
5:35 PM	0	0	9	0	0	0	0	0	0	18	0	0	6	14	0	0	47	765
5:40 PM	3	0	16	0	0	0	0	0	0	14	0	0	3	19	0	0	55	757
5:45 PM	0	0	13	0	0	0	0	0	0	10	0	0	8	21	0	0	52	738
5:50 PM	0	0	7	0	0	0	0	0	0	10	1	0	10	19	0	0	47	713
5:55 PM	0	0	8	0	0	0	0	0	0	13	2	0	5	15	0	0	43	688

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	176	0	0	0	0	0	0	216	12	0	152	292	0	0	852
Heavy Trucks	0	0	4		0	0	0		0	4	0		8	0	0		16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

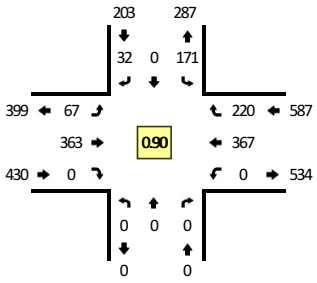
Report generated on 12/10/2025 2:12 PM

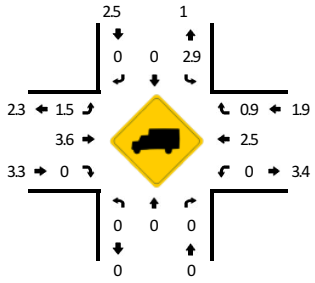
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

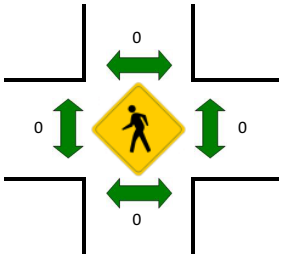
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 3. NE Delfel Rd (N) -- NE 179th St | **QC JOB #:** 17363006
CITY/STATE: Clark, WA | **DATE:** Thu, Dec 4 2025

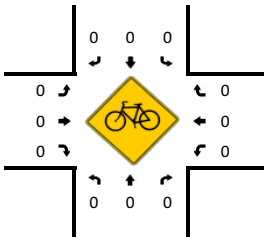
Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

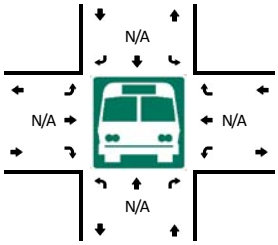




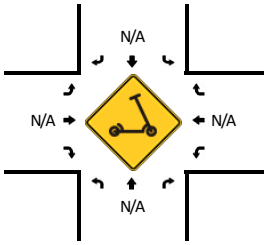












5-Min Count Period Beginning At	3. NE Delfel Rd (N) (Northbound)				3. NE Delfel Rd (N) (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	17	0	2	0	3	37	0	0	0	23	8	0	90	
4:05 PM	0	0	0	0	19	0	0	0	7	31	0	0	0	29	19	0	105	
4:10 PM	0	0	0	0	14	0	4	0	8	43	0	0	0	30	10	0	109	
4:15 PM	0	0	0	0	23	0	5	0	4	26	0	0	0	24	11	0	93	
4:20 PM	0	0	0	0	15	0	4	0	4	34	0	0	0	20	18	0	95	
4:25 PM	0	0	0	0	6	0	4	0	2	18	0	0	0	38	29	0	97	
4:30 PM	0	0	0	0	13	0	1	0	6	29	0	0	0	30	12	0	91	
4:35 PM	0	0	0	0	13	0	1	0	7	24	0	0	0	28	12	0	85	
4:40 PM	0	0	0	0	8	0	3	0	9	34	0	0	0	34	14	0	102	
4:45 PM	0	0	0	0	14	0	1	0	8	35	0	0	0	26	20	0	104	
4:50 PM	0	0	0	0	16	0	4	0	5	32	0	0	0	35	27	0	119	
4:55 PM	0	0	0	0	12	0	3	0	3	25	0	0	0	37	26	0	106	1196
5:00 PM	0	0	0	0	18	0	2	0	4	32	0	0	0	36	22	0	114	1220
5:05 PM	0	0	0	0	8	0	7	0	4	38	0	0	0	33	15	0	105	1220
5:10 PM	0	0	0	0	15	0	2	0	3	18	0	0	0	23	20	0	81	1192
5:15 PM	0	0	0	0	12	0	7	0	6	32	0	0	0	35	18	0	110	1209
5:20 PM	0	0	0	0	13	0	5	0	6	20	0	0	0	34	20	0	98	1212
5:25 PM	0	0	0	0	7	0	2	0	4	29	0	0	0	29	17	0	88	1203
5:30 PM	0	0	0	0	9	0	3	0	5	33	0	0	0	25	18	0	93	1205
5:35 PM	0	0	0	0	13	0	1	0	5	23	0	0	0	21	17	0	80	1200
5:40 PM	0	0	0	0	10	0	4	0	4	28	0	0	0	25	16	0	87	1185
5:45 PM	0	0	0	0	21	0	2	0	1	29	0	0	0	28	16	0	97	1178
5:50 PM	0	0	0	0	8	0	2	0	6	18	0	0	0	25	10	0	69	1128
5:55 PM	0	0	0	0	14	0	1	0	3	20	0	0	0	23	13	0	74	1096

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	184	0	36	0	48	356	0	0	0	432	300	0	1356
Heavy Trucks	0	0	0		12	0	0		0	4	0		0	8	0		24
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

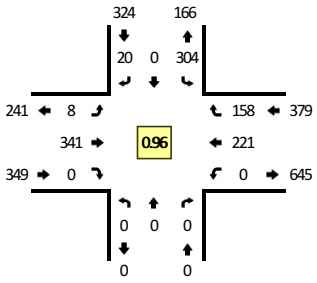
Comments:

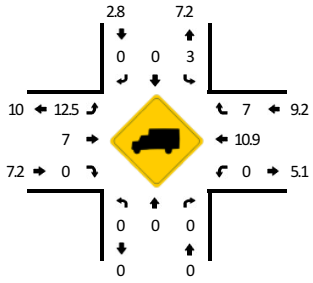
Report generated on 12/10/2025 2:12 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

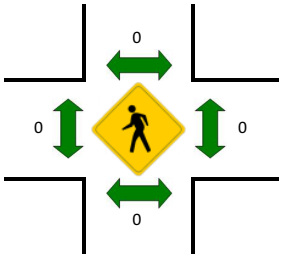
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

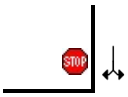
LOCATION: 3. NE Delfel Rd (N) -- NE 179th St | **QC JOB #:** 17363005
CITY/STATE: Clark, WA | **DATE:** Thu, Dec 4 2025

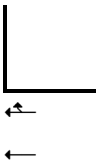
Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:10 AM -- 7:25 AM

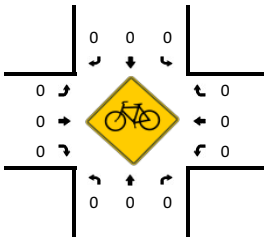


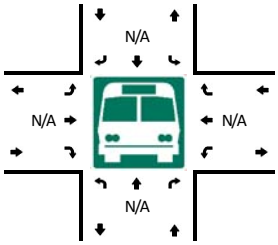


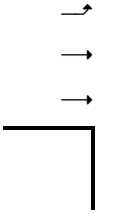




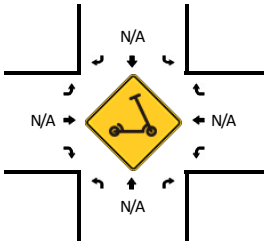












5-Min Count Period Beginning At	3. NE Delfel Rd (N) (Northbound)				3. NE Delfel Rd (N) (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	16	0	2	0	1	15	0	0	0	18	8	0	60	
7:05 AM	0	0	0	0	16	0	2	0	0	23	0	0	0	14	13	0	68	
7:10 AM	0	0	0	0	29	0	1	0	0	33	0	0	0	22	9	0	94	
7:15 AM	0	0	0	0	20	0	2	0	1	29	0	0	0	14	15	0	81	
7:20 AM	0	0	0	0	23	0	2	0	0	32	0	0	0	17	25	0	99	
7:25 AM	0	0	0	0	18	0	3	0	0	33	0	0	0	9	18	0	81	
7:30 AM	0	0	0	0	30	0	0	0	0	24	0	0	0	23	6	0	83	
7:35 AM	0	0	0	0	17	0	0	0	1	33	0	0	0	22	20	0	93	
7:40 AM	0	0	0	0	22	0	0	0	0	36	0	0	0	16	13	0	87	
7:45 AM	0	0	0	0	27	0	2	0	1	25	0	0	0	20	11	0	86	
7:50 AM	0	0	0	0	30	0	1	0	1	24	0	0	0	21	10	0	87	
7:55 AM	0	0	0	0	23	0	1	0	2	19	0	0	0	21	12	0	78	997
8:00 AM	0	0	0	0	34	0	1	0	2	30	0	0	0	18	8	0	93	1030
8:05 AM	0	0	0	0	31	0	7	0	0	23	0	0	0	18	11	0	90	1052
8:10 AM	0	0	0	0	29	0	1	0	1	26	0	0	0	13	9	0	79	1037
8:15 AM	0	0	0	0	16	0	2	0	1	28	0	0	0	15	10	0	72	1028
8:20 AM	0	0	0	0	11	0	6	0	0	31	0	0	0	19	7	0	74	1003
8:25 AM	0	0	0	0	18	0	5	0	1	30	0	0	0	26	12	0	92	1014
8:30 AM	0	0	0	0	21	0	0	0	2	20	0	0	0	14	10	0	67	998
8:35 AM	0	0	0	0	15	0	1	0	2	23	0	0	0	16	14	0	71	976
8:40 AM	0	0	0	0	15	0	3	0	2	20	0	0	0	30	12	0	82	971
8:45 AM	0	0	0	0	23	0	4	0	3	28	0	0	0	29	7	0	94	979
8:50 AM	0	0	0	0	26	0	3	0	1	10	0	0	0	16	10	0	66	958
8:55 AM	0	0	0	0	31	0	3	0	0	17	0	0	0	15	11	0	77	957

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	288	0	20	0	4	376	0	0	0	212	196	0	1096
Heavy Trucks	0	0	0		8	0	0		0	20	0		0	20	12		60
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

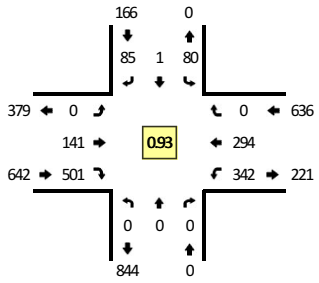
Comments:

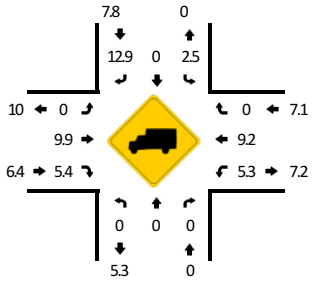
Report generated on 12/10/2025 2:12 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

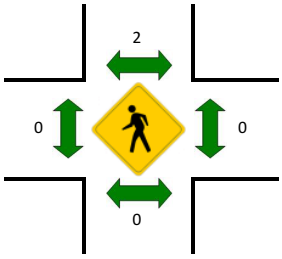
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

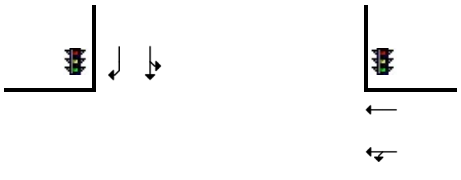
LOCATION: 4. I-5 SB Ramps -- NE 179th St | **QC JOB #:** 17363007
CITY/STATE: Clark, WA | **DATE:** Thu, Dec 4 2025

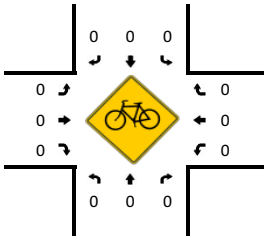
Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

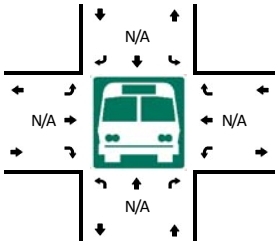




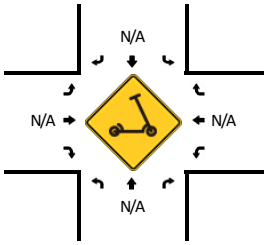












5-Min Count Period Beginning At	4. I-5 SB Ramps (Northbound)				4. I-5 SB Ramps (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	4	0	6	0	0	5	34	0	22	23	0	0	94	
7:05 AM	0	0	0	0	9	0	6	0	0	5	33	0	20	18	0	0	91	
7:10 AM	0	0	0	0	7	0	10	0	0	9	51	0	28	21	0	0	126	
7:15 AM	0	0	0	0	4	0	4	0	0	9	39	0	34	26	0	0	116	
7:20 AM	0	0	0	0	9	0	8	0	0	10	42	0	30	34	0	0	133	
7:25 AM	0	0	0	0	5	1	6	0	0	15	37	0	23	22	0	0	109	
7:30 AM	0	0	0	0	5	0	3	0	0	12	44	0	20	24	0	0	108	
7:35 AM	0	0	0	0	4	0	8	0	0	15	33	0	32	35	0	0	127	
7:40 AM	0	0	0	0	3	0	8	0	0	15	44	0	36	22	0	0	128	
7:45 AM	0	0	0	0	15	0	5	0	0	11	45	0	31	27	0	0	134	
7:50 AM	0	0	0	0	7	0	11	0	0	8	45	0	30	17	0	0	118	
7:55 AM	0	0	0	0	13	0	7	0	0	8	34	0	27	26	0	0	115	1399
8:00 AM	0	0	0	0	3	0	9	0	0	14	44	0	29	17	0	0	116	1421
8:05 AM	0	0	0	0	5	0	6	0	0	15	43	0	22	23	0	0	114	1444
8:10 AM	0	0	0	0	3	0	4	0	0	14	41	0	30	20	0	0	112	1430
8:15 AM	0	0	0	0	4	0	7	0	0	16	27	0	22	13	0	0	89	1403
8:20 AM	0	0	0	0	5	0	0	0	0	12	29	0	30	25	0	0	101	1371
8:25 AM	0	0	0	0	9	1	5	0	0	16	33	0	40	33	0	0	137	1399
8:30 AM	0	0	0	0	2	0	5	0	0	7	36	0	29	21	0	0	100	1391
8:35 AM	0	0	0	0	3	0	6	0	0	9	29	0	35	22	0	0	104	1368
8:40 AM	0	0	0	0	3	0	7	0	0	9	24	0	39	36	0	0	118	1358
8:45 AM	0	0	0	0	3	0	12	0	0	13	36	0	22	23	0	0	109	1333
8:50 AM	0	0	0	0	10	0	8	0	0	7	32	0	24	20	0	0	101	1316
8:55 AM	0	0	0	0	10	0	6	0	0	10	37	0	30	17	0	0	110	1311

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	88	0	84	0	0	164	488	0	396	336	0	0	1556
Heavy Trucks	0	0	0		0	0	4		0	20	16		20	8	0		68
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

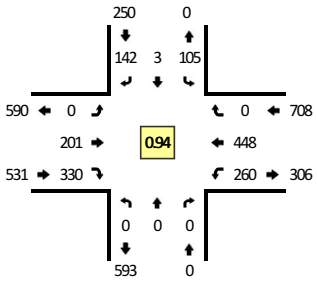
Report generated on 12/10/2025 2:12 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

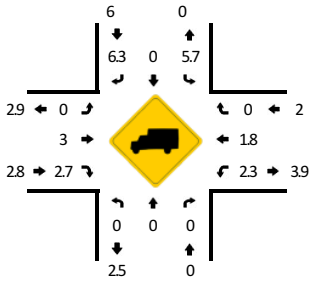
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 4. I-5 SB Ramps -- NE 179th St
CITY/STATE: Clark, WA

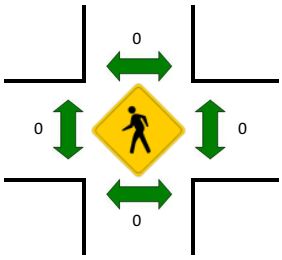
QC JOB #: 17363008
DATE: Thu, Dec 4 2025

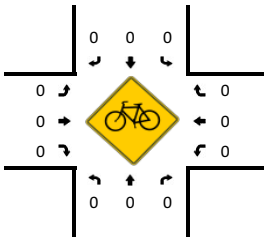
Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

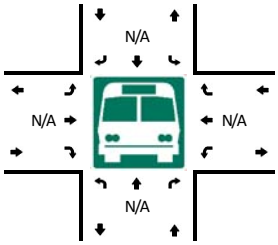


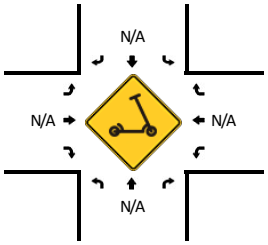


TRUE DATA TO IMPROVE MOBILITY









5-Min Count Period Beginning At	4. I-5 SB Ramps (Northbound)				4. I-5 SB Ramps (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	11	0	11	0	0	21	35	0	27	19	0	0	124	
4:05 PM	0	0	0	0	17	0	10	0	0	23	29	0	28	39	0	0	146	
4:10 PM	0	0	0	0	7	0	9	0	0	23	31	0	31	31	0	0	132	
4:15 PM	0	0	0	0	7	0	8	0	0	19	31	0	16	27	0	0	108	
4:20 PM	0	0	0	0	6	0	12	0	0	17	32	0	26	27	0	0	120	
4:25 PM	0	0	0	0	8	1	17	0	0	9	11	0	22	48	0	0	116	
4:30 PM	0	0	0	0	7	0	11	0	0	15	25	0	23	33	0	0	114	
4:35 PM	0	0	0	0	8	0	7	0	0	16	22	0	24	33	0	0	110	
4:40 PM	0	0	0	0	8	2	12	0	0	19	23	0	18	36	0	0	118	
4:45 PM	0	0	0	0	6	0	13	0	0	13	37	0	22	36	0	0	127	
4:50 PM	0	0	0	0	8	0	13	0	0	16	33	0	20	47	0	0	137	
4:55 PM	0	0	0	0	6	0	15	0	0	17	19	0	11	49	0	0	117	1469
5:00 PM	0	0	0	0	17	0	15	0	0	14	37	0	19	42	0	0	144	1489
5:05 PM	0	0	0	0	12	1	13	0	0	20	24	0	22	34	0	0	126	1469
5:10 PM	0	0	0	0	10	0	11	0	0	14	23	0	17	31	0	0	106	1443
5:15 PM	0	0	0	0	5	0	13	0	0	10	31	0	21	48	0	0	128	1463
5:20 PM	0	0	0	0	13	0	12	0	0	12	22	0	13	38	0	0	110	1453
5:25 PM	0	0	0	0	14	0	11	0	0	16	20	0	12	35	0	0	108	1445
5:30 PM	0	0	0	0	8	0	6	0	0	18	23	0	24	35	0	0	114	1445
5:35 PM	0	0	0	0	10	0	8	0	0	13	22	0	15	31	0	0	99	1434
5:40 PM	0	0	0	0	16	1	10	0	0	17	20	0	29	28	0	0	121	1437
5:45 PM	0	0	0	0	12	0	10	0	0	22	31	0	19	36	0	0	130	1440
5:50 PM	0	0	0	0	6	0	10	0	0	11	14	0	13	26	0	0	80	1383
5:55 PM	0	0	0	0	3	1	7	0	0	11	24	0	17	27	0	0	90	1356

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	124	0	172	0	0	188	356	0	200	552	0	0	1592
Heavy Trucks	0	0	0		0	0	12		0	4	4		4	8	0		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:12 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

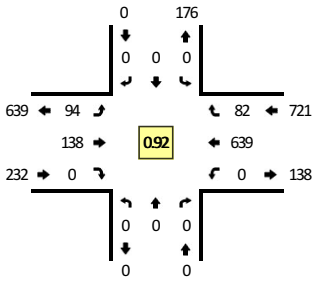
Type of peak hour being reported: Intersection Peak

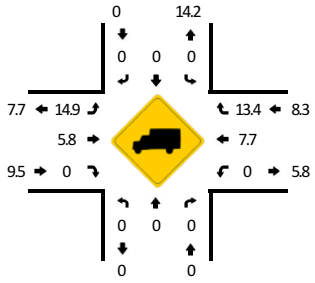
Method for determining peak hour: Total Entering Volume

LOCATION: 5. I-5 NB Ramps -- NE 179th St
CITY/STATE: Clark, WA

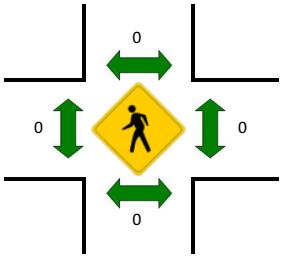
QC JOB #: 17363009
DATE: Thu, Dec 4 2025

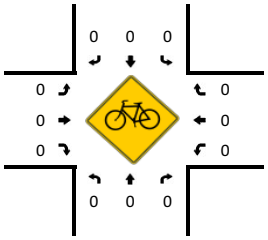
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

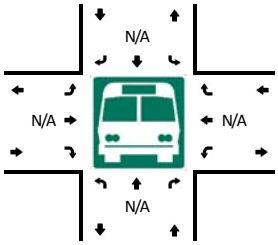


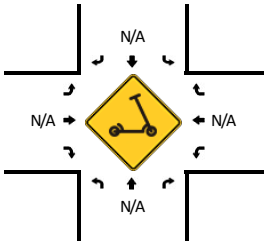


TRUE DATA TO IMPROVE MOBILITY









5-Min Count Period Beginning At	5. I-5 NB Ramps (Northbound)				5. I-5 NB Ramps (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	3	5	0	0	0	44	7	0	59	
7:05 AM	0	0	0	0	0	0	0	0	1	11	0	0	0	35	2	0	49	
7:10 AM	0	0	0	0	0	0	0	0	4	8	0	0	0	55	6	0	73	
7:15 AM	0	0	0	0	0	0	0	0	6	10	0	0	0	59	3	0	78	
7:20 AM	0	0	0	0	0	0	0	0	5	13	0	0	0	62	6	0	86	
7:25 AM	0	0	0	0	0	0	0	0	11	9	0	0	0	42	10	0	72	
7:30 AM	0	0	0	0	0	0	0	0	6	9	0	0	0	54	6	0	75	
7:35 AM	0	0	0	0	0	0	0	0	9	12	0	0	0	62	8	0	91	
7:40 AM	0	0	0	0	0	0	0	0	8	9	0	0	0	61	8	0	86	
7:45 AM	0	0	0	0	0	0	0	0	7	19	0	0	0	51	5	0	82	
7:50 AM	0	0	0	0	0	0	0	0	2	12	0	0	0	54	12	0	80	
7:55 AM	0	0	0	0	0	0	0	0	6	14	0	0	0	51	7	0	78	909
8:00 AM	0	0	0	0	0	0	0	0	9	8	0	0	0	46	3	0	66	916
8:05 AM	0	0	0	0	0	0	0	0	9	12	0	0	0	43	1	0	65	932
8:10 AM	0	0	0	0	0	0	0	0	6	11	0	0	0	53	9	0	79	938
8:15 AM	0	0	0	0	0	0	0	0	8	10	0	0	0	41	10	0	69	929
8:20 AM	0	0	0	0	0	0	0	0	11	9	0	0	0	55	6	0	81	924
8:25 AM	0	0	0	0	0	0	0	0	13	13	0	0	0	68	7	0	101	953
8:30 AM	0	0	0	0	0	0	0	0	3	5	0	0	0	54	13	0	75	953
8:35 AM	0	0	0	0	0	0	0	0	7	7	0	0	0	56	7	0	77	939
8:40 AM	0	0	0	0	0	0	0	0	5	7	0	0	0	74	5	0	91	944
8:45 AM	0	0	0	0	0	0	0	0	9	7	0	0	0	46	10	0	72	934
8:50 AM	0	0	0	0	0	0	0	0	5	11	0	0	0	47	3	0	66	920
8:55 AM	0	0	0	0	0	0	0	0	6	13	0	0	0	50	8	0	77	919

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	96	160	0	0	0	696	84	0	1036
Heavy Trucks	0	0	0		0	0	0		16	4	0		0	24	16		60
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

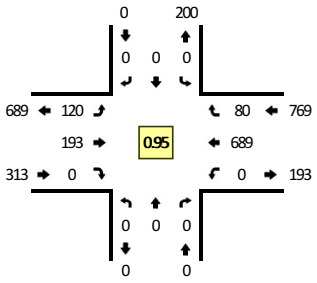
Type of peak hour being reported: Intersection Peak

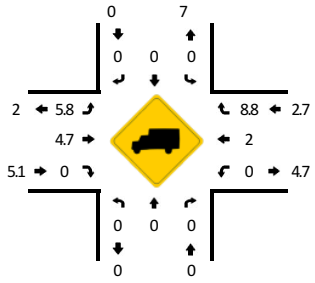
Method for determining peak hour: Total Entering Volume

LOCATION: 5. I-5 NB Ramps -- NE 179th St
CITY/STATE: Clark, WA

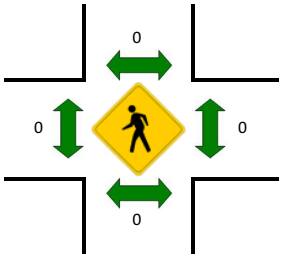
QC JOB #: 17363010
DATE: Thu, Dec 4 2025

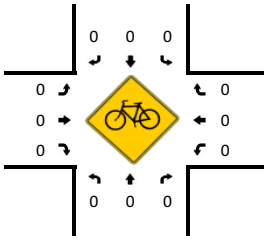
Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:05 PM -- 4:20 PM

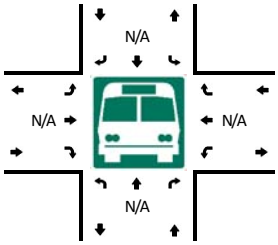


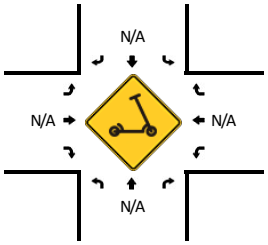


TRUE DATA TO IMPROVE MOBILITY









5-Min Count Period Beginning At	5. I-5 NB Ramps (Northbound)				5. I-5 NB Ramps (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	0	0	4	19	0	0	0	58	5	0	86	
4:05 PM	0	0	0	0	0	0	0	0	14	30	0	0	0	57	9	0	110	
4:10 PM	0	0	0	0	0	0	0	0	17	17	0	0	0	60	5	0	99	
4:15 PM	0	0	0	0	0	0	0	0	8	16	0	0	0	47	5	0	76	
4:20 PM	0	0	0	0	0	0	0	0	11	13	0	0	0	53	5	0	82	
4:25 PM	0	0	0	0	0	0	0	0	7	13	0	0	0	66	6	0	92	
4:30 PM	0	0	0	0	0	0	0	0	9	14	0	0	0	55	7	0	85	
4:35 PM	0	0	0	0	0	0	0	0	11	14	0	0	0	60	5	0	90	
4:40 PM	0	0	0	0	0	0	0	0	7	20	0	0	0	51	6	0	84	
4:45 PM	0	0	0	0	0	0	0	0	7	10	0	0	0	58	7	0	82	
4:50 PM	0	0	0	0	0	0	0	0	11	13	0	0	0	67	8	0	99	
4:55 PM	0	0	0	0	0	0	0	0	7	17	0	0	0	58	9	0	91	1076
5:00 PM	0	0	0	0	0	0	0	0	11	16	0	0	0	57	8	0	92	1082
5:05 PM	0	0	0	0	0	0	0	0	6	25	0	0	0	58	6	0	95	1067
5:10 PM	0	0	0	0	0	0	0	0	4	19	0	0	0	51	9	0	83	1051
5:15 PM	0	0	0	0	0	0	0	0	5	9	0	0	0	65	6	0	85	1060
5:20 PM	0	0	0	0	0	0	0	0	5	18	0	0	0	50	9	0	82	1060
5:25 PM	0	0	0	0	0	0	0	0	4	24	0	0	0	48	3	0	79	1047
5:30 PM	0	0	0	0	0	0	0	0	12	13	0	0	0	57	7	0	89	1051
5:35 PM	0	0	0	0	0	0	0	0	5	17	0	0	0	44	8	0	74	1035
5:40 PM	0	0	0	0	0	0	0	0	10	22	0	0	0	60	6	0	98	1049
5:45 PM	0	0	0	0	0	0	0	0	12	19	0	0	0	57	6	0	94	1061
5:50 PM	0	0	0	0	0	0	0	0	3	15	0	0	0	36	3	0	57	1019
5:55 PM	0	0	0	0	0	0	0	0	4	9	0	0	0	49	6	0	68	996

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	156	252	0	0	0	656	76	0	1140
Heavy Trucks	0	0	0		0	0	0		4	20	0		0	12	16		52
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

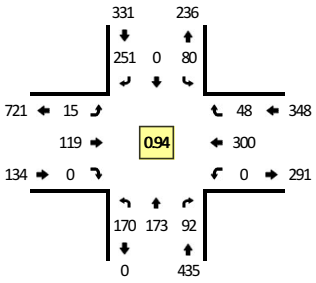
Type of peak hour being reported: Intersection Peak

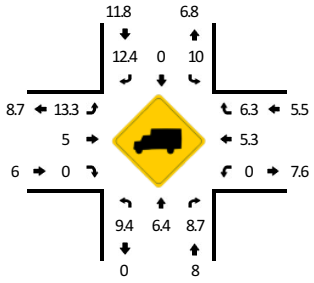
Method for determining peak hour: Total Entering Volume

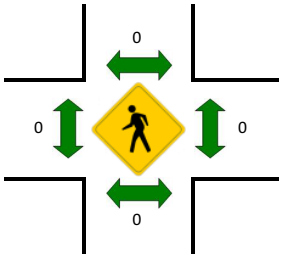
LOCATION: 6. NE 10th Ave/I-5 NB Off-Ramp -- NE 179th St
CITY/STATE: Clark, WA

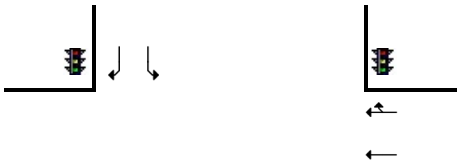
QC JOB #: 17363011
DATE: Thu, Dec 4 2025

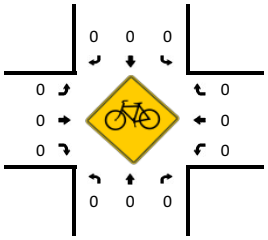
Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

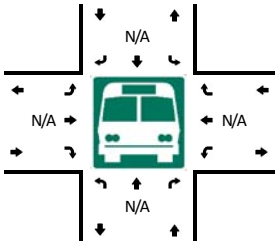


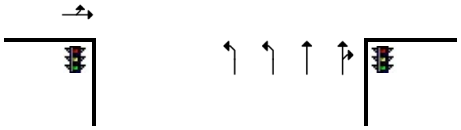


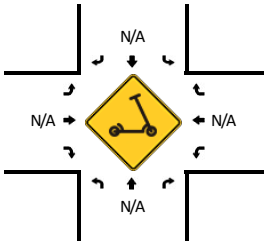












5-Min Count Period Beginning At	6. NE 10th Ave/I-5 NB Off-Ramp (Northbound)				6. NE 10th Ave/I-5 NB Off-Ramp (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	14	3	5	0	1	0	15	0	0	7	0	0	0	22	3	0	70	
7:05 AM	12	7	3	0	1	0	9	0	1	10	0	0	0	19	5	0	67	
7:10 AM	10	11	5	0	4	0	21	0	2	6	0	0	0	28	3	0	90	
7:15 AM	20	19	3	0	2	0	15	0	1	10	0	0	0	27	9	0	106	
7:20 AM	21	17	3	0	4	0	19	0	2	11	0	0	0	28	3	0	108	
7:25 AM	13	11	7	0	4	0	10	0	1	8	0	0	0	30	6	0	90	
7:30 AM	16	15	2	0	4	0	13	0	1	8	0	0	0	30	7	0	96	
7:35 AM	14	12	3	0	5	0	19	0	4	8	0	0	0	36	7	0	108	
7:40 AM	20	17	9	0	7	0	21	0	1	6	0	0	0	26	7	0	114	
7:45 AM	11	17	4	0	6	0	14	0	0	19	0	0	0	29	5	0	105	
7:50 AM	7	16	6	0	10	0	28	0	0	12	0	0	0	31	3	0	113	
7:55 AM	15	11	11	0	9	0	22	0	1	15	0	0	0	20	2	0	106	1173
8:00 AM	18	11	11	0	11	0	19	0	1	6	0	0	0	12	1	0	90	1193
8:05 AM	13	9	7	0	6	0	14	0	2	11	0	0	0	18	4	0	84	1210
8:10 AM	14	17	13	0	2	0	21	0	2	11	0	0	0	27	2	0	109	1229
8:15 AM	9	21	7	0	5	0	15	0	0	10	0	0	0	27	3	0	97	1220
8:20 AM	19	11	11	0	7	0	24	0	2	6	0	0	0	17	3	0	100	1212
8:25 AM	15	16	4	0	5	0	33	0	1	12	0	0	0	26	3	0	115	1237
8:30 AM	15	15	6	0	7	0	21	0	1	3	0	0	0	31	8	0	107	1248
8:35 AM	14	7	8	0	7	0	23	0	3	5	0	0	0	27	7	0	101	1241
8:40 AM	23	11	8	0	4	0	22	0	1	6	0	0	0	32	6	0	113	1240
8:45 AM	10	12	8	0	7	0	19	0	1	6	0	0	0	27	6	0	96	1231
8:50 AM	11	12	10	0	15	0	14	0	0	11	0	0	0	25	3	0	101	1219
8:55 AM	16	14	7	0	10	0	15	0	1	10	0	0	0	26	5	0	104	1217

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	152	200	76	0	92	0	252	0	4	148	0	0	0	344	60	0	1328
Heavy Trucks	4	8	4		12	0	24		0	0	0		0	12	4		68
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

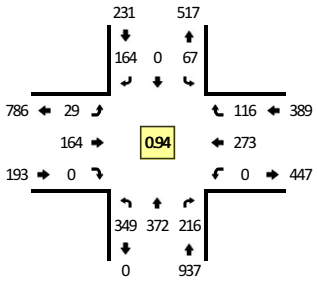
Report generated on 12/10/2025 2:13 PM

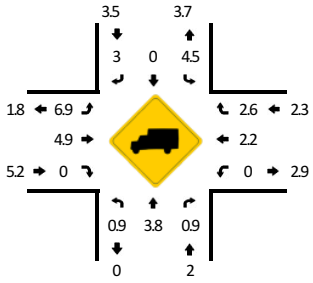
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

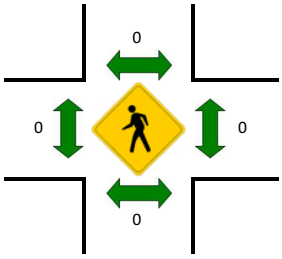
LOCATION: 6. NE 10th Ave/I-5 NB Off-Ramp -- NE 179th St | **QC JOB #:** 17363012
CITY/STATE: Clark, WA | **DATE:** Thu, Dec 4 2025

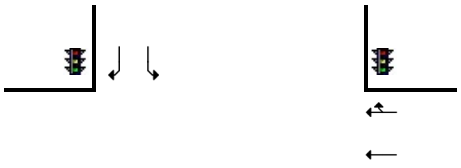
Peak-Hour: 4:25 PM -- 5:25 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

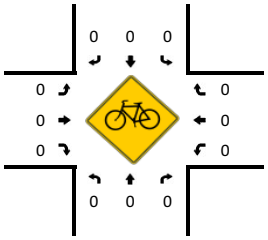


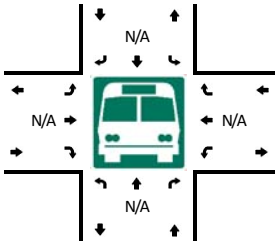


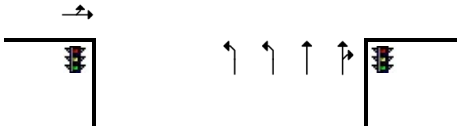
TRUE DATA TO IMPROVE MOBILITY

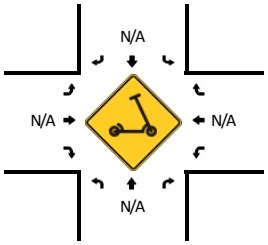










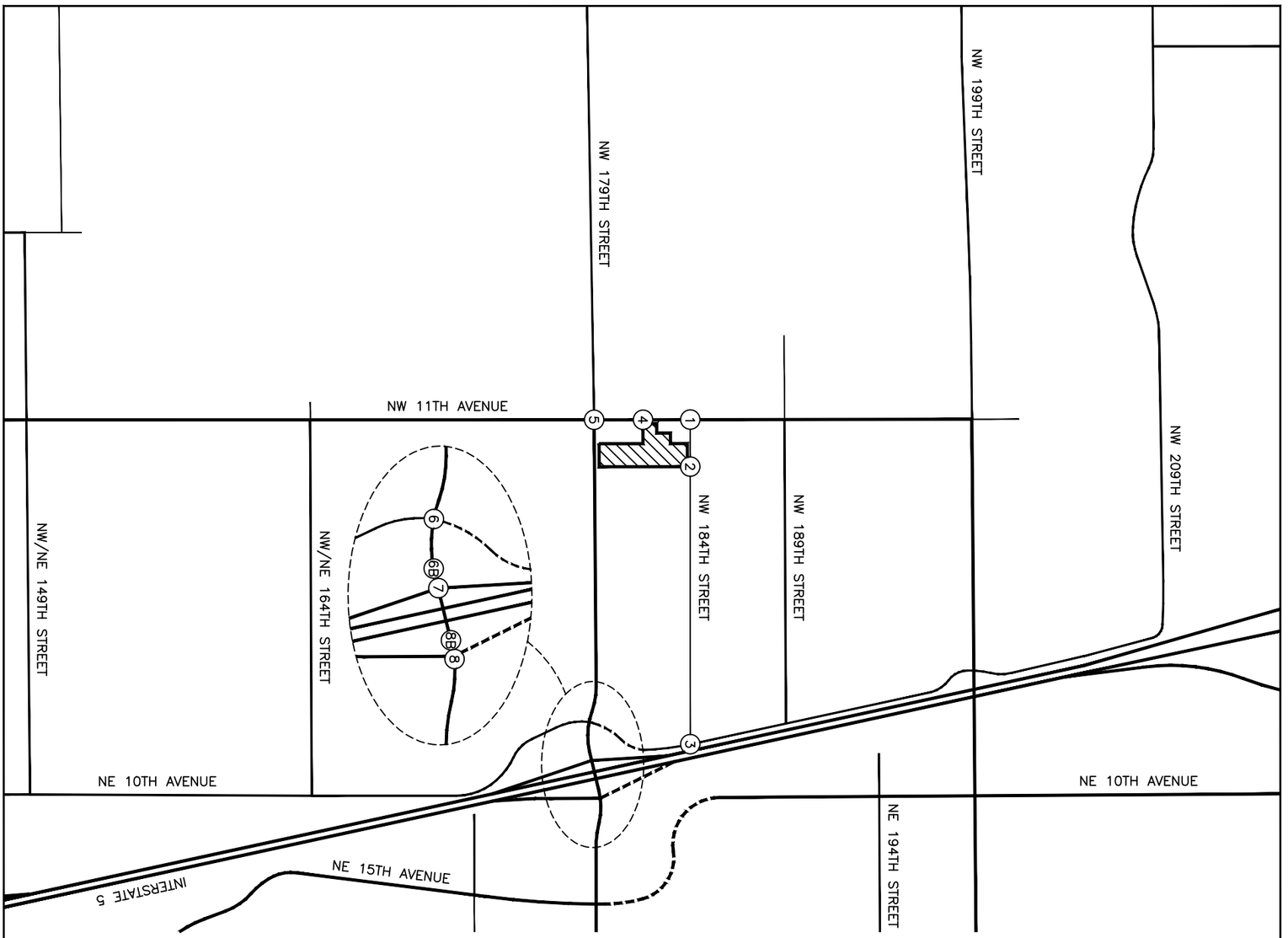


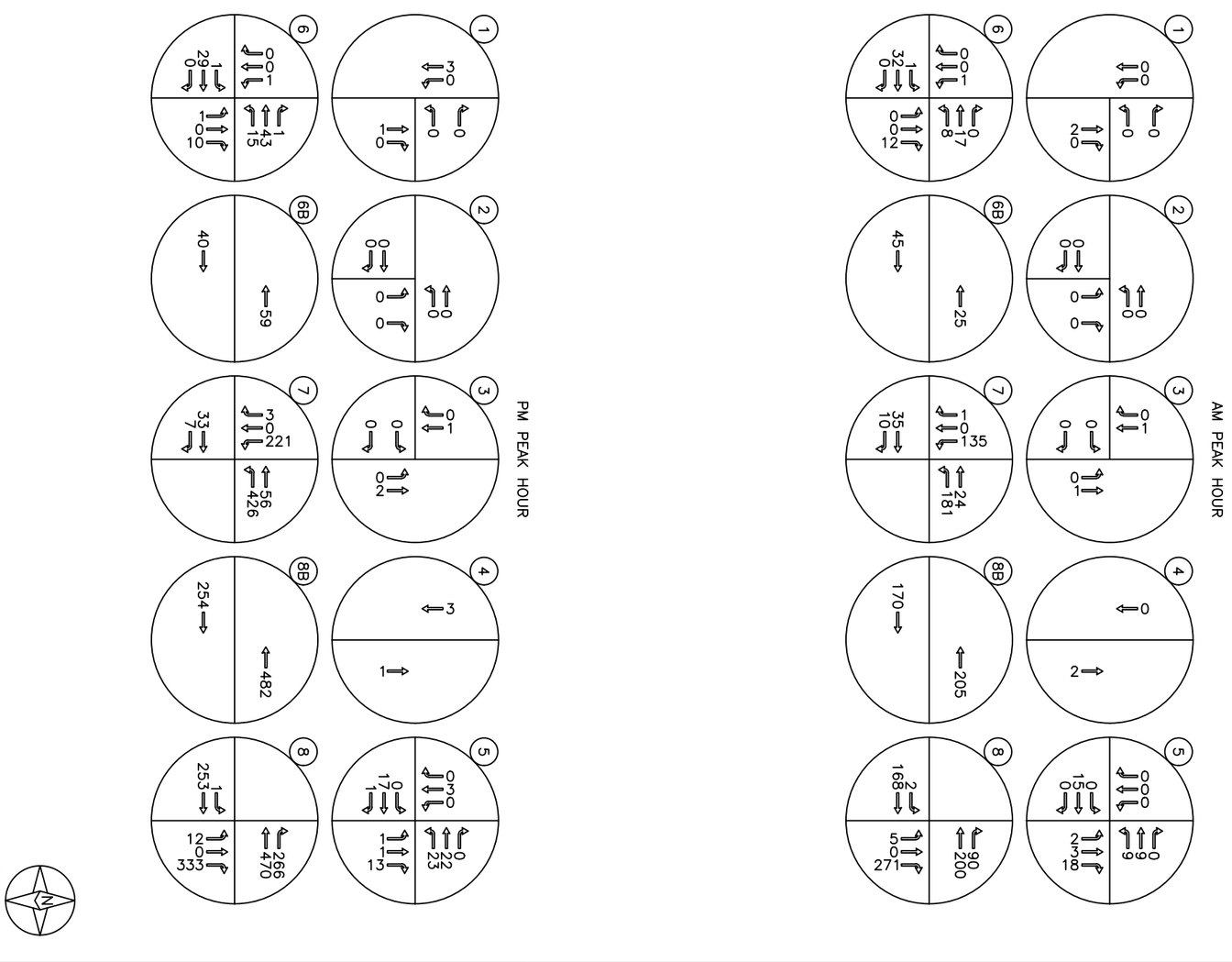
5-Min Count Period Beginning At	6. NE 10th Ave/I-5 NB Off-Ramp (Northbound)				6. NE 10th Ave/I-5 NB Off-Ramp (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	26	20	13	0	7	0	15	0	5	14	0	0	0	23	4	0	127	
4:05 PM	28	20	9	0	6	0	12	0	2	30	0	0	0	30	10	0	147	
4:10 PM	12	29	14	0	6	0	22	0	4	13	0	0	0	29	10	0	139	
4:15 PM	20	39	17	0	4	0	12	0	6	10	0	0	0	18	9	0	135	
4:20 PM	27	36	8	0	5	0	11	0	2	12	0	0	0	18	9	0	128	
4:25 PM	34	30	18	0	9	0	17	0	1	12	0	0	0	23	10	0	154	
4:30 PM	22	26	12	0	7	0	12	0	1	13	0	0	0	26	8	0	127	
4:35 PM	27	30	21	0	3	0	17	0	0	14	0	0	0	24	11	0	147	
4:40 PM	24	33	13	0	7	0	17	0	2	17	0	0	0	15	13	0	141	
4:45 PM	27	23	16	0	8	0	13	0	1	10	0	0	0	25	7	0	130	
4:50 PM	42	30	16	0	7	0	19	0	2	11	0	0	0	19	14	0	160	
4:55 PM	39	31	16	0	7	0	4	0	6	14	0	0	0	25	11	0	153	1688
5:00 PM	28	33	27	0	2	0	11	0	3	13	0	0	0	27	7	0	151	1712
5:05 PM	21	36	18	0	1	0	16	0	4	22	0	0	0	24	10	0	152	1717
5:10 PM	24	32	17	0	5	0	14	0	3	16	0	0	0	21	11	0	143	1721
5:15 PM	32	32	19	0	8	0	17	0	2	7	0	0	0	21	5	0	143	1729
5:20 PM	29	36	23	0	3	0	7	0	4	15	0	0	0	23	9	0	149	1750
5:25 PM	29	30	16	0	6	0	5	0	4	20	0	0	0	17	12	0	139	1735
5:30 PM	33	30	14	0	1	0	18	0	5	9	0	0	0	21	5	0	136	1744
5:35 PM	21	21	10	0	2	0	9	0	2	16	0	0	0	21	12	0	114	1711
5:40 PM	23	26	14	0	3	0	10	0	2	18	0	0	0	28	11	0	135	1705
5:45 PM	30	32	15	0	4	0	9	0	5	13	0	0	0	24	11	0	143	1718
5:50 PM	17	22	15	0	0	0	7	0	2	14	0	0	0	16	5	0	98	1656
5:55 PM	27	27	11	0	1	0	8	0	0	10	0	0	0	20	6	0	110	1613

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	436	376	236	0	64	0	136	0	44	152	0	0	0	284	128	0	1856
Heavy Trucks	8	28	8		4	0	4		4	8	0		0	4	0		68
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212



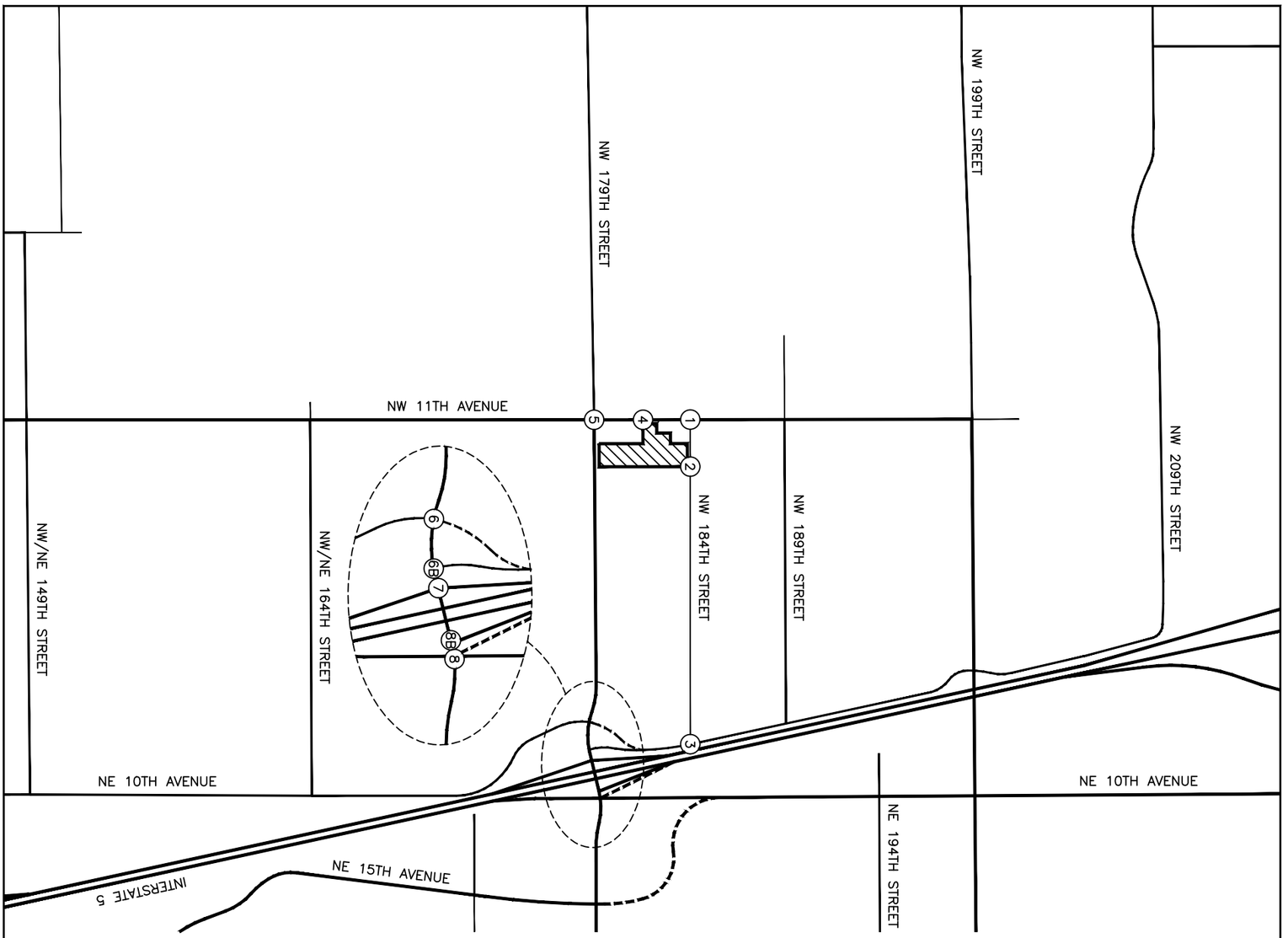


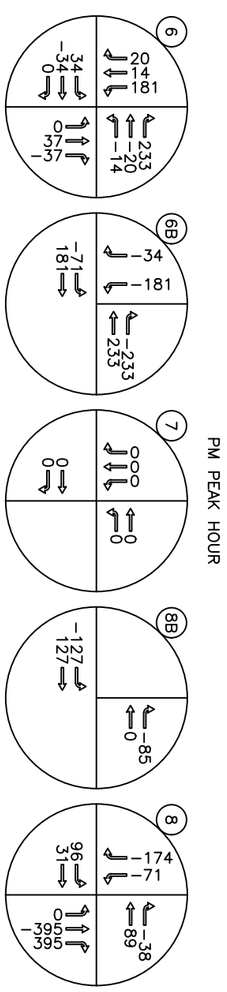
IN-PROCESS DEVELOPMENT TRIPS

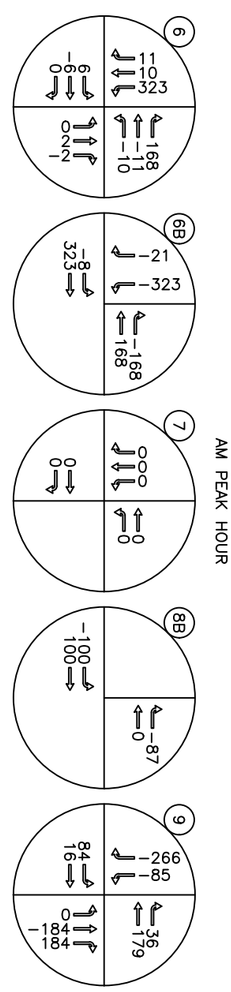
AM & PM PEAK HOURS

FIGURE A

NORTHRIDGE SUBDIVISION







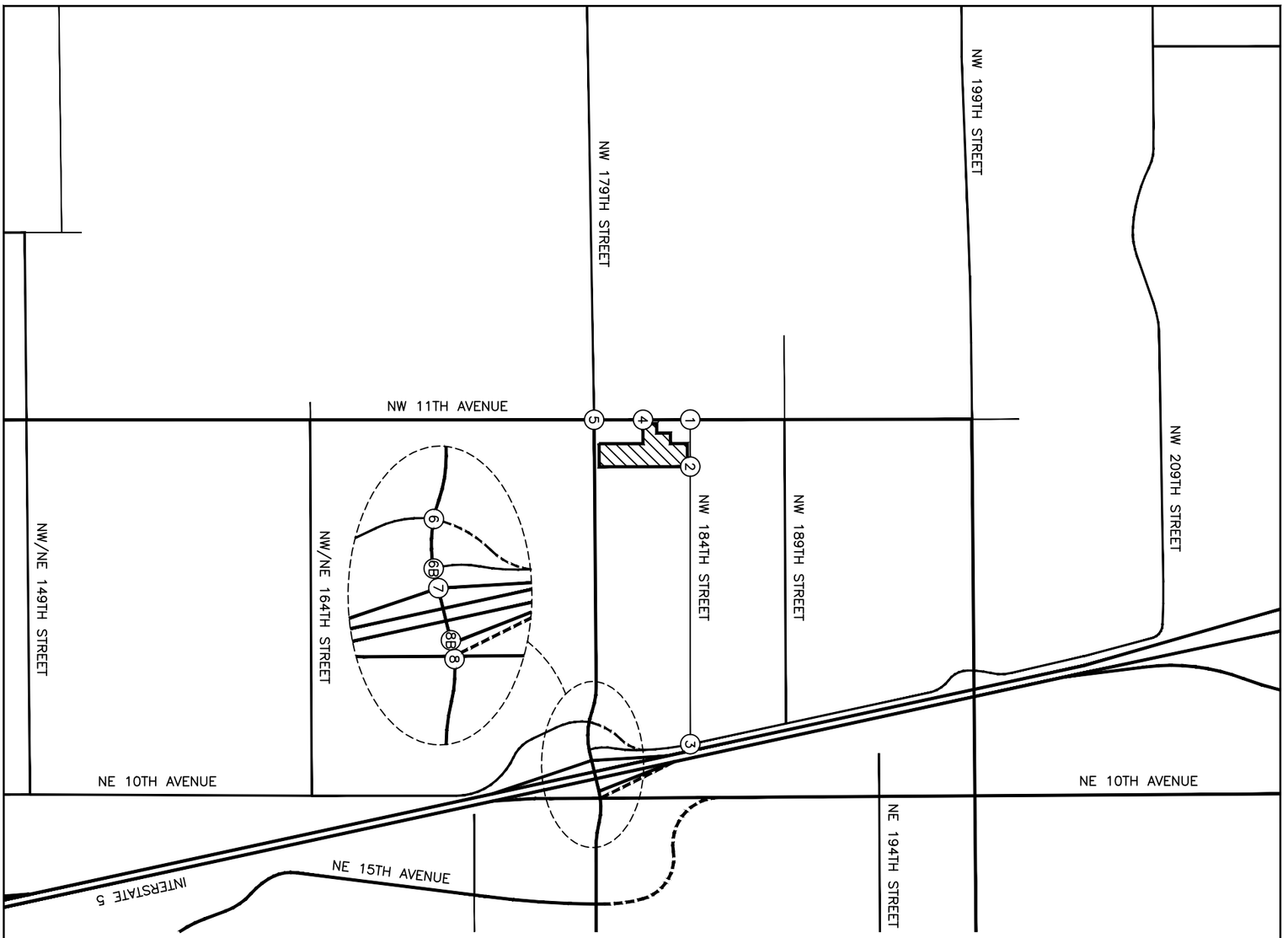
NOT TO SCALE

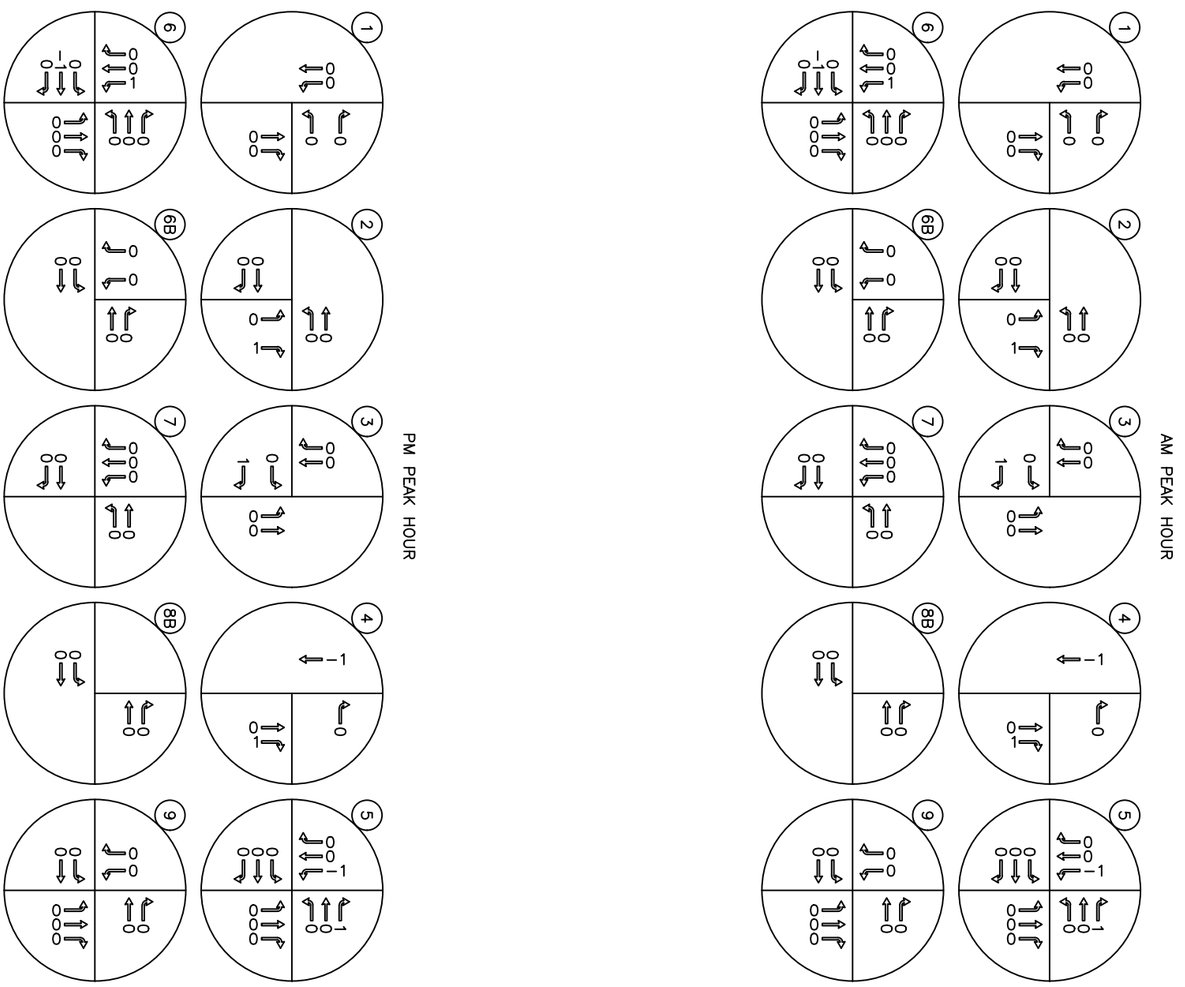
PLANNED IMPROVEMENTS – REROUTE

AM & PM PEAK HOURS

FIGURE B

NORTHRIDGE SUBDIVISION





NOT TO SCALE

PLS ENGINEERING

EXISTING SITE TRIPS – REROUTE

AM & PM PEAK HOURS

FIGURE C

NORTHRIDGE SUBDIVISION

APPENDIX E – OPERATION ANALYSIS

Level of Service Descriptions
Synchro Capacity Results
Sidra Capacity Results

LEVEL OF SERVICE

Intersection Level of Service (LOS) is a qualitative measure used to evaluate the performance of intersections and roadways based on the traffic flow, average control delay, and overall operations. The Highway Capacity Manual (HCM) defines LOS for signalized and unsignalized intersections as a function of the average vehicle control delay. LOS may be calculated per movement or per approach for any intersection configuration, but LOS for the intersection as a whole is generally defined for signalized, roundabout, and all-way stop configurations.

The LOS metric is categorized using a graded scale from A to F. Descriptions of these LOS grade levels are provided below:

LOS Grade	Description	Control Delay Per Vehicle	
		Signalized & Roundabout Intersections	**Unsignalized Intersections**
A	Indicative of relatively freeflow traffic conditions with minimal delays and high comfort for drivers. Low intersection delays and clearing of vehicles occur in a single cycle at signalized intersections.	≤ 10 seconds	≤ 10 seconds
B	Representative of reasonably free flow conditions, where speeds are maintained but maneuverability is slightly restricted. Slightly higher delays at intersections are observed.	10-20 seconds	10-15 seconds
C	Indicative of stable flow, where maneuverability is noticeably restricted, and lane changes require more driver awareness. Moderate delays at intersections may be observed, and the occasional queued vehicle may not clear in a single cycle length.	20-35 seconds	15-25 seconds
D	Signifies approaching unstable flow, with significant delays and reduced comfort. Longer delays and congestion may be apparent at an intersection. More than one cycle length at a signalized intersection may be necessary to service queued vehicles.	35-55 seconds	25-35 seconds
E	Representative of unstable flow, where traffic is at or nearing capacity, leading to long delays. High delays at an intersection are expected, and extended queuing may be observed. Cycle failures at signalized intersections are expected to occur.	55-80 seconds	35-50 seconds
F	Indicative of forced flow, where traffic demand exceeds capacity, resulting in severe congestion and delays. Very high delays and significant queues are common at intersections. Frequent cycle failures are expected to occur at signalized intersections.	>80 seconds	>50 seconds

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	1	39	0	1	63
Future Vol, veh/h	9	1	39	0	1	63
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	80	80	80	80	80	80
Heavy Vehicles, %	0	0	10	10	5	5
Mvmt Flow	11	1	49	0	1	79

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	130	49	0	0	49	0
Stage 1	49	-	-	-	-	-
Stage 2	81	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.15	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.245	-
Pot Cap-1 Maneuver	869	1026	-	-	1539	-
Stage 1	979	-	-	-	-	-
Stage 2	947	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	868	1026	-	-	1539	-
Mov Cap-2 Maneuver	868	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	947	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.14	0	0.11
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	882	28	-
HCM Lane V/C Ratio	-	-	0.014	0.001	-
HCM Ctrl Dly (s/v)	-	-	9.1	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	10	0	0
Future Vol, veh/h	1	0	0	10	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	100	100	0	0	2	2
Mvmt Flow	1	0	0	13	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1	0	14	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	13	-
Critical Hdwy	-	-	4.1	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.2	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1635	-	1005	1083
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1010	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1635	-	1005	1083
Mov Cap-2 Maneuver	-	-	-	-	1005	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1010	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1635	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	10	162	352	2
Future Vol, veh/h	0	12	10	162	352	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	17	17	3	3	4	4
Mvmt Flow	0	14	12	193	419	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	637	420	421	0	-	0
Stage 1	420	-	-	-	-	-
Stage 2	217	-	-	-	-	-
Critical Hdwy	6.57	6.37	4.13	-	-	-
Critical Hdwy Stg 1	5.57	-	-	-	-	-
Critical Hdwy Stg 2	5.57	-	-	-	-	-
Follow-up Hdwy	3.653	3.453	2.227	-	-	-
Pot Cap-1 Maneuver	418	602	1132	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	414	602	1132	-	-	-
Mov Cap-2 Maneuver	414	-	-	-	-	-
Stage 1	624	-	-	-	-	-
Stage 2	785	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.12	0.48	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	105	-	602	-	-
HCM Lane V/C Ratio	0.011	-	0.024	-	-
HCM Ctrl Dly (s/v)	8.2	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	97	3	39	81	14	8	17	65	24	10	5
Future Vol, veh/h	7	97	3	39	81	14	8	17	65	24	10	5
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	5	5	5	17	17	17	8	8	8	5	5	5
Mvmt Flow	8	113	3	45	94	16	9	20	76	28	12	6
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, s/veh	8.4	8.9	8	8.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	7%	29%	62%
Vol Thru, %	19%	91%	60%	26%
Vol Right, %	72%	3%	10%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	107	134	39
LT Vol	8	7	39	24
Through Vol	17	97	81	10
RT Vol	65	3	14	5
Lane Flow Rate	105	124	156	45
Geometry Grp	1	1	1	1
Degree of Util (X)	0.126	0.156	0.202	0.061
Departure Headway (Hd)	4.339	4.506	4.668	4.815
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	827	796	770	745
Service Time	2.361	2.529	2.691	2.84
HCM Lane V/C Ratio	0.127	0.156	0.203	0.06
HCM Control Delay, s/veh	8	8.4	8.9	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.6	0.8	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	195	7	129	136	9	78
Future Volume (veh/h)	195	7	129	136	9	78
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1722	1722	1707	1707
Adj Flow Rate, veh/h	219	4	145	153	10	9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	5	12	12	13	13
Cap, veh/h	858	16	789	1901	41	36
Arrive On Green	0.25	0.25	0.14	0.58	0.03	0.03
Sat Flow, veh/h	3577	64	1640	3358	1626	1447
Grp Volume(v), veh/h	109	114	145	153	10	9
Grp Sat Flow(s),veh/h/ln	1735	1814	1640	1636	1626	1447
Q Serve(g_s), s	1.0	1.0	1.0	0.4	0.1	0.1
Cycle Q Clear(g_c), s	1.0	1.0	1.0	0.4	0.1	0.1
Prop In Lane		0.04	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	427	447	789	1901	41	36
V/C Ratio(X)	0.25	0.26	0.18	0.08	0.25	0.25
Avail Cap(c_a), veh/h	1794	1877	1210	5319	1522	1354
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	6.2	6.2	3.2	1.9	9.7	9.7
Incr Delay (d2), s/veh	0.3	0.3	0.1	0.0	3.1	3.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.0	0.0	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	6.5	6.5	3.4	1.9	12.8	13.2
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h	223			298	19	
Approach Delay, s/veh	6.5			2.6	13.0	
Approach LOS	A			A	B	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.8	9.0			15.8	4.5
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	8.0	21.0			33.0	19.0
Max Q Clear Time (g_c+I1), s	3.0	3.0			2.4	2.1
Green Ext Time (p_c), s	0.1	1.0			0.9	0.0

Intersection Summary		
HCM 7th Control Delay, s/veh		4.6
HCM 7th LOS		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	141	501	342	294	0	0	0	0	80	1	85
Future Volume (veh/h)	0	141	501	342	294	0	0	0	0	80	1	85
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1796	1796	0				1781	1781	1781
Adj Flow Rate, veh/h	0	152	0	381	298	0				86	1	17
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	6	6	7	7	0				8	8	8
Cap, veh/h	0	294		981	515	0				272	3	245
Arrive On Green	0.00	0.16	0.00	0.29	0.29	0.00				0.16	0.16	0.16
Sat Flow, veh/h	0	1811	1535	3421	1796	0				1678	20	1510
Grp Volume(v), veh/h	0	152	0	381	298	0				87	0	17
Grp Sat Flow(s),veh/h/ln	0	1811	1535	1711	1796	0				1698	0	1510
Q Serve(g_s), s	0.0	2.4	0.0	2.8	4.4	0.0				1.4	0.0	0.3
Cycle Q Clear(g_c), s	0.0	2.4	0.0	2.8	4.4	0.0				1.4	0.0	0.3
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	294		981	515	0				275	0	245
V/C Ratio(X)	0.00	0.52		0.39	0.58	0.00				0.32	0.00	0.07
Avail Cap(c_a), veh/h	0	1174		2052	1077	0				1073	0	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.8	0.0	8.8	9.4	0.0				11.4	0.0	11.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.3	1.0	0.0				0.7	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.0	0.6	1.1	0.0				0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	13.2	0.0	9.1	10.4	0.0				12.1	0.0	11.1
LnGrp LOS		B		A	B					B		B
Approach Vol, veh/h		152			679						104	
Approach Delay, s/veh		13.2			9.7						11.9	
Approach LOS		B			A						B	

Timer - Assigned Phs		4		6		8
Phs Duration (G+Y+Rc), s		9.0		9.0		12.8
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		20.0		19.5		18.5
Max Q Clear Time (g_c+I1), s		4.4		3.4		6.4
Green Ext Time (p_c), s		0.6		0.3		2.5

Intersection Summary	
HCM 7th Control Delay, s/veh	10.5
HCM 7th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	119	0	0	300	48	170	173	92	80	0	251
Future Volume (veh/h)	15	119	0	0	300	48	170	173	92	80	0	251
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1811	1811	0	0	1811	1811	1781	1781	1781	1722	0	1722
Adj Flow Rate, veh/h	16	127	0	0	319	28	181	184	21	85	0	55
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, %	6	6	0	0	6	6	8	8	8	12	0	12
Cap, veh/h	165	348	0	0	685	60	444	548	62	293	0	0
Arrive On Green	0.21	0.21	0.00	0.00	0.21	0.21	0.13	0.18	0.18	0.18	0.00	0.00
Sat Flow, veh/h	101	1629	0	0	3293	279	3291	3066	346	1640	85	
Grp Volume(v), veh/h	143	0	0	0	170	177	181	101	104	85	10.5	
Grp Sat Flow(s),veh/h/ln	1730	0	0	0	1721	1761	1646	1692	1719	1640	B	
Q Serve(g_s), s	0.0	0.0	0.0	0.0	2.4	2.5	1.4	1.5	1.5	1.3		
Cycle Q Clear(g_c), s	1.9	0.0	0.0	0.0	2.4	2.5	1.4	1.5	1.5	1.3		
Prop In Lane	0.11		0.00	0.00		0.16	1.00		0.20	1.00		
Lane Grp Cap(c), veh/h	513	0	0	0	368	377	444	302	307	293		
V/C Ratio(X)	0.28	0.00	0.00	0.00	0.46	0.47	0.41	0.33	0.34	0.29		
Avail Cap(c_a), veh/h	1256	0	0	0	1137	1164	3940	1119	1137	645		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	9.4	0.0	0.0	0.0	9.6	9.6	11.1	10.0	10.0	10.0		
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.0	0.9	0.9	0.6	0.6	0.7	0.5		
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		
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.0	0.6	0.6	0.3	0.3	0.3	0.3		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	9.7	0.0	0.0	0.0	10.5	10.5	11.7	10.7	10.7	10.5		
LnGrp LOS	A				B	B	B	B	B	B		
Approach Vol, veh/h		143			347			386				
Approach Delay, s/veh		9.7			10.5			11.2				
Approach LOS		A			B			B				

Timer - Assigned Phs	1	2		4	5			8				
Phs Duration (G+Y+Rc), s	9.0	9.0		10.0	7.8			10.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				
Max Green Setting (Gmax), s	14.0	18.5		18.5	33.5			18.5				
Max Q Clear Time (g_c+I1), s	3.3	3.5		3.9	3.4			4.5				
Green Ext Time (p_c), s	0.1	0.8		0.5	0.6			1.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	10.6
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	341	221	158	304	20
Future Vol, veh/h	8	341	221	158	304	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	7	7	9	9	3	3
Mvmt Flow	8	355	230	165	317	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	395	0	-	0	507	197
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	194	-
Critical Hdwy	4.24	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.27	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	1125	-	-	-	493	808
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	816	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1125	-	-	-	489	808
Mov Cap-2 Maneuver	-	-	-	-	489	-
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	816	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.19	0	25.73
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1125	-	-	-	501
HCM Lane V/C Ratio	0.007	-	-	-	0.673
HCM Ctrl Dly (s/v)	8.2	-	-	-	25.7
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	5

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	1	43	0	1	67
Future Vol, veh/h	10	1	43	0	1	67
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, %	0	0	10	10	5	5
Mvmt Flow	11	1	47	0	1	73

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	122	47	0	0	47	0
Stage 1	47	-	-	-	-	-
Stage 2	75	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.15	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.245	-
Pot Cap-1 Maneuver	878	1028	-	-	1542	-
Stage 1	981	-	-	-	-	-
Stage 2	953	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	878	1028	-	-	1542	-
Mov Cap-2 Maneuver	878	-	-	-	-	-
Stage 1	980	-	-	-	-	-
Stage 2	953	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.1	0	0.11
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	890	26	-
HCM Lane V/C Ratio	-	-	0.013	0.001	-
HCM Ctrl Dly (s/v)	-	-	9.1	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	0	0	11	0	0
Future Vol, veh/h	1	0	0	11	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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, %	100	100	0	0	2	2
Mvmt Flow	1	0	0	12	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1	0	13	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	12	-
Critical Hdwy	-	-	4.1	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.2	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1635	-	1006	1083
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1635	-	1006	1083
Mov Cap-2 Maneuver	-	-	-	-	1006	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1635	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	13	11	173	375	2
Future Vol, veh/h	0	13	11	173	375	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	17	17	3	3	4	4
Mvmt Flow	0	14	12	188	408	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	621	409	410	0	-	0
Stage 1	409	-	-	-	-	-
Stage 2	212	-	-	-	-	-
Critical Hdwy	6.57	6.37	4.13	-	-	-
Critical Hdwy Stg 1	5.57	-	-	-	-	-
Critical Hdwy Stg 2	5.57	-	-	-	-	-
Follow-up Hdwy	3.653	3.453	2.227	-	-	-
Pot Cap-1 Maneuver	428	611	1144	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	789	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	423	611	1144	-	-	-
Mov Cap-2 Maneuver	423	-	-	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	789	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.03	0.49	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	108	-	611	-	-
HCM Lane V/C Ratio	0.01	-	0.023	-	-
HCM Ctrl Dly (s/v)	8.2	0	11	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	118	3	50	95	15	10	21	87	25	11	5
Future Vol, veh/h	7	118	3	50	95	15	10	21	87	25	11	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	5	5	5	17	17	17	8	8	8	5	5	5
Mvmt Flow	8	128	3	54	103	16	11	23	95	27	12	5
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, s/veh	8.6	9.2	8.3	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	5%	31%	61%
Vol Thru, %	18%	92%	59%	27%
Vol Right, %	74%	2%	9%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	118	128	160	41
LT Vol	10	7	50	25
Through Vol	21	118	95	11
RT Vol	87	3	15	5
Lane Flow Rate	128	139	174	45
Geometry Grp	1	1	1	1
Degree of Util (X)	0.157	0.177	0.23	0.061
Departure Headway (Hd)	4.415	4.59	4.756	4.936
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	812	782	755	725
Service Time	2.442	2.619	2.783	2.969
HCM Lane V/C Ratio	0.158	0.178	0.23	0.062
HCM Control Delay, s/veh	8.3	8.6	9.2	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.6	0.9	0.2

Intersection	
Int Delay, s/veh	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	2	45	1	2	67
Future Vol, veh/h	17	2	45	1	2	67
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, %	0	0	10	10	5	5
Mvmt Flow	18	2	49	1	2	73

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	127	49	0	0	50	0
Stage 1	49	-	-	-	-	-
Stage 2	77	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.15	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.245	-
Pot Cap-1 Maneuver	873	1025	-	-	1537	-
Stage 1	978	-	-	-	-	-
Stage 2	951	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	872	1025	-	-	1537	-
Mov Cap-2 Maneuver	872	-	-	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	951	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.16	0	0.21
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	885	52	-
HCM Lane V/C Ratio	-	-	0.023	0.001	-
HCM Ctrl Dly (s/v)	-	-	9.2	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1	2	1	11	8	11
Future Vol, veh/h	1	2	1	11	8	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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, %	100	100	0	0	2	2
Mvmt Flow	1	2	1	12	9	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	3	0	16	2
Stage 1	-	-	-	-	2	-
Stage 2	-	-	-	-	14	-
Critical Hdwy	-	-	4.1	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.2	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1632	-	1002	1082
Stage 1	-	-	-	-	1021	-
Stage 2	-	-	-	-	1009	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1632	-	1001	1082
Mov Cap-2 Maneuver	-	-	-	-	1001	-
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	1009	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.6	8.51
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1046	-	-	150	-
HCM Lane V/C Ratio	0.02	-	-	0.001	-
HCM Ctrl Dly (s/v)	8.5	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	24	12	173	375	2
Future Vol, veh/h	0	24	12	173	375	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	17	17	3	3	4	4
Mvmt Flow	0	26	13	188	408	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	623	409	410	0	-	0
Stage 1	409	-	-	-	-	-
Stage 2	214	-	-	-	-	-
Critical Hdwy	6.57	6.37	4.13	-	-	-
Critical Hdwy Stg 1	5.57	-	-	-	-	-
Critical Hdwy Stg 2	5.57	-	-	-	-	-
Follow-up Hdwy	3.653	3.453	2.227	-	-	-
Pot Cap-1 Maneuver	427	611	1144	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	787	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	421	611	1144	-	-	-
Mov Cap-2 Maneuver	421	-	-	-	-	-
Stage 1	632	-	-	-	-	-
Stage 2	787	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	11.15	0.53	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	117	-	611	-	-
HCM Lane V/C Ratio	0.011	-	0.043	-	-
HCM Ctrl Dly (s/v)	8.2	0	11.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	44	5	0	83
Future Vol, veh/h	0	2	44	5	0	83
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	10	10	3	3
Mvmt Flow	0	2	48	5	0	90

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	51	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	1018	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	1018	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.55	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	1018	-
HCM Lane V/C Ratio	-	-	0.002	-
HCM Ctrl Dly (s/v)	-	-	8.5	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	118	3	50	95	20	10	22	87	27	14	6
Future Vol, veh/h	7	118	3	50	95	20	10	22	87	27	14	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	5	5	5	17	17	17	8	8	8	5	5	5
Mvmt Flow	8	128	3	54	103	22	11	24	95	29	15	7
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, s/veh	8.7	9.3	8.3	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	5%	30%	57%
Vol Thru, %	18%	92%	58%	30%
Vol Right, %	73%	2%	12%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	119	128	165	47
LT Vol	10	7	50	27
Through Vol	22	118	95	14
RT Vol	87	3	20	6
Lane Flow Rate	129	139	179	51
Geometry Grp	1	1	1	1
Degree of Util (X)	0.159	0.178	0.237	0.07
Departure Headway (Hd)	4.438	4.615	4.757	4.939
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	807	776	755	724
Service Time	2.47	2.647	2.787	2.976
HCM Lane V/C Ratio	0.16	0.179	0.237	0.07
HCM Control Delay, s/veh	8.3	8.7	9.3	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.6	0.9	0.2

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	0	45	1	2	44
Future Vol, veh/h	3	0	45	1	2	44
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	80	80	80	80	80	80
Heavy Vehicles, %	0	0	4	4	7	7
Mvmt Flow	4	0	56	1	3	55

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	117	57	0	0	58	0
Stage 1	57	-	-	-	-	-
Stage 2	60	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.17	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.263	-
Pot Cap-1 Maneuver	884	1015	-	-	1515	-
Stage 1	971	-	-	-	-	-
Stage 2	968	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	882	1015	-	-	1515	-
Mov Cap-2 Maneuver	882	-	-	-	-	-
Stage 1	969	-	-	-	-	-
Stage 2	968	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.1	0	0.32
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	882	78	-
HCM Lane V/C Ratio	-	-	0.004	0.002	-
HCM Ctrl Dly (s/v)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3	0	1	3	0	0
Future Vol, veh/h	3	0	1	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	67	67	0	0	2	2
Mvmt Flow	4	0	1	4	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	4	0	10	4
Stage 1	-	-	-	-	4	-
Stage 2	-	-	-	-	6	-
Critical Hdwy	-	-	4.1	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.2	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1631	-	1010	1080
Stage 1	-	-	-	-	1019	-
Stage 2	-	-	-	-	1017	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1631	-	1009	1080
Mov Cap-2 Maneuver	-	-	-	-	1009	-
Stage 1	-	-	-	-	1019	-
Stage 2	-	-	-	-	1017	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.8	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	450	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Ctrl Dly (s/v)	0	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	8	14	250	235	2
Future Vol, veh/h	2	8	14	250	235	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	20	20	2	2	2	2
Mvmt Flow	2	9	15	275	258	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	565	259	260	0	-	0
Stage 1	259	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Critical Hdwy	6.6	6.4	4.12	-	-	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.48	2.218	-	-	-
Pot Cap-1 Maneuver	457	738	1304	-	-	-
Stage 1	744	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	451	738	1304	-	-	-
Mov Cap-2 Maneuver	451	-	-	-	-	-
Stage 1	734	-	-	-	-	-
Stage 2	708	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.6	0.41	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	95	-	654	-	-
HCM Lane V/C Ratio	0.012	-	0.017	-	-
HCM Ctrl Dly (s/v)	7.8	0	10.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	104	15	85	93	22	7	12	61	14	25	4
Future Vol, veh/h	5	104	15	85	93	22	7	12	61	14	25	4
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	1	1	1	2	2	2
Mvmt Flow	6	121	17	99	108	26	8	14	71	16	29	5
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, s/veh	8.5	9.3	8	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	4%	43%	33%
Vol Thru, %	15%	84%	47%	58%
Vol Right, %	76%	12%	11%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	124	200	43
LT Vol	7	5	85	14
Through Vol	12	104	93	25
RT Vol	61	15	22	4
Lane Flow Rate	93	144	233	50
Geometry Grp	1	1	1	1
Degree of Util (X)	0.114	0.179	0.287	0.068
Departure Headway (Hd)	4.394	4.457	4.443	4.91
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	815	805	809	729
Service Time	2.425	2.485	2.469	2.945
HCM Lane V/C Ratio	0.114	0.179	0.288	0.069
HCM Control Delay, s/veh	8	8.5	9.3	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.6	1.2	0.2



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	193	7	156	235	10	206
Future Volume (veh/h)	193	7	156	235	10	206
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1811	1841	1841	1870	1870
Adj Flow Rate, veh/h	203	4	164	247	11	26
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	4	4	2	2
Cap, veh/h	2360	46	1024	2897	68	61
Arrive On Green	0.68	0.68	0.08	0.83	0.04	0.04
Sat Flow, veh/h	3542	68	1753	3589	1781	1585
Grp Volume(v), veh/h	101	106	164	247	11	26
Grp Sat Flow(s),veh/h/ln	1721	1799	1753	1749	1781	1585
Q Serve(g_s), s	1.2	1.2	1.3	0.8	0.4	1.0
Cycle Q Clear(g_c), s	1.2	1.2	1.3	0.8	0.4	1.0
Prop In Lane		0.04	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1176	1230	1024	2897	68	61
V/C Ratio(X)	0.09	0.09	0.16	0.09	0.16	0.43
Avail Cap(c_a), veh/h	1176	1230	1092	2897	594	528
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	3.2	3.2	1.5	1.0	27.9	28.2
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.1	1.1	4.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.0	0.0	0.2	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	3.3	3.3	1.6	1.0	29.0	32.9
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h	207			411	37	
Approach Delay, s/veh	3.3			1.2	31.7	
Approach LOS	A			A	C	

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.7	45.0			53.7	6.3
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	7.0	21.0			32.0	20.0
Max Q Clear Time (g_c+I1), s	3.3	3.2			2.8	3.0
Green Ext Time (p_c), s	0.1	0.9			1.5	0.1

Intersection Summary		
HCM 7th Control Delay, s/veh		3.6
HCM 7th LOS		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	201	330	260	448	0	0	0	0	105	3	142
Future Volume (veh/h)	0	201	330	260	448	0	0	0	0	105	3	142
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1856	1870	1870	0				1811	1811	1811
Adj Flow Rate, veh/h	0	214	0	251	513	0				112	3	29
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	0				6	6	6
Cap, veh/h	0	358		505	1061	0				259	7	236
Arrive On Green	0.00	0.19	0.00	0.28	0.28	0.00				0.15	0.15	0.15
Sat Flow, veh/h	0	1856	1572	1781	3741	0				1682	45	1535
Grp Volume(v), veh/h	0	214	0	251	513	0				115	0	29
Grp Sat Flow(s),veh/h/ln	0	1856	1572	1781	1870	0				1727	0	1535
Q Serve(g_s), s	0.0	3.4	0.0	3.8	3.7	0.0				2.0	0.0	0.5
Cycle Q Clear(g_c), s	0.0	3.4	0.0	3.8	3.7	0.0				2.0	0.0	0.5
Prop In Lane	0.00		1.00	1.00		0.00				0.97		1.00
Lane Grp Cap(c), veh/h	0	358		505	1061	0				266	0	236
V/C Ratio(X)	0.00	0.60		0.50	0.48	0.00				0.43	0.00	0.12
Avail Cap(c_a), veh/h	0	1085		1097	2303	0				1010	0	898
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.0	0.0	9.7	9.7	0.0				12.5	0.0	11.9
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.8	0.3	0.0				1.1	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	0.0	1.0	1.0	0.0				0.6	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	13.6	0.0	10.5	10.0	0.0				13.6	0.0	12.1
LnGrp LOS		B		B	A					B		B
Approach Vol, veh/h		214			764						144	
Approach Delay, s/veh		13.6			10.1						13.3	
Approach LOS		B			B						B	

Timer - Assigned Phs		4		6		8
Phs Duration (G+Y+Rc), s		10.3		9.0		13.2
Change Period (Y+Rc), s		4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0		19.0		20.0
Max Q Clear Time (g_c+I1), s		5.4		4.0		5.8
Green Ext Time (p_c), s		0.9		0.5		3.4

Intersection Summary	
HCM 7th Control Delay, s/veh	11.2
HCM 7th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	164	0	0	273	116	349	372	216	67	0	164
Future Volume (veh/h)	29	164	0	0	273	116	349	372	216	67	0	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	0	0	1870	1870	1870	1870	1870	1841	0	1841
Adj Flow Rate, veh/h	31	174	0	0	290	38	371	396	83	71	0	31
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, %	5	5	0	0	2	2	2	2	2	4	0	4
Cap, veh/h	164	305	0	0	642	83	668	730	152	282	0	0
Arrive On Green	0.20	0.20	0.00	0.00	0.20	0.20	0.19	0.25	0.25	0.16	0.00	0.00
Sat Flow, veh/h	148	1506	0	0	3256	410	3456	2929	608	1753	71	
Grp Volume(v), veh/h	205	0	0	0	162	166	371	239	240	71	11.8	
Grp Sat Flow(s),veh/h/ln	1654	0	0	0	1777	1796	1728	1777	1761	1753	B	
Q Serve(g_s), s	0.9	0.0	0.0	0.0	2.5	2.5	3.0	3.6	3.7	1.1		
Cycle Q Clear(g_c), s	3.5	0.0	0.0	0.0	2.5	2.5	3.0	3.6	3.7	1.1		
Prop In Lane	0.15		0.00	0.00		0.23	1.00		0.35	1.00		
Lane Grp Cap(c), veh/h	469	0	0	0	360	364	668	443	439	282		
V/C Ratio(X)	0.44	0.00	0.00	0.00	0.45	0.46	0.56	0.54	0.55	0.25		
Avail Cap(c_a), veh/h	1117	0	0	0	1065	1077	3719	1099	1089	576		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	11.2	0.0	0.0	0.0	10.8	10.9	11.3	10.1	10.1	11.4		
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.9	0.9	0.7	1.0	1.1	0.5		
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		
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.0	0.7	0.7	0.7	0.9	0.9	0.3		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	11.8	0.0	0.0	0.0	11.7	11.8	12.0	11.1	11.2	11.8		
LnGrp LOS	B				B	B	B	B	B	B		
Approach Vol, veh/h		205			328			850				
Approach Delay, s/veh		11.8			11.7			11.5				
Approach LOS		B			B			B				

Timer - Assigned Phs	1	2		4	5			8				
Phs Duration (G+Y+Rc), s	9.0	11.7		10.3	10.0			10.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				
Max Green Setting (Gmax), s	10.3	19.2		18.6	33.4			18.6				
Max Q Clear Time (g_c+I1), s	3.1	5.7		5.5	5.0			4.5				
Green Ext Time (p_c), s	0.1	2.1		0.8	1.2			1.4				

Intersection Summary		
HCM 7th Control Delay, s/veh	11.6	
HCM 7th LOS	B	

Intersection	
Int Delay, s/veh	8.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	67	363	367	220	171	32
Future Vol, veh/h	67	363	367	220	171	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	2	2	3	3
Mvmt Flow	74	403	408	244	190	36

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	652	0	-	0	881	326
Stage 1	-	-	-	-	530	-
Stage 2	-	-	-	-	351	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	924	-	-	-	284	667
Stage 1	-	-	-	-	552	-
Stage 2	-	-	-	-	681	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	924	-	-	-	261	667
Mov Cap-2 Maneuver	-	-	-	-	261	-
Stage 1	-	-	-	-	507	-
Stage 2	-	-	-	-	681	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.44	0	50.54
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	924	-	-	-	289
HCM Lane V/C Ratio	0.081	-	-	-	0.78
HCM Ctrl Dly (s/v)	9.2	-	-	-	50.5
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0.3	-	-	-	6

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	0	49	1	2	50
Future Vol, veh/h	3	0	49	1	2	50
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, %	0	0	4	4	7	7
Mvmt Flow	3	0	53	1	2	54

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	113	54	0	0	54	0
Stage 1	54	-	-	-	-	-
Stage 2	59	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.17	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.263	-
Pot Cap-1 Maneuver	889	1019	-	-	1519	-
Stage 1	974	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	888	1019	-	-	1519	-
Mov Cap-2 Maneuver	888	-	-	-	-	-
Stage 1	972	-	-	-	-	-
Stage 2	969	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.07	0	0.28
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	888	69	-
HCM Lane V/C Ratio	-	-	0.004	0.001	-
HCM Ctrl Dly (s/v)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3	0	1	3	0	0
Future Vol, veh/h	3	0	1	3	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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, %	67	67	0	0	2	2
Mvmt Flow	3	0	1	3	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	3	0	9	3
Stage 1	-	-	-	-	3	-
Stage 2	-	-	-	-	5	-
Critical Hdwy	-	-	4.1	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.2	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1632	-	1012	1081
Stage 1	-	-	-	-	1020	-
Stage 2	-	-	-	-	1018	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1632	-	1011	1081
Mov Cap-2 Maneuver	-	-	-	-	1011	-
Stage 1	-	-	-	-	1019	-
Stage 2	-	-	-	-	1018	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.8	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	450	-
HCM Lane V/C Ratio	-	-	-	0.001	-
HCM Ctrl Dly (s/v)	0	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	8	15	267	250	2
Future Vol, veh/h	2	8	15	267	250	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	20	20	2	2	2	2
Mvmt Flow	2	8	15	267	250	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	548	251	252	0	-	0
Stage 1	251	-	-	-	-	-
Stage 2	297	-	-	-	-	-
Critical Hdwy	6.6	6.4	4.12	-	-	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.48	2.218	-	-	-
Pot Cap-1 Maneuver	468	746	1313	-	-	-
Stage 1	751	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	462	746	1313	-	-	-
Mov Cap-2 Maneuver	462	-	-	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.5	0.41	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	96	-	664	-	-
HCM Lane V/C Ratio	0.011	-	0.015	-	-
HCM Ctrl Dly (s/v)	7.8	0	10.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	127	17	113	121	23	8	14	78	15	30	4
Future Vol, veh/h	5	127	17	113	121	23	8	14	78	15	30	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	1	1	1	2	2	2
Mvmt Flow	5	138	18	123	132	25	9	15	85	16	33	4
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, s/veh	8.8	10	8.3	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	3%	44%	31%
Vol Thru, %	14%	85%	47%	61%
Vol Right, %	78%	11%	9%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	149	257	49
LT Vol	8	5	113	15
Through Vol	14	127	121	30
RT Vol	78	17	23	4
Lane Flow Rate	109	162	279	53
Geometry Grp	1	1	1	1
Degree of Util (X)	0.137	0.206	0.352	0.075
Departure Headway (Hd)	4.547	4.571	4.535	5.098
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	786	784	791	700
Service Time	2.59	2.61	2.57	3.147
HCM Lane V/C Ratio	0.139	0.207	0.353	0.076
HCM Control Delay, s/veh	8.3	8.8	10	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.8	1.6	0.2

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	0	51	5	5	50
Future Vol, veh/h	7	0	51	5	5	50
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, %	0	0	4	4	7	7
Mvmt Flow	8	0	55	5	5	54

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	123	58	0	0	61	0
Stage 1	58	-	-	-	-	-
Stage 2	65	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.17	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.263	-
Pot Cap-1 Maneuver	877	1013	-	-	1511	-
Stage 1	970	-	-	-	-	-
Stage 2	963	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	873	1013	-	-	1511	-
Mov Cap-2 Maneuver	873	-	-	-	-	-
Stage 1	966	-	-	-	-	-
Stage 2	963	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.16	0	0.67
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	873	164	-
HCM Lane V/C Ratio	-	-	0.009	0.004	-
HCM Ctrl Dly (s/v)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3	7	5	3	4	8
Future Vol, veh/h	3	7	5	3	4	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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, %	67	67	0	0	2	2
Mvmt Flow	3	8	5	3	4	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	11	0	21	7
Stage 1	-	-	-	-	7	-
Stage 2	-	-	-	-	14	-
Critical Hdwy	-	-	4.1	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.2	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1622	-	996	1075
Stage 1	-	-	-	-	1016	-
Stage 2	-	-	-	-	1009	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1622	-	992	1075
Mov Cap-2 Maneuver	-	-	-	-	992	-
Stage 1	-	-	-	-	1013	-
Stage 2	-	-	-	-	1009	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	4.52	8.48
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1046	-	-	1125	-
HCM Lane V/C Ratio	0.012	-	-	0.003	-
HCM Ctrl Dly (s/v)	8.5	-	-	7.2	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	16	19	267	250	2
Future Vol, veh/h	2	16	19	267	250	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	20	20	2	2	2	2
Mvmt Flow	2	16	19	267	250	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	556	251	252	0	-	0
Stage 1	251	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Critical Hdwy	6.6	6.4	4.12	-	-	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.48	2.218	-	-	-
Pot Cap-1 Maneuver	463	746	1313	-	-	-
Stage 1	751	-	-	-	-	-
Stage 2	709	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	455	746	1313	-	-	-
Mov Cap-2 Maneuver	455	-	-	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	709	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	10.31	0.52	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	120	-	696	-	-
HCM Lane V/C Ratio	0.014	-	0.026	-	-
HCM Ctrl Dly (s/v)	7.8	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	54	12	0	56
Future Vol, veh/h	0	2	54	12	0	56
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	4	4	2	2
Mvmt Flow	0	2	59	13	0	61

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	65	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	999	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	999	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.61	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	999	-
HCM Lane V/C Ratio	-	-	0.002	-
HCM Ctrl Dly (s/v)	-	-	8.6	-
HCM Lane LOS	-	-	A	-
HCM 95th %tile Q(veh)	-	-	0	-

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	127	17	113	121	35	8	17	78	16	32	4
Future Vol, veh/h	6	127	17	113	121	35	8	17	78	16	32	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	1	1	1	2	2	2
Mvmt Flow	7	138	18	123	132	38	9	18	85	17	35	4
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, s/veh	8.9	10.2	8.4	8.7
HCM LOS	A	B	A	A

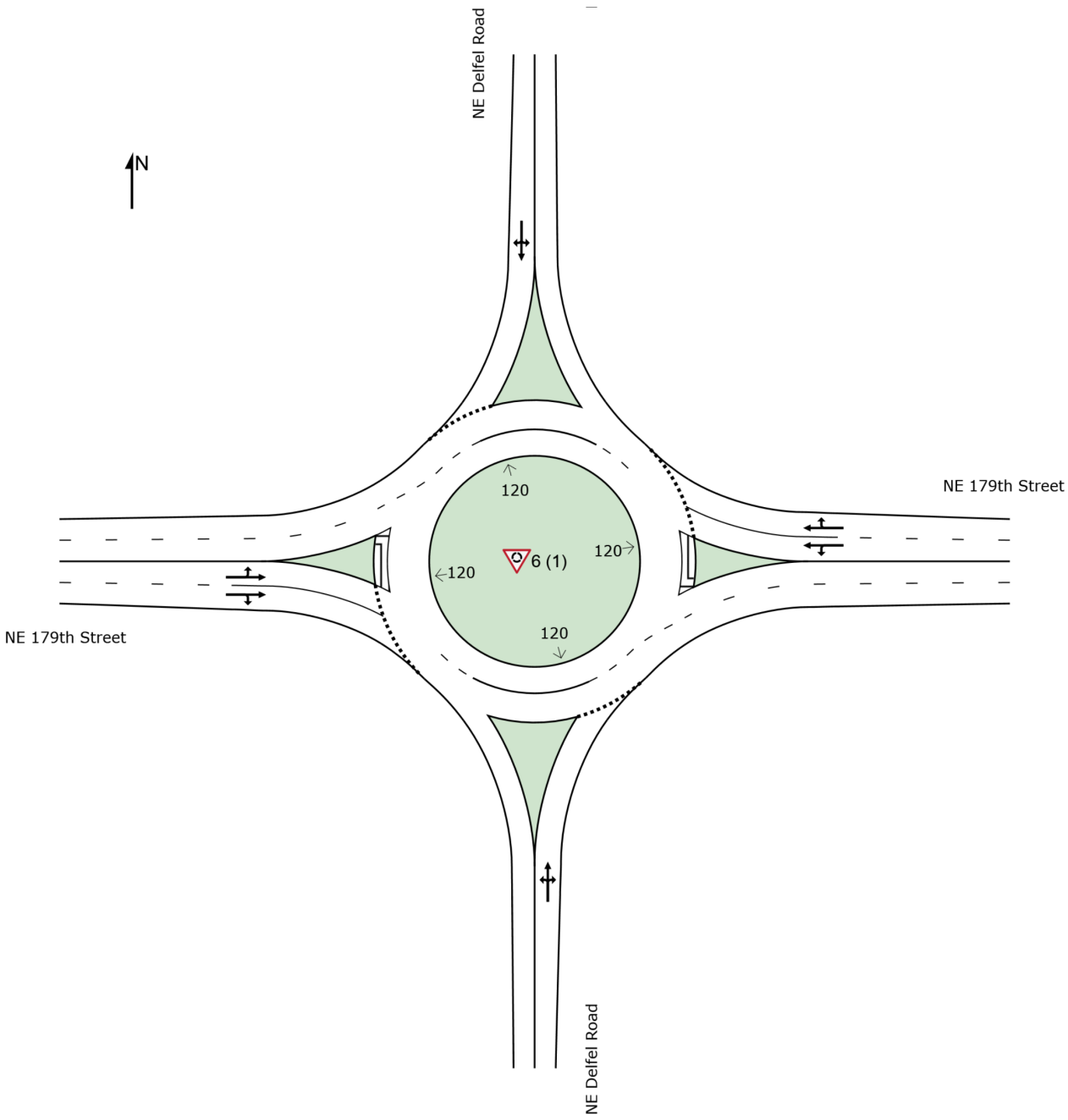
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	4%	42%	31%
Vol Thru, %	17%	85%	45%	62%
Vol Right, %	76%	11%	13%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	150	269	52
LT Vol	8	6	113	16
Through Vol	17	127	121	32
RT Vol	78	17	35	4
Lane Flow Rate	112	163	292	57
Geometry Grp	1	1	1	1
Degree of Util (X)	0.143	0.209	0.368	0.081
Departure Headway (Hd)	4.596	4.609	4.531	5.138
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	777	776	792	694
Service Time	2.645	2.651	2.568	3.193
HCM Lane V/C Ratio	0.144	0.21	0.369	0.082
HCM Control Delay, s/veh	8.4	8.9	10.2	8.7
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.5	0.8	1.7	0.3

SITE LAYOUT

Site: [6 (1)] 2028 Pre-Development - AM Peak Hour (Int 6)

NE 179th Street at NE Delfel Road
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: [6 (1)] 2028 Pre-Development - AM Peak Hour (Int 6)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

NE 179th Street at NE Delfel Road
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: NE Delfel Road															
3	L2	All MCs	11	12.6	11	12.6	0.138	12.3	LOS B	0.5	13.5	0.48	0.63	0.48	34.2
8	T1	All MCs	2	12.6	2	12.6	0.138	5.9	LOS A	0.5	13.5	0.48	0.63	0.48	35.1
18	R2	All MCs	101	12.6	101	12.6	0.138	5.9	LOS A	0.5	13.5	0.48	0.63	0.48	34.8
Approach			114	12.6	114	12.6	0.138	6.5	LOS A	0.5	13.5	0.48	0.63	0.48	34.7
East: NE 179th Street															
1	L2	All MCs	147	12.1	147	12.1	0.164	10.3	LOS B	0.9	24.0	0.11	0.55	0.11	33.5
6	T1	All MCs	163	12.1	163	12.1	0.164	3.8	LOS A	0.9	24.4	0.11	0.47	0.11	35.4
16	R2	All MCs	183	12.1	183	12.1	0.164	4.0	LOS A	0.9	24.4	0.11	0.39	0.11	36.0
Approach			492	12.1	492	12.1	0.164	5.8	LOS A	0.9	24.4	0.11	0.46	0.11	35.0
North: NE Delfel Road															
7	L2	All MCs	352	2.8	352	2.8	0.343	11.4	LOS B	1.4	35.9	0.41	0.67	0.41	32.3
4	T1	All MCs	11	2.8	11	2.8	0.343	5.0	LOS A	1.4	35.9	0.41	0.67	0.41	33.0
14	R2	All MCs	12	2.8	12	2.8	0.343	4.9	LOS A	1.4	35.9	0.41	0.67	0.41	32.7
Approach			375	2.8	375	2.8	0.343	11.0	LOS B	1.4	35.9	0.41	0.67	0.41	32.4
West: NE 179th Street															
5	L2	All MCs	8	4.5	8	4.5	0.120	12.6	LOS B	0.6	16.8	0.58	0.57	0.58	33.8
2	T1	All MCs	253	4.5	253	4.5	0.120	5.8	LOS A	0.7	18.5	0.57	0.54	0.57	34.7
12	R2	All MCs	8	4.5	8	4.5	0.120	5.7	LOS A	0.7	18.5	0.57	0.52	0.57	34.5
Approach			268	4.5	268	4.5	0.120	6.0	LOS A	0.7	18.5	0.57	0.54	0.57	34.7
All Vehicles			1250	7.7	1250	7.7	0.343	7.5	LOS A	1.4	35.9	0.33	0.56	0.33	34.1

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6 (2)] 2028 Post-Development - AM Peak Hour (Int 6)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

NE 179th Street at NE Delfel Road
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: NE Delfel Road															
3	L2	All MCs	11	12.6	11	12.6	0.140	12.4	LOS B	0.5	13.7	0.48	0.63	0.48	34.2
8	T1	All MCs	2	12.6	2	12.6	0.140	6.0	LOS A	0.5	13.7	0.48	0.63	0.48	35.1
18	R2	All MCs	101	12.6	101	12.6	0.140	6.0	LOS A	0.5	13.7	0.48	0.63	0.48	34.8
Approach			114	12.6	114	12.6	0.140	6.6	LOS A	0.5	13.7	0.48	0.63	0.48	34.7
East: NE 179th Street															
1	L2	All MCs	147	12.1	147	12.1	0.166	10.3	LOS B	0.9	24.3	0.12	0.54	0.12	33.6
6	T1	All MCs	167	12.1	167	12.1	0.166	3.8	LOS A	0.9	24.8	0.11	0.46	0.11	35.4
16	R2	All MCs	184	12.1	184	12.1	0.166	4.0	LOS A	0.9	24.8	0.11	0.39	0.11	35.9
Approach			498	12.1	498	12.1	0.166	5.8	LOS A	0.9	24.8	0.11	0.46	0.11	35.0
North: NE Delfel Road															
7	L2	All MCs	364	2.8	364	2.8	0.354	11.4	LOS B	1.5	37.5	0.41	0.68	0.41	32.3
4	T1	All MCs	11	2.8	11	2.8	0.354	5.0	LOS A	1.5	37.5	0.41	0.68	0.41	33.0
14	R2	All MCs	12	2.8	12	2.8	0.354	5.0	LOS A	1.5	37.5	0.41	0.68	0.41	32.7
Approach			387	2.8	387	2.8	0.354	11.0	LOS B	1.5	37.5	0.41	0.68	0.41	32.3
West: NE 179th Street															
5	L2	All MCs	8	4.5	8	4.5	0.122	12.7	LOS B	0.7	17.2	0.59	0.58	0.59	33.8
2	T1	All MCs	255	4.5	255	4.5	0.122	5.9	LOS A	0.7	19.0	0.58	0.55	0.58	34.7
12	R2	All MCs	8	4.5	8	4.5	0.122	5.8	LOS A	0.7	19.0	0.58	0.53	0.58	34.4
Approach			271	4.5	271	4.5	0.122	6.1	LOS A	0.7	19.0	0.58	0.55	0.58	34.7
All Vehicles			1270	7.7	1270	7.7	0.354	7.5	LOS A	1.5	37.5	0.34	0.56	0.34	34.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6 (3)] 2028 Pre-Development - PM Peak Hour (Int 6)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

NE 179th Street at NE Delfel Road
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: NE Delfel Road															
3	L2	All MCs	12	1.9	12	1.9	0.227	11.3	LOS B	0.9	22.2	0.41	0.55	0.41	34.8
8	T1	All MCs	37	1.9	37	1.9	0.227	4.9	LOS A	0.9	22.2	0.41	0.55	0.41	35.6
18	R2	All MCs	192	1.9	192	1.9	0.227	4.9	LOS A	0.9	22.2	0.41	0.55	0.41	35.3
Approach			241	1.9	241	1.9	0.227	5.2	LOS A	0.9	22.2	0.41	0.55	0.41	35.3
East: NE 179th Street															
1	L2	All MCs	167	4.1	167	4.1	0.218	10.5	LOS B	1.2	30.8	0.24	0.52	0.24	33.8
6	T1	All MCs	272	4.1	272	4.1	0.218	4.0	LOS A	1.2	31.5	0.23	0.46	0.23	35.3
16	R2	All MCs	234	4.1	234	4.1	0.218	4.1	LOS A	1.2	31.5	0.22	0.40	0.22	35.8
Approach			673	4.1	673	4.1	0.218	5.7	LOS A	1.2	31.5	0.23	0.46	0.23	35.0
North: NE Delfel Road															
7	L2	All MCs	182	2.5	182	2.5	0.208	11.4	LOS B	0.8	19.8	0.42	0.68	0.42	32.6
4	T1	All MCs	14	2.5	14	2.5	0.208	5.0	LOS A	0.8	19.8	0.42	0.68	0.42	33.2
14	R2	All MCs	20	2.5	20	2.5	0.208	5.0	LOS A	0.8	19.8	0.42	0.68	0.42	33.0
Approach			216	2.5	216	2.5	0.208	10.4	LOS B	0.8	19.8	0.42	0.68	0.42	32.7
West: NE 179th Street															
5	L2	All MCs	35	5.5	35	5.5	0.097	11.7	LOS B	0.5	12.7	0.47	0.56	0.47	33.6
2	T1	All MCs	200	5.5	200	5.5	0.097	5.0	LOS A	0.5	13.6	0.45	0.49	0.45	34.9
12	R2	All MCs	7	5.5	7	5.5	0.097	5.0	LOS A	0.5	13.6	0.45	0.46	0.45	34.9
Approach			242	5.5	242	5.5	0.097	6.0	LOS A	0.5	13.6	0.46	0.50	0.46	34.7
All Vehicles			1372	3.7	1372	3.7	0.227	6.4	LOS A	1.2	31.5	0.33	0.52	0.33	34.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [6 (4)] 2028 Post-Development - PM Peak Hour (Int 6)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

NE 179th Street at NE Delfel Road
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: NE Delfel Road															
3	L2	All MCs	12	1.9	12	1.9	0.228	11.4	LOS B	0.9	22.3	0.42	0.55	0.42	34.8
8	T1	All MCs	37	1.9	37	1.9	0.228	5.0	LOS A	0.9	22.3	0.42	0.55	0.42	35.6
18	R2	All MCs	192	1.9	192	1.9	0.228	4.9	LOS A	0.9	22.3	0.42	0.55	0.42	35.3
Approach			241	1.9	241	1.9	0.228	5.3	LOS A	0.9	22.3	0.42	0.55	0.42	35.3
East: NE 179th Street															
1	L2	All MCs	167	4.1	167	4.1	0.223	10.5	LOS B	1.2	31.7	0.24	0.52	0.24	33.8
6	T1	All MCs	283	4.1	283	4.1	0.223	4.0	LOS A	1.3	32.4	0.23	0.46	0.23	35.3
16	R2	All MCs	238	4.1	238	4.1	0.223	4.1	LOS A	1.3	32.4	0.22	0.40	0.22	35.8
Approach			688	4.1	688	4.1	0.223	5.6	LOS A	1.3	32.4	0.23	0.46	0.23	35.1
North: NE Delfel Road															
7	L2	All MCs	190	2.5	190	2.5	0.217	11.5	LOS B	0.8	20.8	0.42	0.68	0.42	32.6
4	T1	All MCs	14	2.5	14	2.5	0.217	5.1	LOS A	0.8	20.8	0.42	0.68	0.42	33.2
14	R2	All MCs	20	2.5	20	2.5	0.217	5.1	LOS A	0.8	20.8	0.42	0.68	0.42	33.0
Approach			224	2.5	224	2.5	0.217	10.5	LOS B	0.8	20.8	0.42	0.68	0.42	32.6
West: NE 179th Street															
5	L2	All MCs	35	5.5	35	5.5	0.098	11.8	LOS B	0.5	12.9	0.48	0.57	0.48	33.6
2	T1	All MCs	201	5.5	201	5.5	0.098	5.1	LOS A	0.5	13.8	0.46	0.50	0.46	34.9
12	R2	All MCs	7	5.5	7	5.5	0.098	5.1	LOS A	0.5	13.8	0.45	0.46	0.45	34.9
Approach			243	5.5	243	5.5	0.098	6.0	LOS A	0.5	13.8	0.46	0.51	0.46	34.7
All Vehicles			1396	3.7	1396	3.7	0.228	6.4	LOS A	1.3	32.4	0.34	0.52	0.34	34.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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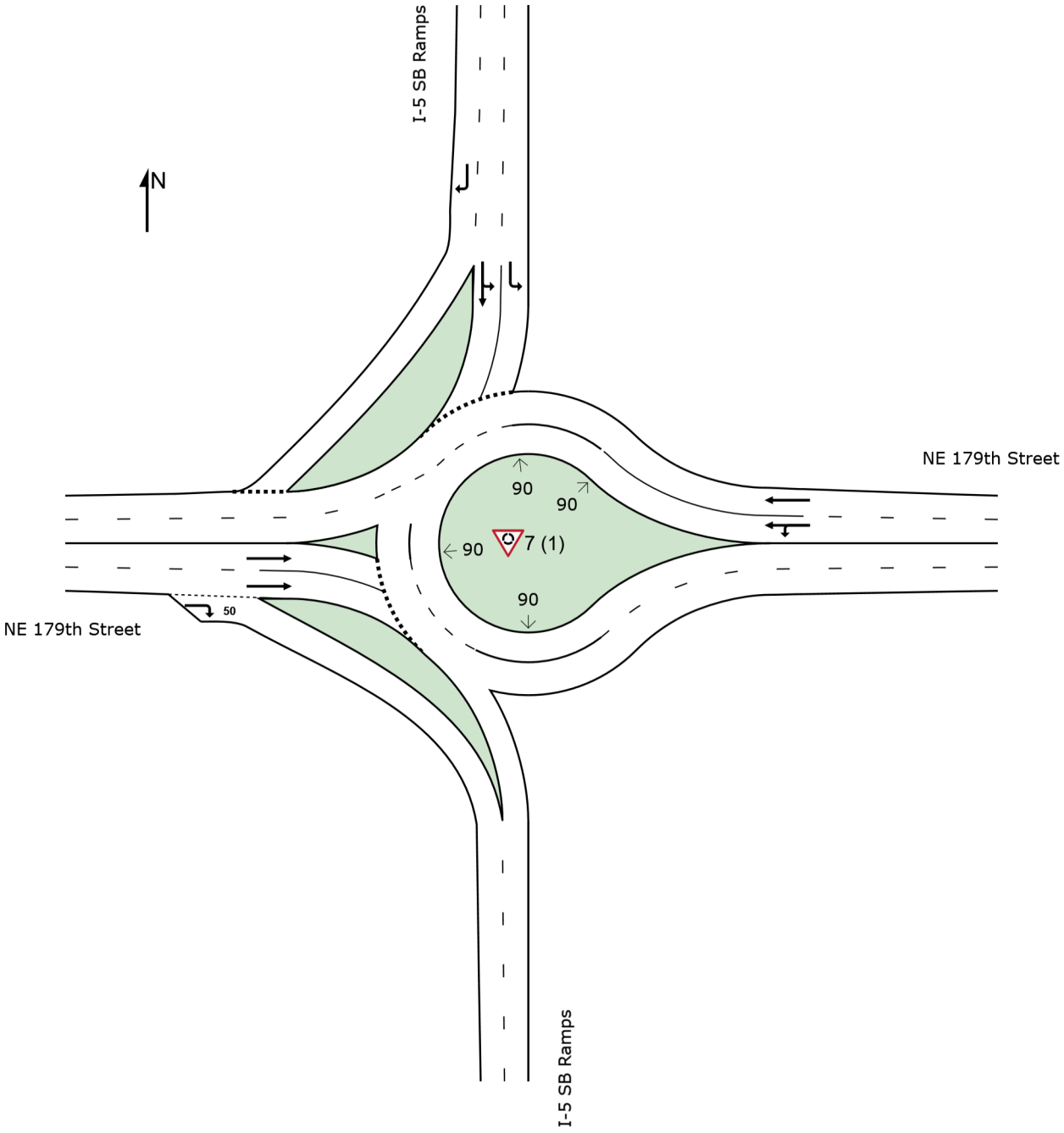
SITE LAYOUT

Site: [7 (1)] 2028 Pre-Development - AM Peak Hour (Int 7)

I-5 SB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: [7 (1)] 2028 Pre-Development - AM Peak Hour (Int 7)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

I-5 SB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
East: NE 179th Street															
1	L2	All MCs	544	7.1	544	7.1	0.387	9.8	LOS A	0.0	0.0	0.00	0.66	0.00	32.9
6	T1	All MCs	336	7.1	336	7.1	0.269	4.3	LOS A	0.0	0.0	0.00	0.39	0.00	36.4
Approach			880	7.1	880	7.1	0.387	7.7	LOS A	0.0	0.0	0.00	0.56	0.00	34.1
North: I-5 SB Ramps															
7	L2	All MCs	220	7.8	220	7.8	0.103	11.8	LOS B	0.4	10.1	0.49	0.74	0.49	31.8
4	T1	All MCs	1	7.8	1	7.8	0.103	6.0	LOS A	0.4	10.1	0.48	0.73	0.48	32.5
14	R2	All MCs	91	7.8	91	7.8	0.065	5.2	LOS A	0.3	7.0	0.35	0.52	0.35	35.0
Approach			312	7.8	312	7.8	0.103	9.9	LOS A	0.4	10.1	0.45	0.68	0.45	32.7
West: NE 179th Street															
2	T1	All MCs	185	6.4	185	6.4	0.088	6.4	LOS A	0.4	10.3	0.53	0.59	0.53	34.5
12	R2	All MCs	542	6.4	542	6.4	0.344	4.1	LOS A	0.0	0.0	0.00	0.46	0.00	36.1
Approach			727	6.4	727	6.4	0.344	4.7	LOS A	0.4	10.3	0.14	0.49	0.14	35.7
All Vehicles			1919	6.9	1919	6.9	0.387	6.9	LOS A	0.4	10.3	0.12	0.55	0.12	34.4

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [7 (2)] 2028 Post-Development - AM Peak Hour (Int 7)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

I-5 SB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
East: NE 179th Street															
1	L2	All MCs	544	7.1	544	7.1	0.387	9.8	LOS A	0.0	0.0	0.00	0.66	0.00	32.9
6	T1	All MCs	340	7.1	340	7.1	0.272	4.3	LOS A	0.0	0.0	0.00	0.39	0.00	36.4
Approach			884	7.1	884	7.1	0.387	7.7	LOS A	0.0	0.0	0.00	0.56	0.00	34.1
North: I-5 SB Ramps															
7	L2	All MCs	220	7.8	220	7.8	0.103	11.8	LOS B	0.4	10.1	0.49	0.74	0.49	31.8
4	T1	All MCs	1	7.8	1	7.8	0.103	6.0	LOS A	0.4	10.1	0.48	0.73	0.48	32.5
14	R2	All MCs	92	7.8	92	7.8	0.066	5.2	LOS A	0.3	7.2	0.35	0.52	0.35	35.0
Approach			313	7.8	313	7.8	0.103	9.9	LOS A	0.4	10.1	0.45	0.68	0.45	32.7
West: NE 179th Street															
2	T1	All MCs	188	6.4	188	6.4	0.089	6.4	LOS A	0.4	10.4	0.53	0.59	0.53	34.5
12	R2	All MCs	552	6.4	552	6.4	0.351	4.1	LOS A	0.0	0.0	0.00	0.46	0.00	36.1
Approach			740	6.4	740	6.4	0.351	4.7	LOS A	0.4	10.4	0.13	0.49	0.13	35.7
All Vehicles			1937	6.9	1937	6.9	0.387	6.9	LOS A	0.4	10.4	0.12	0.55	0.12	34.4

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [7 (3)] 2028 Pre-Development - PM Peak Hour (Int 7)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

I-5 SB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
East: NE 179th Street															
1	L2	All MCs	702	2.0	702	2.0	0.475	9.7	LOS A	0.0	0.0	0.00	0.67	0.00	33.0
6	T1	All MCs	531	2.0	531	2.0	0.393	4.2	LOS A	0.0	0.0	0.00	0.40	0.00	36.5
Approach			1233	2.0	1233	2.0	0.475	7.4	LOS A	0.0	0.0	0.00	0.55	0.00	34.4
North: I-5 SB Ramps															
7	L2	All MCs	332	6.0	332	6.0	0.162	12.5	LOS B	0.6	17.0	0.56	0.78	0.56	31.6
4	T1	All MCs	3	6.0	3	6.0	0.162	6.5	LOS A	0.6	17.0	0.55	0.76	0.55	32.4
14	R2	All MCs	154	6.0	154	6.0	0.117	5.9	LOS A	0.6	14.4	0.46	0.57	0.46	34.8
Approach			489	6.0	489	6.0	0.162	10.3	LOS B	0.6	17.0	0.53	0.71	0.53	32.5
West: NE 179th Street															
2	T1	All MCs	246	2.8	246	2.8	0.125	7.1	LOS A	0.6	16.3	0.63	0.65	0.63	34.2
12	R2	All MCs	357	2.8	357	2.8	0.219	4.0	LOS A	0.0	0.0	0.00	0.46	0.00	36.2
Approach			603	2.8	603	2.8	0.219	5.3	LOS A	0.6	16.3	0.26	0.54	0.26	35.4
All Vehicles			2325	3.0	2325	3.0	0.475	7.4	LOS A	0.6	17.0	0.18	0.58	0.18	34.2

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [7 (4)] 2028 Post-Development - PM Peak Hour (Int 7)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

I-5 SB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
East: NE 179th Street															
1	L2	All MCs	702	2.0	702	2.0	0.475	9.7	LOS A	0.0	0.0	0.00	0.67	0.00	33.0
6	T1	All MCs	544	2.0	544	2.0	0.401	4.2	LOS A	0.0	0.0	0.00	0.40	0.00	36.5
Approach			1246	2.0	1246	2.0	0.475	7.3	LOS A	0.0	0.0	0.00	0.55	0.00	34.4
North: I-5 SB Ramps															
7	L2	All MCs	332	6.0	332	6.0	0.162	12.5	LOS B	0.6	16.9	0.56	0.78	0.56	31.6
4	T1	All MCs	3	6.0	3	6.0	0.162	6.5	LOS A	0.6	16.9	0.55	0.76	0.55	32.4
14	R2	All MCs	156	6.0	156	6.0	0.119	5.9	LOS A	0.6	14.9	0.47	0.57	0.47	34.7
Approach			491	6.0	491	6.0	0.162	10.4	LOS B	0.6	16.9	0.53	0.71	0.53	32.5
West: NE 179th Street															
2	T1	All MCs	248	2.8	248	2.8	0.126	7.1	LOS A	0.6	16.4	0.63	0.65	0.63	34.2
12	R2	All MCs	364	2.8	364	2.8	0.223	4.0	LOS A	0.0	0.0	0.00	0.46	0.00	36.2
Approach			612	2.8	612	2.8	0.223	5.2	LOS A	0.6	16.4	0.26	0.54	0.26	35.4
All Vehicles			2349	3.0	2349	3.0	0.475	7.4	LOS A	0.6	16.9	0.18	0.58	0.18	34.3

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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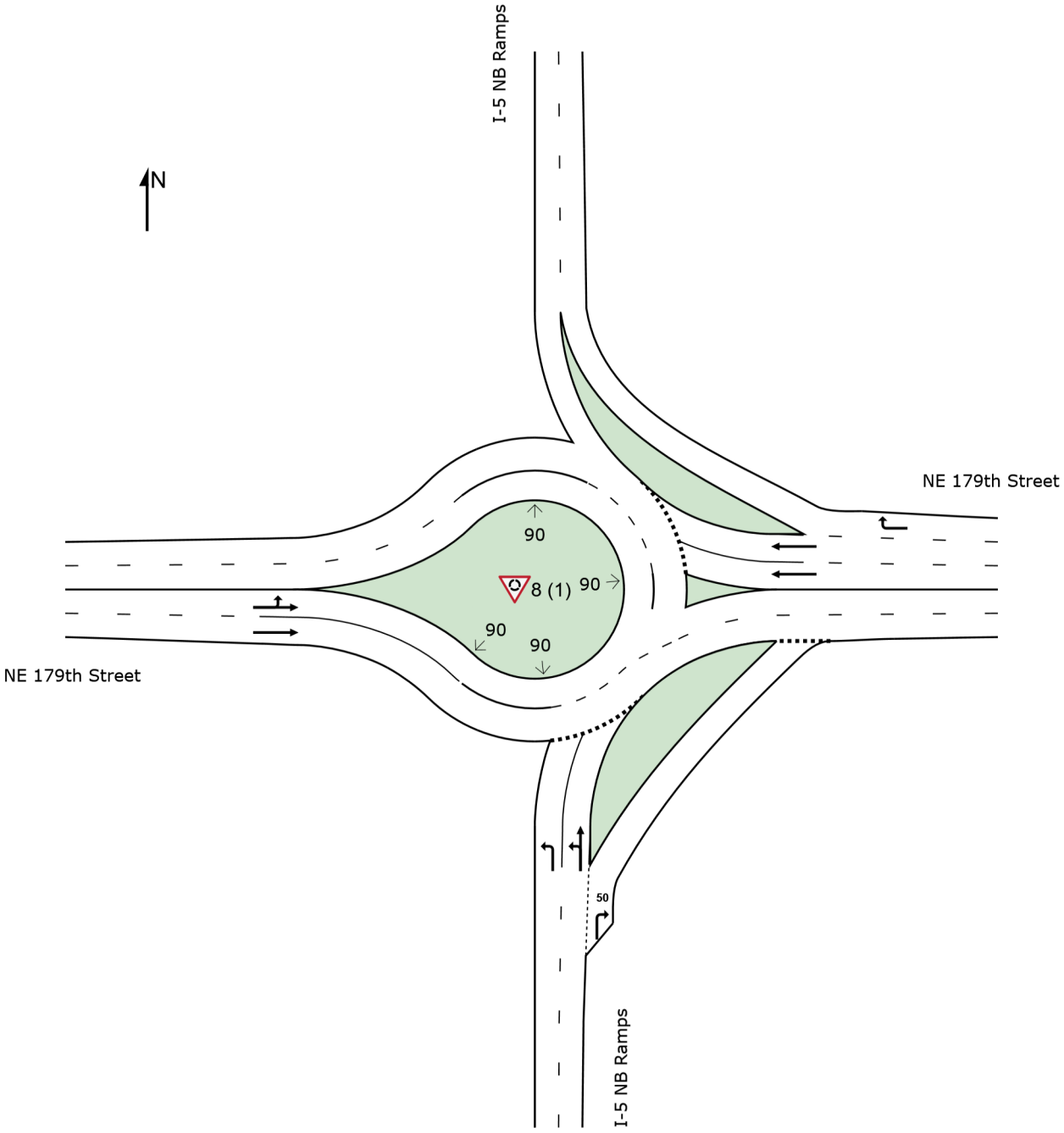
SITE LAYOUT

Site: [8 (1)] 2028 Pre-Development - AM Peak Hour (Int 8)

I-5 NB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: [8 (1)] 2028 Pre-Development - AM Peak Hour (Int 8)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

I-5 NB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: I-5 NB Ramps															
3	L2	All MCs	185	8.0	185	8.0	0.074	10.7	LOS B	0.2	6.5	0.34	0.67	0.34	32.1
8	T1	All MCs	1	8.0	1	8.0	0.074	5.1	LOS A	0.2	6.5	0.33	0.66	0.33	32.9
18	R2	All MCs	553	8.0	553	8.0	0.384	5.2	LOS A	1.7	46.3	0.38	0.54	0.38	34.9
Approach			739	8.0	739	8.0	0.384	6.6	LOS A	1.7	46.3	0.37	0.58	0.37	34.1
East: NE 179th Street															
6	T1	All MCs	697	5.5	697	5.5	0.262	5.1	LOS A	1.1	29.7	0.37	0.47	0.37	35.1
16	R2	All MCs	177	5.5	177	5.5	0.112	4.0	LOS A	0.0	0.0	0.00	0.46	0.00	36.2
Approach			874	5.5	874	5.5	0.262	4.9	LOS A	1.1	29.7	0.29	0.47	0.29	35.3
West: NE 179th Street															
5	L2	All MCs	102	6.0	102	6.0	0.149	9.8	LOS A	0.0	0.0	0.00	0.57	0.00	34.2
2	T1	All MCs	310	6.0	310	6.0	0.149	4.3	LOS A	0.0	0.0	0.00	0.45	0.00	35.9
Approach			412	6.0	412	6.0	0.149	5.6	LOS A	0.0	0.0	0.00	0.48	0.00	35.5
All Vehicles			2025	6.5	2025	6.5	0.384	5.7	LOS A	1.7	46.3	0.26	0.51	0.26	34.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [8 (2)] 2028 Post-Development - AM Peak Hour (Int 8)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

I-5 NB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: I-5 NB Ramps															
3	L2	All MCs	189	8.0	189	8.0	0.076	10.8	LOS B	0.3	6.7	0.34	0.67	0.34	32.1
8	T1	All MCs	1	8.0	1	8.0	0.076	5.1	LOS A	0.3	6.7	0.33	0.66	0.33	32.8
18	R2	All MCs	553	8.0	553	8.0	0.384	5.2	LOS A	1.7	46.3	0.38	0.54	0.38	34.9
Approach			743	8.0	743	8.0	0.384	6.6	LOS A	1.7	46.3	0.37	0.58	0.37	34.1
East: NE 179th Street															
6	T1	All MCs	697	5.5	697	5.5	0.262	5.1	LOS A	1.1	29.8	0.37	0.48	0.37	35.1
16	R2	All MCs	177	5.5	177	5.5	0.112	4.0	LOS A	0.0	0.0	0.00	0.46	0.00	36.2
Approach			874	5.5	874	5.5	0.262	4.9	LOS A	1.1	29.8	0.29	0.47	0.29	35.3
West: NE 179th Street															
5	L2	All MCs	103	6.0	103	6.0	0.150	9.8	LOS A	0.0	0.0	0.00	0.57	0.00	34.2
2	T1	All MCs	312	6.0	312	6.0	0.150	4.3	LOS A	0.0	0.0	0.00	0.45	0.00	35.9
Approach			415	6.0	415	6.0	0.150	5.6	LOS A	0.0	0.0	0.00	0.48	0.00	35.4
All Vehicles			2032	6.5	2032	6.5	0.384	5.7	LOS A	1.7	46.3	0.26	0.51	0.26	34.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [8 (3)] 2028 Pre-Development - PM Peak Hour (Int 8)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

I-5 NB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: I-5 NB Ramps															
3	L2	All MCs	382	2.0	382	2.0	0.148	10.9	LOS B	0.5	13.3	0.40	0.70	0.40	32.2
8	T1	All MCs	1	2.0	1	2.0	0.148	5.2	LOS A	0.5	13.3	0.38	0.69	0.38	32.8
18	R2	All MCs	957	2.0	957	2.0	0.640	6.3	LOS A	4.5	114.4	0.55	0.68	0.63	34.6
Approach			1340	2.0	1340	2.0	0.640	7.6	LOS A	4.5	114.4	0.51	0.69	0.56	33.9
East: NE 179th Street															
6	T1	All MCs	849	2.3	849	2.3	0.335	5.5	LOS A	1.6	40.0	0.48	0.52	0.48	34.7
16	R2	All MCs	351	2.3	351	2.3	0.214	4.0	LOS A	0.0	0.0	0.00	0.46	0.00	36.3
Approach			1200	2.3	1200	2.3	0.335	5.1	LOS A	1.6	40.0	0.34	0.50	0.34	35.2
West: NE 179th Street															
5	L2	All MCs	128	5.2	128	5.2	0.210	9.8	LOS A	0.0	0.0	0.00	0.55	0.00	34.4
2	T1	All MCs	458	5.2	458	5.2	0.210	4.3	LOS A	0.0	0.0	0.00	0.45	0.00	35.9
Approach			586	5.2	586	5.2	0.210	5.5	LOS A	0.0	0.0	0.00	0.47	0.00	35.6
All Vehicles			3126	2.7	3126	2.7	0.640	6.2	LOS A	4.5	114.4	0.35	0.57	0.37	34.7

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [8 (4)] 2028 Post-Development - PM Peak Hour (Int 8)
Output produced by SIDRA INTERSECTION Version: 10.0.9.250

I-5 NB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: I-5 NB Ramps															
3	L2	All MCs	393	2.0	393	2.0	0.152	10.9	LOS B	0.5	13.8	0.40	0.70	0.40	32.2
8	T1	All MCs	1	2.0	1	2.0	0.152	5.2	LOS A	0.5	13.8	0.39	0.69	0.39	32.8
18	R2	All MCs	957	2.0	957	2.0	0.640	6.3	LOS A	4.5	114.6	0.55	0.68	0.63	34.6
Approach			1351	2.0	1351	2.0	0.640	7.7	LOS A	4.5	114.6	0.51	0.69	0.56	33.9
East: NE 179th Street															
6	T1	All MCs	851	2.3	851	2.3	0.337	5.6	LOS A	1.6	40.4	0.49	0.52	0.49	34.7
16	R2	All MCs	351	2.3	351	2.3	0.214	4.0	LOS A	0.0	0.0	0.00	0.46	0.00	36.3
Approach			1202	2.3	1202	2.3	0.337	5.1	LOS A	1.6	40.4	0.35	0.50	0.35	35.1
West: NE 179th Street															
5	L2	All MCs	129	5.2	129	5.2	0.211	9.8	LOS A	0.0	0.0	0.00	0.55	0.00	34.3
2	T1	All MCs	459	5.2	459	5.2	0.211	4.3	LOS A	0.0	0.0	0.00	0.45	0.00	35.9
Approach			588	5.2	588	5.2	0.211	5.5	LOS A	0.0	0.0	0.00	0.47	0.00	35.6
All Vehicles			3141	2.7	3141	2.7	0.640	6.3	LOS A	4.5	114.6	0.35	0.58	0.38	34.7

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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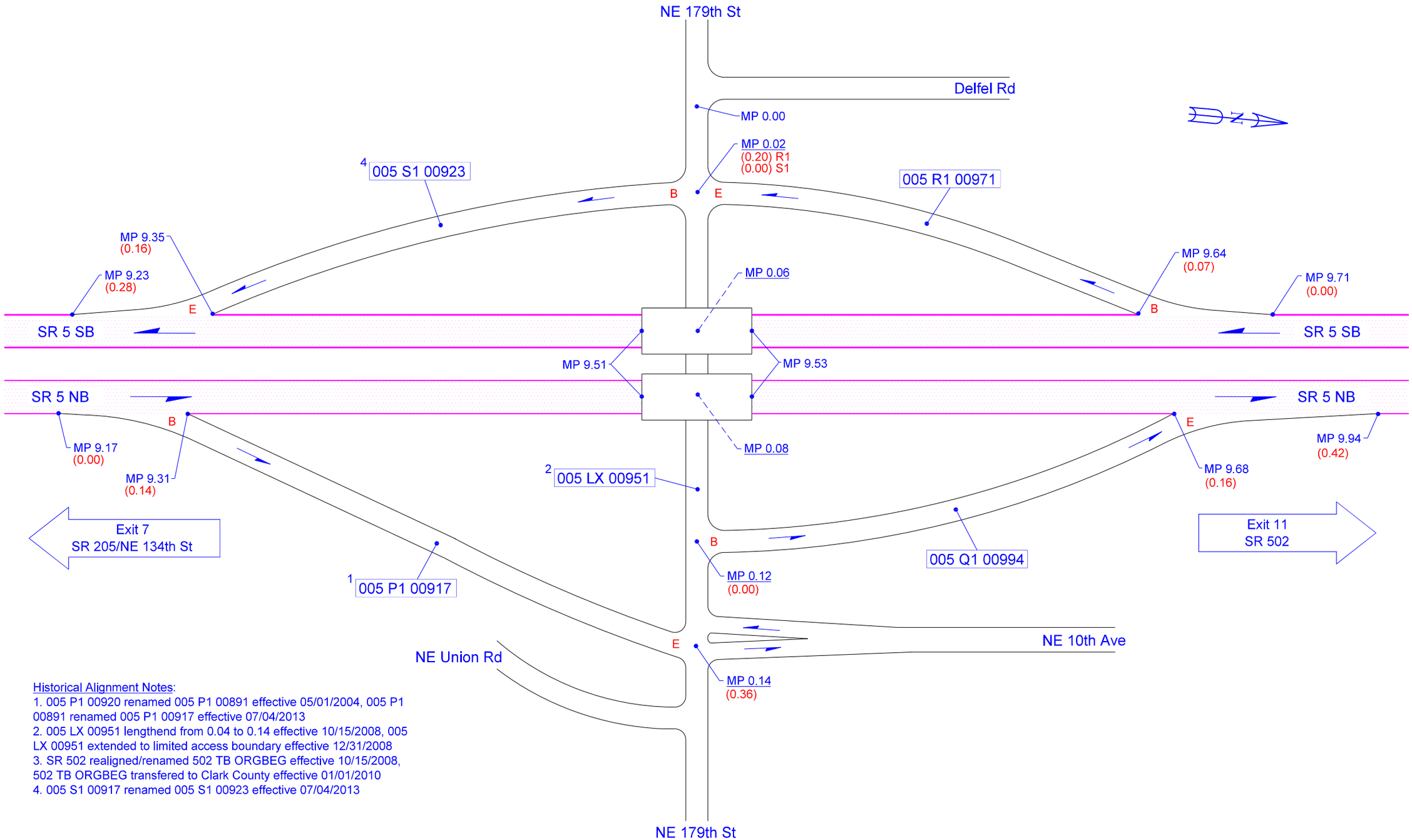
APPENDIX F – SAFETY ANALYSIS

Crash History Reports



Historical Alignment Notes:
1. 005 P1 00920 renamed 005 P1 00891 effective 05/01/2004, 005 P1 00891 renamed 005 P1 00917 effective 07/04/2013
2. 005 LX 00951 lengthend from 0.04 to 0.14 effective 10/15/2008, 005 LX 00951 extended to limited access boundary effective 12/31/2008
3. SR 502 realigned/renamed 502 TB ORGBEG effective 10/15/2008, 502 TB ORGBEG transfered to Clark County effective 01/01/2010
4. 005 S1 00917 renamed 005 S1 00923 effective 07/04/2013

Not To Scale

02/16/2017	KLK	WSDOT SOUTHWEST REGION	CLARK COUNTY	JUNCTION NE 179TH ST	SR 5 - EXIT 9

Outlook

[Records Center] Public Disclosure Request :: P019999-031226

From WSDOT <wsdot@mycusthelp.net>
Date Tue 3/17/2026 8:15 AM
To Daniel Stumpf <daniels@plsengineering.com>

--- Please respond above this line ---

Washington State Department of Transportation

RE: Public Disclosure Request of March 12, 2026, Reference #P019999-031226

Good morning Daniel,

In accordance with the Public Records Act (RCW 42.56), this letter acknowledges receipt of your request for records, Reference # P019999-031226, received 3/12/2026 concerning:

Crash data at the following 2 intersections located in unincorporated Clark County, Washington:
1. NW 184th Street at NW 11th Avenue; and
2. NE 184th Street at NE Delfel Road.

We've done a thorough search of agency records, and no responsive records were located. The responding office replied there are no available records in our database for search criteria listed.

With this communication, your request is considered closed. This is our final response. WSDOT does not intend to further address the request, and the PRA's one-year statute of limitations to seek judicial review has started to run as of the date of this correspondence.

If you have any questions, please reply to this email. Thank you and hope you have a great rest of your day.

Best regards,

Dawn Roberts
Public Disclosure Coordinator
Washington State Department of Transportation

To monitor the progress or update this request please log into the Public Disclosure Request Center

Powered by GovQA

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

179th St (Co Rd # 94300, mp 1.470 – 1.510) @ 11th Ave (Co Rd # 41410, mp 1.480 – 1.520)

01/01/2021 - *12/31/2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NW 179TH ST	94300	1.490			41410	1.500						No	EE68817	03/23/2024	14:46	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Wet	Daylight
County Road	Clark		NW 179TH ST	94300	1.490			41410	1.500						No	EB78674	10/06/2021	21:00	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear	Wet	Dark-No Street Lights
County Road	Clark		NW 179TH ST	94300	1.490			41410	1.500						No	EC65850	07/08/2022	07:25	Possible Injury	3	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NW 179TH ST	94300	1.490			41410	1.500						No	EC65854	07/15/2022	08:35	Unknown	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

179th St (Co Rd # 94300, mp 1.470 – 1.510) @ 11th Ave (Co Rd # 41410, mp 1.480 – 1.520)

01/01/2021 - *12/31/2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
From same direction - both going straight - one stopped - rear-end	Stopped at Signal or Stop Sign	Going Straight Ahead	Vehicle Stopped	Vehicle Stopped	West	East	None			Other Contributing Circ Not Listed						Lane of Primary Trafficway	1083431.55	159867.64
Entering at angle	Starting in Traffic Lane	Going Straight Ahead	South	North	East	West	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1083390.46	159883.29
Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East	South	North	None			Did Not Grant RW to Vehicle						Lane of Primary Trafficway	1083390.46	159883.29
Entering at angle	Starting in Traffic Lane	Going Straight Ahead	South	North	West	East	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1083390.46	159883.29

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

179th St (Co Rd # 94300, mp 2.280 – 2.320) @ Delfel Rd (Co Rd # 41471, mp 0.000 – 0.020 – South Leg)

01/01/2021 - *12/31/2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NE 179TH ST	41471	0.000			94300	2.300						No	EC53045	06/03/2022	22:43	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	Intersection Related but Not at Intersection	Raining	Wet	Dark-Street Lights On
County Road	Clark		NE 179TH ST	94300	2.300			41471	0.000						No	EE75164	05/07/2024	14:39	Suspected Minor Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	Intersection Related but Not at Intersection	Overcast	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

179th St (Co Rd # 94300, mp 2.280 – 2.320) @ Delfel Rd (Co Rd # 41471, mp 0.000 – 0.020 – South Leg)

01/01/2021 - *12/31/2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Slowing	West	East	West	East	Under Influence of Alcohol			None						Lane of Primary Trafficway	1087553.13	159699.2
From same direction - both going straight - both moving - sideswipe	Changing Lanes	Going Straight Ahead	East	West	East	West	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1088884.28	159835.45

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.00 – 0.02 East Leg & Co Rd # 94300, mp 2.350 – 2.370- West Leg) @ Delfel Rd (Co Rd # 41860, mp 0.000 – 0.020)

01/01/2021 - *12/31/2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NE 179TH ST	94300	2.370			41860	0.000						No	EB11344	02/28/2021	15:58	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 179TH ST	94300	2.370			41860	0.000						No	EB30674	04/26/2021	17:00	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	Intersection Related but Not at Intersection	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 179TH ST	94300	2.370			41860	0.000						No	EC75587	08/16/2022	17:30	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.00									0.00	No	EE97595	07/17/2024	07:43	No Apparent Injury	0	0	3	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.00									0.00	No	ED91868	07/24/2023	12:52	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.00 – 0.02 East Leg & Co Rd # 94300, mp 2.350 – 2.370- West Leg) @ Delfel Rd (Co Rd # 41860, mp 0.000 – 0.020)

01/01/2021 - *12/31/2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Entering at angle	Making Left Turn	Going Straight Ahead	North	East	East	West	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1088006.14	159687.14
From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped for Traffic	West	East	Vehicle Stopped	Vehicle Stopped	Follow Too Closely			None						Lane of Primary Trafficway	1087841.97	159671.61
Entering at angle	Making Right Turn	Going Straight Ahead	East	North	North	South	Under Influence of Alcohol			None						Intersecting Trafficway	1088006.14	159687.14
Entering at angle	Making Left Turn	Going Straight Ahead	North	East	East	West	Did Not Grant RW to Vehicle			None						Lane 1 LX Decreasing Milepost	1088035.39	159683.65
Entering at angle	Making Left Turn	Going Straight Ahead	North	East	West	East	Did Not Grant RW to Vehicle			None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1088036.25	159686.66

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.00 - 0.07) @ SR 005 SB on-off ramps

SR 005R100971 (SR 005 SB off-ramp, mp 0.12 – 0.20) @ SR 005LX00951 (aka 179th St, mp 0.00 - 0.07)

SR 005S100923 (SR 005 SB on-ramp, mp 0.00 – 0.10) @ SR 005LX00951 (aka 179th St, mp 0.00 - 0.07)

01/01/2021 - *12/31/2025* *See 2nd tab below for road info & interchange drawings*

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JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.00 - 0.07) @ SR 005 SB on-off ramps

SR 005R100971 (SR 005 SB off-ramp, mp 0.12 – 0.20) @ SR 005LX00951 (aka 179th St, mp 0.00 - 0.07)

SR 005S100923 (SR 005 SB on-ramp, mp 0.00 – 0.10) @ SR 005LX00951 (aka 179th St, mp 0.00 - 0.07)

01/01/2021 - *12/31/2025* *See 2nd tab below for road info & interchange drawings*

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FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.10 - 0.14) @ SR 005 NB on-ramp

SR 005Q100994 (SR 005 NB on-ramp, mp 0.00 – 0.02) @ SR 005LX00951 (aka 179th St, mp 0.10 - 0.14) - *No Reported Crashes*

SR 005LX00951 (aka 179th St, mp 0.12 - 0.14 -West Leg & Co Rd # 94360, mp 2.470 – 2.490 – East Leg) @ SR 005 NB off-ramp / 10th Ave (Co Rd # 41761, mp 0.000 – 0.020)

SR 005P100917 (SR 005 NB off-ramp, mp 0.27 – 0.36) @ SR 005LX00951 (aka 179th St, mp 0.12 - 0.14 -West Leg & Co Rd # 94360, mp 2.470 – 2.490 – East Leg) - *No Reported Crashes*

01/01/2021 - *12/31/2025* *See 2nd tab below for road info & interchange drawings*

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County Road	Clark		NE 10TH AVE	41761	0.000			94360	0.000						No	EE82582	05/27/2024	12:19	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.12									0.12	No	EE53383	02/18/2024	12:25	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.12									0.12	No	EC17012	02/02/2022	16:58	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Raining	Wet	Daylight
State Route	Clark		005LX00951	005LX00951	0.12									0.12	No	ED04036	11/12/2022	21:45	Suspected Minor Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	Intersection Related but Not at Intersection	Overcast	Dry	Dark-Street Lights On
State Route	Clark		005LX00951	005LX00951	0.12									0.12	No	EF91823	05/02/2025	16:21	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EB89575	11/13/2021	13:55	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	ED31404	01/29/2023	15:53	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EE74078	04/29/2024	11:22	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EC06793	12/23/2021	22:09	Suspected Minor Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Raining	Wet	Dark-Street Lights On
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EG01604	06/15/2025	15:52	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.10 - 0.14) @ SR 005 NB on-ramp

SR 005Q100994 (SR 005 NB on-ramp, mp 0.00 – 0.02) @ SR 005LX00951 (aka 179th St, mp 0.10 - 0.14) - *No Reported Crashes*

SR 005LX00951 (aka 179th St, mp 0.12 - 0.14 -West Leg & Co Rd # 94360, mp 2.470 – 2.490 – East Leg) @ SR 005 NB off-ramp / 10th Ave (Co Rd # 41761, mp 0.000 – 0.020)

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01/01/2021 - *12/31/2025* *See 2nd tab below for road info & interchange drawings*

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Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West	South	North	Under Influence of Alcohol	Did Not Grant R/W to Non Motorist	Disregard Traffic Sign and Signals	None						Lane of Primary Trafficway	1088702.83	159822.35
From same direction - all others	Backing	Stopped for Traffic	West	Vehicle Backing	West	Vehicle Stopped	Improper Backing			None						Left Turn Lane LX Increasing Milepost (Prior to 2002 Impact Location Code was	1088596.51	159795.69
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	North	East	West	Did Not Grant RW to Vehicle			None						Lane 1 LX Decreasing Milepost	1088598.62	159796.09
From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Going Straight Ahead	West	East	West	East	Under Influence of Alcohol	Other Contributing Circ Not Listed		None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1088623.21	159792.89
From opposite direction - one left turn - one straight	Stopped in Roadway	Going Straight Ahead	South	Vehicle Stopped	East	West	Did Not Grant RW to Vehicle	Improper Turn/Merge		None						Lane 1 LX Decreasing Milepost	1088598.37	159791.35
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	West	North	East	West	Improper Turn/Merge			None						Lane 2 LX Decreasing Milepost	1088718.52	159822.31
From same direction - one right turn - one straight	Making Right Turn	Going Straight Ahead	South	East	South	East	Improper Turn/Merge			None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1088723.3	159814.68
Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West	South	North	Disregard Traffic Sign and Signals			None						Lane 1 LX Decreasing Milepost	1088702.83	159822.34
From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	South	North	North	East	Under Influence of Alcohol	Disregard Traffic Sign and Signals		None						Lane 1 LX Decreasing Milepost	1088703.59	159812.87
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	West	North	East	West	Improper Turn/Merge			None						Lane 1 LX Decreasing Milepost	1088722.37	159819.34

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STATE ROUTE INTERSECTIONS

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State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EC94425	10/16/2022	15:05	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EC21583	02/07/2022	14:48	Possible Injury	1	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EF84426	04/15/2025	12:20	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EF88726	01/03/2025	12:58	Suspected Minor Injury	1	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Raining	Wet	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	ED15354	12/14/2022	14:06	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight

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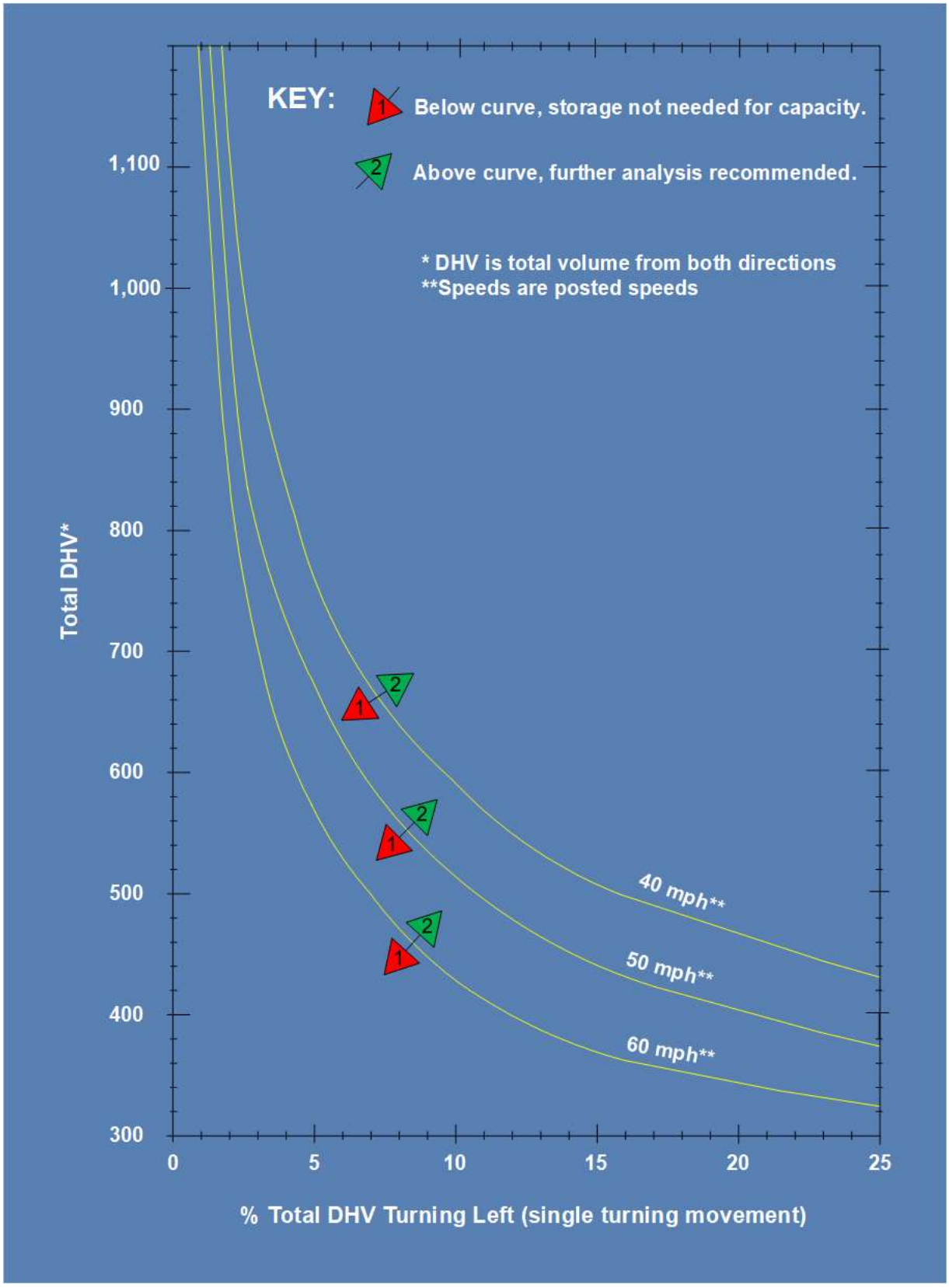
Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West	South	North	Unknown Distraction	Disregard Traffic Sign and Signals		None						Lane 2 LX Decreasing Milepost	1088704.33	159814.79
Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West	South	North	Disregard Traffic Sign and Signals			None						Lane 1 LX Decreasing Milepost	1088721.82	159822.1
From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	East	West	West	North	None			Did Not Grant RW to Vehicle						Lane 1 LX Decreasing Milepost	1088704.33	159814.79
Entering at angle	Going Straight Ahead	Making Left Turn	West	East	South	West	Disregard Traffic Sign and Signals			None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1088704.33	159814.79
Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West	South	North	Disregard Traffic Sign and Signals			None						Lane 1 LX Decreasing Milepost	1088704.33	159814.79

APPENDIX G – WARRANT ANALYSIS

Left-Turn Lane Warrant Calculations

Exhibit 1310-9 Left-Turn Storage Guidelines: Two-Lane, Unsignalized



TRANSPORTATION IMPACT STUDY

Towhee Creek Subdivision

Clark County, Washington

Prepared by:
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Consulting Engineers and Planners
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12/30/2025



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Vancouver, WA 98685

Prepared: December 30, 2025

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Executive Summary

1. The proposed Towhee Creek Planned Unit Development (PUD) and Zone Change project will include the construction of a residential subdivision on a single property east of NW 11th Avenue and south of NW 164th Street in unincorporated Clark County, Washington. The proposal will include a rezone of the site from existing R1-20 zoning to proposed R1-10 zoning and the subsequent construction of a 96-lot residential subdivision. Access to the site will be provided via a proposed public street connection with NW 11th Avenue
2. The trip generation calculations show that the proposed subdivision is projected to generate 46 AM peak hour trips, 55 PM peak hour trips, and 691 average weekday trips.
3. The intersection of NE 179th Street at NE Delfel Road (North Leg) currently operates at LOS F during the PM peak hour. However, with the closure of this intersection, relocation of the north leg of NE Delfel Road opposite of its south leg, and reconstruction of the intersection as a roundabout (i.e., 2025-2030 TIP Project B) the newly constructed intersection of NE 179th Street at NE Delfel Road is projected to operate acceptably per Clark County standards through the 2028 development year of the site. No additional mitigation is recommended at this intersection.
4. All other study intersections are currently operating acceptably per Clark County standards and are projected to continue operating acceptably through the 2028 development year of the site. Accordingly, no additional operational mitigation is necessary or recommended at the study intersections as part of the proposed development application.
5. There are several roadway segments that are projected to exceed Clark County's roadway segment v/c ratio threshold during the PM Peak hour under year 2028 conditions. However, no mitigation as part of the proposed development application is recommended. These segments and reasons for not requiring development specific mitigation include the following:
    a. Segments:
        i. NE 179th Street, between NE Delfel Road and NE 15th Avenue
        ii. NE 139th Street, between NE 10th Avenue and NE 20th Avenue
        iii. NE 139th Street, between NE 20th Avenue and NE 23rd Avenue
        iv. NE 10th Avenue, between NE 149th Street and NE 139th Street
        v. NE 10th Avenue between NE 189th Street and NE 179th Street

b. Reasons for no Development Specific Mitigation:

   i. Planned roadway improvements along NE 179th Street are expected to increase the carrying capacity of the street segment near the I-5 interchange.

   ii. These roadway segments are projected to operate with v/c ratios above 0.90 under year 2028 pre-development conditions. Therefore, the proposed Towhee Creek Subdivision project alone will not cause these roadway segments to exceed the 0.90 v/c ratio threshold.

   iii. The study intersections along these roadway segments are projected to operate within acceptable agency standards during the AM and PM peak hours under year 2028 post-development conditions. Therefore, the high roadway v/c ratios are not expected to create operational issues at the relevant/applicable study intersections.

   iv. Some of these roadway segments are designed with raised medians or additional travel lanes beyond those presented in the Standard Detail Drawings applicable to each respective roadway segment classification. It is reasonable to assume these roadway segments offer greater vehicle carrying capacity than their respective classifications.

6. All other relevant roadway segments are projected to operate acceptably per Clark County standards through the 2028 development year of the site. Accordingly, no additional roadway capacity-related mitigation is necessary or recommended beyond currently planned improvement projects as part of the proposed development application.
7. No significant trends or crash patterns were identified at any of the study intersections that are indicative of safety concerns. Accordingly, no crash-related mitigation is necessary or recommended as part of the Towhee Creek Subdivision application.
8. Adequate intersection and stopping sight distances are available at the proposed site access intersection to allow for safe and efficient operation along NW 11th Avenue. No sight distance related mitigation is necessary or recommended.
9. Left-turn lanes are not projected to be warranted at either the site access intersection along NW 11th Avenue or at the intersection of NW 149th Street at NW 11th Avenue under any analysis scenario through year 2028. Accordingly, no new turn lanes are necessary or recommended as part of the proposed Towhee Creek Subdivision project.
10. Traffic signal warrants are not projected to be met at the applicable unsignalized study intersections under any analysis scenario through the year 2028. Therefore, no new traffic signals are necessary or recommended as part of the proposed development application.

Section A – Project Description

Introduction

The proposed Towhee Creek Planned Unit Development (PUD) and Zone Change project will include the construction of a residential subdivision on a single property east of NW 11th Avenue and south of NW 164th Street in unincorporated Clark County, Washington. The proposal will include a rezone of the site from existing R1-20 zoning to proposed R1-10 zoning and the subsequent construction of a 96-lot residential subdivision. Access to the site will be provided via a proposed public street connection with NW 11th Avenue.

Based on correspondence with Clark County and WSDOT staff, the report conducts safety and capacity/level of service analyses at the following intersections:

1. NW 179th Street at NW 11th Avenue
2. NE 179th Street at NE Delfel Road (North and South Legs)
3. NE 179th Street at Interstate 5 (I-5) Southbound Ramps
4. NE 179th Street at I-5 Northbound Ramps
5. NE 179th Street at NE 15th Avenue
6. NW 164th Street at NW 11th Avenue
7. Site Access at NW 11th Avenue
8. NW 149th Street at NW 11th Avenue
9. NE 149th Street at NE 10th Avenue
10. NE 139th Street at NE 10th Avenue
11. NE 139th Street at I-5 Southbound Ramp
12. NE 139th Street at I-5 Northbound Ramp
13. NE 139th Street at NE 20th Avenue
14. NE Tenney Road at NE 10th Avenue
15. NE 134th Street at NE 20th Avenue

The purpose of this study is to determine whether the transportation system within the vicinity of the site is capable of safely and efficiently supporting the surrounding existing and proposed uses, and to determine any mitigation that may be necessary to do so. Detailed information on traffic counts, trip generation calculations, safety analyses, and level of service calculations is included in the appendix to this report.

Location Description

The project site is located south of NW 164th Street and east of NW 11th Avenue in unincorporated Clark County, Washington. The site consists of a single vacant assessor parcel (assessor parcel 185490000), which encompasses an approximate total of 10 acres. Located within a developing area of rural Clark County, the site is surrounded by low-density residential uses to the north, south, and west, and forested land to the east. Notable land uses within an approximate ¾ mile distance of the site include the Clark County Fairgrounds and Amphitheater to the northeast.

Figure 1 presents an aerial image of the nearby vicinity with the project site outlined in yellow.

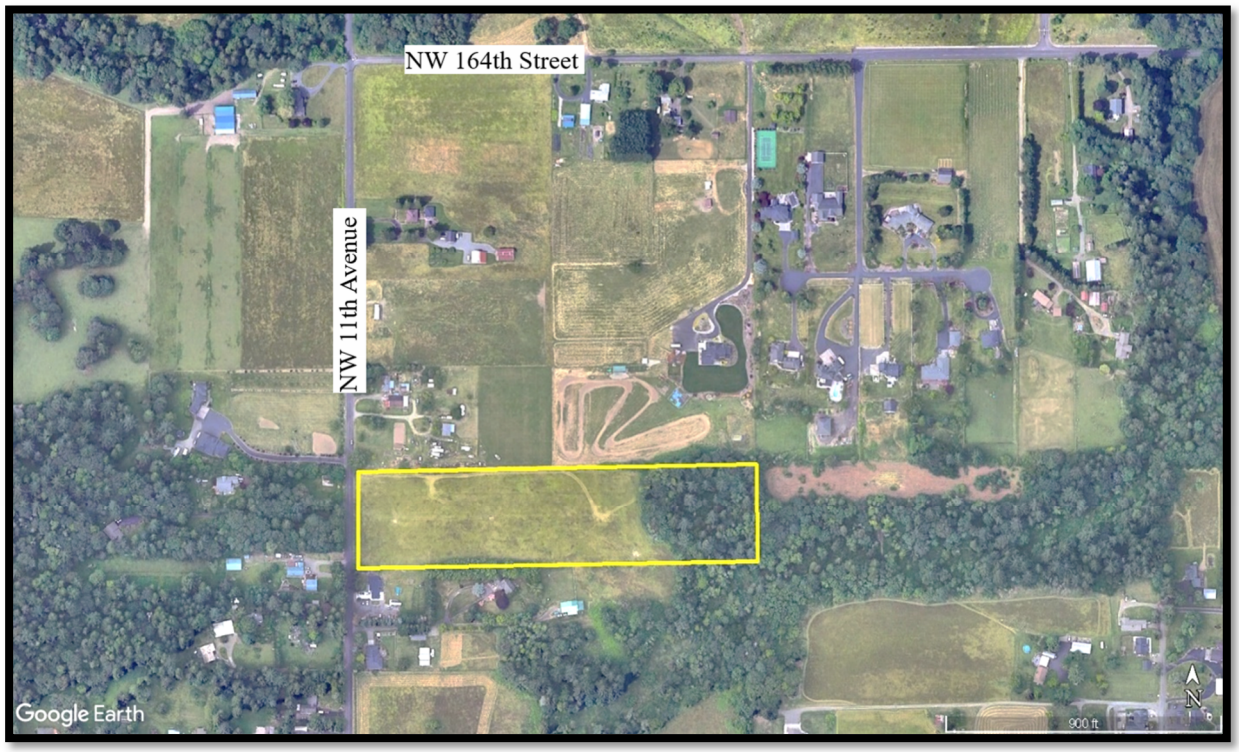


Figure 1 – Aerial Photo of Site Vicinity (Image from Google Earth)

Vicinity Streets

The study area is composed of 11 roadways near the site. Table 1 provides a description of each vicinity roadway.

Table 1 – Vicinity Roadway Descriptions

Street Name	Jurisdiction	Functional Classification	Speed (MPH)	On-Street Parking	Curbs & Sidewalks	Bicycle Lanes
NW/NE 179th Street	Clark County	Principal Arterial/ Rural Major Collector	40	Not Permitted	Partial Both Sides	Partial Both Sides
NW/NE 164th Street	Clark County	Collector	35	Not Permitted	None	None
NW/NE 149th Street	Clark County	Collector	35	Not Permitted	Partial Both Sides	Partial Both Sides
NE 139th Street	Clark County	Minor Arterial/ Collector	35	Not Permitted	Partial Both Sides	Both Sides
NE Tenney Road	Clark County	Minor Arterial	35	Not Permitted	Both Sides	Both Sides
NE 134th Street	Clark County	Minor Arterial	35	Not Permitted	Partial Both Sides	Partial Both Sides
NW 11th Avenue	Clark County	Minor Arterial	25/35/ 45	Not Permitted	Partial Both Sides	None
NE Delfel Road	Clark County	Collector	35/50*	Not Permitted	Partial Both Sides	Partial Both Sides
NE 10th Avenue (North Segment)	Clark County	Minor Arterial	50	Not Permitted	None	None
NE 10th Avenue (South Segment)	Clark County	Collector	35	Not Permitted	Partial Both Sides	Partial Both Sides
NE 15th Avenue	Clark County	Minor Arterial	40	Not Permitted	Both Sides	Both Sides
NE 20th Avenue	Clark County	Minor Arterial	40	Not Permitted	Both Sides	Both Sides

Table Notes: Functional classification based on Clark County's MapsOnline GIS website.

** Statutory speed based on Washington State Code Section RCW 46.61.400.*

Study Intersections

Based on correspondence with agency staff, an analysis of 16 existing intersections (13 future intersections) of significance was conducted. A summarized description of these study intersections under their existing lane configurations is provided in Table 2.

Table 2 – Study Intersection Descriptions

Number	Intersection	Geometry	Traffic Control	Phasing/Stopped Approaches
1	NW 179th Street at NW 11th Avenue	Four-Legged	Stop-Control	All-Way Stop-Control
2	NE 179th Street at NE Delfel Road (South Leg)	Three-Legged	Traffic Signal	FYA WB Left-turn Lane, Protected NB Left-turn Lane
2B	NE 179th Street at NE Delfel Road (North Leg)	Three-Legged	Stop-Control	Stop-Controlled SB Approach
3	NE 179th Street at I-5 SB Ramps	Four-Legged	Traffic Signal	Split EB/WB Phasing
4	NE 179th Street at I-5 NB Off-Ramp/NE 10th Avenue	Four-Legged	Traffic Signal	Protected NB/SB Left-turn Lanes, Overlap SB Right-turn Lane
4B	NE 179th Street at I-5 NB On-Ramp	Three-Legged	None	Uncontrolled
5	NE 179th Street at NE 15th Avenue	Three-Legged	Traffic Signal	Permitted NB Left-turn Lane
6	NW 164th Street at NW 11th Avenue	Four-Legged	Stop-Control	All-Way Stop-Control
8	NW 149th Street at NW 11th Avenue	Four-Legged	Stop-Control	Stop-Controlled NB/SB Approaches
9	NE 149th Street at NE 10th Avenue	Three-Legged	Traffic Signal	FYA NB Left-turn Lane
10	NE 139th Street at NE 10th Avenue	Four-Legged	Traffic Signal	Protected Left-turn Lanes, Overlap NB Right-turn Lane
11	NE 139th Street at I-5 Southbound Ramp	Three-Legged	Traffic Signal	Protected WB Left-turn Lanes
12	NE 139th Street at I-5 Northbound Ramp	Four-Legged	Traffic Signal	Protected NB Left-turn/Right-turn Lanes
13	NE 139th Street at NE 20th Avenue	Four-Legged	Traffic Signal	Protected Left-turn Lanes, Overlap Right-turn Lanes

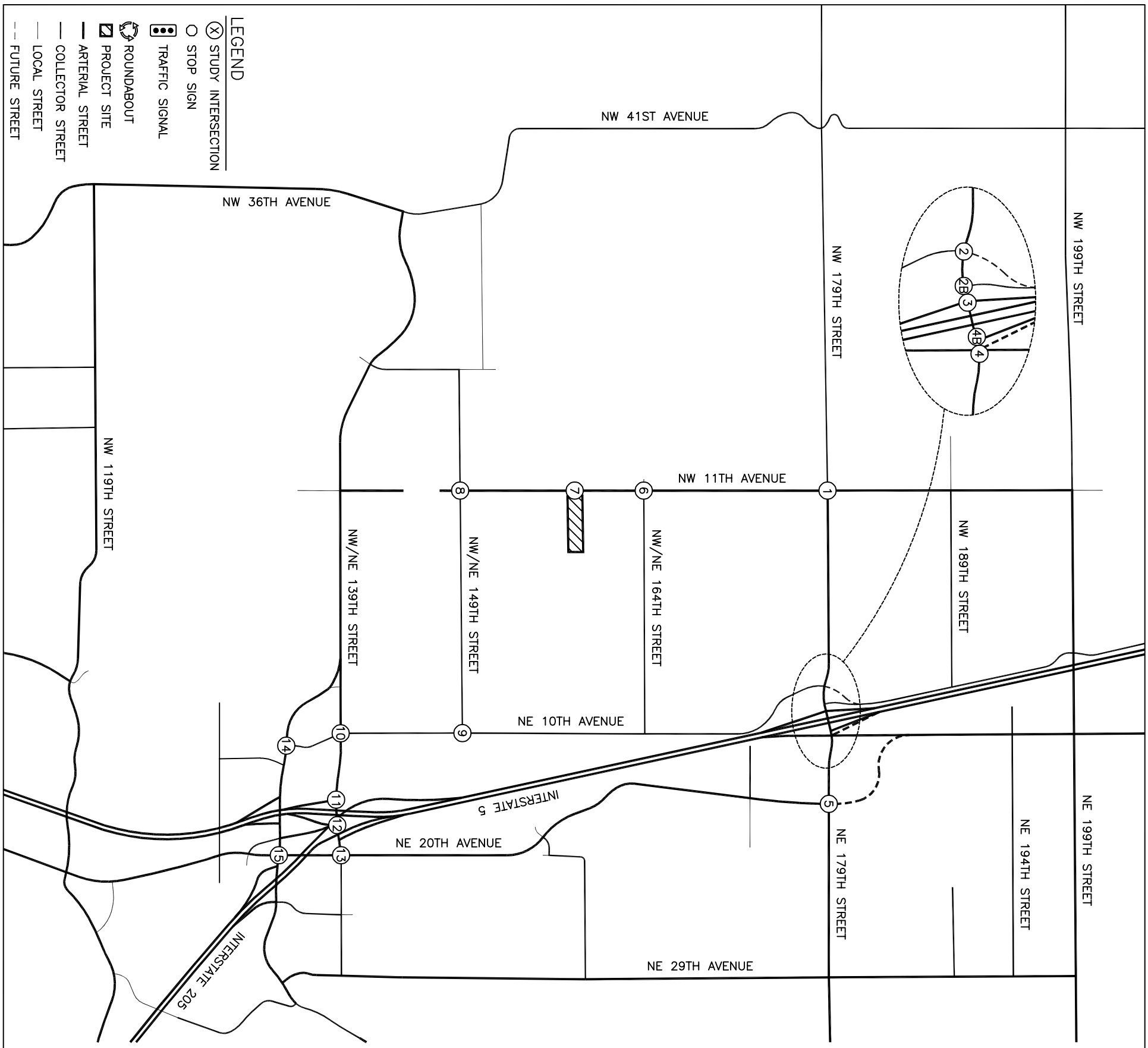
Table Notes: Flashing-Yellow-Arrow denoted as FYA.

Table 2 – Study Intersection Descriptions (Continued)

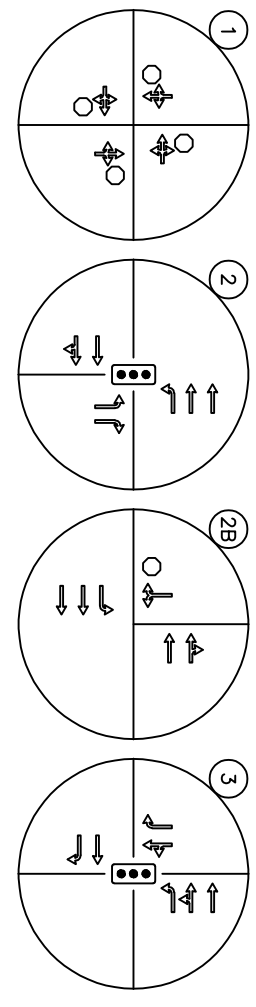
Number	Intersection	Geometry	Traffic Control	Phasing/Stopped Approaches
14	NE 134th Street at NE 10th Avenue	Three-Legged	Traffic Signal	FYA EB Left-turn Lane, Protected SB Left-turn Lanes
15	NE 134th Street at NE 20th Avenue	Four-Legged	Traffic Signal	Protected Left-turn Lanes, Overlap Right-turn Lanes

Table Notes: Flashing-Yellow-Arrow denoted as FYA.

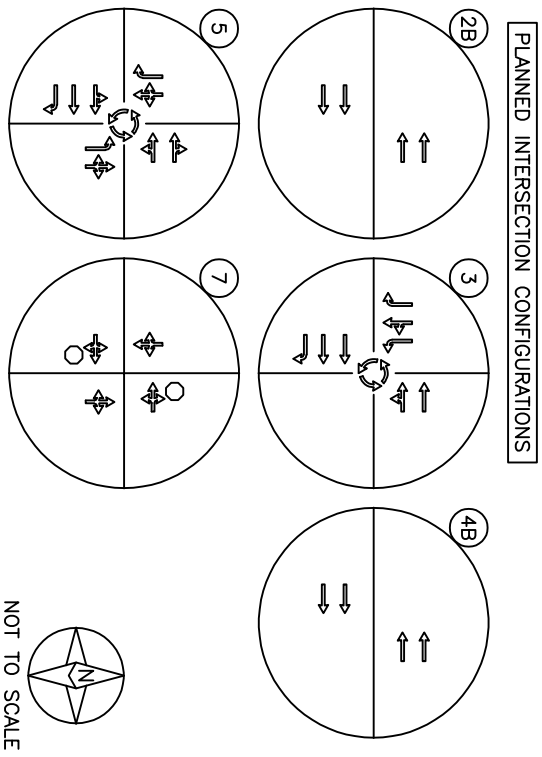
A vicinity map showing the project site, vicinity streets, and study intersection configurations are shown in Figure 2.



EXISTING INTERSECTION CONFIGURATIONS



PLANNED INTERSECTION CONFIGURATIONS



NOT TO SCALE

VICINITY MAP

INTERSECTION LANE & TRAFFIC CONTROL CONFIGURATIONS

FIGURE 2

TOWHEE CREEK SUBDIVISION

Section B – Site Trips

Trip Generation

The proposed Towhee Creek Subdivision project will include the construction of 96 townhomes/ attached dwellings on an undeveloped lot. To estimate the number of trips that are and will be generated by the proposed use, trip rates from the ITE *Trip Generation Manual, 11th Edition*[1] were used. Data from land use code 215, Single-Family Attached Housing, was used to estimate site trip generation based on the number of dwelling units.

The trip generation calculations show that the proposed subdivision is projected to generate 46 AM peak hour trips, 55 PM peak hour trips, and 691 average weekday trips. The trip generation estimates are summarized in Table 3. Detailed trip generation calculations are included in the technical appendix.

Table 3 – Site Trip Generation Summary

ITE Land Use Code		Variable	AM Peak Hour			PM Peak Hour			Weekday Total
			Enter	Exit	Total	Enter	Exit	Total	
215	Single-Family Attached Housing	96 units	12	34	46	32	23	55	691

Trip Distribution

The trip distribution of the proposed development was derived using the Southwest Washington Regional Transportation Council (RTC) transportation system model. The project site is located in Transportation Analysis Zone (TAZ) #1968, for which a select zone analysis was run to determine the distribution of site trips entering and exiting the zone.

The following trip distribution is projected:

- Approximately 22% of site trips will travel to/from the south along I-5, south of NE 139th Street.
- Approximately 14% of site trips will travel to/from the southeast along Interstate 205 (I-205), south of NE 134th Street.
- Approximately 12% of site trips will travel to/from the north along I-5, north of NE 179th Street.
- Approximately 6% of site trips will travel to/from the east along NE 179th Street, east of NE 29th Avenue.
- Approximately 5% of site trips will travel to/from the south along NE 20th Avenue, south of NE 129th Street.

[1] Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition, 2021.

- Approximately 3% of site trips will travel to/from the north along NE 10th Avenue, north of NE 199th Street.
- Approximately 3% of site trips will travel to/from the south along NW 36th Avenue, south of NW Bliss Road.
- Approximately 2% of site trips will travel to/from the north along NE 29th Avenue, north of NE 179th Street.
- Approximately 1% of site trips will travel to/from the north along NE Salmon Creek Avenue, north of NE 134th Street.
- Approximately 1% of site trips will travel to/from the south along NE Salmon Creek Avenue, south of NE 134th Street.
- Approximately 1% of site trips will travel to/from the west along NW 179th Street, west of NW 41st Avenue.
- Approximately 30% of site trips will travel to/from locales within the surrounding site vicinity between study intersections.

Although within a two-mile radius of the site, several regionally significant intersections were determined as not requiring analysis based on limited site trip impacts. These intersections with explanations for removal from study are provided below.

The following intersections will not be impacted by 5 or more peak hour trips. Therefore, no mitigation can be required as part of the application per Clark County Unified Development Code 40.350.020.G.1.c., not-with-standing safety improvements which may be necessary per section 40.350.030(B)(6):

A. NW 199th Street at NW 11th Avenue – 0 AM and PM peak hour trip impact.
B. NE 199th Street at NE Delfel Road – 2 AM and PM peak hour trip impact.
C. NE 194th Street at NE 10th Avenue – 0 AM and PM peak hour trip impact.
D. NW 189th Street at NW 11th Avenue - 0 AM and PM peak hour trip impact.
E. NE 189th Street at NE Delfel Road – 2 AM and PM peak hour trip impact.
F. NW 179th Street at NW 41st Avenue – 0 AM and PM peak hour trip impact.
H. NE 173rd Street at NE 15th Avenue – 2 AM and PM peak hour trip impact.
I. NE 164th Street at NE 10th Avenue – 0 AM and PM peak hour trip impact.
J. NE 159th Street at NE 29th Avenue – 0 AM and PM peak hour trip impact.
K. NE 156th Street at NE Union Road – 1 AM and PM peak hour trip impact.
L. NW 149th Street at NW 21st Avenue – 2 AM and 3 PM peak hour trip impact.

M. NW Bliss Road at NW 36th Avenue – 1 AM and 2 PM peak hour trip impact.

N. NW Bliss Road at NW 21st Avenue – 1 AM and PM peak hour trip impact.

O. NW 139th Street at NW 11th Avenue – 0 AM and PM peak hour trip impact.

Q. NE 139th Street at NE 23rd Avenue – 1 AM and 2 PM peak hour trip impact.

R. NE 139th Street at NE 29th Avenue – 1 AM and 2 PM peak hour trip impact.

X. NE Highway 99 at NE 20th Avenue – 3 AM and PM peak hour trip impact.

Y. NW 119th Street at NW 21st Avenue – 0 AM and PM peak hour trip impact.

Z. NW 119th Street at NW 16th Avenue – 0 AM and PM peak hour trip impact.

Although impacted by 5 or more peak hour trips, the minor-street approaches of the unsignalized intersection will be impacted by less than 5 approaching trips whereby no mitigation can be required as part of the application per Clark County Unified Development Code 40.350.020.G.1.c, not-with-standing safety improvements which may be necessary per section 40.350.030(B)(6):

G. NE 179th Street at NE 29th Avenue – 4 AM and 5 PM peak hour trip impact.

WSDOT requires the analysis of intersections under their jurisdiction that are impacted by 10 or more peak hour trips. The following intersections will either be impacted by less than 10 peak hour trips:

P. NE 139th Street at I-5 Northbound On-Ramp Ramp – 5 AM and PM peak hour trip impact.

S. NE 134th Street at I-5 Southbound On-Ramp – 7 AM and 8 PM peak hour trip impact.

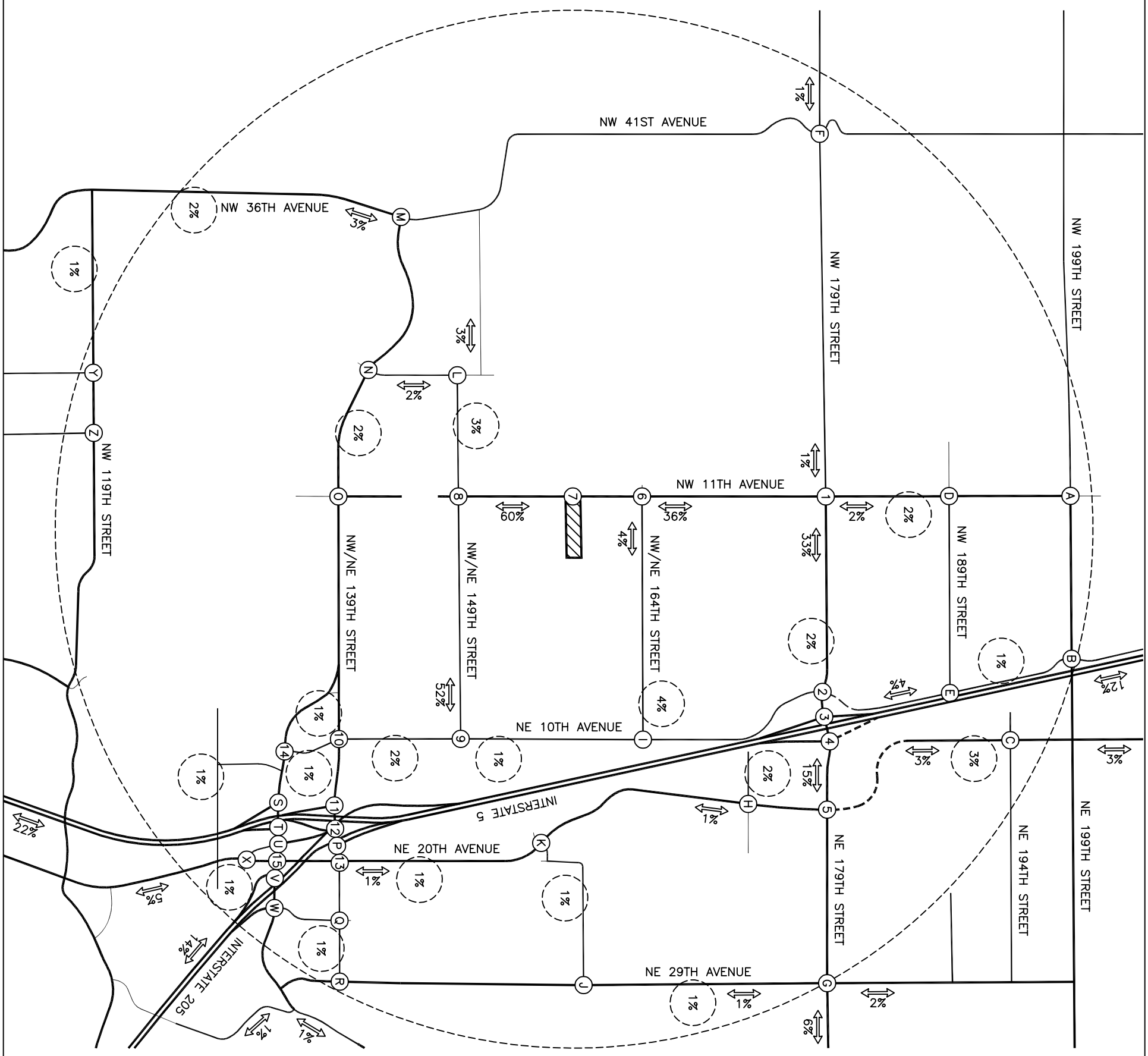
T. NE 134th Street at I-5 Northbound Off-Ramp– 7 AM and 8 PM peak hour trip impact.

U. NE 134th Street at I-5 Southbound Off-Ramp – 7 AM and 8 PM peak hour trip impact.

V. NE 134th Street at I-205 Southbound On-Ramp – 7 AM and 8 PM peak hour trip impact.

W. NE 134th Street at I-205 Northbound Off-Ramp – 2 AM and 5 PM peak hour trip impact.

The trip distribution and assignment for the site trips generated during the AM and PM peak hours are shown in Figure 3, 4, and 5. Trip assignment is depicted for both the study intersections and the aforementioned intersections that do not require detailed analysis.



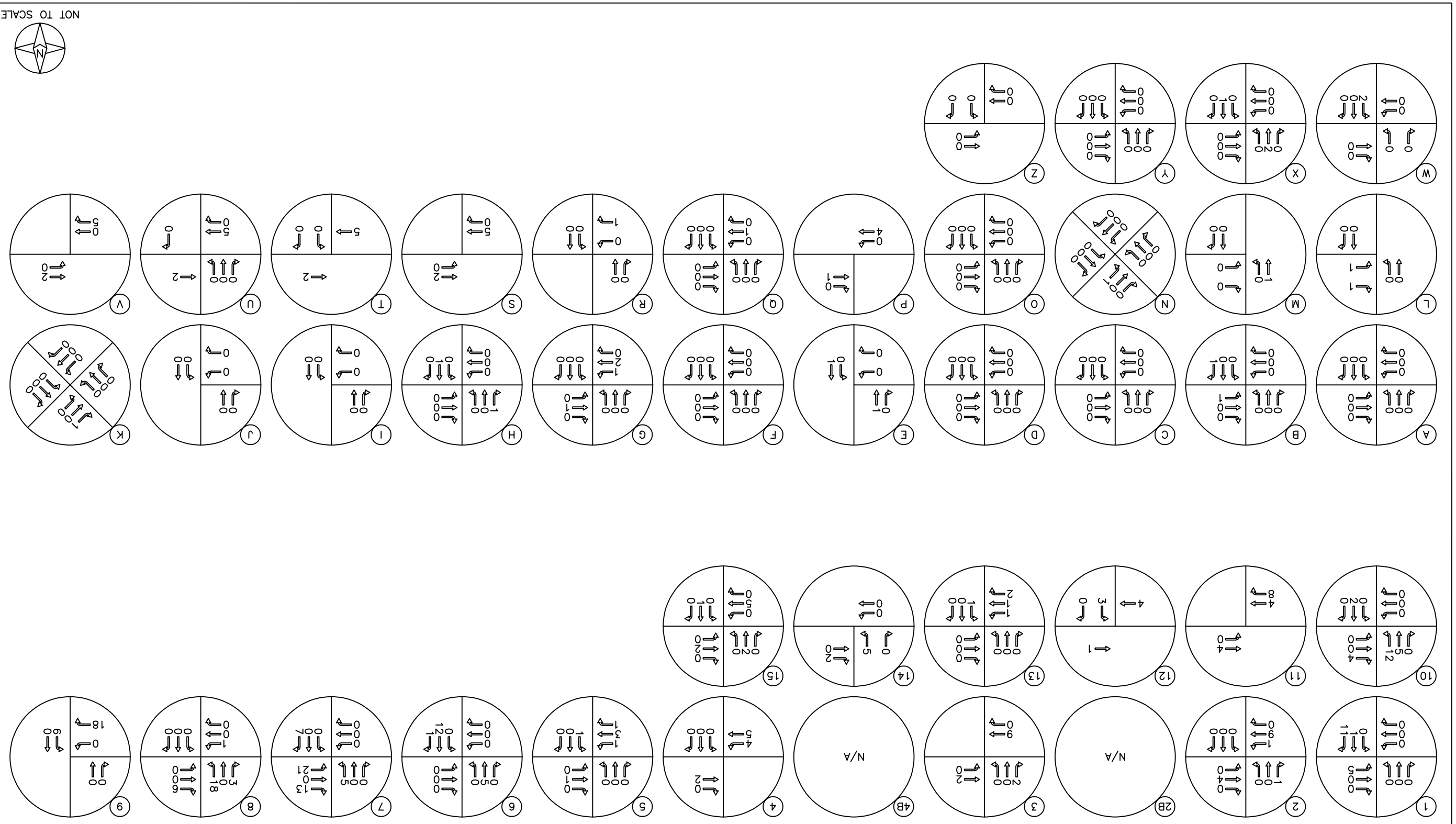
NOT TO SCALE

SITE TRIP DISTRIBUTION

AM & PM PEAK HOURS

FIGURE 3

TOWHEE CREEK
SUBDIVISION



NOT TO SCALE

NET NEW SITE TRIP GENERATION			
ANALYSIS SCENARIO	PRIMARY TRIPS		TOTAL
	ENTER	EXIT	
AM PEAK HOUR	12	34	46

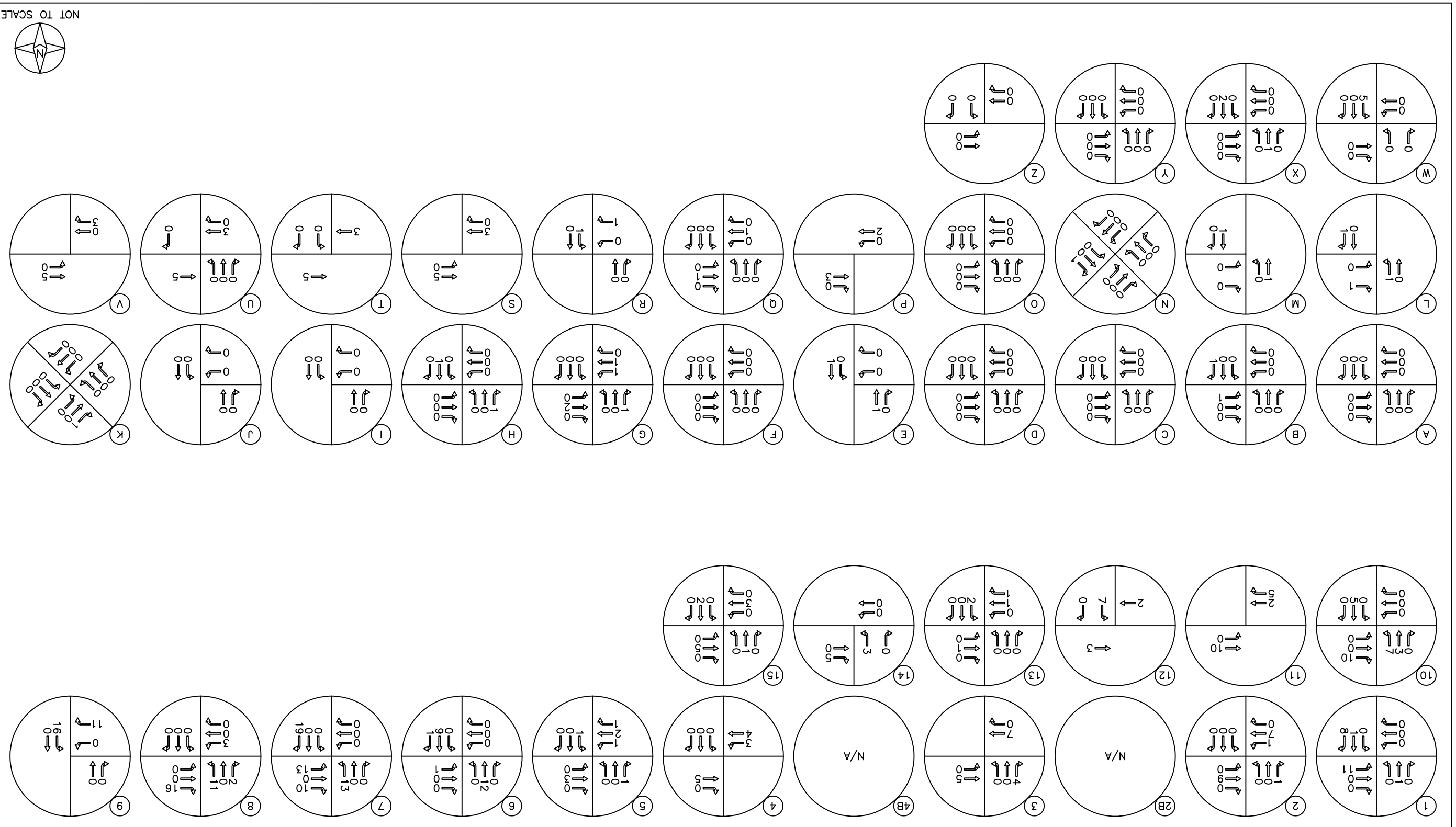
FIGURE 4

TOWHEE CREEK
SUBDIVISION

SITE TRIP ASSIGNMENT

AM PEAK HOUR

PLS ENGINEERING



NET NEW SITE TRIP GENERATION			
ANALYSIS SCENARIO	PRIMARY TRIPS		TOTAL
	ENTER	EXIT	
PM PEAK HOUR	32	23	55

PLS ENGINEERING

SITE TRIP ASSIGNMENT

PM PEAK HOUR

TOWHEE CREEK
SUBDIVISION

FIGURE 5

Section C – Traffic Volumes

2025 Existing Volumes

Traffic counts were conducted at the study intersections on the following dates from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM:

- Thursday, December 4, 2025.
- Wednesday, December 10, 2025.

Data was used from each intersection's respective AM and PM peak hours.

To estimate major street through traffic volumes at the proposed site access intersection location, volumes were balanced with those recorded at the adjacent study intersection of NW 164th Street at NW 11th Avenue.

Figures 6 and 7 show the 2025 existing year traffic volumes at the study intersections during the AM and PM peak hours.

2028 Pre-Development Volumes

Volume Growth

An estimate of future traffic volumes is required to provide analysis of the proposed development impacts to the nearby transportation system. To approximate the future year 2028 traffic volumes at the study intersections, a compounding growth rate of two percent per year for over a three-year period was applied to the year 2025 existing traffic volumes.

In-Process Development Data

In addition to the traffic volume growth described above, there are several in-process developments that are currently approved/proposed for construction within the site vicinity that are expected to impact nearby study intersections. These in-process developments include the following:

- 179th Street Commercial Center Phase 1 & 2 (aka Killian Phase 1 & 2)
- Emerald Grove Subdivision
- M&H Subdivision (20% built, 80% in-process)
- Majestic Industrial Center
- Maletis Distribution Center
- Martin's Meadow Subdivision (50% built, 50% in-process)
- Mill Creek Meadows
- Mill Creek Terrace

- Mountain Estates Cluster Subdivision
- Mountain View Ridge PUD
- Mt Vista Logistics
- NE 29th Avenue Subdivision
- North Haven Subdivision (85% built, 15% in-process)
- Salmon Creek Memory Care
- Sherwood Landing Subdivision
- Skyview Station East
- South Ridge Central Apartments
- The Highlands at Whipple Creek
- Three Creeks North Phase 1 & 2
- Trails at Whipple Creek Subdivision (55% built, 45% in-process)
- Viers Subdivision PUD
- Washington State University Master Plan
- Whipple Creek Village Subdivision (95% built, 5% in-process)
- Woodbrook Subdivision (aka Mill Creek PUD, 40% built, 60% in-process)

The in-process developments are not currently/fully contributing trips to the transportation system but may potentially be by the assumed 2028 development year of the site. Additional trips corresponding to each in-process development were added to the existing year traffic volumes in addition to the three years of traffic growth at each of the applicable study intersections. To maintain a conservative analysis of operation at the study intersections, all in-process developments were assumed to be constructed by year 2028. Figures A and B in the technical appendix shows the in-process development trips at the study intersections during the AM and PM peak hours.

Planned Transportation Infrastructure Revisions

Several planned transportation improvement projects were incorporated in the future year analysis scenarios. According to the Clark County's *Northeast 179th Street Corridor Improvements* project website[2], the Washington Department of Transportation's (WSDOT) *I-5 – 179th Street Interchange – Interchange Improvements* project website[3], and the 2025-2030 Transportation Improvement Program (TIP), these projects include the following:

- Realign NE Delfel Road (North Leg) to a location opposite NE Delfel Road (South Leg) and reconstruct the intersection of the NE 179th Street at NE Delfel Road as a roundabout (2025-2030 TIP Project B). Construction is estimated to occur between 2028 and post-2030.
- The I-5 northbound on-ramp will be reconstructed opposite the existing I-5 off-ramp location along NE 179th Street.
- Reconstruct the I-5/NE 179th Street interchange as roundabouts at the ramp terminals. According to WSDOT the interchange design phase will begin in Spring 2025, construction is expected to begin in 2028 and will be completed by 2031.
- NE 10th Avenue, just north of NE 179th Street and opposite of the I-5 northbound off-ramp, will be closed and reconstructed at a location opposite of NE 15th Avenue along NE 179th Street (2025-2030 TIP Project C). Clark County's *179th Street Circulation and Access Management Plan*, dated July 2023, indicates the intersection of NE 15th Avenue at NE 179th Street will be reconstructed as a roundabout. The anticipated lane configuration of the intersection was referenced from a WSDOT concept design for the NE 179th Street interchange improvement project. Construction is estimated to occur between 2028 and 2030.
- NE 179th Street will be widened to accommodate two eastbound travel lanes, two westbound travel lanes, and a center median/turn lane. This roadway widening project will occur in phases:
    - Between NE 10th Avenue and NE 15th Avenue (2025-2030 TIP Project A). The project will be constructed in collaboration with WSDOT as part of the I-5 interchange improvement project. Construction is estimated to occur sometime between 2028 and 2029.
    - Between NE 15th Avenue and NE 26th Avenue (2025-2030 TIP Project F). Construction is estimated to occur sometime between 2028 and 2030.

[2] "Northeast 179th Street Corridor Improvements | Clark County." Clark County, clark.wa.gov/public-works/northeast-179th-street-corridor-improvements.

[3] I-5 - 179th St. Interchange - Interchange Improvements | WSDOT. 17 June 2024, wsdot.wa.gov/construction-planning/search-projects/i-5-179th-st-interchange-interchange-improvements.

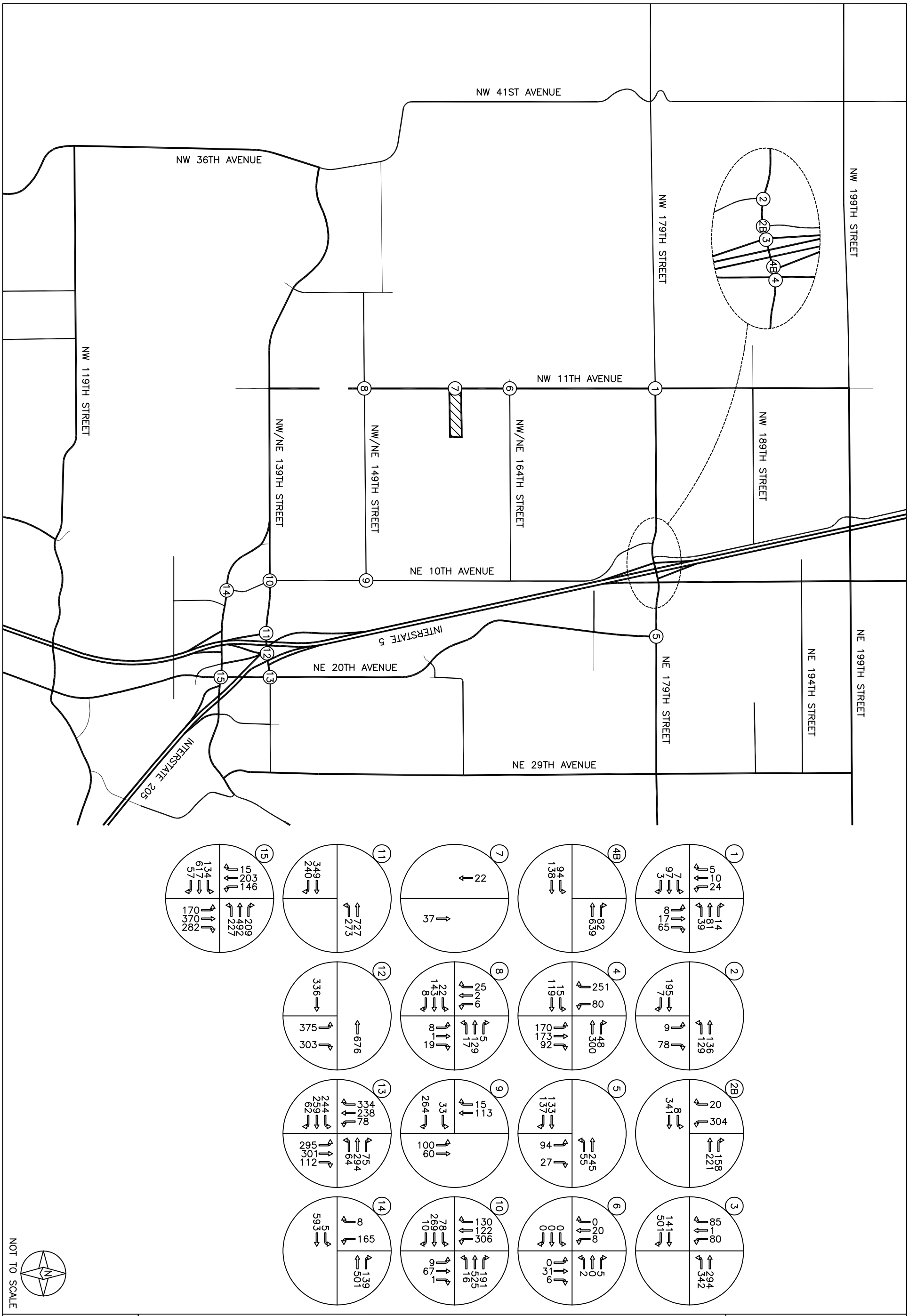
It is assumed that the future year 2028 conditions would reflect the aforementioned revisions to the transportation system. Rerouted peak hour traffic volumes associated with the relocation of NE Delfel Road (north segment), NE 10th Avenue, and the I-5 northbound on-ramp are shown in Figure C in the technical appendix. Note that Figure C shows the rerouted 2028 volumes after applying the annual two percent per year growth rates over a three-year period to the existing year traffic volumes.

Figure 2 presents the future planned intersection configurations. Figures 8 and 9 show the projected year 2028 pre-development traffic volumes at the study intersections during the AM and PM peak hours.

2028 Post-Development Volumes

Peak hour trips calculated to be generated by the proposed development, as described earlier within the *Site Trips* section, were added to the year 2028 pre-development traffic volumes to estimate future traffic conditions with the proposed development in place.

Figures 10 and 11 show the year 2028 post-development traffic volumes at the study intersections during the AM and PM peak hours.

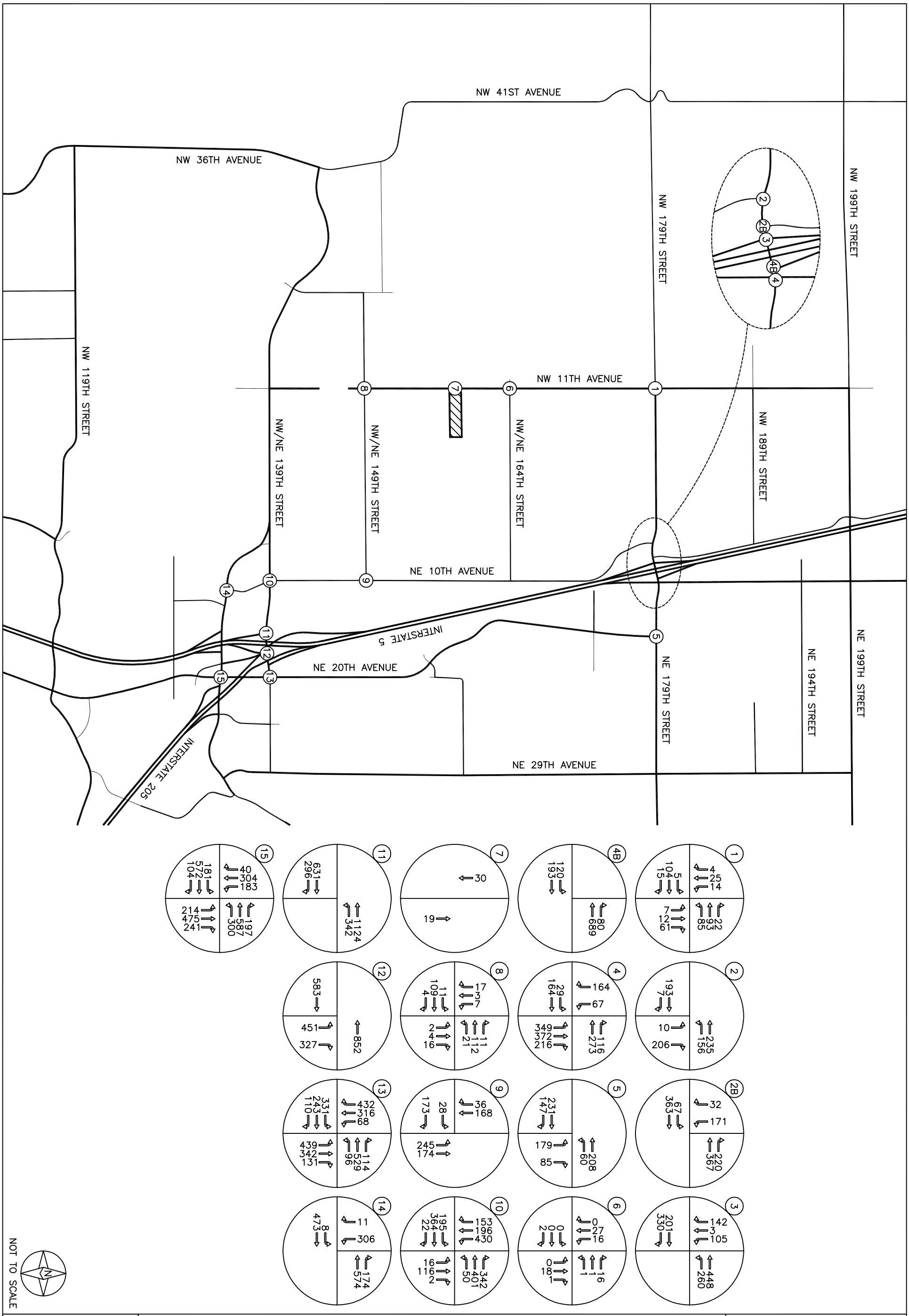


2025 EXISTING VOLUMES

AM PEAK HOUR

FIGURE 6

TOWHEE CREEK SUBDIVISION



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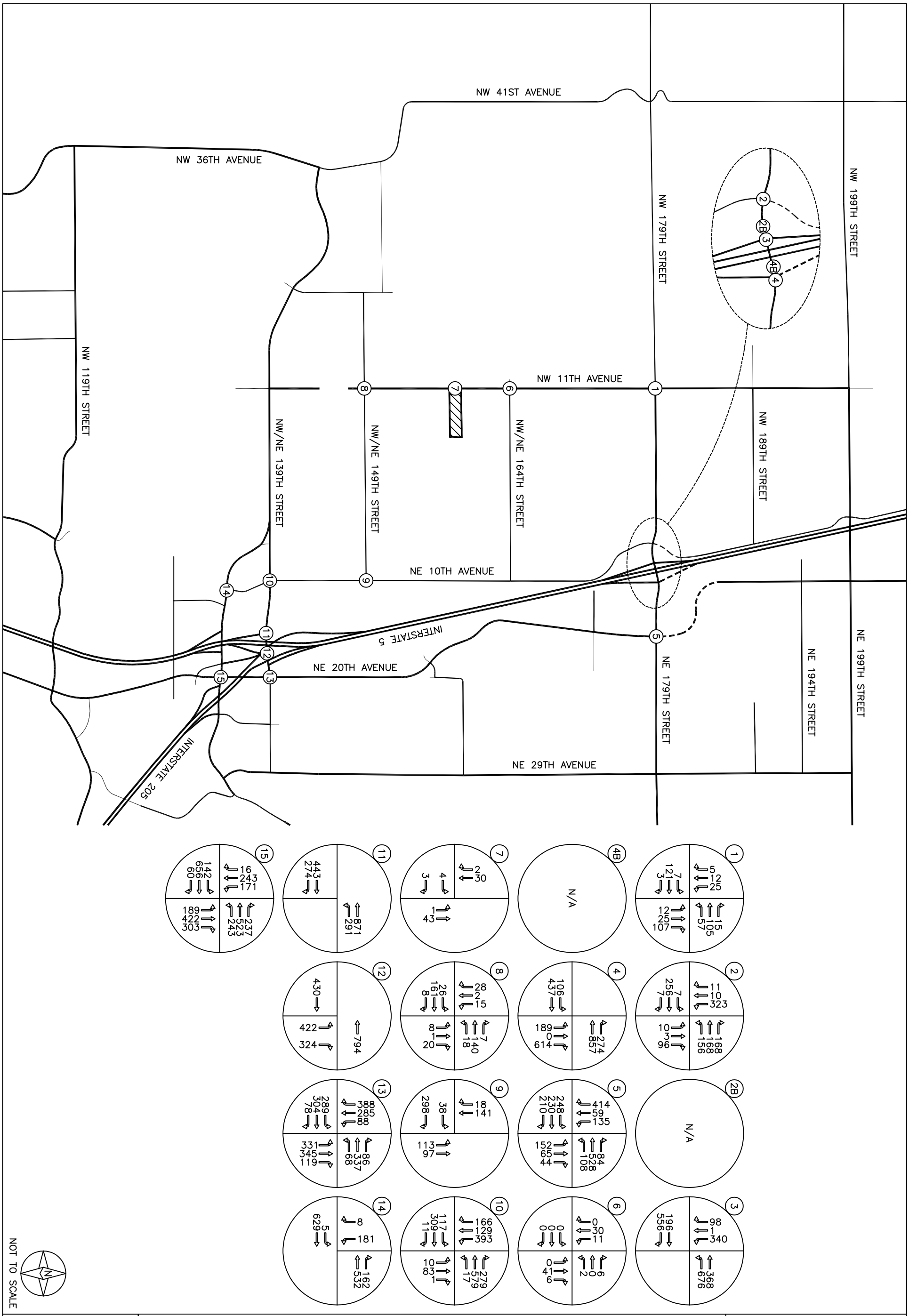
PLS ENGINEERING

2025 EXISTING VOLUMES

PM PEAK HOUR

FIGURE 7

TOWHEE CREEK SUBDIVISION



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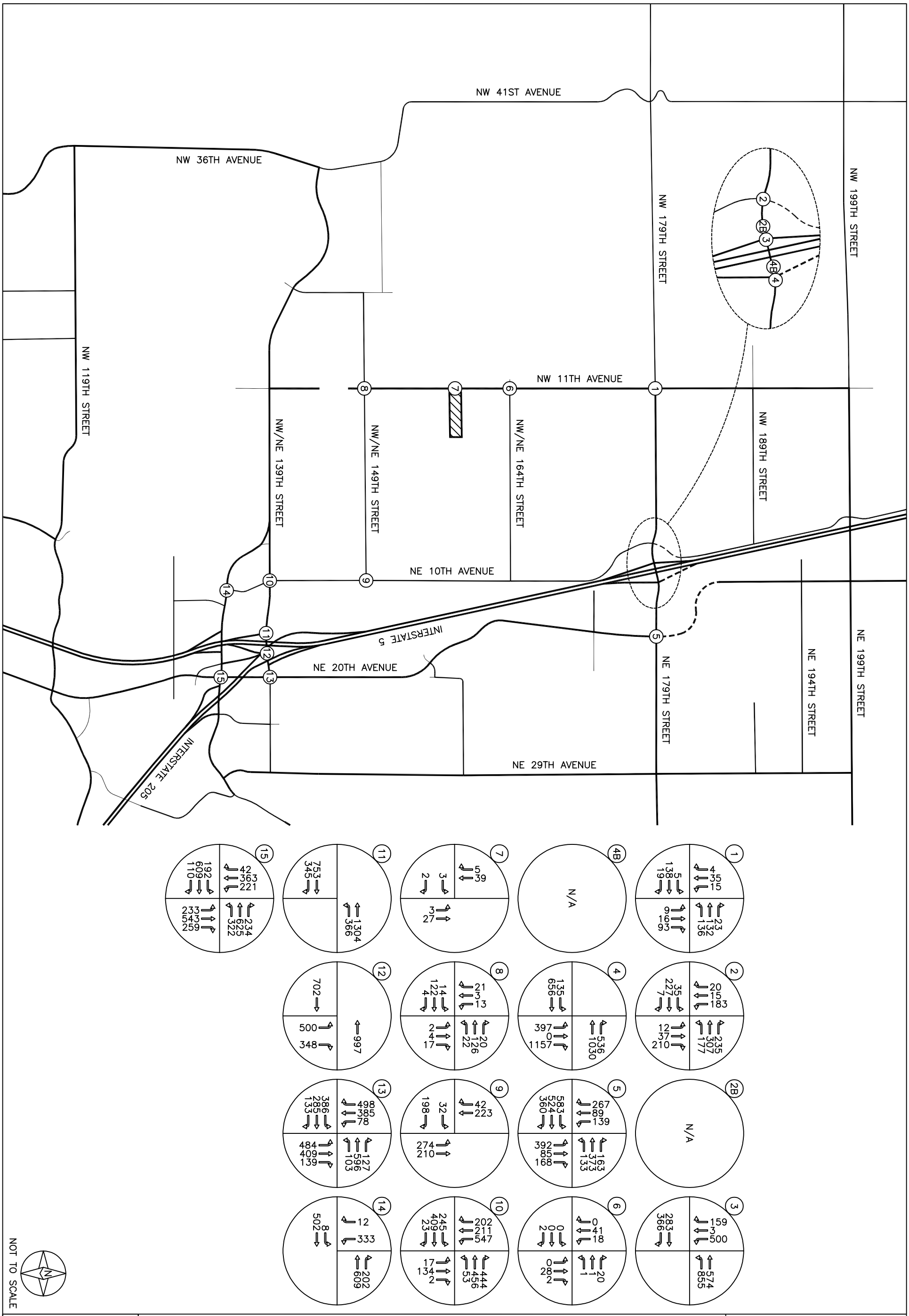
2028 PRE-DEVELOPMENT VOLUMES

AM PEAK HOUR

FIGURE 8

TOWHEE CREEK SUBDIVISION

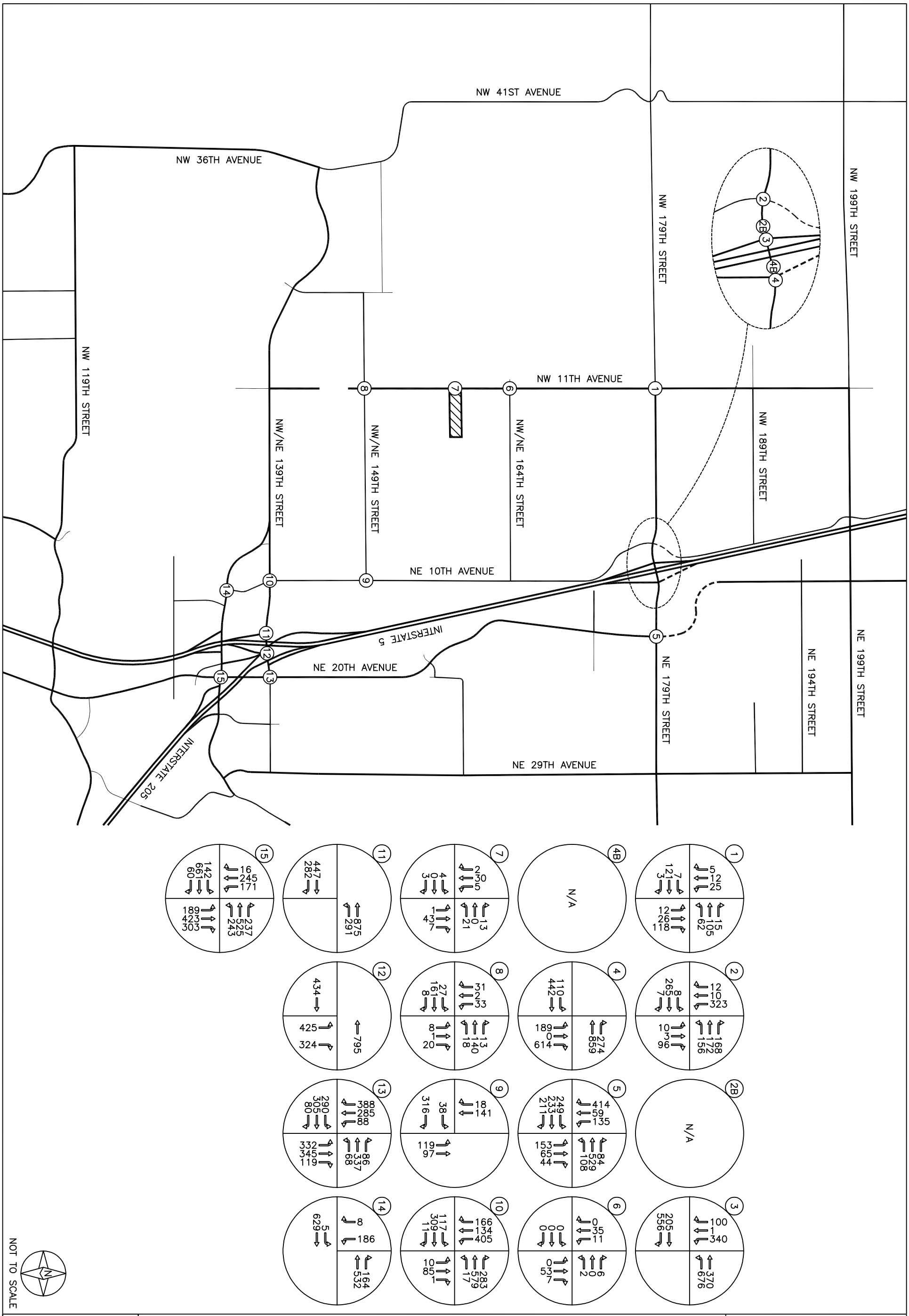


2028 PRE-DEVELOPMENT VOLUMES

PM PEAK HOUR

FIGURE 9

TOWHEE CREEK SUBDIVISION



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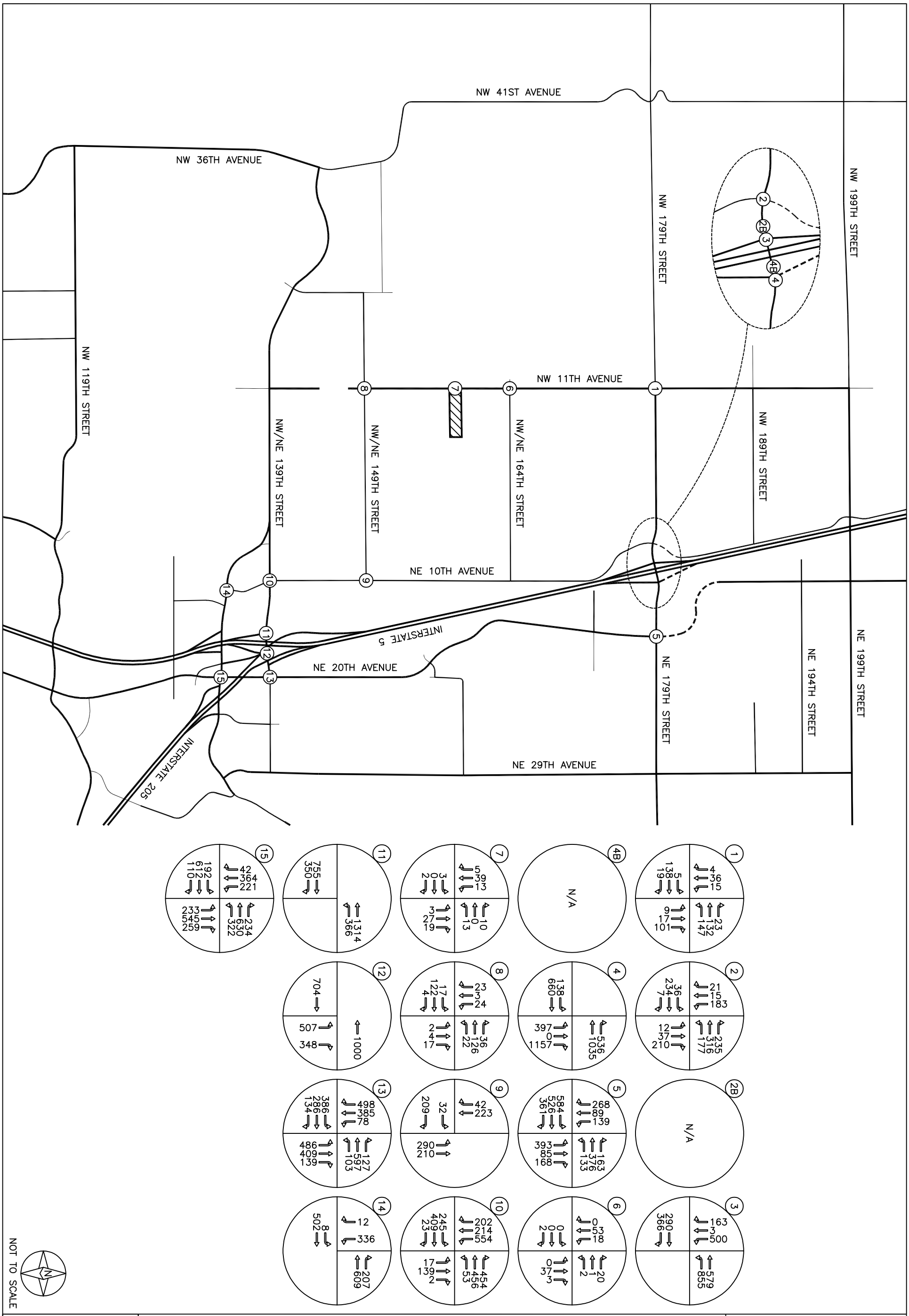
2028 POST-DEVELOPMENT VOLUMES

AM PEAK HOUR

FIGURE 10

TOWHEE CREEK SUBDIVISION



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PLS ENGINEERING

2028 POST-DEVELOPMENT VOLUMES

PM PEAK HOUR

FIGURE 11

TOWHEE CREEK SUBDIVISION

Section D – Operations Analysis

Intersection Capacity Analysis

A capacity and delay analysis were conducted for the study intersections per the signalized and unsignalized intersection analysis methodologies in the *Highway Capacity Manual* (HCM)[4] . Intersections are generally evaluated based on the average control delay experienced by vehicles and are assigned a grade according to their operation. The Level of Service (LOS) is a qualitative measure of traffic operational conditions, and can range from LOS A, which indicates little or no delay experienced by vehicles, to LOS F, which indicates a high degree of congestion and delay. The volume-to-capacity (v/c) ratio is a measure that compares the traffic volumes (demand) against the available capacity of an intersection or roadway.

Performance Standards

According to Clark County's Unified Development Code, *Title 40.350 – Transportation and Circulation*, Clark County's performance standards require unsignalized intersections to operate at LOS E or better unless traffic signal warrants are met. If traffic signal warrants are met, the intersection is required to operate at LOS D or better. Individual movements at signalized intersections of regional significance are to operate with average control delays of less than two cycle lengths or 240 seconds, whichever is less.

The I-5 and I-205 ramp study intersections operate under the jurisdiction of WSDOT. According to the Revised Code of Washington (RCW) 47.06.140(2):

> *The department of transportation, in consultation with local governments, shall set level of service standards for state highways and state ferry routes of statewide significance. Although the department shall consult with local governments when setting level of service standards, the department retains authority to make final decisions regarding level of service standards for state highways and state ferry routes of statewide significance. In establishing level of service standards for state highways and state ferry routes of statewide significance, the department shall consider the necessary balance between providing for the free interjurisdictional movement of people and goods and the needs of local communities using these facilities...*

Consistent with other transportation studies conducted in the nearby vicinity, it was assumed the I-5 ramp intersections along NE 179th Street and NE 139th Street would defer to Clark County mobility standards.

[4] Transportation Research Board, *Highway Capacity Manual*, 7th Edition, 2022.

Delay and Capacity Analysis

The study intersections were analyzed utilizing methodologies and parameters detailed in the *WSDOT Synchro & SimTraffic Protocol* document. Of specific note, the following peak hour factors (PHF) were incorporated in the analysis models:

- For existing year conditions, a PHF of no less than 0.80 was applied to each study intersection.
- For future year conditions, for study intersections where count data recorded a PHF of 0.90 or greater, the PHF was increased to 1.0.
- To better avoid showing a future year scenario with lower delays than under existing conditions, for study intersections where count data recorded a PHF of 0.89 or less the PHF was increased to 0.92. The exception to this rule is when an intersection was reported to operate at LOS E or F under 2028 conditions, where the PHF was increased to 1.0. In situations when intersection congestion becomes heavier, often PHF's tend to converge toward 1.0.

Due to the lane configuration at the signalized study intersection of NE 179th Street at NE 15th Avenue (i.e., non-NEMA phasing), the HCM 7th Edition methodology utilizing Trafficware's Synchro 12 software does not provide capacity outputs for this intersection under existing conditions. Therefore, the reported results at this intersection are based on HCM 2000 methodologies.

For future year 2028 conditions, the following intersections were modeled as roundabouts.

2. NE 179th Street at NE Delfel Road
3. NE 179th Street at I-5 Southbound Ramps
4. NE 179th Street at I-5 Northbound Ramps
5. NE 179th Street at NE 15th Avenue

Sidra software was used to model these intersections in accordance with the *WSDOT Synchro & SimTraffic Protocol* and *WSDOT Sidra Policy Settings* documents.

The LOS, delay, and v/c results of the capacity analysis are shown in Table 4 for the AM and PM peak hours. Detailed capacity calculations as well as the LOS grading descriptions and corresponding delays are included in the appendix to this report.

Table 4 – Intersection Capacity Analysis Summary

Analysis Scenario	AM Peak Hour			PM Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
1. NW 179th Street at NW 11th Avenue						
2025 Existing Conditions	A	9	0.20	A	9	0.29
2028 Pre-Development Conditions	A	9	0.26	A	10	0.41
2028 Post-Development Conditions	A	9	0.27	A	10	0.43
2. NE 179th Street at NE Delfel Road						
2025 Existing Conditions	A	5	-	A	4	-
2028 Pre-Development Conditions[1]	A	8	0.35	A	6	0.25
2028 Post-Development Conditions[1]	A	8	0.35	A	6	0.25
2B. NE 179th Street at NE Delfel Road (North Leg)						
2025 Existing Conditions	D	26	0.67	**F**	51	0.78
3. NE 179th Street at I-5 Southbound Ramps						
2025 Existing Conditions	B	11	-	B	11	-
2028 Pre-Development Conditions[1]	A	8	0.48	A	8	0.58
2028 Post-Development Conditions[1]	A	8	0.48	A	8	0.58
4. NE 179th Street at I-5 Northbound Ramps						
2025 Existing Conditions	B	11	-	B	12	-
2028 Pre-Development Conditions[1]	A	6	0.44	A	7	0.82
2028 Post-Development Conditions[1]	A	6	0.44	A	7	0.82
5. NE 179th Street at NE 15th Avenue						
2025 Existing Conditions	A	5	0.37	A	7	0.44
2028 Pre-Development Conditions[1]	A	8	0.42	A	9	0.44
2028 Post-Development Conditions[1]	A	8	0.42	A	9	0.45
6. NW 164th Street at NW 11th Avenue						
2025 Existing Conditions	A	7	0.05	A	7	0.06
2028 Pre-Development Conditions	A	7	0.06	A	7	0.07
2028 Post-Development Conditions	A	8	0.07	A	7	0.09

Table Notes: ***BOLDED*** *text indicates intersection operation above jurisdictional standards.*

[1] *Intersection analyzed as a roundabout.*

Table 4 – Intersection Capacity Analysis Summary (Continued)

Analysis Scenario	AM Peak Hour			PM Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
7. Site Access at NW 11th Avenue						
2028 Pre-Development Conditions	A	9	0.01	A	9	0.01
2028 Post-Development Conditions	A	9	0.04	A	9	0.03
8. NW 149th Street at NW 11th Avenue						
2025 Existing Conditions	B	11	0.06	B	10	0.05
2028 Pre-Development Conditions	B	11	0.07	B	11	0.06
2028 Post-Development Conditions	B	12	0.12	B	11	0.08
9. NE 149th Street at NE 10th Avenue						
2025 Existing Conditions	A	7	-	A	5	-
2028 Pre-Development Conditions	A	7	-	A	5	-
2028 Post-Development Conditions	A	7	-	A	5	-
10. NE 139th Street at NE 10th Avenue						
2025 Existing Conditions	C	22	-	C	30	-
2028 Pre-Development Conditions	C	27	-	C	35	-
2028 Post-Development Conditions	C	27	-	D	35	-
11. NE 139th Street at I-5 Southbound Ramps						
2025 Existing Conditions	A	5	-	A	5	-
2028 Pre-Development Conditions	A	5	-	A	5*	-
2028 Post-Development Conditions	A	5	-	A	5*	-
12. NE 139th Street at I-5 Northbound Ramps						
2025 Existing Conditions	B	13	-	B	14	-
2028 Pre-Development Conditions	B	14	-	B	14	-
2028 Post-Development Conditions	B	14	-	B	14	-
13. NE 139th Street at NE 20th Avenue						
2025 Existing Conditions	C	26	-	C	28	-
2028 Pre-Development Conditions	C	35	-	D	38	-
2028 Post-Development Conditions	C	35	-	D	38	-

Table Notes: * *Delay or v/c ratio increased to match previous analysis scenario.*

Table 4 – Intersection Capacity Analysis Summary (Continued)

Analysis Scenario	AM Peak Hour			PM Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
14. NE Tenney Road at NE 10th Avenue						
2025 Existing Conditions	A	6	-	A	9	-
2028 Pre-Development Conditions	A	6	-	A	9	-
2028 Post-Development Conditions	A	6	-	A	9	-
15. NE 134th Street at NE 20th Avenue						
2025 Existing Conditions	C	24	-	C	27	-
2028 Pre-Development Conditions	C	24	-	C	27	-
2028 Post-Development Conditions	C	24	-	C	27	-

Based on the results of the operational analysis, the intersection of NE 179th Street at NE Delfel Road (North Leg) currently operates at LOS F during the PM peak hour. However, with the closure of this intersection, relocation of the north leg of NE Delfel Road opposite of its south leg, and reconstruction of the intersection as a roundabout (i.e., 2025-2030 TIP Project B) the newly constructed intersection of NE 179th Street at NE Delfel Road is projected to operate acceptably per Clark County standards through the 2028 development year of the site. No additional mitigation is recommended at this intersection.

All other study intersections are currently operating acceptably per Clark County standards and are projected to continue operating acceptably through the 2028 development year of the site. Accordingly, no additional operational mitigation is necessary or recommended at the study intersections as part of the proposed development application.

Roadway Capacity Analysis

In accordance with Clark County Code Section *40.350.020(G) – Level of Service Standards*, a capacity analysis was conducted for roadway segments within the analysis area of the site. The code section requires all Collector and Arterial roadway segments located within the Vancouver Urban Growth Area, but outside Vancouver city limits, as well as state highways of regional significance to have a maximum v/c ratio no greater than 0.90, measured independently for each direction of travel. Roadway volumes were determined utilizing the 2028 post-development volumes during the AM and PM peak hours. Roadway capacities were referenced from Table 40.350.020-1 of the Clark County code based on the County roadway designation and classification.

The results of the roadway capacity analysis for the projected year 2028 post-development traffic volumes are shown in Table 5. The maximum calculated v/c ratio along each roadway segment is reported for both the AM and PM peak hours.

Table 5 – Roadway Capacity Analysis Summary

Roadway	From	To	Classification	Capacity (veh/hr)	V/C	
					AM	PM
NE/NW 179th Street	NW 41st Avenue	NW 11th Avenue	R-2	800	0.164	0.203
	NW 11th Avenue	NE Delfel Road	Pr-4cb	1,800	0.156	0.194
	NE Delfel Road	NE 15th Avenue	Pr-4cb	1,800	0.629	**1.009**
	NE 15th Avenue	NE 29th Avenue	Pr-4cb	1,800	0.401	0.463
NE/NW 164th Street	NW 11th Avenue	NE 10th Avenue	C-2cb	900	0.020	0.026
NE 149th Street	NW 21st Avenue	NW 11th Avenue	C-2	800	0.245	0.189
	NW 11th Avenue	NE 10th Avenue	C-2	800	0.443	0.415
NE 139th Street	NE Tenney Road	NE 10th Avenue	M-4cb	1,800	0.419	0.376
	NE 10th Avenue	NE 20th Avenue	M-4cb	1,800	0.678	**0.933**
	NE 20th Avenue	NE 23rd Avenue	C-2cb	900	0.569	**0.919**
NE Tenney Road/NE 134th Street	NE 139th Street	NE 10th Avenue	M-4cb	1,800	0.352	0.345
	NE 10th Avenue	NE 20th Avenue	M-4cb	1,800	0.479	0.508
	NE 20th Avenue	NE 23rd Avenue	M-4cb	1,800	0.631	0.659
NW 11th Avenue	NE 184th Street	NE 179th Street	M-2cb	900	0.053	0.061
	NE 179th Street	NE 164th Street	M-2cb	900	0.173	0.224
	NE 164th Street	NE 149th Street	M-2cb	900	0.073	0.063

Table Notes: ***BOLDED*** *text indicates a roadway capacity in excess of 0.90.*

Table 5 – Roadway Capacity Analysis Summary (Continued)

Roadway	From	To	Classification	Capacity (veh/hr)	V/C	
					AM	PM
NE Delfel Road/ NE 10th Avenue	NE 189th Street	NE 179th Street	C-2	800	0.431	0.385
	NE 179th Street	NE 164th Street	C-2cb	900	0.192	0.288
	NE 164th Street	NE 149th Street	C-2cb	900	0.177	0.294
	NE 149th Street	NE 139th Street	C-2cb	900	0.783	**1.078**
	NE 139th Street	NE Tenney Road	C-2cb	900	0.216	0.387
NE 10th Avenue/NE 15th Avenue	NE 189th Street	NE 179th Street	M-2cb	900	0.676	**0.924**
	NE 179th Street	NE 173rd Street	M-2cb	900	0.420	0.718
NE 20th Avenue	NE 156th Street	NE 139th Street	M-4cb	1,800	0.423	0.534
	NE 139th Street	NE 134th Street	M-4cb	1,800	0.446	0.574
	NE 134th Street	NE Highway 99	Pr-4cb	1,800	0.508	0.576

Table Notes: ***BOLDED*** *text indicates a roadway capacity in excess of 0.90.*

Based on the results of the roadway capacity analysis, there are several roadway segments that are projected to exceed Clark County's roadway segment v/c ratio threshold during the PM Peak hour under year 2028 conditions. Although these roadway segments are projected to operate with a v/c ratio in excess of 0.90 during the PM peak hour, no mitigation as part of the proposed development application is recommended. These segments and reasons for not requiring development specific mitigation include the following:

NE 179th Street, between NE Delfel Road and NE 15th Avenue

- As part of Clark County's *Northeast 179th Street Corridor Improvements* project, WSDOT's *I-5 – 179th Street Interchange – Interchange Improvements* project, and the 2025-2030 TIP (Project A), roadway improvements are planned along NE 179th Street that are expected to increase the carrying capacity of the street segment near the I-5 interchange.

- This segment of NE 179th Street is projected to operate with a v/c ratio above 0.90 under year 2028 pre-development conditions. Therefore, the proposed Towhee Creek Subdivision project alone does not cause this roadway segment to exceed the 0.90 v/c ratio threshold.
- The study intersections along NE 179th Street, between NE Delfel Road and NE 15th Avenue, are projected to operate at no lower than LOS A during the AM and PM peak hours under year 2028 post-development conditions. Therefore, the high roadway v/c ratio is not expected to create operational issues at the relevant/applicable study intersections.

NE 139th Street, between NE 10th Avenue and NE 23rd Avenue

- The proposed Towhee Creek Subdivision project is expected to add a minimal number of peak hour trips to the roadway segments between NE 10th Avenue to NE 20th Avenue (increasing the v/c ratio by approximately 0.006) and NE 20th Avenue to NE 23rd Avenue (increase the v/c ratio by approximately 0.001). Therefore, the proposed Towhee Creek Subdivision project alone does not cause these roadway segments to exceed the 0.90 v/c ratio threshold.
- The study intersections along this segment of NE 139th Street are projected to operate at no lower than LOS D during the AM and PM peak hours under year 2028 site development conditions. Therefore, the high roadway v/c ratio is not expected to create operational issues at the relevant/applicable study intersections.
- The segment of NE 139th Street between NE 10th Avenue and NE 20th Avenue has a varying roadway width between five to seven travel lanes. The specific section of this segment that experiences a v/c ratio above 0.90 occurs in the westbound direction just east of the I-5 southbound ramps. This section of the westbound approach includes one additional left-turn lane compared to the County's Standard Drawing 3, Urban Minor Arterial (M-4cb). It is reasonable to assume this roadway segment offers a greater vehicle carrying capacity than its classification as a four-lane Minor Arterial with a center turn lane and bike lanes.
- The segment of NE 139th Street between NE 20th Avenue and NE 23rd Avenue has a varying roadway width between three to seven travel lanes with a raised 280-foot median from NE 20th Avenue to the east. It is reasonable to assume this roadway segment offers a greater vehicle carrying capacity than its classification as a two-lane Collector with a center turn lane and bike lanes (C-2cb).

NE 10th Avenue, between NE 149th Street and NE 139th Street

- This segment of NE 10th Avenue is projected to operate with a v/c ratio above 0.90 under year 2028 pre-development conditions. Therefore, the proposed Towhee Creek Subdivision project alone does not cause this roadway segment to exceed the 0.90 v/c ratio threshold.
- The study intersections along NE 10th Avenue between NE 149th Street and NE 139th Street, are projected to operate at no lower than LOS D during the AM and PM peak hours under year 2028 post-development conditions. Therefore, the high roadway v/c ratio is not expected to create operational issues at the relevant/applicable study intersections.

NE 10th/15th Avenue, between NE 189th Street and NE 179th Street

- This segment of NE 10th/15th Avenue is projected to operate with a v/c ratio above 0.90 under year 2028 pre-development conditions. Therefore, the proposed Towhee Creek Subdivision project alone does not cause this roadway segment to exceed the 0.90 v/c ratio threshold.
- The intersection of NE 179th Street at NE 15th Avenue is projected to operate at no lower than LOS A during the AM and PM peak hours under year 2028 post-development conditions. Therefore, the high roadway v/c ratio is not expected to create operational issues at the relevant/applicable study intersection.

All other relevant roadway segments are projected to operate acceptably per Clark County standards through the 2028 development year of the site. Accordingly, no additional roadway capacity-related mitigation is necessary or recommended beyond currently planned improvement projects as part of the proposed development application.

Section E – Safety Analysis

Crash History Review

Using data obtained from the Washington Department of Transportation (WSDOT) Crash Data and Reporting Branch, a review of the most recent available five to six years of crash history (January 2020 to late September 2025) was performed at the study intersections. 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 analysis 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 PM peak hour represents approximately 10 percent of the annual average daily traffic (AADT) at the intersection. Crash rates in excess of 1.00 crashes per million entering vehicles (CMEV) may be indicative of design deficiencies and therefore require a need for further investigation and possible mitigation.

Regarding crash severity, WSDOT classifies crashes in the following categories:

- No Apparent Injury (NA)
- Possible Injury (P)
- Suspected Minor Injury (SM)
- Suspected Serious Injury (SS)
- Fatality or Fatal Injury

Table 6 provides a summary of crash types while Table 7 summarizes crash severities and rates for each of the applicable study intersections. Due to the close proximity of the I-5 northbound off and on-ramp intersections (i.e., Intersection 4 and 4B), crash data was consolidated between the two intersections. Crash data is included in the technical appendix to this report.

Table 6 – Crash Type Summary

No.	Intersection	Crash Type						Total
		Rear End	Turn/ Angle	Fixed Object	Side swipe	Ped/ Bike	Other	
1	NW 179th Street at NW 11th Avenue	1	4	0	0	0	0	5
2	NE 179th Street at NE Delfel Road (South Leg)	1	0	0	1	0	0	2
2B	NE 179th Street at NE Delfel Road (North Leg)	1	4	0	0	0	0	5
3	NE 179th Street at I-5 SB Ramps	0	0	0	0	0	0	0
4 4B	NE 179th Street at I-5 NB Ramps	1	13	0	0	0	1	15
5	NE 179th Street at NE 15th Avenue	0	5	0	0	0	0	5
6	NW 164th Street at NW 11th Avenue	0	0	0	0	0	0	0
8	NW 149th Street at NW 11th Avenue	0	1	0	0	0	0	1
9	NE 149th Street at NE 10th Avenue	0	2	2	0	0	0	4
10	NE 139th Street at NE 10th Avenue	2	1	1	0	0	0	4
11	NE 139th Street at I-5 Southbound Ramp	0	3	1	0	0	0	4
12	NE 139th Street at I-5 Northbound Ramp	0	14	0	0	0	0	14
13	NE 139th Street at NE 20th Avenue	0	6	0	0	0	0	6
14	NE 134th Street at NE 10th Avenue	0	1	1	0	0	0	2
15	NE 134th Street at NE 20th Avenue	3	12	0	2	1	0	18

Table 7 – Crash Severity and Rate Summary

No.	Intersection	Crash Severity						Total Crashes	AADT	Crash Rate
		NA	P	SM	SS	Fatal	Unknown			
1	NW 179th Street at NW 11th Avenue	2	2	0	0	0	1	5	4,470	0.53
2	NE 179th Street at NE Delfel Road (South Leg)	1	0	1	0	0	0	2	8,070	0.12
2B	NE 179th Street at NE Delfel Road (North Leg)	5	0	0	0	0	0	5	12,200	0.19
3	NE 179th Street at I-5 SB Ramps	0	0	0	0	0	0	0	14,890	0.00
4 4B	NE 179th Street at I-5 NB Ramps	10	2	3	0	0	0	15	17,500	0.40
5	NE 179th Street at NE 15th Avenue	4	1	0	0	0	0	5	9,100	0.26
6	NW 164th Street at NW 11th Avenue	0	0	0	0	0	0	0	820	0.00
8	NW 149th Street at NW 11th Avenue	0	0	0	1	0	0	1	3,170	0.15
9	NE 149th Street at NE 10th Avenue	4	0	0	0	0	0	4	8,240	0.23
10	NE 139th Street at NE 10th Avenue	2	2	0	0	0	0	4	22,870	0.08
11	NE 139th Street at I-5 Southbound Ramp	2	0	2	0	0	0	4	23,930	0.08
12	NE 139th Street at I-5 Northbound Ramp	9	5	0	0	0	0	14	22,130	0.30
13	NE 139th Street at NE 20th Avenue	1	3	1	1	0	0	6	31,510	0.09
14	NE 134th Street at NE 10th Avenue	1	0	1	0	0	0	2	15,460	0.06
15	NE 134th Street at NE 20th Avenue	13	3	1	1	0	0	18	33,980	0.25

Per Table 6 and 7, there were four crashes that either involved a pedestrian/bicyclist or were classified as *Suspected Serious Injury* collisions. The following sections provide a detailed description of these crashes.

8. NW 149th Street at NE 10th Avenue

The one reported crash at the intersection was classified as *Suspected Serious Injury*. The crash occurred when the driver of a southbound truck disregarded traffic controls and collided with an eastbound passenger car. One person involved in the collision sustained injuries.

13. NE 139th Street at NE 20th Avenue

One of the reported crashes at the intersection was classified as *Suspected Serious Injury*. The crash occurred when the driver of a northbound passenger car rear-ended another passenger car that was stopped at the intersection. The driver who instigated the collision was operating their vehicle while under the influence of alcohol. One person involved in the collision sustained injuries.

15. NE 134th Street at NE 20th Avenue

Two of the reported crashes at the intersection either involved a pedestrian or was classified as *Suspected Serious Injury*:

- The pedestrian-related crash occurred when the driver of an eastbound vehicle struck a pedestrian at the intersection. No specific contributing reason for the crash occurring on behalf of the vehicle operator was noted. However, the crash data indicates that the pedestrian did not grant right-of-way to the vehicle and was reported to have been in an emotional state when the crash occurred. One person involved in the collision sustained injuries that were classified as *Suspected Minor Injury*.
- The crash that was classified as *Suspected Serious Injury* occurred when the driver of a northbound left-turning passenger car disregarded traffic controls and collided with a westbound passenger car. Two people involved in the collision were reported to have sustained injuries.

Based on a review of the crash data, no significant trends or crash patterns were identified at any of the study intersections that are indicative of safety concerns. Accordingly, no crash-related mitigation is necessary or recommended as part of the Towhee Creek Subdivision application.

Sight Distance Evaluation

Sight Distance Definitions and Methodologies

Intersection and stopping sight distances were measured at the proposed site access intersection along NW 11th Avenue. Sight distances were measured and evaluated at the intersection in accordance with standards established in *A Policy of Geometric Design of Highways and Streets*[5], as well as per Clark County standards.

Intersection sight distance is an operational measure, intended to provide sufficient line of sight along the major street so that a driver can enter the roadway without impeding the flow of through traffic. For intersection sight distance, the driver's eye is assumed to be 15 feet from the near edge of the nearest travel lane (or traveled way) of the intersecting street and at a height of 3.5 feet above the minor-street approach 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.

Stopping sight distance is considered the minimum requirement to ensure safe operation of an intersection with respect to sight lines. This distance allows the driver of a vehicle traveling on the major street to react to a turning vehicle or other object in the roadway and, if necessary, come to a complete stop to avoid a collision. To ensure safe operation, the extent of available intersection sight distance must at least equal the minimum required stopping sight distance. For stopping sight distance, the major street approaching driver's eye height is 3.5 feet while an object height of 2 feet above the street pavement is used.

According to Clark County Unified Development Code section 40.350.030.B.8, the minimum recommended intersection sight distance is based on ten times the posted/statutory speed of the roadway. However, alternative standards may be considered provided intersection sight distance cannot reasonably be met. Stopping sight distances were based on Table 40.350.030-7 of the County's code.

Based on a posted speed of 35 mph along NW 11th Avenue, the following minimum intersection and stopping sight distances are applicable to the proposed site access intersection:

- Intersection Sight Distance: 350 feet to the north and south.
- Stopping Sight Distance: 250 feet to the north and south, considering the major-street approach grades are less than 3% over a 300-foot distance.

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

Sight Distance Measurements

Field measurements were conducted at the proposed site access intersection on Friday, December 26, 2025. Intersection and stopping sight distances to the north and south of the proposed site access location were measured to be in excess of 400 feet. Accordingly, no sight distance related mitigation is necessary or recommended.

Analysis Summary

Based on the sight distance analysis, adequate intersection and stopping sight distances are available at the proposed site access intersection to allow for safe and efficient operation along NW 11th Avenue. No sight distance related mitigation is necessary or recommended.

Section F – Warrant Analysis

Left-Turn Lane Warrants

Left-turn lane warrants were examined for the site access intersection along NW 11th Avenue and NW 149th Street at NW 11th Avenue where such treatment would be applicable. A left-turn refuge lane is primarily a safety consideration for the major street, removing left-turning vehicles from the through traffic stream. To evaluate left-turn lane warrants, section *1310.02(13) Left-Turn Lanes and Turn Radii* and *Exhibit 1310-9 Left-Turn Storage Guidelines: Two-Lane, Unsignalized* from the WSDOT Design Manual were referenced. Turn lane warrants were evaluated based on the number of advancing and opposing vehicles, the number of turning vehicles, the travel speed, and the number of through lanes.

At the site access intersection along NW 11th Avenue, in both the northbound and southbound directions the approach design hour volumes are well below 300 vehicles per hour under year 2028 post-development conditions for both the AM and PM peak hours. Therefore, the WSDOT volume thresholds for warranting a left-turn lane on either approach will not be met.

Similarly for the intersection of NW 149th Street at NW 11th Avenue, the eastbound and westbound approach design hour volumes are below the 300 vehicles per hour WSDOT threshold under year 2028 post-development conditions for both the AM and PM peak hours. Therefore, the WSDOT volume thresholds for warranting a left-turn lane on either approach will not be met.

Based on the warrant analysis, left-turn lanes are not projected to be warranted at either the site access intersection along NW 11th Avenue or at the intersection of NW 149th Street at NW 11th Avenue under any analysis scenario through year 2028. Accordingly, no new turn lanes are necessary or recommended as part of the proposed Towhee Creek Subdivision project.

Exhibit 1310-9 from the WSDOT Design Manual is included in the appendix to this report.

Preliminary Traffic Signal Warrants

Preliminary traffic signal warrants were examined for the unsignalized study intersections, that are not planned for reconstruction as roundabouts, to determine whether the installation of a new traffic signal will be warranted by the 2028 post-development year. Based on a preliminary review of Warrants 1 and 2 in the *Manual on Uniform Traffic Control Devices*, or MUTCD, traffic signal warrants are not projected to be met at the applicable unsignalized study intersections under any analysis scenario through the year 2028. Therefore, no new traffic signals are necessary or recommended as part of the proposed development application.

Note that a review of Warrant 3 was not considered as part of this analysis. According to the MUTCD regarding Warrant 3:

> *This signal warrant should be applied only in unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities that attract or discharge large numbers of vehicles over a short time.*

These study intersections are not located near land uses that are expected to generate this type of traffic impact on a consistent basis. Regarding the nearby Clark County Fairgrounds and Amphitheater, these facilities do not generate this level of traffic on a regular daily basis, nor is traffic generated by these facilities expected to significantly impact the applicable study intersections (i.e., most of these trips are expected to either travel to/from I-5 and along NE 10th Avenue). Therefore, it was concluded that Warrant 3 would not be applicable to the analyzed study intersections along NW 11th Avenue.

Conclusions

- The intersection of NE 179th Street at NE Delfel Road (North Leg) currently operates at LOS F during the PM peak hour. However, with the closure of this intersection, relocation of the north leg of NE Delfel Road opposite of its south leg, and reconstruction of the intersection as a roundabout (i.e., 2025-2030 TIP Project B) the newly constructed intersection of NE 179th Street at NE Delfel Road is projected to operate acceptably per Clark County standards through the 2028 development year of the site. No additional mitigation is recommended at this intersection.
- All other study intersections are currently operating acceptably per Clark County standards and are projected to continue operating acceptably through the 2028 development year of the site. Accordingly, no additional operational mitigation is necessary or recommended at the study intersections as part of the proposed development application.
- There are several roadway segments that are projected to exceed Clark County's roadway segment v/c ratio threshold during the PM Peak hour under year 2028 conditions. However, no mitigation as part of the proposed development application is recommended. These segments and reasons for not requiring development specific mitigation include the following:
    - Segments:
        - NE 179th Street, between NE Delfel Road and NE 15th Avenue
        - NE 139th Street, between NE 10th Avenue and NE 20th Avenue
        - NE 139th Street, between NE 20th Avenue and NE 23rd Avenue
        - NE 10th Avenue, between NE 149th Street and NE 139th Street
        - NE 10th Avenue between NE 189th Street and NE 179th Street
    - Reasons for no Development Specific Mitigation:
        - Planned roadway improvements along NE 179th Street are expected to increase the carrying capacity of the street segment near the I-5 interchange.
        - These roadway segments are projected to operate with v/c ratios above 0.90 under year 2028 pre-development conditions. Therefore, the proposed Towhee Creek Subdivision project alone will not cause these roadway segments to exceed the 0.90 v/c ratio threshold.

    - The study intersections along these roadway segments are projected to operate within acceptable agency standards during the AM and PM peak hours under year 2028 post-development conditions. Therefore, the high roadway v/c ratios are not expected to create operational issues at the relevant/applicable study intersections.
    - Some of these roadway segments are designed with raised medians or additional travel lanes beyond those presented in the Standard Detail Drawings applicable to each respective roadway segment classification. It is reasonable to assume these roadway segments offer greater vehicle carrying capacity than their respective classifications.
- All other relevant roadway segments are projected to operate acceptably per Clark County standards through the 2028 development year of the site. Accordingly, no additional roadway capacity-related mitigation is necessary or recommended beyond currently planned improvement projects as part of the proposed development application.
- No significant trends or crash patterns were identified at any of the study intersections that are indicative of safety concerns. Accordingly, no crash-related mitigation is necessary or recommended as part of the Towhee Creek Subdivision application.
- Adequate intersection and stopping sight distances are available at the proposed site access intersection to allow for safe and efficient operation along NW 11th Avenue. No sight distance related mitigation is necessary or recommended.
- Left-turn lanes are not projected to be warranted at either the site access intersection along NW 11th Avenue or at the intersection of NW 149th Street at NW 11th Avenue under any analysis scenario through year 2028. Accordingly, no new turn lanes are necessary or recommended as part of the proposed Towhee Creek Subdivision project.
- Traffic signal warrants are not projected to be met at the applicable unsignalized study intersections under any analysis scenario through the year 2028. Therefore, no new traffic signals are necessary or recommended as part of the proposed development application.

APPENDIX A – SCOPING MATERIALS

Scoping Memorandum
Scoping Email Response

1130 SW Morrison St., Suite 318
Portland, OR 97205
503.248.0313
lancastermobley.com

Memorandum

To: **Craig Kathol, Clark County**
David Jardin, Clark County
Jason Lugo, WSDOT

From: **Daniel Stumpf, PE**
Ken Kim, PE

Date: **October 27, 2025**

Subject: **Towhee Creek PUD and Zone Change (PAC-2025-00098)**
Scoping Memorandum

Introduction

This memorandum details a proposed scope of work for a Transportation Impact Study (TIS) related to the *Towhee Creek PUD and Zone Change* (PAC-2025-00098) project, to be located on a single property (assessor parcel 185490000) east of NW 11th Avenue and south of NW 164th Street in unincorporated Clark County, Washington. The project will include the following:

- A comprehensive plan amendment from existing R1-20 zoning to proposed R1-10 zoning.
- Pending approval of the zone change, the construction of a 96-lot residential subdivision.

Access to the site will be provided via a proposed public street connection located along NW 11th Avenue.

Trip Generation

To estimate the number of trips that will be generated by the proposed subdivision, trip rates from the *Trip Generation Manual*[1] were used. Data from the land use code 215, *Single-Family Attached Housing*, was used to estimate site trip generation based on the number of dwelling units.

The trip generation calculations show that the proposed subdivision is projected to generate 46 AM peak hour trips, 55 PM peak hour trips, and 692 average weekday trips. The trip generation estimates are summarized in a Table 1. Detailed trip generation calculations are included as an attachment to this memorandum.

[1] Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition, 2021.

Table 1: Trip Generation Summary

ITE Land Use Code		Size	Morning Peak Hour			Evening Peak Hour			Weekday Total
			Enter	Exit	Total	Enter	Exit	Total	
215	Single-Family Attached Housing	96 units	12	34	46	32	23	55	692

Trip Distribution

The trip distribution of the proposed development was derived using the Southwest Washington Regional Transportation Council (RTC) transportation system model. The project site is located in Transportation Analysis Zone (TAZ) #1968, for which a select zone analysis was run to determine the distribution of site trips entering and exiting the zone.

The following trip distribution is projected:

- Approximately 22% of site trips will travel to/from the south along I-5, south of NE 139th Street.
- Approximately 14% of site trips will travel to/from the southeast along I-205, south of NW 134th Street.
- Approximately 12% of site trips will travel to/from the north along I-5, north of NE 179th Street.
- Approximately 6% of site trips will travel to/from the east along NE 179th Street, east of NE 29th Avenue.
- Approximately 2% of site trips will travel to/from the north along NE 29th Avenue, north of NE 179th Street.
- Approximately 5% of site trips will travel to/from the south along NE 20th Avenue, south of NE 129th Street.
- Approximately 3% of site trips will travel to/from the north along NW 10th Avenue, north of NW 199th Street.
- Approximately 1% of site trips will travel to/from the north along NE Salmon Creek Avenue, north of NE 134th Street.
- Approximately 1% of site trips will travel to/from the south along NE Salmon Creek Avenue, south of NE 134th Street.
- Approximately 1% of site trips will travel to/from the west along NE 179th Street, west of NE 41st Avenue.
- Approximately 33% of site trips will travel to/from locales within the surrounding site vicinity between study intersections.

Figures A, B, and C in the attachments depicts site trip assignment during the AM and PM peak hours for the proposed development.

Proposed Study Intersections

According to the project's Pre-Application Final Report:

> *Any development generating 10 or more peak hour trips is required to complete a transportation impact study. A general outline is provided in the concurrency administrative manual. A traffic impact study shall analyze impacts according to the following:*
>
> *- 50 or less new peak hour trips; one mile from site*
>
> *- 51-250 new peak hour trips; two miles from the site*
>
> *- 251 or more new peak hour trips; three miles from the site*

Based on the projected trips generated, the preliminary trip distribution, and the anticipated impacts to the transportation system, the following study intersections are suggested for analysis (refer to Figures A and B for the numbering convention of listed intersections):

1. NW 179th Street at NW 11th Avenue – 17 AM and 21 PM peak hour trip impact.
2. NE 179th Street at NE Delfel Road (South Leg) – 15 AM and 18 PM peak hour trip impact.
3. NE 179th Street at NE Delfel Road (North Leg) – 15 AM and 18 PM peak hour trip impact.
4. NE 179th Street at Interstate 5 (I-5) Southbound Ramps – 13 AM and 16 PM peak hour trip impact.
5. NE 179th Street at I-5 Northbound On-Ramp – 11 AM and 12 PM peak hour trip impact.
6. NE 179th Street at I-5 Northbound Off-Ramp/NE 10th Avenue – 7 AM and 9 PM peak hour trip impact.
7. NE 179th Street at NE 15th Avenue – 6 AM and 7 PM peak hour trip impact.
8. NW 164th Street at NW 11th Avenue – 18 AM and 23 PM peak hour trip impact.
9. Site Access at NW 11th Avenue – 46 AM and 55 PM peak hour trip impact.
10. NW 149th Street at NW 11th Avenue – 28 AM and 32 PM peak hour trip impact.
11. NE 149th Street at NE 10th Avenue – 24 AM and 27 PM peak hour trip impact.
12. NE 139th Street at NE 10th Avenue – 23 AM and 25 PM peak hour trip impact.
13. NE 139th Street at I-5 Southbound Ramp – 16 AM and 17 PM peak hour trip impact.
14. NE 139th Street at I-5 Northbound Ramp – 8 AM and 12 PM peak hour trip impact.
15. NE 139th Street at NE 20th Avenue – 5 AM and 5 PM peak hour trip impact.
16. NE 134th Street at NE 10th Avenue – 7 AM and 8 PM peak hour trip impact.
17. NE 134th Street at NE 20th Avenue – 10 AM and 11 PM peak hour trip impact.

Note that in Figures A and B the north and south legs of NE Delfel Road are shown to be realigned opposite each other in accordance with Clark County's 2024-2029 Transportation Improvement Program (TIP) Project B. The listed intersections above show the north and south legs of NE Delfel Road as two separate intersections, labelled as Intersections 2 and 3.

While considered higher classification intersections within a two-mile radius of the site, several regionally significant intersections are recommended for removal from analysis. These intersections with explanations for removal from study are provided below.

The following intersections will not be impacted by 5 or more peak hour trips. Therefore, no mitigation can be required as part of the application per Clark County Unified Development Code 40.350.020.G.1.c., not-with-standing safety improvements which may be necessary per section 40.350.030(B)(6):

A. NW 199th Street at NW 11th Avenue – 0 AM and 0 PM peak hour trip impact.

B. NW 199th Street at NE Delfel Road – 2 AM and 2 PM peak hour trip impact.

C. NW 179th Street at NW 41st Avenue – 0 AM and 0 PM peak hour trip impact.

E. NW 173rd Street at NE 15th Avenue – 2 AM and 2 PM peak hour trip impact.

F. NW 164th Street at NE 10th Avenue – 0 AM and 0 PM peak hour trip impact.

G. NW 159th Street at NE 29th Avenue – 0 AM and 0 PM peak hour trip impact.

H. NW 156th Street at NE Union Road – 1 AM and 1 PM peak hour trip impact.

I. NW 149th Street at NE 21st Avenue – 2 AM and 3 PM peak hour trip impact.

J. NW Bliss Road at NE 36th Avenue – 1 AM and 2 PM peak hour trip impact.

K. NW Bliss Road at NE 21st Avenue – 1 AM and 1 PM peak hour trip impact.

L. NW 139th Street at NE 11th Avenue – 0 AM and 0 PM peak hour trip impact.

N. NW 139th Street at NE 23rd Avenue – 1 AM and 2 PM peak hour trip impact.

O. NW 139th Street at NE 29th Avenue – 1 AM and 2 PM peak hour trip impact.

U. Pacific Highway Ramp at NE 20th Avenue – 3 AM and 3 PM peak hour trip impact.

V. NW 119th Street at NW 21st Avenue – 0 AM and 0 PM peak hour trip impact.

W. NW 119th Street at NW 16th Avenue – 0 AM and 0 PM peak hour trip impact.

Although impacted by 5 or more peak hour trips, the minor-street approaches of the unsignalized intersections will be impacted by less than 5 minor-street approaching trips whereby no mitigation can be required as part of the application per Clark County Unified Development Code 40.350.020.G.1.c, not-with-standing safety improvements which may be necessary per section 40.350.030(B)(6):

D. NW 179th Street at NE 29th Avenue – 4 AM and 5 PM peak hour trip impact.

WSDOT requires the analysis of intersections under their jurisdiction that are impacted by 10 or more peak hour trips. The following intersections will be impacted by less than 10 peak hour trips, or site trips are not expected to be added to the minor-street stop-controlled approaches:

M. NE 139th Street at I-205 Northbound Ramp – 5 AM and 5 PM peak hour trip impact.

P. NE 134th Street at I-5 Southbound Ramp – 7 AM and 8 PM peak hour trip impact.

Q. NE 134th Street at I-5 Northbound Ramp – 7 AM and 8 PM peak hour trip impact.

R. NE 134th Street at I-205 Southbound Off-Ramp – 7 AM and 8 PM peak hour trip impact.

S. NE 134th Street at I-205 Southbound On-Ramp – 7 AM and 8 PM peak hour trip impact.

T. NE 134th Street at I-205 Northbound Ramp – 2 AM and 5 PM peak hour trip impact.

Other Considerations

Please provide in-process development data which should be incorporated in the TIS. If available, the traffic studies for these projects are requested. Lancaster Mobley currently has access to data for the following projects (please let me know if any of the following can be removed):

- 179th Street Commercial Center Phase 1 & 2 (aka Killian Phase 1 & 2, located at/near 17714 NE 14th Avenue)
- M&H Subdivision (**20% built, 80% in-process,** located at/near 3801 NE 174th Street)
- Majestic Industrial Centre (located at/near 15017 NE 10th Avenue)
- Maletis Distribution Center (located at/near 16101 NE 10th Avenue)
- Martin's Meadow Subdivision (**50% built, 50% in-process** approximately 10% constructed and occupied, located at/near 1114 NW 150th Street)
- Mill Creek Meadows (PLD-2024-00092)
- Mill Creek Terrace (PLD-2024-00015)
- Mountain Estates Cluster Subdivision (PLD-2017-00046)
- Mountain View Ridge PUD (PLD-2023-00053)
- Mt Vista Logistics (PSR-2023-00008)
- NE 29th Avenue Subdivision (located at/near 18216 NE 29th Avenue)
- North Haven Subdivision (**85% built, 15% in-process**, located at/near 807 NW 179th Street)
- Salmon Creek Memory Care (located at/near 14801 NE 20th Avenue)
- Sherwood Landing Subdivision (located at/near 2526/2700 NE 125th Street)
- Skyview Station Shopping Center (**42% built, 58% in-process**, located at/near 14007 NE 10th Avenue)
- South Ridge Central Apartments (PSR-2023-00158)
- The Highlands at Whipple Creek (located at/near 818 NW 173rd Circle)

- Three Creeks North Phase 1 & 2 (located at/near 18701 NE 10th Avenue)
- Trails at Whipple Creek Subdivision (**55% built, 45% in-process**, located at/near 1214 NW 166th Way)
- Viers Subdivision PUD (assessor parcel 181682000)
- Washington State University Master Plan (located at/near 14204 NE Salmon Creek Avenue)
- Whipple Creek Village Subdivision (**95% built, 5% in-process**, located at/near 17603 NE 17th Avenue)
- Woodbrook Subdivision (aka Mill Creek PUD) (**40% built, 60% in-process**, located at/near 4519 NE 183rd Street)

Conclusions

Based on the projected trips generated, the preliminary trip distribution, and the anticipated impacts to the transportation system, the following study intersections are suggested for analysis:

1. NW 179th Street at NW 11th Avenue
2. NE 179th Street at NE Delfel Road (South Leg)
3. NE 179th Street at NE Delfel Road (North Leg)
4. NE 179th Street at Interstate 5 (I-5) Southbound Ramps
5. NE 179th Street at I-5 Northbound On-Ramps
6. NE 179th Street at I-5 Northbound Off-Ramp/NE 10th Avenue
7. NE 179th Street at NE 15th Avenue
8. NW 164th Street at NW 11th Avenue
9. Site Access at NW 11th Avenue
10. NW 149th Street at NW 11th Avenue
11. NE 149th Street at NE 10th Avenue
12. NE 139th Street at NE 10th Avenue
13. NE 139th Street at I-5 Southbound Ramp
14. NE 139th Street at I-5 Northbound Ramp
15. NE 139th Street at NE 20th Avenue
16. NE 134th Street at NE 10th Avenue
17. NE 134th Street at NE 20th Avenue

Please confirm if the above study area is sufficient for the TIS. Also, please confirm the following:

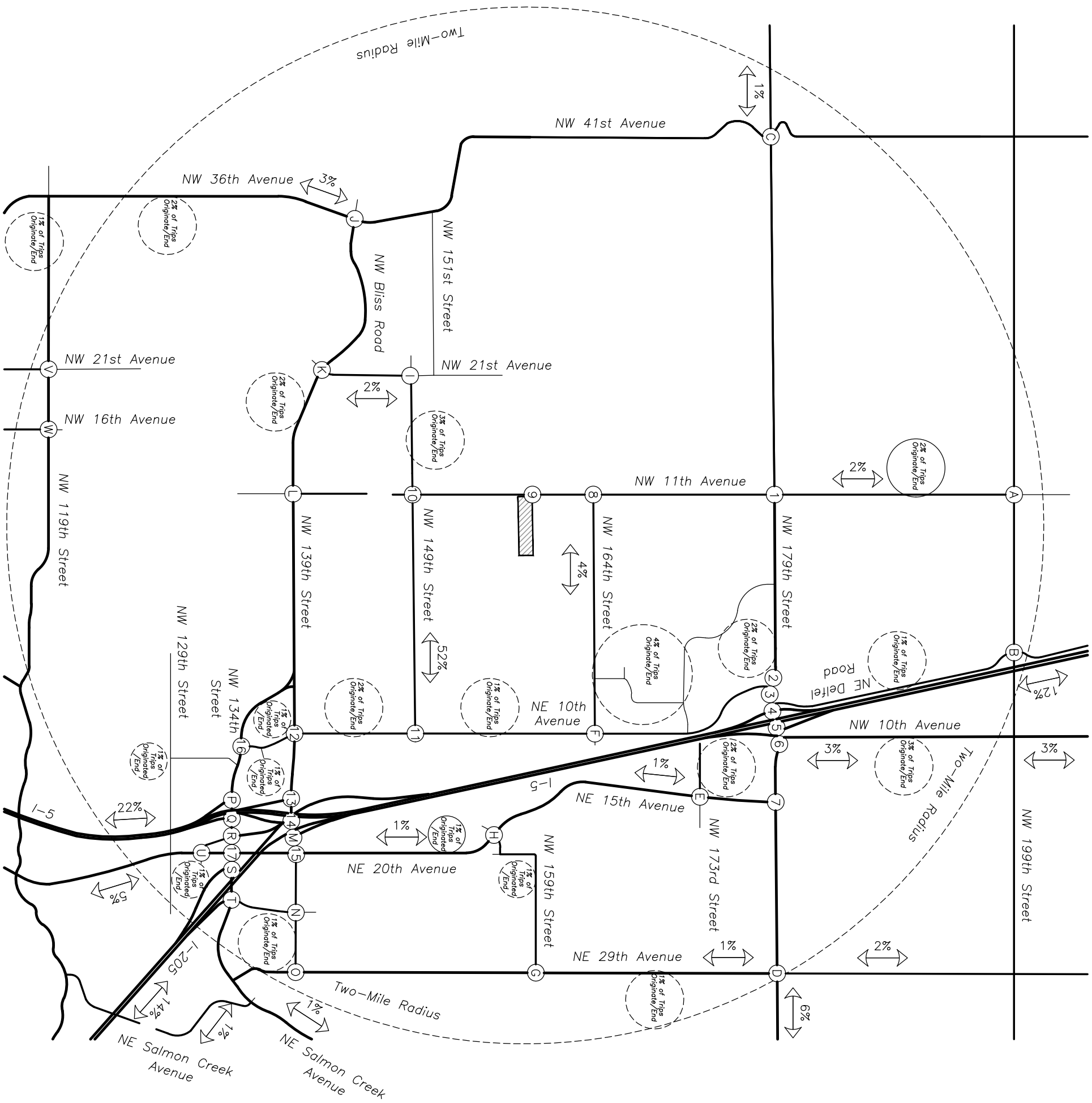
- In addition to those listed above, are there any other in-process development projects that should be incorporated in the TIS? If yes, could their traffic studies be provided? Can any in-process development data be removed?

If you have any questions regarding the preparation of this scoping memorandum, please don't hesitate to contact us.

LEGEND

XX% PERCENT OF PROJECT TRIPS

TRIP GENERATION			
	IN	OUT	TOTAL
AM	12	34	46
PM	32	23	55



No Scale

SITE TRIP DISTRIBUTION

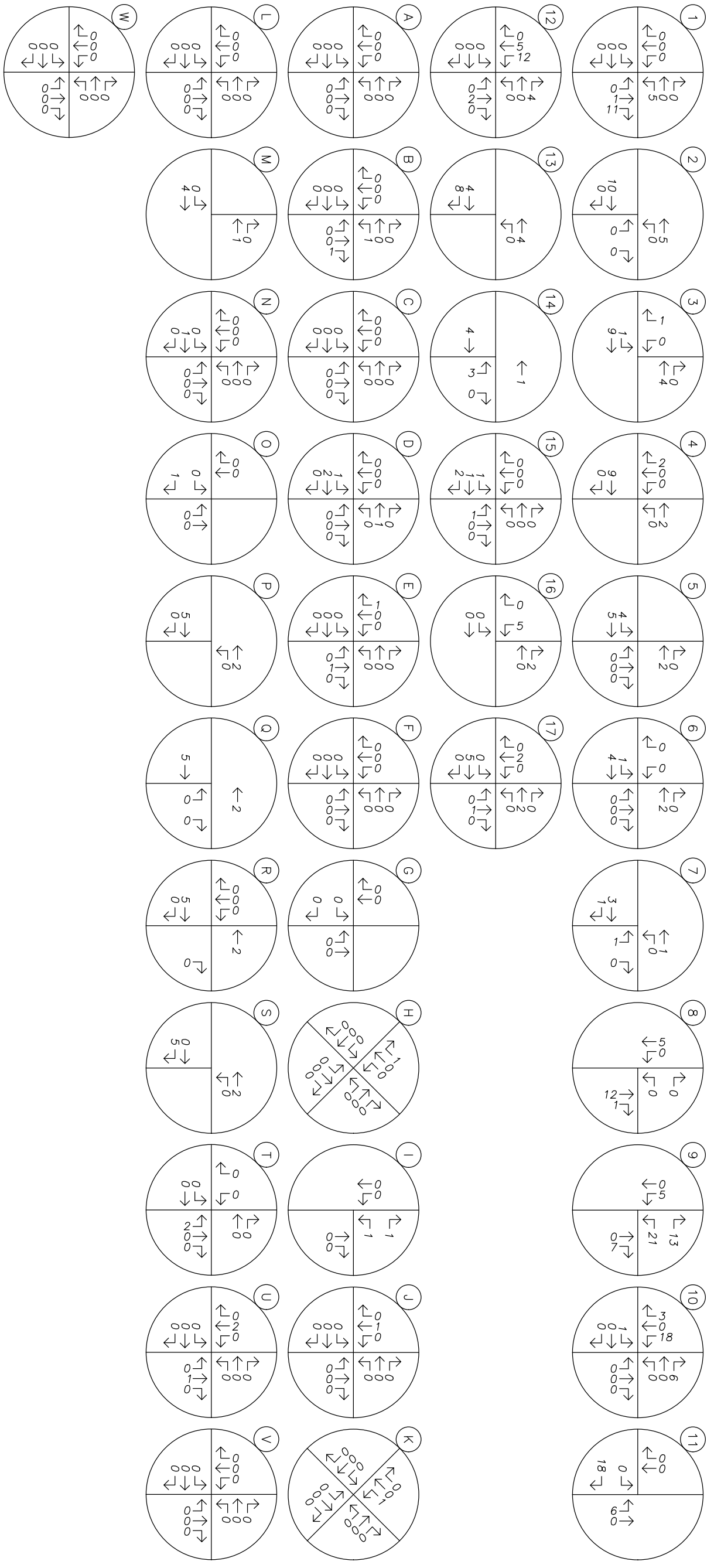
Proposed Development Plan - Site Trips

AM & PM Peak Hours

Figure A

Towhee Creek PUD & Zone Change

10/27/2025



SITE TRIP ASSIGNMENT

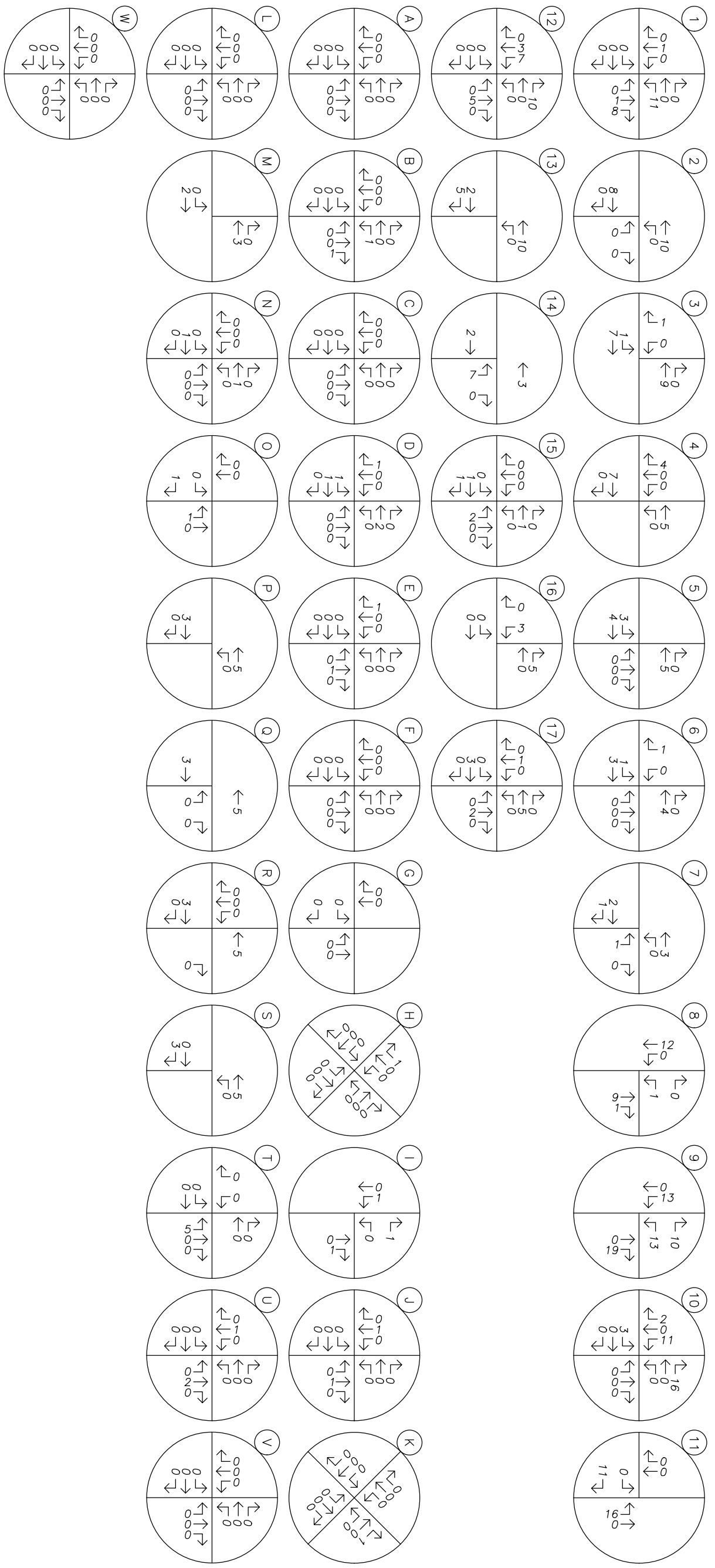
Proposed Development Plan - Site Trips

AM Peak Hour

Figure B

Towhee Creek PUD & Zone Change

10/24/2025



No Scale

SITE TRIP ASSIGNMENT

Proposed Development Plan - Site Trips

PM Peak Hour

Figure C

Towhee Creek PUD & Zone Change

10/24/2025

TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition
Proposed Subdivision

Land Use:	Single-Family Attached Housing
Land Use Code:	215
Land Use Subcategory:	All Sites
Setting/Location	General Urban/Suburban
Variable:	Dwelling Units
Trip Type:	Vehicle
Formula Type:	Rate
Variable Quantity:	96

AM PEAK HOUR

Trip Rate: 0.48

	Enter	Exit	Total
Directional Split	25%	75%	
Trip Ends	12	34	46

PM PEAK HOUR

Trip Rate: 0.57

	Enter	Exit	Total
Directional Split	59%	41%	
Trip Ends	32	23	55

WEEKDAY

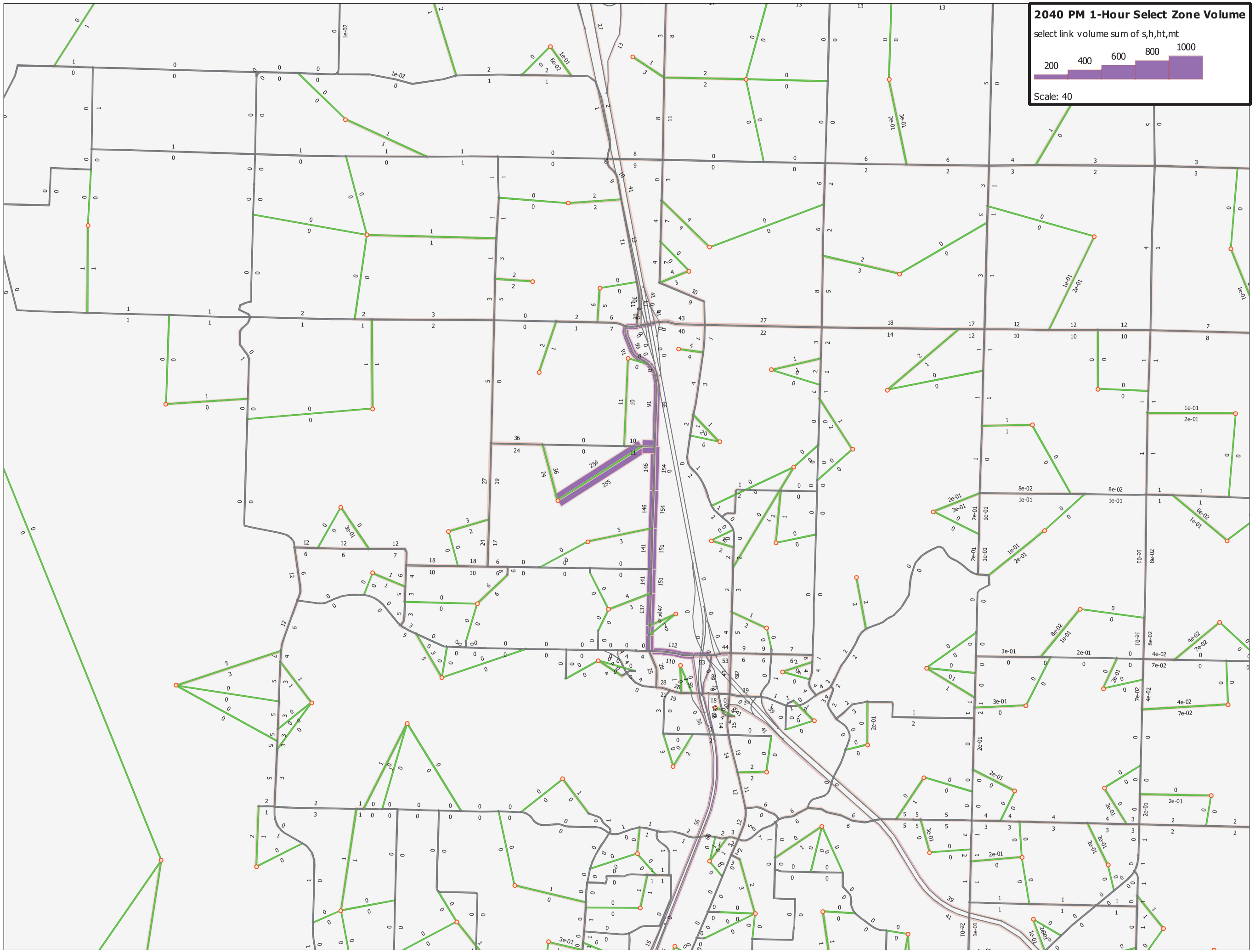
Trip Rate: 7.2

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	346	346	692

SATURDAY

Trip Rate: 8.76

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	420	420	840


2040 PM 1-Hour Select Zone Volume
select link volume sum of s,h,ht,mt
200
400
600
800
1000
Scale: 40

Outlook

FW: Towhee Creek PUD and Zone Change (PAC-2025-00098) - Traffic Study Scoping Update

From Craig Kathol <Craig.Kathol@clark.wa.gov>
Date Thu 11/20/2025 2:06 PM
To Daniel Stumpf <daniels@plsengineering.com>

1 attachment (2 MB)
PSR-2024-00049 Skyview Station East Trip gen-Dist-Assign.pdf;

Craig Kathol, E.I.T.
Transportation Concurrency Engineer
Clark County Public Works

Cell: 360.553.8247

From: Craig Kathol
Sent: Monday, November 17, 2025 2:26 PM
To: Ken Kim <ken.kim@aks-eng.com>; jason.lugo@wsdot.wa.gov
Cc: David Jardin <David.Jardin@clark.wa.gov>; Todd Mobley <todd.mobley@aks-eng.com>
Subject: RE: Towhee Creek PUD and Zone Change (PAC-2025-00098) - Traffic Study Scoping Update

Hi Ken,

I spoke too soon with the in-process data. Skyview Station Shopping Center can be removed. However, Skyview East is still in-process. See attached.

Thank you,

Craig Kathol, E.I.T.
Transportation Concurrency Engineer
Clark County Public Works

Cell: 360.553.8247



From: Ken Kim <ken.kim@aks-eng.com>
Sent: Monday, November 17, 2025 1:38 PM
To: Craig Kathol <Craig.Kathol@clark.wa.gov>; jason.lugo@wsdot.wa.gov
Cc: David Jardin <David.Jardin@clark.wa.gov>; Todd Mobley <todd.mobley@aks-eng.com>
Subject: RE: Towhee Creek PUD and Zone Change (PAC-2025-00098) - Traffic Study Scoping Update

We will include the intersection you listed in the email. Thank you, Craig.

Ken Kim, PE
AKS ENGINEERING & FORESTRY, LLC
P: 503-248-0313 | www.aks-eng.com | ken.kim@aks-eng.com

From: Craig Kathol <Craig.Kathol@clark.wa.gov>
Sent: Monday, November 17, 2025 10:25 AM
To: Ken Kim <ken.kim@aks-eng.com>; jason.lugo@wsdot.wa.gov
Cc: David Jardin <David.Jardin@clark.wa.gov>; Todd Mobley <todd.mobley@aks-eng.com>
Subject: RE: Towhee Creek PUD and Zone Change (PAC-2025-00098) - Traffic Study Scoping Update

Good morning Ken,

Sorry for the delay. I have reviewed the scoping memo for the proposed Towhee Creek PUD and generally agree with your findings.

Please retain all proposed study intersections in your scoping memo for analysis.

Please retain the regionally significant intersections that will have at least 5 trips in the intersection showing trip assignments as an illustration for why CCC 40.350.020.G.1.c is applicable. I noticed several regionally significant intersections that were not included in the trip assignments that I would like to see included. Please see below:

- NE 139th St/NE 23rd Ave
- NE 164th St/NE 10th Ave
- NW 179th St/NW 41st Ave
- NW 189th St/NW 11th Ave
- NW Bliss Rd/NW 21st Ave

I agree with all of your in-process data.

Please let me know if you have any questions or need anything else.

Thank you,



Craig Kathol, E.I.T.
Transportation Concurrency Engineer
Clark County Public Works

Cell: 360.553.8247



From: Ken Kim <ken.kim@aks-eng.com>
Sent: Thursday, November 13, 2025 1:25 PM
To: Craig Kathol <Craig.Kathol@clark.wa.gov>; jason.lugo@wsdot.wa.gov
Cc: David Jardin <David.Jardin@clark.wa.gov>; Todd Mobley <todd.mobley@aks-eng.com>
Subject: RE: Towhee Creek PUD and Zone Change (PAC-2025-00098) - Traffic Study Scoping Update

No worries, I was just trying to check if I missed the comments from you. Thank you, Craig.

Best regards,

Ken Kim, PE
AKS ENGINEERING & FORESTRY, LLC
P: 503-248-0313 | www.aks-eng.com | ken.kim@aks-eng.com

From: Craig Kathol <Craig.Kathol@clark.wa.gov>
Sent: Thursday, November 13, 2025 1:20 PM
To: Ken Kim <ken.kim@aks-eng.com>; jason.lugo@wsdot.wa.gov
Cc: David Jardin <David.Jardin@clark.wa.gov>; Todd Mobley <todd.mobley@aks-eng.com>
Subject: RE: Towhee Creek PUD and Zone Change (PAC-2025-00098) - Traffic Study Scoping Update

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Hi Ken,

I'm very sorry for the delay. It has been a very busy few weeks. I should be able to get you my comments tomorrow.

Thank you,



Craig Kathol, E.I.T.
Transportation Concurrency Engineer
Clark County Public Works

Cell: 360.553.8247

From: Ken Kim <ken.kim@aks-eng.com>
Sent: Wednesday, November 12, 2025 11:05 AM
To: Craig Kathol <Craig.Kathol@clark.wa.gov>; jason.lugo@wsdot.wa.gov
Cc: David Jardin <David.Jardin@clark.wa.gov>; Todd Mobley <todd.mobley@aks-eng.com>
Subject: RE: Towhee Creek PUD and Zone Change (PAC-2025-00098) - Traffic Study Scoping Update

EXTERNAL: This email originated from outside of Clark County. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good morning, Craig and Jason,

I just wanted to check if there was any update for the scoping memo. There was some change in our team so if you already sent the comments to Daniel, could you please share and forward that to me. Thank you.

Best regards,

Ken Kim, PE
AKS ENGINEERING & FORESTRY, LLC
P: 503-248-0313 | www.aks-eng.com | ken.kim@aks-eng.com

From: Daniel Stumpf <daniel.stumpf@aks-eng.com>
Sent: Monday, October 27, 2025 11:21 AM
To: Craig.Kathol@clark.wa.gov; jason.lugo@wsdot.wa.gov
Cc: david.jardin@clark.wa.gov; Ken Kim <ken.kim@aks-eng.com>
Subject: Towhee Creek PUD and Zone Change (PAC-2025-00098) - Traffic Study Scoping Update

Good morning Craig and Jason,

This has been on ongoing project that I had previously scoped with the County (i.e., Craig) back in June of 2024, but I was wondering if you could provide scoping input for the Towhee Creek PUD and Zone Change project (PAC-2025-00098). At the time of writing, the project will include the development 96 dwelling units (i.e., 48 duplexes). Unlike the prior 2024 scoping, based on the trip generation we'll need to look at intersections within a 2-mile radius.

Attached is a scoping memo for your review/approval. To summarize main points:

- Please confirm if the study area is acceptable.
- Let me know if there are any other in-process development projects not listed in the scoping memo that should be included. Additionally, if any can be removed please let me know.
- We'll include trip assignment for the intersections that do not require a detailed review of intersection capacity or safety and provide discussion as to why analysis was deemed not necessary.

Thanks, and let me know if you have any questions or need additional info.

Daniel

Daniel Stumpf



AKS ENGINEERING & FORESTRY, LLC

1130 SW Morrison Street, Suite 318 | Portland OR 97205

P: 503-248-0313 | www.aks-eng.com | danliel.stumpf@aks-eng.com

Oregon: Bend, Keizer, Portland, The Dalles, Tualatin

Washington: Kirkland, Richland, Vancouver, Wenatchee, White Salmon

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APPENDIX B – SITE PLAN

Site Plan

Towhee Creek Subdivision

Located in the NW ¼ of Section 22, T3N, R1E, W.M.
Clark County, Washington

GENERAL NOTES

APPLICANT:
IRA Resources Inc
Daniel Wisner
4910 NW 127th Street
Vancouver, WA 98685
wisnerdan@gmail.com

OWNER:
Daniel Wisner
4910 NW 127th Street
Vancouver, WA 98685

CIVIL ENGINEER:
PLS Engineering
Contact: Travis Johnson, PE
604 W Evergreen Blvd
Vancouver, WA 98660
(360) 944-6519
pm@plsengineering.com

SITE ADDRESS:
Parcel # 185490000
No Situs Address

GENERAL NOTES:

Land Use:
The applicant is proposing to subdivide the 9.91-acre site into 96 single-family attached units in the R1-7.5 zone utilizing the compact lot development standards. The site is currently unoccupied and is relatively flat with a hill near the northwest border sloping down to a steep drop past the tree line to the east leading to a creak. All existing structures will be removed.

The property is identified as assessor's parcel numbers 185490000. The site has no situs address.

Approximate Site Area: 431,876 sq-ft, 9.91 acres

All lots will maintain the following minimum setbacks:
- **10' from public rights-of-way and private street easements**
- **10' from external non-street property boundaries**
- **5' side yard setbacks**

Transportation:
NW 11th Ave abuts the site to the west. This plat will dedicate additional right-of-way to meet the standards for a minor arterial. Improvements along the site frontage will include a planter strip and 5' detached sidewalk.

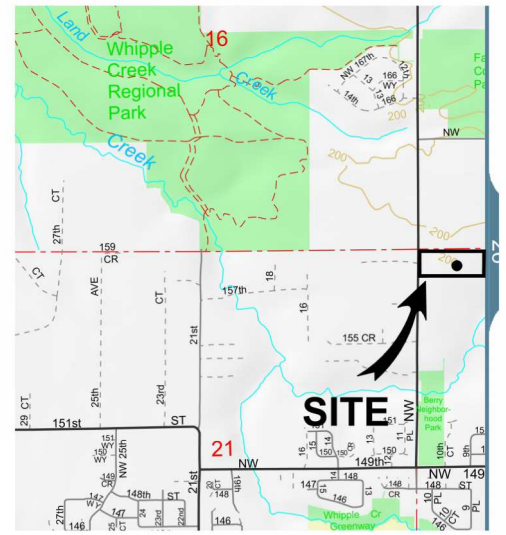
Lane widths will be maintained and bike lanes will match into existing.

New public streets are proposed to provide access to the site and are designed to meet drawing #13. The public roadway is then stubbed to the south.

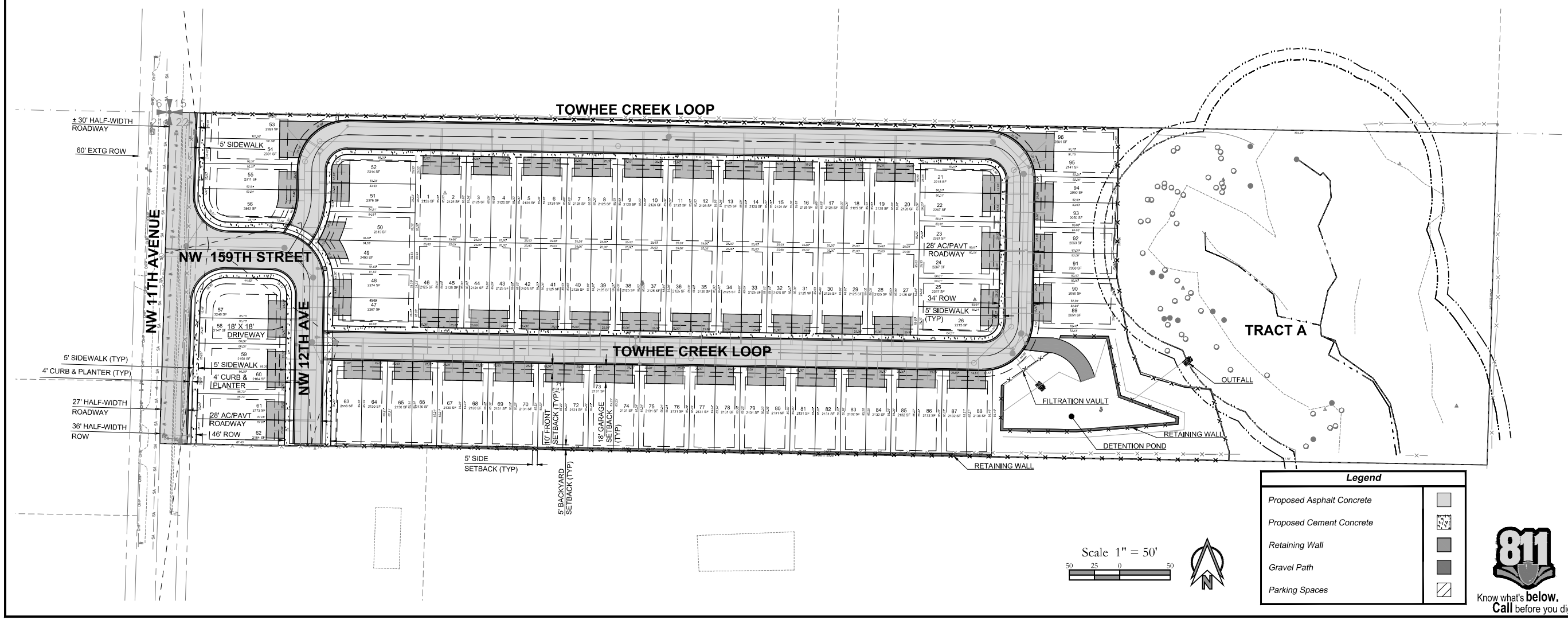
Utilities:
The future homes will be connected to public water and sewer service. Water service will be provided by Clark Public Utilities. Sewer service will be provided by Clark Regional. There are no existing wells onsite. There are no existing septic system is located onsite that will be decommissioned during construction. There are two septic systems within one hundred feet on the south side of the property.

Stormwater generated from the development will be treated & routed to a detention pond at the south east end of the site.

Critical Areas:
There is a stream and its buffer on the East end of the site, no construction happens within the stream or its buffer. There are no other known critical areas such as a 100 year floodplain, water bodies, unstable slopes and landslide hazard areas, significant wildlife habitat or vegetation areas, known significant historical resources or wetland areas on this site.



VICINITY MAP
NOT TO SCALE



Know what's **below.** **Call** before you dig.

PLS ENGINEERING

Preliminary Plat For:

Towhee Subdivision

A Site Located In Clark County, Washington

Engineering - Surveying - Planning | 604 W. Evergreen Blvd., Vancouver, WA 98660 | PH (360) 944-6519 | Fax (360) 944-6539

Revisions

1	2	3	4	5	6

Project No.	3988
SCALE:	H: 1" = 50' V: N/A
DESIGNED BY:	CHJ
DRAFTED BY:	CHJ
REVIEWED BY:	TGJ

2
3

APPENDIX C – SITE TRIPS

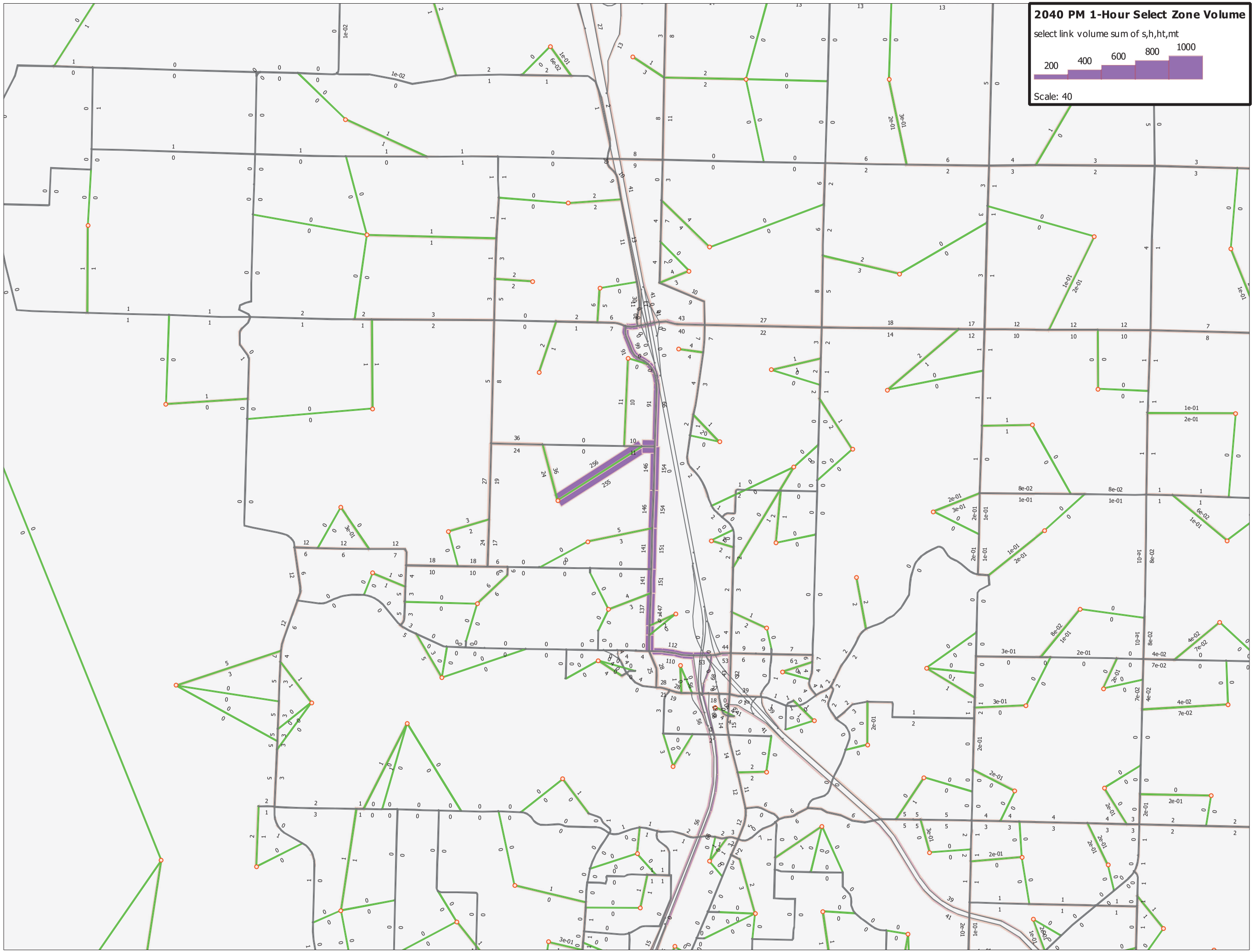
Trip Generation Calculations
RTC Modeling Data

Trip Generation Calculations

Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition

Analysis Scenario: Proposed Conditions
Land Use Code: 215, Single-Family Attached Housing
Subcategory: All Sites
Setting/Location General Urban/Suburban
Trip Type: Vehicle
Formula Type: Rate
Variable Type & Quanity: 96 Dwelling Units

Scenario	Trip Rate	Enter (*Percentage Split*)		Exit (*Percentage Split*)		Total
AM Peak Hour	0.48	12	*25%*	34	*75%*	46
PM Peak Hour	0.57	32	*59%*	23	*41%*	55
Weekday	7.20	346	*50%*	345	*50%*	691


2040 PM 1-Hour Select Zone Volume
select link volume sum of s,h,ht,mt
200
400
600
800
1000
Scale: 40

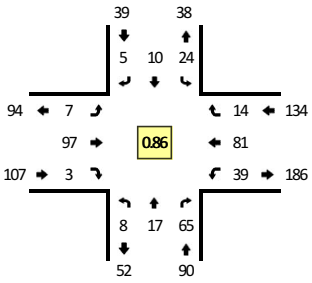
APPENDIX D – TRAFFIC VOLUMES

Traffic Count Data
In-Process Development
Rerouted Trips

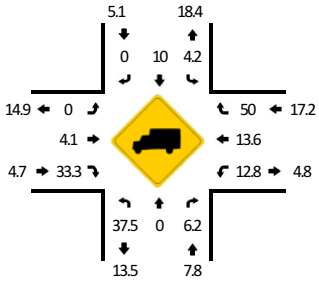
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

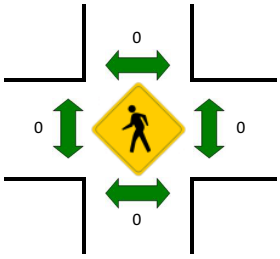
LOCATION: 1. NW 11th Ave -- NW 179th St | **QC JOB #:** 17363001
CITY/STATE: Clark, WA | **DATE:** Thu, Dec 4 2025

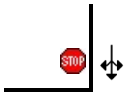
Peak-Hour: 7:55 AM -- 8:55 AM
Peak 15-Min: 8:35 AM -- 8:50 AM

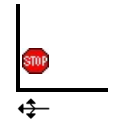


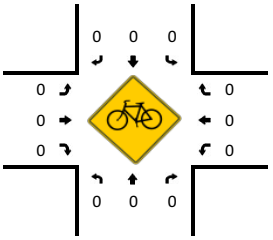
TRUE DATA TO IMPROVE MOBILITY

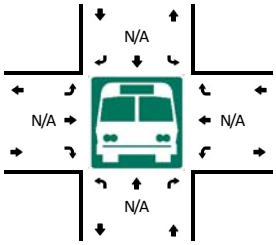


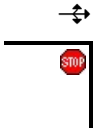


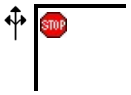


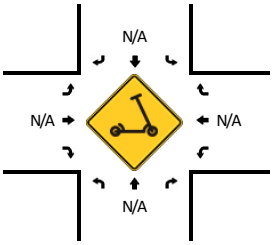












5-Min Count Period Beginning At	1. NW 11th Ave (Northbound)				1. NW 11th Ave (Southbound)				NW 179th St (Eastbound)				NW 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	3	0	1	0	0	0	0	6	1	0	3	2	2	0	19	
7:05 AM	0	1	8	0	2	0	0	0	0	7	0	0	1	1	0	0	20	
7:10 AM	0	0	13	0	0	1	0	0	0	9	0	0	0	2	0	0	25	
7:15 AM	0	1	6	0	4	1	0	0	0	5	0	0	2	2	3	0	24	
7:20 AM	0	1	8	0	1	3	0	0	2	12	0	0	4	1	0	0	32	
7:25 AM	0	0	10	0	1	0	1	0	1	7	0	0	2	3	0	0	25	
7:30 AM	2	1	3	0	5	0	0	0	1	11	0	0	2	4	0	0	29	
7:35 AM	2	0	8	0	3	0	0	0	2	10	0	0	6	3	0	0	34	
7:40 AM	1	2	9	0	2	1	0	0	0	13	1	0	1	7	0	0	37	
7:45 AM	0	2	8	0	0	2	0	0	0	13	0	0	5	1	1	0	32	
7:50 AM	1	0	4	0	2	1	1	0	0	3	1	0	2	3	0	0	18	
7:55 AM	0	0	7	0	4	1	0	0	0	10	1	0	6	8	1	0	38	333
8:00 AM	0	0	4	0	2	3	0	0	1	5	0	0	5	5	0	0	25	339
8:05 AM	1	2	5	0	1	1	0	0	3	5	0	0	3	7	1	0	29	348
8:10 AM	1	1	4	0	2	0	0	0	1	9	0	0	2	5	1	0	26	349
8:15 AM	0	0	7	0	2	0	0	0	0	8	0	0	1	4	1	0	23	348
8:20 AM	0	2	7	0	4	0	3	0	0	10	0	0	2	6	0	0	34	350
8:25 AM	0	3	5	0	2	0	0	0	0	9	0	0	4	11	0	0	34	359
8:30 AM	1	1	7	0	2	1	0	0	1	7	1	0	1	7	0	0	29	359
8:35 AM	2	0	2	0	1	1	1	0	1	9	0	0	2	5	2	0	26	351
8:40 AM	0	1	4	0	4	1	0	0	0	11	0	0	7	7	3	0	38	352
8:45 AM	2	2	8	0	0	2	0	0	0	10	1	0	1	13	4	0	43	363
8:50 AM	1	5	5	0	0	0	1	0	0	4	0	0	5	3	1	0	25	370
8:55 AM	0	1	10	0	2	4	0	0	1	9	0	0	2	4	0	0	33	365

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	12	56	0	20	16	4	0	4	120	4	0	40	100	36	0	428
Heavy Trucks	8	0	0		0	4	0		0	12	4		0	12	24		64
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

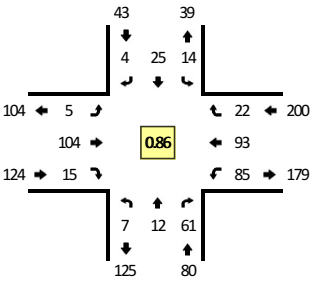
Report generated on 12/10/2025 2:12 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

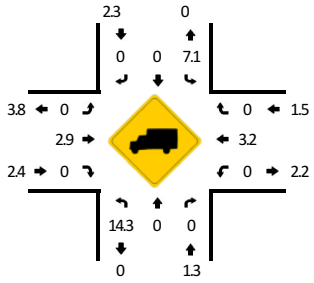
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

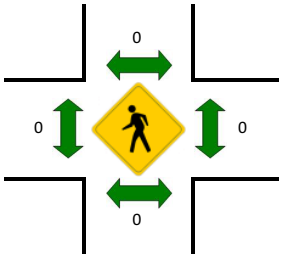
LOCATION: 1. NW 11th Ave -- NW 179th St
CITY/STATE: Clark, WA

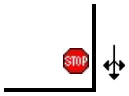
QC JOB #: 17363002
DATE: Thu, Dec 4 2025

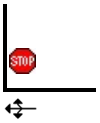
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:20 PM -- 5:35 PM

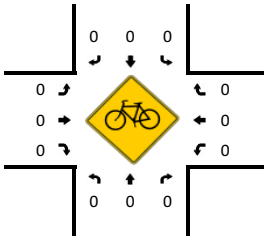


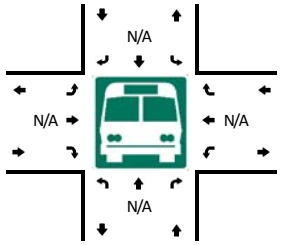


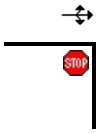


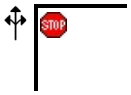


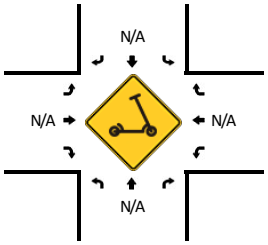












5-Min Count Period Beginning At	1. NW 11th Ave (Northbound)				1. NW 11th Ave (Southbound)				NW 179th St (Eastbound)				NW 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	2	3	0	0	3	0	0	0	11	0	0	5	10	2	0	36	
4:05 PM	1	1	8	0	1	1	0	0	1	8	2	0	9	7	2	0	41	
4:10 PM	0	1	5	0	1	0	2	0	0	16	2	0	3	8	1	0	39	
4:15 PM	1	0	5	0	1	1	1	0	0	8	1	0	4	7	1	0	30	
4:20 PM	0	2	2	0	3	0	1	0	1	8	0	0	4	3	1	0	25	
4:25 PM	0	1	2	0	1	2	2	0	1	4	0	0	10	9	3	0	35	
4:30 PM	0	0	4	0	0	1	0	0	0	10	0	0	5	11	0	0	31	
4:35 PM	0	0	7	0	1	0	1	0	2	10	0	0	6	4	2	0	33	
4:40 PM	0	2	4	0	2	1	0	0	0	10	2	0	5	10	0	0	36	
4:45 PM	0	1	2	0	1	1	0	0	0	10	4	0	5	10	2	0	36	
4:50 PM	0	0	6	0	1	2	0	0	0	7	1	0	5	14	0	0	36	
4:55 PM	2	0	7	0	0	4	0	0	0	7	0	0	6	3	1	0	30	408
5:00 PM	0	1	6	0	0	0	0	0	0	12	2	0	4	3	3	0	31	403
5:05 PM	0	0	6	0	1	3	1	0	0	8	2	0	11	12	4	0	48	410
5:10 PM	0	1	3	0	0	3	0	0	0	4	1	0	7	5	3	0	27	398
5:15 PM	2	1	5	0	4	2	1	0	0	10	0	0	6	7	2	0	40	408
5:20 PM	0	2	5	0	1	4	0	0	1	5	1	0	15	7	1	0	42	425
5:25 PM	0	2	5	0	2	2	1	0	0	8	1	0	7	7	3	0	38	428
5:30 PM	3	2	5	0	1	3	0	0	2	13	1	0	8	11	1	0	50	447
5:35 PM	0	0	5	0	4	1	0	0	0	4	0	0	2	6	1	0	23	437
5:40 PM	1	2	6	0	1	0	1	0	1	7	0	0	8	9	3	0	39	440
5:45 PM	0	2	3	0	3	2	0	0	0	3	0	0	6	8	1	0	28	432
5:50 PM	0	3	3	0	0	1	0	0	1	9	3	0	7	9	4	0	40	436
5:55 PM	0	1	2	0	0	0	0	0	1	9	0	0	1	11	1	0	26	432

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	24	60	0	16	36	4	0	12	104	12	0	120	100	20	0	520
Heavy Trucks	4	0	0		0	0	0		0	0	0		0	4	0		8
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:12 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

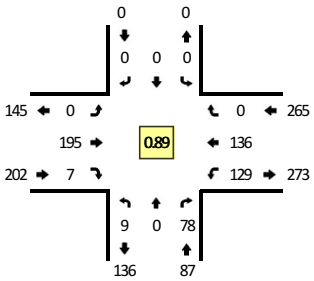
Type of peak hour being reported: Intersection Peak

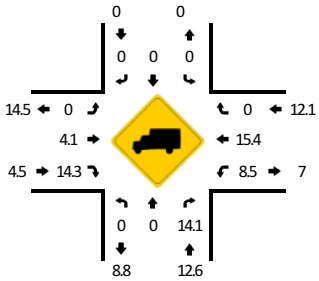
Method for determining peak hour: Total Entering Volume

LOCATION: 2. NE Delfel Rd (S) -- NE 179th St
CITY/STATE: Clark, WA

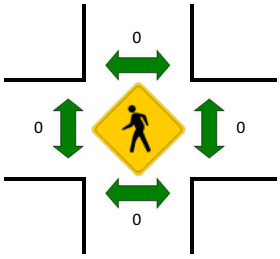
QC JOB #: 17363003
DATE: Thu, Dec 4 2025

Peak-Hour: 7:50 AM -- 8:50 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

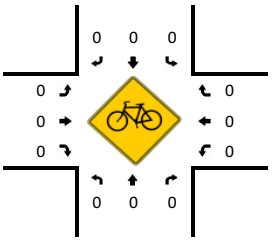


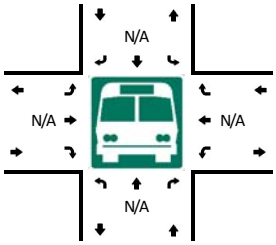


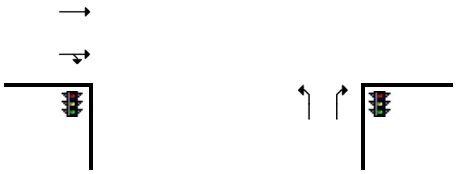
TRUE DATA TO IMPROVE MOBILITY

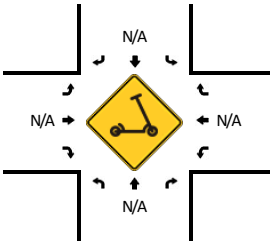












5-Min Count Period Beginning At	2. NE Delfel Rd (S) (Northbound)				2. NE Delfel Rd (S) (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	2	0	0	0	0	0	0	10	2	0	11	8	0	1	34	
7:05 AM	0	0	0	0	0	0	0	0	0	16	0	0	10	4	0	0	30	
7:10 AM	0	0	6	0	0	0	0	0	0	22	1	0	15	7	0	0	51	
7:15 AM	0	0	3	0	0	0	0	0	0	22	0	0	6	3	0	0	34	
7:20 AM	0	0	5	0	0	0	0	0	0	21	1	0	11	5	0	0	43	
7:25 AM	1	0	5	0	0	0	0	0	0	21	1	0	10	5	0	0	43	
7:30 AM	0	0	3	0	0	0	0	0	0	18	0	0	10	7	0	0	38	
7:35 AM	0	0	7	0	0	0	0	0	0	23	1	0	10	10	0	0	51	
7:40 AM	0	0	4	0	0	0	0	0	0	23	0	0	12	7	0	0	46	
7:45 AM	0	0	6	0	0	0	0	0	0	17	2	0	12	6	0	0	43	
7:50 AM	0	0	3	0	0	0	0	0	0	17	0	0	10	7	0	0	37	
7:55 AM	0	0	2	0	0	0	0	0	0	17	1	0	11	13	0	0	44	494
8:00 AM	1	0	11	0	0	0	0	0	0	17	0	0	9	9	0	0	47	507
8:05 AM	1	0	6	0	0	0	0	0	0	12	0	0	15	12	0	0	46	523
8:10 AM	1	0	8	0	0	0	0	0	0	16	1	0	5	7	0	0	38	510
8:15 AM	0	0	11	0	0	0	0	0	0	13	2	0	11	6	0	0	43	519
8:20 AM	1	0	11	0	0	0	0	0	0	20	0	0	13	11	0	0	56	532
8:25 AM	3	0	4	0	0	0	0	0	0	19	0	0	13	18	0	0	57	546
8:30 AM	0	0	3	0	0	0	0	0	0	15	1	0	6	8	0	0	33	541
8:35 AM	0	0	5	0	0	0	0	0	0	15	0	0	5	10	0	0	35	525
8:40 AM	0	0	4	0	0	0	0	0	0	14	2	0	12	22	0	0	54	533
8:45 AM	2	0	10	0	0	0	0	0	0	20	0	0	19	13	0	0	64	554
8:50 AM	0	0	3	0	0	0	0	0	0	7	1	0	11	9	0	0	31	548
8:55 AM	1	0	1	0	0	0	0	0	0	20	2	0	10	8	0	0	42	546

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	0	104	0	0	0	0	0	0	208	8	0	148	140	0	0	624
Heavy Trucks	0	0	16		0	0	0		0	4	0		0	28	0		48
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:12 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

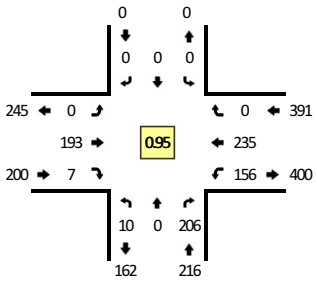
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

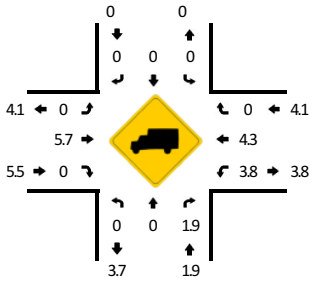
LOCATION: 2. NE Delfel Rd (S) -- NE 179th St
CITY/STATE: Clark, WA

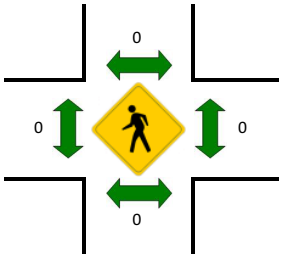
QC JOB #: 17363004
DATE: Thu, Dec 4 2025

Peak-Hour: 4:10 PM -- 5:10 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

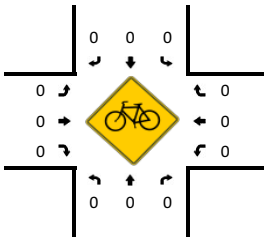


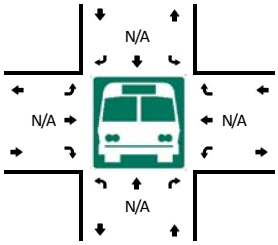




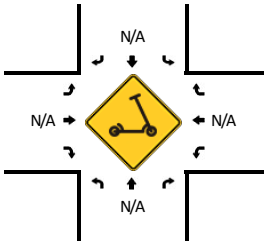












5-Min Count Period Beginning At	2. NE Delfel Rd (S) (Northbound)				2. NE Delfel Rd (S) (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	23	0	0	0	0	0	0	14	2	0	13	14	0	0	66	
4:05 PM	1	0	15	0	0	0	0	0	0	19	0	0	7	20	0	0	62	
4:10 PM	1	0	18	0	0	0	0	0	0	27	0	0	12	19	0	0	77	
4:15 PM	0	0	16	0	0	0	0	0	0	11	0	0	17	13	0	0	57	
4:20 PM	1	0	14	0	0	0	0	0	0	20	1	0	11	13	0	0	60	
4:25 PM	1	0	18	0	0	0	0	0	0	3	1	0	18	23	0	0	64	
4:30 PM	1	0	17	0	0	0	0	0	0	15	1	0	12	18	0	0	64	
4:35 PM	1	0	16	0	0	0	0	0	0	17	1	0	13	18	0	0	66	
4:40 PM	1	0	23	0	0	0	0	0	0	13	0	0	10	16	0	0	63	
4:45 PM	3	0	23	0	0	0	0	0	0	15	0	0	10	20	0	0	71	
4:50 PM	1	0	13	0	0	0	0	0	0	18	0	0	15	25	0	0	72	
4:55 PM	0	0	17	0	0	0	0	0	0	12	1	0	14	24	0	0	68	790
5:00 PM	0	0	14	0	0	0	0	0	0	24	2	0	9	24	0	0	73	797
5:05 PM	0	0	17	0	0	0	0	0	0	18	0	0	14	22	0	1	72	807
5:10 PM	1	0	9	0	0	0	0	0	0	11	0	0	10	14	0	0	45	775
5:15 PM	1	0	14	0	0	0	0	0	0	16	0	0	11	21	0	0	63	781
5:20 PM	1	0	9	0	0	0	0	0	0	10	0	0	17	24	0	0	61	782
5:25 PM	1	0	14	0	0	0	0	0	0	17	3	0	4	29	0	0	68	786
5:30 PM	0	0	19	0	0	0	0	0	0	17	1	0	8	17	0	0	62	784
5:35 PM	0	0	9	0	0	0	0	0	0	18	0	0	6	14	0	0	47	765
5:40 PM	3	0	16	0	0	0	0	0	0	14	0	0	3	19	0	0	55	757
5:45 PM	0	0	13	0	0	0	0	0	0	10	0	0	8	21	0	0	52	738
5:50 PM	0	0	7	0	0	0	0	0	0	10	1	0	10	19	0	0	47	713
5:55 PM	0	0	8	0	0	0	0	0	0	13	2	0	5	15	0	0	43	688

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	176	0	0	0	0	0	0	216	12	0	152	292	0	0	852
Heavy Trucks	0	0	4		0	0	0		0	4	0		8	0	0		16
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

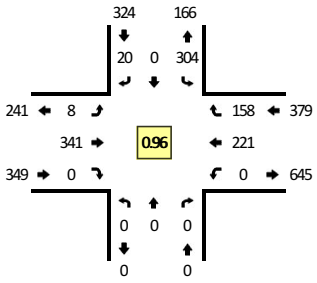
Report generated on 12/10/2025 2:12 PM

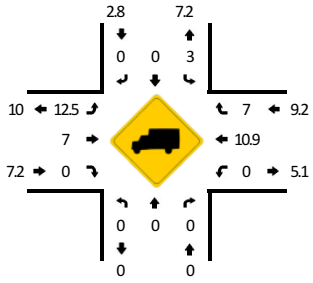
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

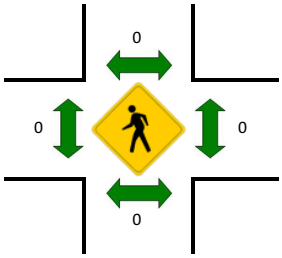
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

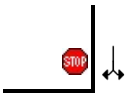
LOCATION: 3. NE Delfel Rd (N) -- NE 179th St | **QC JOB #:** 17363005
CITY/STATE: Clark, WA | **DATE:** Thu, Dec 4 2025

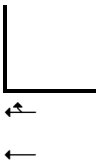
Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:10 AM -- 7:25 AM

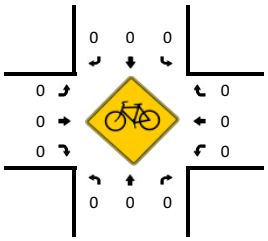


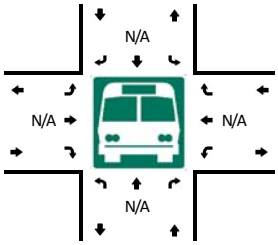


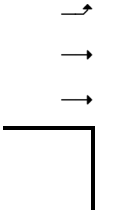




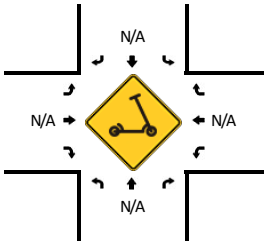












5-Min Count Period Beginning At	3. NE Delfel Rd (N) (Northbound)				3. NE Delfel Rd (N) (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	16	0	2	0	1	15	0	0	0	18	8	0	60	
7:05 AM	0	0	0	0	16	0	2	0	0	23	0	0	0	14	13	0	68	
7:10 AM	0	0	0	0	29	0	1	0	0	33	0	0	0	22	9	0	94	
7:15 AM	0	0	0	0	20	0	2	0	1	29	0	0	0	14	15	0	81	
7:20 AM	0	0	0	0	23	0	2	0	0	32	0	0	0	17	25	0	99	
7:25 AM	0	0	0	0	18	0	3	0	0	33	0	0	0	9	18	0	81	
7:30 AM	0	0	0	0	30	0	0	0	0	24	0	0	0	23	6	0	83	
7:35 AM	0	0	0	0	17	0	0	0	1	33	0	0	0	22	20	0	93	
7:40 AM	0	0	0	0	22	0	0	0	0	36	0	0	0	16	13	0	87	
7:45 AM	0	0	0	0	27	0	2	0	1	25	0	0	0	20	11	0	86	
7:50 AM	0	0	0	0	30	0	1	0	1	24	0	0	0	21	10	0	87	
7:55 AM	0	0	0	0	23	0	1	0	2	19	0	0	0	21	12	0	78	997
8:00 AM	0	0	0	0	34	0	1	0	2	30	0	0	0	18	8	0	93	1030
8:05 AM	0	0	0	0	31	0	7	0	0	23	0	0	0	18	11	0	90	1052
8:10 AM	0	0	0	0	29	0	1	0	1	26	0	0	0	13	9	0	79	1037
8:15 AM	0	0	0	0	16	0	2	0	1	28	0	0	0	15	10	0	72	1028
8:20 AM	0	0	0	0	11	0	6	0	0	31	0	0	0	19	7	0	74	1003
8:25 AM	0	0	0	0	18	0	5	0	1	30	0	0	0	26	12	0	92	1014
8:30 AM	0	0	0	0	21	0	0	0	2	20	0	0	0	14	10	0	67	998
8:35 AM	0	0	0	0	15	0	1	0	2	23	0	0	0	16	14	0	71	976
8:40 AM	0	0	0	0	15	0	3	0	2	20	0	0	0	30	12	0	82	971
8:45 AM	0	0	0	0	23	0	4	0	3	28	0	0	0	29	7	0	94	979
8:50 AM	0	0	0	0	26	0	3	0	1	10	0	0	0	16	10	0	66	958
8:55 AM	0	0	0	0	31	0	3	0	0	17	0	0	0	15	11	0	77	957

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	288	0	20	0	4	376	0	0	0	212	196	0	1096
Heavy Trucks	0	0	0		8	0	0		0	20	0		0	20	12		60
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

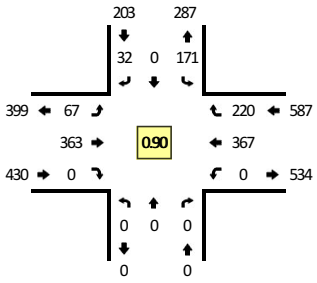
Comments:

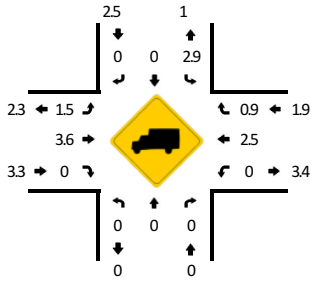
Report generated on 12/10/2025 2:12 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

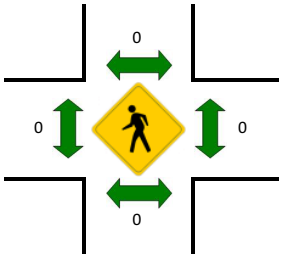
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 3. NE Delfel Rd (N) -- NE 179th St | **QC JOB #:** 17363006
CITY/STATE: Clark, WA | **DATE:** Thu, Dec 4 2025

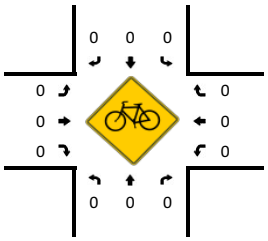
Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

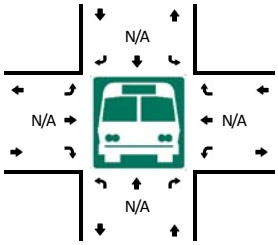




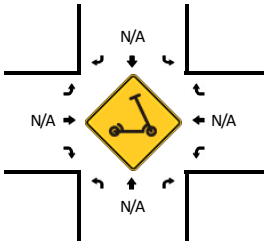












5-Min Count Period Beginning At	3. NE Delfel Rd (N) (Northbound)				3. NE Delfel Rd (N) (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	17	0	2	0	3	37	0	0	0	23	8	0	90	
4:05 PM	0	0	0	0	19	0	0	0	7	31	0	0	0	29	19	0	105	
4:10 PM	0	0	0	0	14	0	4	0	8	43	0	0	0	30	10	0	109	
4:15 PM	0	0	0	0	23	0	5	0	4	26	0	0	0	24	11	0	93	
4:20 PM	0	0	0	0	15	0	4	0	4	34	0	0	0	20	18	0	95	
4:25 PM	0	0	0	0	6	0	4	0	2	18	0	0	0	38	29	0	97	
4:30 PM	0	0	0	0	13	0	1	0	6	29	0	0	0	30	12	0	91	
4:35 PM	0	0	0	0	13	0	1	0	7	24	0	0	0	28	12	0	85	
4:40 PM	0	0	0	0	8	0	3	0	9	34	0	0	0	34	14	0	102	
4:45 PM	0	0	0	0	14	0	1	0	8	35	0	0	0	26	20	0	104	
4:50 PM	0	0	0	0	16	0	4	0	5	32	0	0	0	35	27	0	119	
4:55 PM	0	0	0	0	12	0	3	0	3	25	0	0	0	37	26	0	106	1196
5:00 PM	0	0	0	0	18	0	2	0	4	32	0	0	0	36	22	0	114	1220
5:05 PM	0	0	0	0	8	0	7	0	4	38	0	0	0	33	15	0	105	1220
5:10 PM	0	0	0	0	15	0	2	0	3	18	0	0	0	23	20	0	81	1192
5:15 PM	0	0	0	0	12	0	7	0	6	32	0	0	0	35	18	0	110	1209
5:20 PM	0	0	0	0	13	0	5	0	6	20	0	0	0	34	20	0	98	1212
5:25 PM	0	0	0	0	7	0	2	0	4	29	0	0	0	29	17	0	88	1203
5:30 PM	0	0	0	0	9	0	3	0	5	33	0	0	0	25	18	0	93	1205
5:35 PM	0	0	0	0	13	0	1	0	5	23	0	0	0	21	17	0	80	1200
5:40 PM	0	0	0	0	10	0	4	0	4	28	0	0	0	25	16	0	87	1185
5:45 PM	0	0	0	0	21	0	2	0	1	29	0	0	0	28	16	0	97	1178
5:50 PM	0	0	0	0	8	0	2	0	6	18	0	0	0	25	10	0	69	1128
5:55 PM	0	0	0	0	14	0	1	0	3	20	0	0	0	23	13	0	74	1096

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	184	0	36	0	48	356	0	0	0	432	300	0	1356
Heavy Trucks	0	0	0		12	0	0		0	4	0		0	8	0		24
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

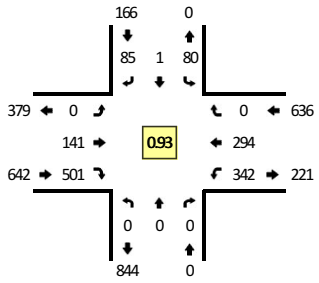
Comments:

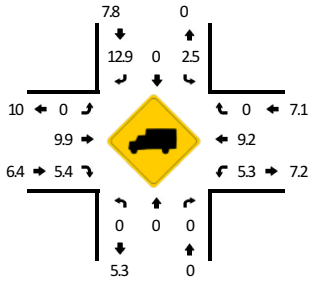
Report generated on 12/10/2025 2:12 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

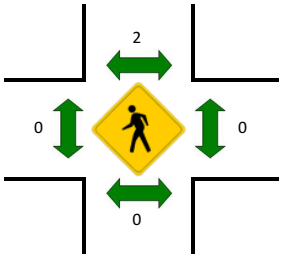
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

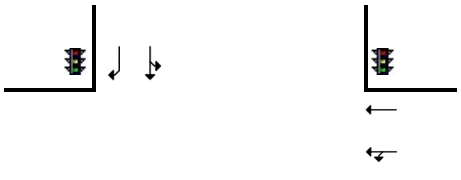
LOCATION: 4. I-5 SB Ramps -- NE 179th St | **QC JOB #:** 17363007
CITY/STATE: Clark, WA | **DATE:** Thu, Dec 4 2025

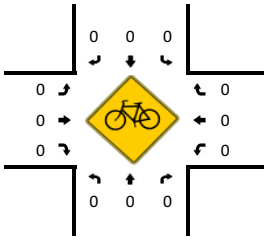
Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

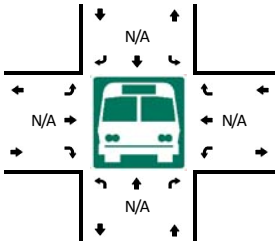




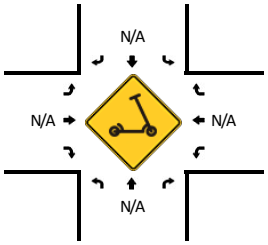












5-Min Count Period Beginning At	4. I-5 SB Ramps (Northbound)				4. I-5 SB Ramps (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	4	0	6	0	0	5	34	0	22	23	0	0	94	
7:05 AM	0	0	0	0	9	0	6	0	0	5	33	0	20	18	0	0	91	
7:10 AM	0	0	0	0	7	0	10	0	0	9	51	0	28	21	0	0	126	
7:15 AM	0	0	0	0	4	0	4	0	0	9	39	0	34	26	0	0	116	
7:20 AM	0	0	0	0	9	0	8	0	0	10	42	0	30	34	0	0	133	
7:25 AM	0	0	0	0	5	1	6	0	0	15	37	0	23	22	0	0	109	
7:30 AM	0	0	0	0	5	0	3	0	0	12	44	0	20	24	0	0	108	
7:35 AM	0	0	0	0	4	0	8	0	0	15	33	0	32	35	0	0	127	
7:40 AM	0	0	0	0	3	0	8	0	0	15	44	0	36	22	0	0	128	
7:45 AM	0	0	0	0	15	0	5	0	0	11	45	0	31	27	0	0	134	
7:50 AM	0	0	0	0	7	0	11	0	0	8	45	0	30	17	0	0	118	
7:55 AM	0	0	0	0	13	0	7	0	0	8	34	0	27	26	0	0	115	1399
8:00 AM	0	0	0	0	3	0	9	0	0	14	44	0	29	17	0	0	116	1421
8:05 AM	0	0	0	0	5	0	6	0	0	15	43	0	22	23	0	0	114	1444
8:10 AM	0	0	0	0	3	0	4	0	0	14	41	0	30	20	0	0	112	1430
8:15 AM	0	0	0	0	4	0	7	0	0	16	27	0	22	13	0	0	89	1403
8:20 AM	0	0	0	0	5	0	0	0	0	12	29	0	30	25	0	0	101	1371
8:25 AM	0	0	0	0	9	1	5	0	0	16	33	0	40	33	0	0	137	1399
8:30 AM	0	0	0	0	2	0	5	0	0	7	36	0	29	21	0	0	100	1391
8:35 AM	0	0	0	0	3	0	6	0	0	9	29	0	35	22	0	0	104	1368
8:40 AM	0	0	0	0	3	0	7	0	0	9	24	0	39	36	0	0	118	1358
8:45 AM	0	0	0	0	3	0	12	0	0	13	36	0	22	23	0	0	109	1333
8:50 AM	0	0	0	0	10	0	8	0	0	7	32	0	24	20	0	0	101	1316
8:55 AM	0	0	0	0	10	0	6	0	0	10	37	0	30	17	0	0	110	1311

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	88	0	84	0	0	164	488	0	396	336	0	0	1556
Heavy Trucks	0	0	0		0	0	4		0	20	16		20	8	0		68
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

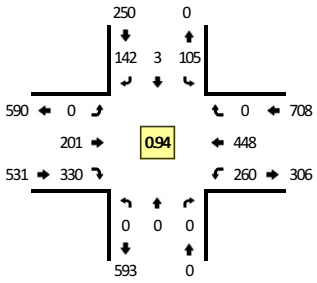
Report generated on 12/10/2025 2:12 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

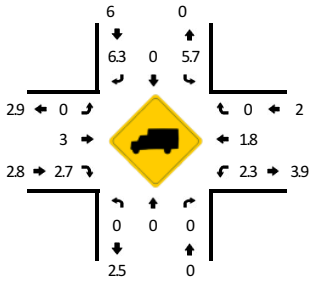
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 4. I-5 SB Ramps -- NE 179th St
CITY/STATE: Clark, WA

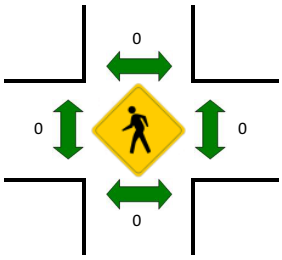
QC JOB #: 17363008
DATE: Thu, Dec 4 2025

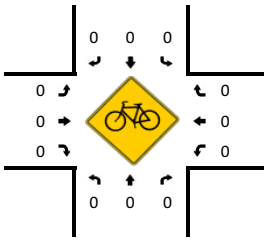
Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

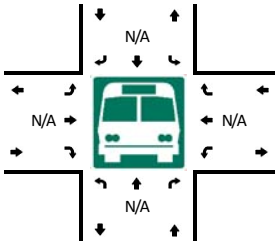


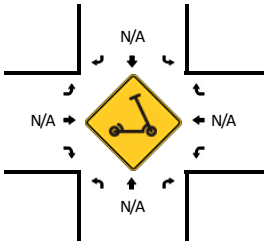


TRUE DATA TO IMPROVE MOBILITY









5-Min Count Period Beginning At	4. I-5 SB Ramps (Northbound)				4. I-5 SB Ramps (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	11	0	11	0	0	21	35	0	27	19	0	0	124	
4:05 PM	0	0	0	0	17	0	10	0	0	23	29	0	28	39	0	0	146	
4:10 PM	0	0	0	0	7	0	9	0	0	23	31	0	31	31	0	0	132	
4:15 PM	0	0	0	0	7	0	8	0	0	19	31	0	16	27	0	0	108	
4:20 PM	0	0	0	0	6	0	12	0	0	17	32	0	26	27	0	0	120	
4:25 PM	0	0	0	0	8	1	17	0	0	9	11	0	22	48	0	0	116	
4:30 PM	0	0	0	0	7	0	11	0	0	15	25	0	23	33	0	0	114	
4:35 PM	0	0	0	0	8	0	7	0	0	16	22	0	24	33	0	0	110	
4:40 PM	0	0	0	0	8	2	12	0	0	19	23	0	18	36	0	0	118	
4:45 PM	0	0	0	0	6	0	13	0	0	13	37	0	22	36	0	0	127	
4:50 PM	0	0	0	0	8	0	13	0	0	16	33	0	20	47	0	0	137	
4:55 PM	0	0	0	0	6	0	15	0	0	17	19	0	11	49	0	0	117	1469
5:00 PM	0	0	0	0	17	0	15	0	0	14	37	0	19	42	0	0	144	1489
5:05 PM	0	0	0	0	12	1	13	0	0	20	24	0	22	34	0	0	126	1469
5:10 PM	0	0	0	0	10	0	11	0	0	14	23	0	17	31	0	0	106	1443
5:15 PM	0	0	0	0	5	0	13	0	0	10	31	0	21	48	0	0	128	1463
5:20 PM	0	0	0	0	13	0	12	0	0	12	22	0	13	38	0	0	110	1453
5:25 PM	0	0	0	0	14	0	11	0	0	16	20	0	12	35	0	0	108	1445
5:30 PM	0	0	0	0	8	0	6	0	0	18	23	0	24	35	0	0	114	1445
5:35 PM	0	0	0	0	10	0	8	0	0	13	22	0	15	31	0	0	99	1434
5:40 PM	0	0	0	0	16	1	10	0	0	17	20	0	29	28	0	0	121	1437
5:45 PM	0	0	0	0	12	0	10	0	0	22	31	0	19	36	0	0	130	1440
5:50 PM	0	0	0	0	6	0	10	0	0	11	14	0	13	26	0	0	80	1383
5:55 PM	0	0	0	0	3	1	7	0	0	11	24	0	17	27	0	0	90	1356

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	124	0	172	0	0	188	356	0	200	552	0	0	1592
Heavy Trucks	0	0	0		0	0	12		0	4	4		4	8	0		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:12 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

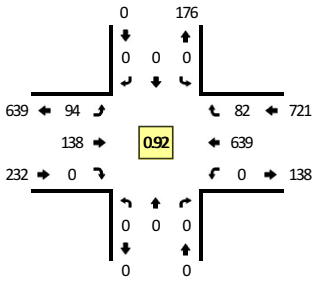
Type of peak hour being reported: Intersection Peak

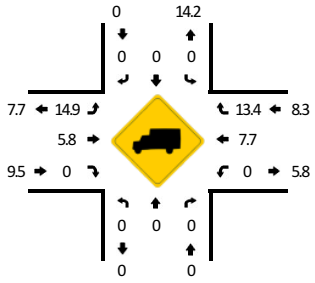
Method for determining peak hour: Total Entering Volume

LOCATION: 5. I-5 NB Ramps -- NE 179th St
CITY/STATE: Clark, WA

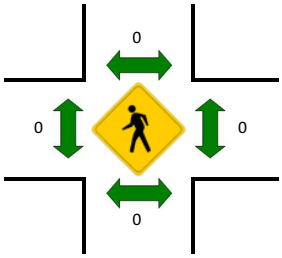
QC JOB #: 17363009
DATE: Thu, Dec 4 2025

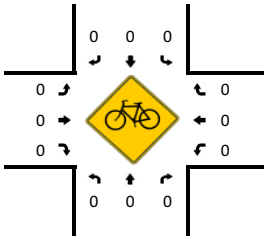
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

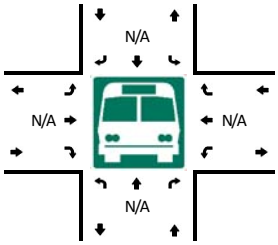


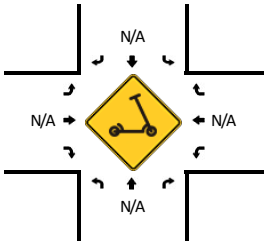


TRUE DATA TO IMPROVE MOBILITY









5-Min Count Period Beginning At	5. I-5 NB Ramps (Northbound)				5. I-5 NB Ramps (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	3	5	0	0	0	44	7	0	59	
7:05 AM	0	0	0	0	0	0	0	0	1	11	0	0	0	35	2	0	49	
7:10 AM	0	0	0	0	0	0	0	0	4	8	0	0	0	55	6	0	73	
7:15 AM	0	0	0	0	0	0	0	0	6	10	0	0	0	59	3	0	78	
7:20 AM	0	0	0	0	0	0	0	0	5	13	0	0	0	62	6	0	86	
7:25 AM	0	0	0	0	0	0	0	0	11	9	0	0	0	42	10	0	72	
7:30 AM	0	0	0	0	0	0	0	0	6	9	0	0	0	54	6	0	75	
7:35 AM	0	0	0	0	0	0	0	0	9	12	0	0	0	62	8	0	91	
7:40 AM	0	0	0	0	0	0	0	0	8	9	0	0	0	61	8	0	86	
7:45 AM	0	0	0	0	0	0	0	0	7	19	0	0	0	51	5	0	82	
7:50 AM	0	0	0	0	0	0	0	0	2	12	0	0	0	54	12	0	80	
7:55 AM	0	0	0	0	0	0	0	0	6	14	0	0	0	51	7	0	78	909
8:00 AM	0	0	0	0	0	0	0	0	9	8	0	0	0	46	3	0	66	916
8:05 AM	0	0	0	0	0	0	0	0	9	12	0	0	0	43	1	0	65	932
8:10 AM	0	0	0	0	0	0	0	0	6	11	0	0	0	53	9	0	79	938
8:15 AM	0	0	0	0	0	0	0	0	8	10	0	0	0	41	10	0	69	929
8:20 AM	0	0	0	0	0	0	0	0	11	9	0	0	0	55	6	0	81	924
8:25 AM	0	0	0	0	0	0	0	0	13	13	0	0	0	68	7	0	101	953
8:30 AM	0	0	0	0	0	0	0	0	3	5	0	0	0	54	13	0	75	953
8:35 AM	0	0	0	0	0	0	0	0	7	7	0	0	0	56	7	0	77	939
8:40 AM	0	0	0	0	0	0	0	0	5	7	0	0	0	74	5	0	91	944
8:45 AM	0	0	0	0	0	0	0	0	9	7	0	0	0	46	10	0	72	934
8:50 AM	0	0	0	0	0	0	0	0	5	11	0	0	0	47	3	0	66	920
8:55 AM	0	0	0	0	0	0	0	0	6	13	0	0	0	50	8	0	77	919

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	96	160	0	0	0	696	84	0	1036
Heavy Trucks	0	0	0		0	0	0		16	4	0		0	24	16		60
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

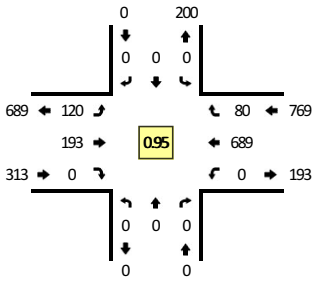
Type of peak hour being reported: Intersection Peak

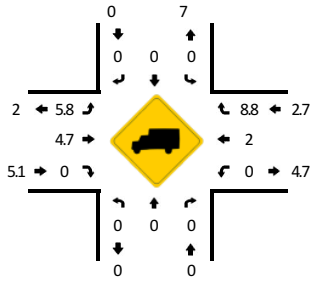
Method for determining peak hour: Total Entering Volume

LOCATION: 5. I-5 NB Ramps -- NE 179th St
CITY/STATE: Clark, WA

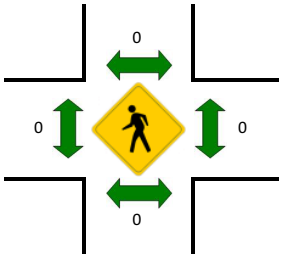
QC JOB #: 17363010
DATE: Thu, Dec 4 2025

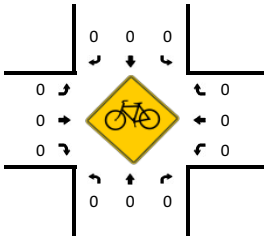
Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:05 PM -- 4:20 PM

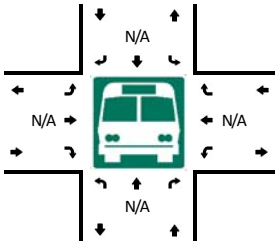


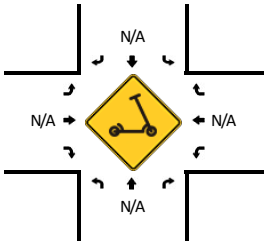


TRUE DATA TO IMPROVE MOBILITY









5-Min Count Period Beginning At	5. I-5 NB Ramps (Northbound)				5. I-5 NB Ramps (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	0	0	4	19	0	0	0	58	5	0	86	
4:05 PM	0	0	0	0	0	0	0	0	14	30	0	0	0	57	9	0	110	
4:10 PM	0	0	0	0	0	0	0	0	17	17	0	0	0	60	5	0	99	
4:15 PM	0	0	0	0	0	0	0	0	8	16	0	0	0	47	5	0	76	
4:20 PM	0	0	0	0	0	0	0	0	11	13	0	0	0	53	5	0	82	
4:25 PM	0	0	0	0	0	0	0	0	7	13	0	0	0	66	6	0	92	
4:30 PM	0	0	0	0	0	0	0	0	9	14	0	0	0	55	7	0	85	
4:35 PM	0	0	0	0	0	0	0	0	11	14	0	0	0	60	5	0	90	
4:40 PM	0	0	0	0	0	0	0	0	7	20	0	0	0	51	6	0	84	
4:45 PM	0	0	0	0	0	0	0	0	7	10	0	0	0	58	7	0	82	
4:50 PM	0	0	0	0	0	0	0	0	11	13	0	0	0	67	8	0	99	
4:55 PM	0	0	0	0	0	0	0	0	7	17	0	0	0	58	9	0	91	1076
5:00 PM	0	0	0	0	0	0	0	0	11	16	0	0	0	57	8	0	92	1082
5:05 PM	0	0	0	0	0	0	0	0	6	25	0	0	0	58	6	0	95	1067
5:10 PM	0	0	0	0	0	0	0	0	4	19	0	0	0	51	9	0	83	1051
5:15 PM	0	0	0	0	0	0	0	0	5	9	0	0	0	65	6	0	85	1060
5:20 PM	0	0	0	0	0	0	0	0	5	18	0	0	0	50	9	0	82	1060
5:25 PM	0	0	0	0	0	0	0	0	4	24	0	0	0	48	3	0	79	1047
5:30 PM	0	0	0	0	0	0	0	0	12	13	0	0	0	57	7	0	89	1051
5:35 PM	0	0	0	0	0	0	0	0	5	17	0	0	0	44	8	0	74	1035
5:40 PM	0	0	0	0	0	0	0	0	10	22	0	0	0	60	6	0	98	1049
5:45 PM	0	0	0	0	0	0	0	0	12	19	0	0	0	57	6	0	94	1061
5:50 PM	0	0	0	0	0	0	0	0	3	15	0	0	0	36	3	0	57	1019
5:55 PM	0	0	0	0	0	0	0	0	4	9	0	0	0	49	6	0	68	996

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	156	252	0	0	0	656	76	0	1140
Heavy Trucks	0	0	0		0	0	0		4	20	0		0	12	16		52
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

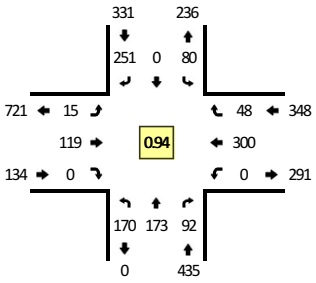
Type of peak hour being reported: Intersection Peak

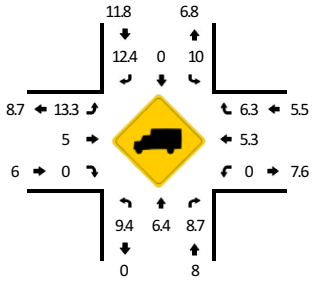
Method for determining peak hour: Total Entering Volume

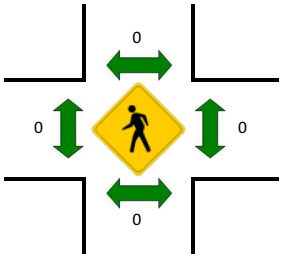
LOCATION: 6. NE 10th Ave/I-5 NB Off-Ramp -- NE 179th St
CITY/STATE: Clark, WA

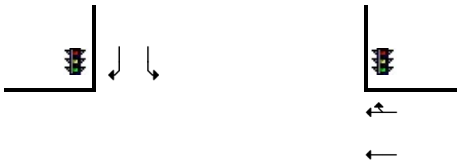
QC JOB #: 17363011
DATE: Thu, Dec 4 2025

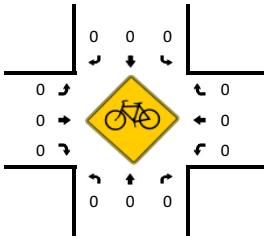
Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

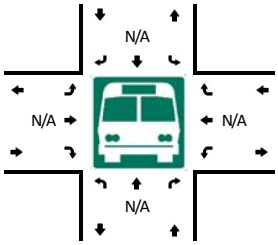


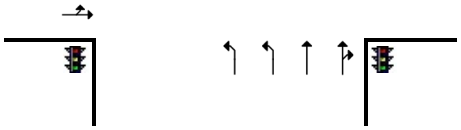


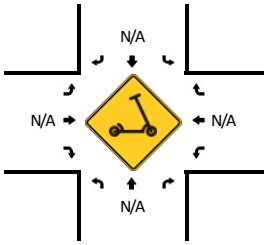












5-Min Count Period Beginning At	6. NE 10th Ave/I-5 NB Off-Ramp (Northbound)				6. NE 10th Ave/I-5 NB Off-Ramp (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	14	3	5	0	1	0	15	0	0	7	0	0	0	22	3	0	70	
7:05 AM	12	7	3	0	1	0	9	0	1	10	0	0	0	19	5	0	67	
7:10 AM	10	11	5	0	4	0	21	0	2	6	0	0	0	28	3	0	90	
7:15 AM	20	19	3	0	2	0	15	0	1	10	0	0	0	27	9	0	106	
7:20 AM	21	17	3	0	4	0	19	0	2	11	0	0	0	28	3	0	108	
7:25 AM	13	11	7	0	4	0	10	0	1	8	0	0	0	30	6	0	90	
7:30 AM	16	15	2	0	4	0	13	0	1	8	0	0	0	30	7	0	96	
7:35 AM	14	12	3	0	5	0	19	0	4	8	0	0	0	36	7	0	108	
7:40 AM	20	17	9	0	7	0	21	0	1	6	0	0	0	26	7	0	114	
7:45 AM	11	17	4	0	6	0	14	0	0	19	0	0	0	29	5	0	105	
7:50 AM	7	16	6	0	10	0	28	0	0	12	0	0	0	31	3	0	113	
7:55 AM	15	11	11	0	9	0	22	0	1	15	0	0	0	20	2	0	106	1173
8:00 AM	18	11	11	0	11	0	19	0	1	6	0	0	0	12	1	0	90	1193
8:05 AM	13	9	7	0	6	0	14	0	2	11	0	0	0	18	4	0	84	1210
8:10 AM	14	17	13	0	2	0	21	0	2	11	0	0	0	27	2	0	109	1229
8:15 AM	9	21	7	0	5	0	15	0	0	10	0	0	0	27	3	0	97	1220
8:20 AM	19	11	11	0	7	0	24	0	2	6	0	0	0	17	3	0	100	1212
8:25 AM	15	16	4	0	5	0	33	0	1	12	0	0	0	26	3	0	115	1237
8:30 AM	15	15	6	0	7	0	21	0	1	3	0	0	0	31	8	0	107	1248
8:35 AM	14	7	8	0	7	0	23	0	3	5	0	0	0	27	7	0	101	1241
8:40 AM	23	11	8	0	4	0	22	0	1	6	0	0	0	32	6	0	113	1240
8:45 AM	10	12	8	0	7	0	19	0	1	6	0	0	0	27	6	0	96	1231
8:50 AM	11	12	10	0	15	0	14	0	0	11	0	0	0	25	3	0	101	1219
8:55 AM	16	14	7	0	10	0	15	0	1	10	0	0	0	26	5	0	104	1217

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	152	200	76	0	92	0	252	0	4	148	0	0	0	344	60	0	1328
Heavy Trucks	4	8	4		12	0	24		0	0	0		0	12	4		68
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

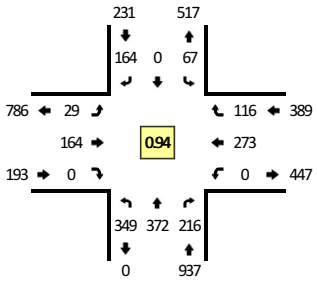
Report generated on 12/10/2025 2:13 PM

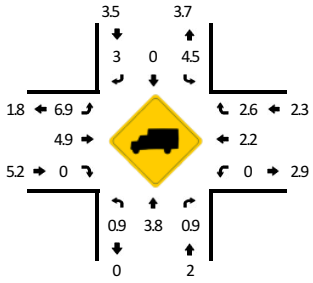
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

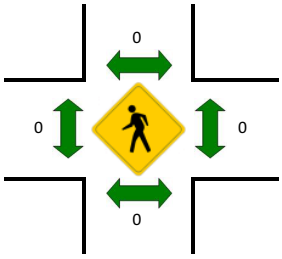
LOCATION: 6. NE 10th Ave/I-5 NB Off-Ramp -- NE 179th St | **QC JOB #:** 17363012
CITY/STATE: Clark, WA | **DATE:** Thu, Dec 4 2025

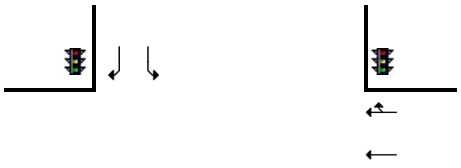
Peak-Hour: 4:25 PM -- 5:25 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

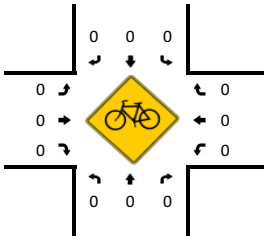


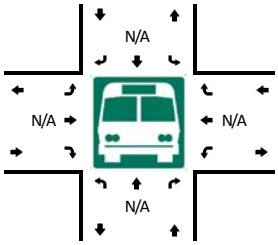


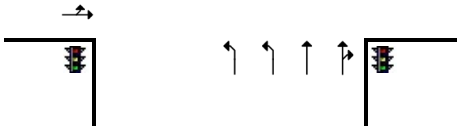
TRUE DATA TO IMPROVE MOBILITY

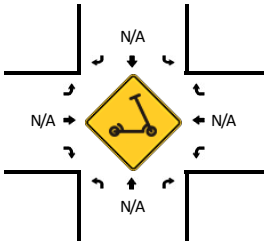












5-Min Count Period Beginning At	6. NE 10th Ave/I-5 NB Off-Ramp (Northbound)				6. NE 10th Ave/I-5 NB Off-Ramp (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	26	20	13	0	7	0	15	0	5	14	0	0	0	23	4	0	127	
4:05 PM	28	20	9	0	6	0	12	0	2	30	0	0	0	30	10	0	147	
4:10 PM	12	29	14	0	6	0	22	0	4	13	0	0	0	29	10	0	139	
4:15 PM	20	39	17	0	4	0	12	0	6	10	0	0	0	18	9	0	135	
4:20 PM	27	36	8	0	5	0	11	0	2	12	0	0	0	18	9	0	128	
4:25 PM	34	30	18	0	9	0	17	0	1	12	0	0	0	23	10	0	154	
4:30 PM	22	26	12	0	7	0	12	0	1	13	0	0	0	26	8	0	127	
4:35 PM	27	30	21	0	3	0	17	0	0	14	0	0	0	24	11	0	147	
4:40 PM	24	33	13	0	7	0	17	0	2	17	0	0	0	15	13	0	141	
4:45 PM	27	23	16	0	8	0	13	0	1	10	0	0	0	25	7	0	130	
4:50 PM	42	30	16	0	7	0	19	0	2	11	0	0	0	19	14	0	160	
4:55 PM	39	31	16	0	7	0	4	0	6	14	0	0	0	25	11	0	153	1688
5:00 PM	28	33	27	0	2	0	11	0	3	13	0	0	0	27	7	0	151	1712
5:05 PM	21	36	18	0	1	0	16	0	4	22	0	0	0	24	10	0	152	1717
5:10 PM	24	32	17	0	5	0	14	0	3	16	0	0	0	21	11	0	143	1721
5:15 PM	32	32	19	0	8	0	17	0	2	7	0	0	0	21	5	0	143	1729
5:20 PM	29	36	23	0	3	0	7	0	4	15	0	0	0	23	9	0	149	1750
5:25 PM	29	30	16	0	6	0	5	0	4	20	0	0	0	17	12	0	139	1735
5:30 PM	33	30	14	0	1	0	18	0	5	9	0	0	0	21	5	0	136	1744
5:35 PM	21	21	10	0	2	0	9	0	2	16	0	0	0	21	12	0	114	1711
5:40 PM	23	26	14	0	3	0	10	0	2	18	0	0	0	28	11	0	135	1705
5:45 PM	30	32	15	0	4	0	9	0	5	13	0	0	0	24	11	0	143	1718
5:50 PM	17	22	15	0	0	0	7	0	2	14	0	0	0	16	5	0	98	1656
5:55 PM	27	27	11	0	1	0	8	0	0	10	0	0	0	20	6	0	110	1613

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	436	376	236	0	64	0	136	0	44	152	0	0	0	284	128	0	1856
Heavy Trucks	8	28	8		4	0	4		4	8	0		0	4	0		68
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

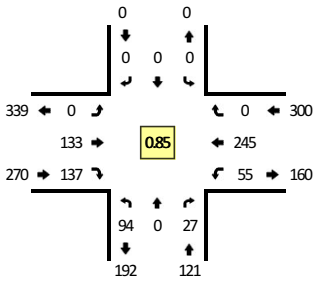
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

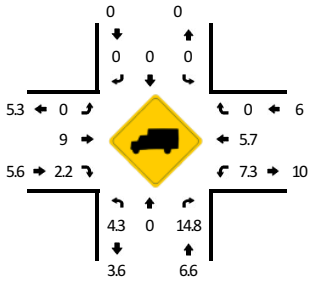
LOCATION: 7. NE 15th Ave -- NE 179th St
CITY/STATE: Mount Vista, WA

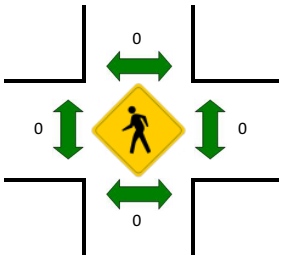
QC JOB #: 17363013
DATE: Thu, Dec 4 2025

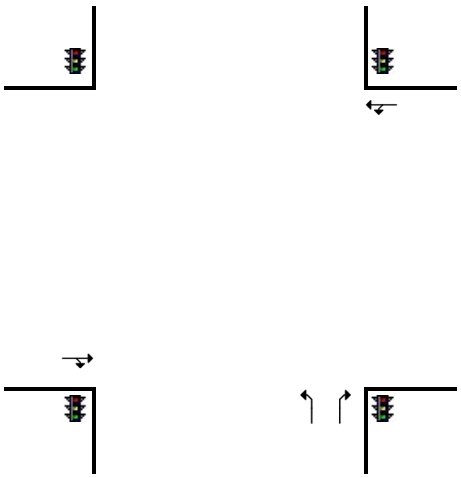
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

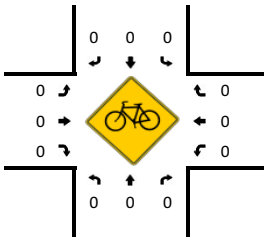


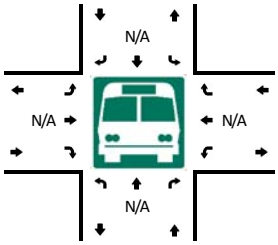


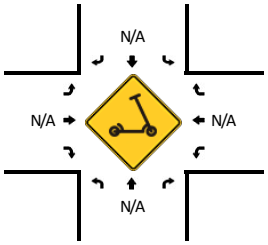












5-Min Count Period Beginning At	7. NE 15th Ave (Northbound)				7. NE 15th Ave (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	0	0	0	0	0	0	0	0	8	4	0	2	12	0	0	31	
7:05 AM	9	0	1	0	0	0	0	0	0	9	5	0	4	13	0	0	41	
7:10 AM	8	0	1	0	0	0	0	0	0	5	8	0	3	17	0	0	42	
7:15 AM	10	0	4	0	0	0	0	0	0	8	8	0	3	28	0	0	61	
7:20 AM	7	0	1	0	0	0	0	0	0	7	4	0	5	12	0	0	36	
7:25 AM	10	0	2	0	0	0	0	0	0	11	10	0	3	23	0	0	59	
7:30 AM	9	0	1	0	0	0	0	0	0	4	9	0	3	26	0	0	52	
7:35 AM	18	0	2	0	0	0	0	0	0	6	13	0	7	23	0	0	69	
7:40 AM	7	0	0	0	0	0	0	0	0	14	8	0	8	28	0	0	65	
7:45 AM	9	0	6	0	0	0	0	0	0	8	18	0	5	24	0	0	70	
7:50 AM	9	0	2	0	0	0	0	0	0	9	15	0	5	22	0	0	62	
7:55 AM	7	0	3	0	0	0	0	0	0	14	16	0	4	19	0	0	63	651
8:00 AM	5	0	2	0	0	0	0	0	0	20	10	0	3	5	0	0	45	665
8:05 AM	6	0	0	0	0	0	0	0	0	6	14	0	5	16	0	0	47	671
8:10 AM	4	0	3	0	0	0	0	0	0	14	5	0	3	18	0	0	47	676
8:15 AM	7	0	2	0	0	0	0	0	0	14	8	0	8	21	0	0	60	675
8:20 AM	3	0	4	0	0	0	0	0	0	13	11	0	1	20	0	0	52	691
8:25 AM	9	0	3	0	0	0	0	0	0	7	10	0	3	25	0	0	57	689
8:30 AM	13	0	1	0	0	0	0	0	0	6	10	0	2	21	0	0	53	690
8:35 AM	14	0	3	0	0	0	0	0	0	8	6	0	5	18	0	0	54	675
8:40 AM	15	0	1	0	0	0	0	0	0	9	9	0	8	21	0	0	63	673
8:45 AM	14	0	4	0	0	0	0	0	0	11	8	0	2	14	0	0	53	656
8:50 AM	7	0	5	0	0	0	0	0	0	11	17	0	4	20	0	0	64	658
8:55 AM	13	0	4	0	0	0	0	0	0	10	21	0	2	19	0	0	69	664

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	136	0	32	0	0	0	0	0	0	112	156	0	80	300	0	0	816
Heavy Trucks	4	0	4		0	0	0		0	8	0		8	20	0		44
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM

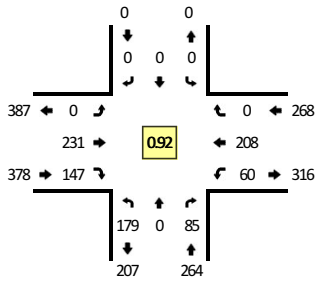
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

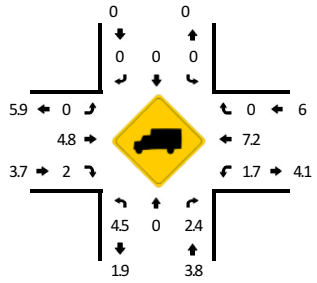
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 7. NE 15th Ave -- NE 179th St
CITY/STATE: Mount Vista, WA

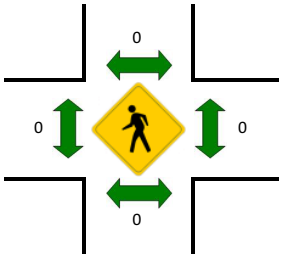
QC JOB #: 17363014
DATE: Thu, Dec 4 2025

Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:05 PM -- 4:20 PM

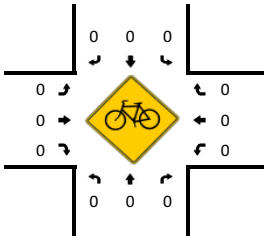


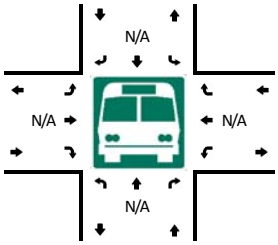


TRUE DATA TO IMPROVE MOBILITY

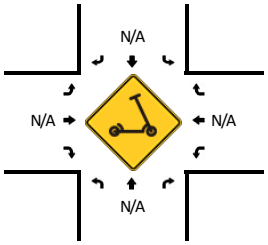












5-Min Count Period Beginning At	7. NE 15th Ave (Northbound)				7. NE 15th Ave (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	10	0	6	0	0	0	0	0	0	20	10	0	4	16	0	0	66	
4:05 PM	17	0	9	0	0	0	0	0	0	17	23	0	10	27	0	0	103	
4:10 PM	21	0	8	0	0	0	0	0	0	12	16	0	4	19	0	0	80	
4:15 PM	7	0	3	0	0	0	0	0	0	22	7	0	6	18	0	0	63	
4:20 PM	15	0	9	0	0	0	0	0	0	12	14	0	7	12	0	0	69	
4:25 PM	15	0	5	0	0	0	0	0	0	21	15	0	3	17	0	0	76	
4:30 PM	14	0	6	0	0	0	0	0	0	21	9	0	6	19	0	0	75	
4:35 PM	17	0	5	0	0	0	0	0	0	27	9	0	3	20	0	0	81	
4:40 PM	11	0	9	0	0	0	0	0	0	19	9	0	5	12	0	0	65	
4:45 PM	15	0	10	0	0	0	0	0	0	18	10	0	3	18	0	0	74	
4:50 PM	14	0	8	0	0	0	0	0	0	19	9	0	4	12	0	0	66	
4:55 PM	18	0	6	0	0	0	0	0	0	20	16	0	5	17	0	0	82	900
5:00 PM	15	0	7	0	0	0	0	0	0	23	10	0	4	17	0	0	76	910
5:05 PM	12	0	4	0	0	0	0	0	0	25	8	0	2	16	0	0	67	874
5:10 PM	17	0	10	0	0	0	0	0	0	28	10	0	7	12	0	0	84	878
5:15 PM	13	0	10	0	0	0	0	0	0	17	12	0	1	11	0	0	64	879
5:20 PM	12	0	9	0	0	0	0	0	0	24	16	0	5	17	0	0	83	893
5:25 PM	12	0	10	0	0	0	0	0	0	21	13	0	5	16	0	0	77	894
5:30 PM	6	0	7	0	0	0	0	0	0	16	9	0	2	12	0	0	52	871
5:35 PM	22	0	11	0	0	0	0	0	0	13	9	0	5	22	0	0	82	872
5:40 PM	12	0	10	0	0	0	0	0	0	21	15	0	3	17	0	0	78	885
5:45 PM	11	0	4	0	0	0	0	0	0	14	12	0	6	15	0	0	62	873
5:50 PM	9	0	7	0	0	0	0	0	0	20	3	0	0	13	0	0	52	859
5:55 PM	6	0	8	0	0	0	0	0	0	18	5	0	2	11	0	0	50	827

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	180	0	80	0	0	0	0	0	0	204	184	0	80	256	0	0	984
Heavy Trucks	12	0	4		0	0	0		0	20	0		4	20	0		60
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM

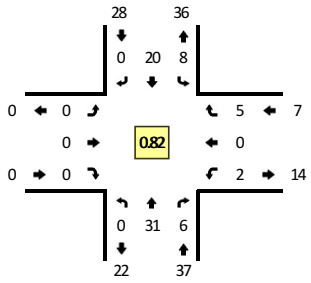
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

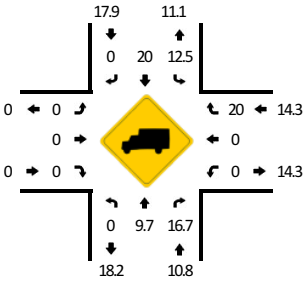
LOCATION: 8. NW 11th Ave -- NW 164th St
CITY/STATE: Clark, WA

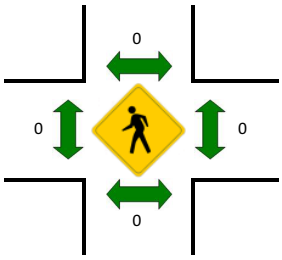
QC JOB #: 17363015
DATE: Thu, Dec 4 2025

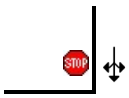
Peak-Hour: 7:55 AM -- 8:55 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

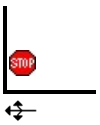


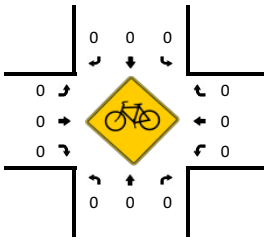

figure_TRUE DATA TO IMPROVE MOBILITY

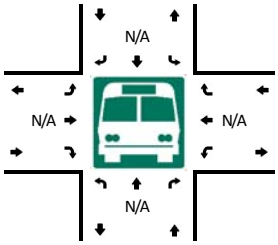


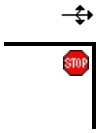


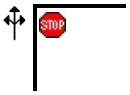


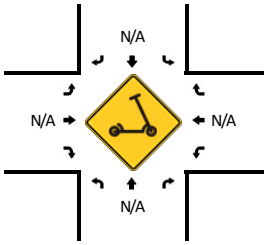












5-Min Count Period Beginning At	8. NW 11th Ave (Northbound)				8. NW 11th Ave (Southbound)				NW 164th St (Eastbound)				NW 164th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4	
7:05 AM	0	2	0	0	0	1	0	0	0	1	0	0	1	0	0	0	5	
7:10 AM	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	4	
7:15 AM	0	2	0	0	2	1	0	0	0	0	0	0	0	0	0	0	5	
7:20 AM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	3	
7:25 AM	0	5	0	0	1	1	0	0	0	0	0	0	0	0	1	0	8	
7:30 AM	0	2	0	0	1	1	0	0	0	0	0	0	0	0	1	0	5	
7:35 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:40 AM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
7:45 AM	0	0	0	0	1	3	0	0	0	0	0	0	2	0	0	0	6	
7:50 AM	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	4	
7:55 AM	0	1	0	0	0	5	0	0	0	0	0	0	1	0	0	0	7	55
8:00 AM	0	2	3	0	2	2	0	0	0	0	0	0	0	0	1	0	10	61
8:05 AM	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	61
8:10 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	59
8:15 AM	0	3	0	0	2	1	0	0	0	0	0	0	0	0	1	0	7	61
8:20 AM	0	2	0	0	1	4	0	0	0	0	0	0	0	0	1	0	8	66
8:25 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	61
8:30 AM	0	2	0	0	1	0	0	0	0	0	0	0	0	0	2	0	5	61
8:35 AM	0	3	0	0	1	2	0	0	0	0	0	0	0	0	0	0	6	66
8:40 AM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5	68
8:45 AM	0	4	1	0	0	2	0	0	0	0	0	0	0	0	0	0	7	69
8:50 AM	0	4	1	0	1	1	0	0	0	0	0	0	0	0	0	0	7	72
8:55 AM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3	68

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	28	12	0	8	28	0	0	0	0	0	0	8	0	4	0	88
Heavy Trucks	0	4	0		0	8	0		0	0	0		0	0	0		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM

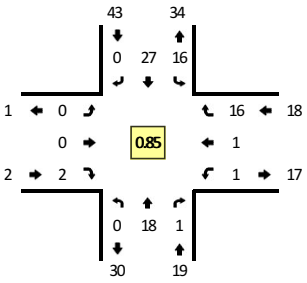
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

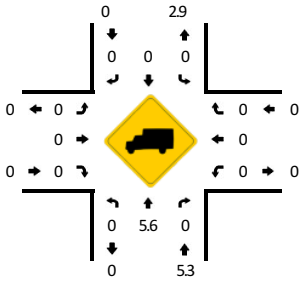
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 8. NW 11th Ave -- NW 164th St
CITY/STATE: Clark, WA

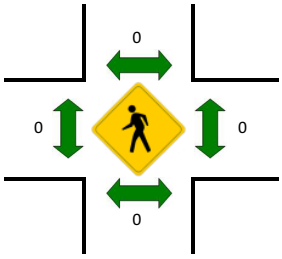
QC JOB #: 17363016
DATE: Thu, Dec 4 2025

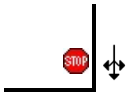
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:20 PM -- 5:35 PM

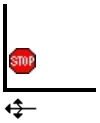


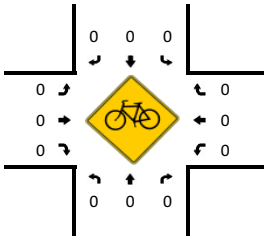


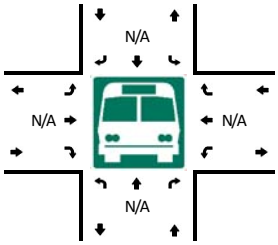
TRUE DATA TO IMPROVE MOBILITY

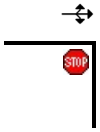


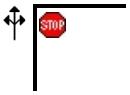


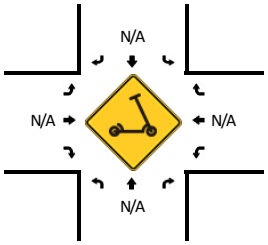












5-Min Count Period Beginning At	8. NW 11th Ave (Northbound)				8. NW 11th Ave (Southbound)				NW 164th St (Eastbound)				NW 164th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	2	0	0	0	4	0	0	0	0	0	0	0	0	1	0	7	
4:05 PM	0	2	0	0	3	1	0	0	0	0	0	0	0	0	2	0	8	
4:10 PM	0	2	0	0	1	2	0	0	0	0	1	0	0	0	4	0	10	
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	4	
4:20 PM	0	4	1	0	0	1	0	0	0	0	0	0	0	0	1	0	7	
4:25 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	2	0	5	
4:30 PM	0	2	0	0	1	4	0	0	0	0	0	0	0	0	1	0	8	
4:35 PM	0	2	0	0	3	2	0	0	0	0	1	0	0	0	0	0	8	
4:40 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	3	
4:45 PM	0	1	0	0	5	2	0	0	0	0	0	0	0	0	1	0	9	
4:50 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	2	0	5	
4:55 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6	80
5:00 PM	0	4	1	0	0	1	0	0	0	0	0	0	0	0	1	0	7	80
5:05 PM	0	1	0	0	0	3	0	0	0	0	0	0	0	0	2	0	6	78
5:10 PM	0	0	0	0	2	2	0	0	0	0	0	0	1	0	2	0	7	75
5:15 PM	0	2	0	0	1	2	0	0	0	0	1	0	0	0	1	0	7	78
5:20 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	3	74
5:25 PM	0	1	0	0	3	3	0	0	0	0	0	0	0	0	5	0	12	81
5:30 PM	0	2	0	0	1	5	0	0	0	0	0	0	0	0	1	0	9	82
5:35 PM	0	2	1	0	0	1	0	0	0	0	0	0	0	0	1	0	5	79
5:40 PM	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0	6	82
5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	75
5:50 PM	0	1	0	0	2	1	0	0	0	0	0	0	0	0	2	0	6	76
5:55 PM	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2	0	5	75

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	16	0	0	16	36	0	0	0	0	0	0	0	0	28	0	96
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

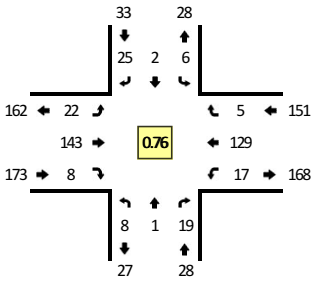
Type of peak hour being reported: Intersection Peak

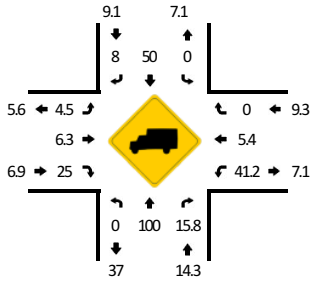
Method for determining peak hour: Total Entering Volume

LOCATION: 9. NW 11th Ave -- NW 149th St
CITY/STATE: Salmon Creek, WA

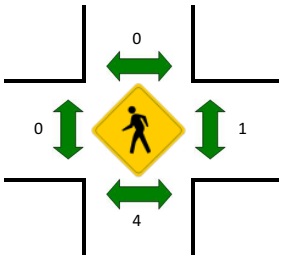
QC JOB #: 17363017
DATE: Thu, Dec 4 2025

Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

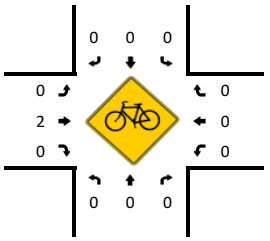


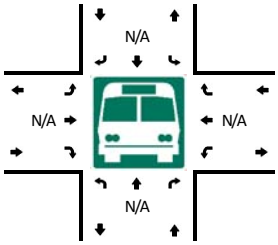


TRUE DATA TO IMPROVE MOBILITY

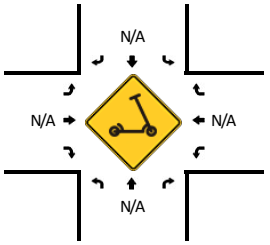












5-Min Count Period Beginning At	9. NW 11th Ave (Northbound)				9. NW 11th Ave (Southbound)				NW 149th St (Eastbound)				NW 149th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	3	0	1	0	2	0	3	2	0	0	0	1	1	0	13	
7:05 AM	0	0	1	0	2	0	0	0	1	9	0	0	0	2	0	0	15	
7:10 AM	0	0	2	0	0	1	1	0	1	6	0	0	0	4	0	0	15	
7:15 AM	1	1	3	0	0	0	0	0	0	2	0	0	0	5	0	0	12	
7:20 AM	1	0	1	0	1	0	1	0	0	3	0	0	1	10	0	0	18	
7:25 AM	0	0	3	0	0	1	2	0	3	5	0	0	1	7	0	0	22	
7:30 AM	1	0	3	0	0	0	0	0	0	9	0	0	0	4	1	0	18	
7:35 AM	1	0	5	0	1	0	0	0	2	4	0	0	1	2	0	0	16	
7:40 AM	0	0	4	0	1	0	0	0	2	5	1	0	0	10	0	0	23	
7:45 AM	0	0	2	0	2	0	2	0	0	8	0	0	1	10	0	0	25	
7:50 AM	3	0	0	0	2	0	3	0	0	18	0	0	0	14	0	0	40	
7:55 AM	0	0	2	0	1	0	6	0	1	15	1	0	1	24	2	0	53	270
8:00 AM	1	0	1	0	0	0	3	0	3	13	1	0	0	11	0	0	33	290
8:05 AM	1	0	1	0	0	0	2	0	4	15	1	0	1	14	1	0	40	315
8:10 AM	1	0	2	0	0	0	2	0	2	14	0	0	1	8	0	0	30	330
8:15 AM	1	0	0	0	1	1	0	0	1	10	2	0	2	10	1	0	29	347
8:20 AM	0	0	2	0	0	1	3	0	1	14	1	0	0	5	0	0	27	356
8:25 AM	0	1	4	0	0	0	1	0	2	8	1	0	2	13	0	0	32	366
8:30 AM	0	0	1	0	0	0	0	0	4	9	0	0	1	8	0	0	23	371
8:35 AM	0	0	4	0	0	0	1	0	1	11	1	0	3	7	0	0	28	383
8:40 AM	1	0	0	0	0	0	2	0	3	8	0	0	5	5	1	0	25	385
8:45 AM	1	0	1	0	0	0	2	0	5	9	0	0	0	7	0	0	25	385
8:50 AM	5	0	3	0	1	0	0	0	1	6	1	0	1	8	0	0	26	371
8:55 AM	3	0	1	0	0	0	2	0	1	11	0	0	2	5	0	0	25	343

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	0	12	0	12	0	48	0	16	184	8	0	4	196	8	0	504
Heavy Trucks	0	0	0		0	0	4		0	16	0		4	8	0		32
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM

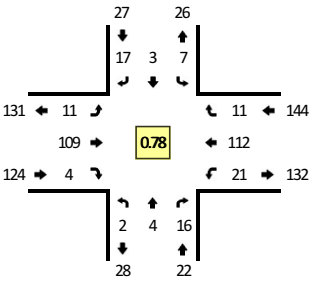
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

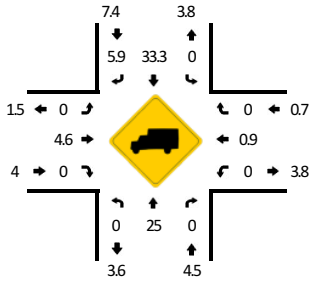
LOCATION: 9. NW 11th Ave -- NW 149th St
CITY/STATE: Salmon Creek, WA

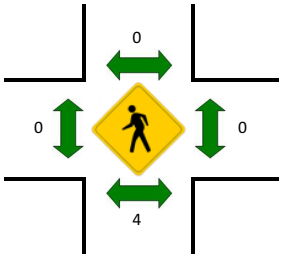
QC JOB #: 17363018
DATE: Thu, Dec 4 2025

Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:05 PM -- 4:20 PM

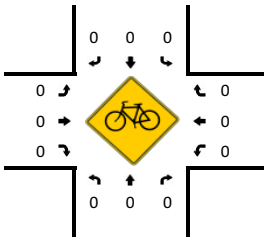


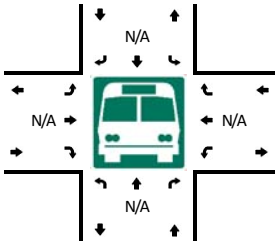




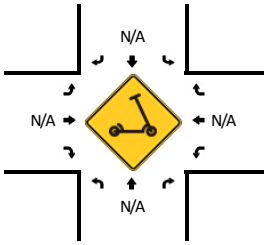












5-Min Count Period Beginning At	9. NW 11th Ave (Northbound)				9. NW 11th Ave (Southbound)				NW 149th St (Eastbound)				NW 149th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	1	2	0	1	1	3	0	0	14	0	0	3	8	0	0	33	
4:05 PM	0	0	1	0	1	0	0	0	3	14	0	0	3	8	2	0	32	
4:10 PM	1	0	3	0	0	0	3	0	0	7	1	0	2	17	1	0	35	
4:15 PM	0	1	2	0	0	0	1	0	0	9	0	0	3	15	3	0	34	
4:20 PM	0	1	1	0	0	1	1	0	2	7	0	0	1	10	1	0	25	
4:25 PM	0	1	1	0	0	1	0	0	1	11	1	0	3	6	2	0	27	
4:30 PM	0	0	2	0	1	0	0	0	0	8	0	0	1	9	0	0	21	
4:35 PM	1	0	1	0	1	0	3	0	2	5	0	0	3	6	0	0	22	
4:40 PM	0	0	1	0	1	0	1	0	0	12	1	0	0	6	0	0	22	
4:45 PM	0	0	2	0	0	0	0	0	1	8	1	0	2	5	0	0	19	
4:50 PM	0	0	0	0	1	0	3	0	1	6	0	0	0	12	2	0	25	
4:55 PM	0	0	0	0	1	0	2	0	1	8	0	0	0	10	0	0	22	317
5:00 PM	0	0	1	0	0	0	1	0	5	9	0	0	1	4	2	0	23	307
5:05 PM	0	0	1	0	2	0	0	0	0	3	0	0	1	10	1	0	18	293
5:10 PM	0	0	0	0	0	0	1	0	0	3	0	0	0	4	1	0	9	267
5:15 PM	0	0	1	0	2	0	1	0	0	7	0	0	4	8	3	0	26	259
5:20 PM	0	0	0	0	0	1	2	0	0	8	0	0	4	3	3	0	21	255
5:25 PM	0	0	0	0	1	0	2	0	1	8	1	0	0	3	1	0	17	245
5:30 PM	0	0	0	0	2	2	2	0	2	7	1	0	4	11	0	0	31	255
5:35 PM	3	0	2	0	0	0	5	0	1	3	1	0	3	10	1	0	29	262
5:40 PM	1	0	1	0	0	0	0	0	2	3	0	0	0	5	2	0	14	254
5:45 PM	0	0	1	0	0	0	5	0	0	5	0	0	0	14	0	0	25	260
5:50 PM	0	0	0	0	1	0	0	0	0	5	0	0	1	6	1	0	14	249
5:55 PM	1	0	1	0	0	0	1	0	2	10	1	0	1	6	0	0	23	250

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	4	24	0	4	0	16	0	12	120	4	0	32	160	24	0	404
Heavy Trucks	0	0	0		0	0	0		0	4	0		0	0	0		4
Buses																	
Pedestrians		8				0				0				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

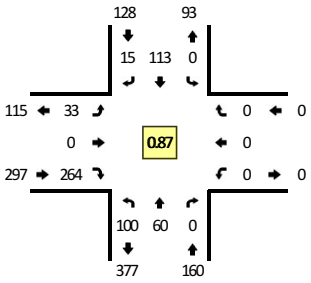
Type of peak hour being reported: Intersection Peak

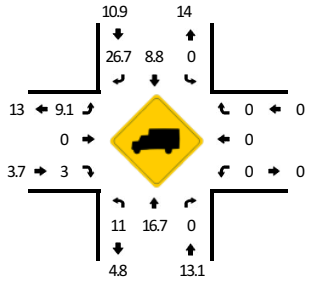
Method for determining peak hour: Total Entering Volume

LOCATION: 10. NE 10th Ave -- NE 149th St
CITY/STATE: Salmon Creek, WA

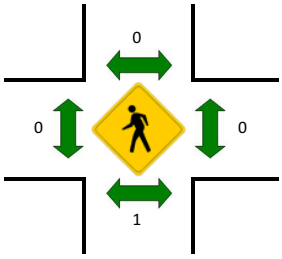
QC JOB #: 17363019
DATE: Thu, Dec 4 2025

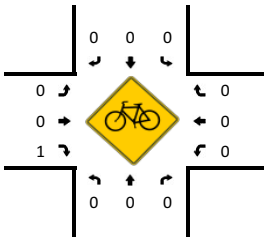
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

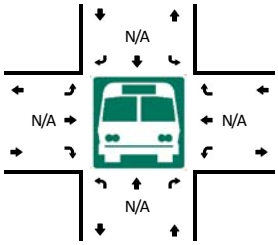


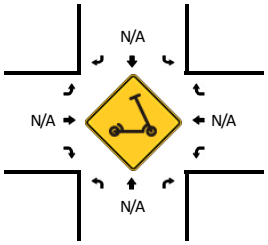


TRUE DATA TO IMPROVE MOBILITY









5-Min Count Period Beginning At	10. NE 10th Ave (Northbound)				10. NE 10th Ave (Southbound)				NE 149th St (Eastbound)				NE 149th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	1	0	0	0	5	0	0	1	0	17	0	0	0	0	0	25	
7:05 AM	3	2	0	0	0	13	2	0	2	0	18	0	0	0	0	0	40	
7:10 AM	4	1	0	0	0	9	0	0	3	0	16	0	0	0	0	0	33	
7:15 AM	5	5	0	0	0	11	1	0	2	0	18	0	0	0	0	0	42	
7:20 AM	3	6	0	0	0	6	1	0	4	0	16	0	0	0	0	0	36	
7:25 AM	13	5	0	0	0	9	0	0	4	0	23	0	0	0	0	0	54	
7:30 AM	2	4	0	0	0	10	0	0	6	0	16	0	0	0	0	0	38	
7:35 AM	3	1	0	0	0	8	2	0	0	0	21	0	0	0	0	0	35	
7:40 AM	4	4	0	0	0	8	1	0	2	0	24	0	0	0	0	0	43	
7:45 AM	5	4	0	0	0	10	2	0	1	0	19	0	0	0	0	0	41	
7:50 AM	9	8	0	0	0	9	2	0	0	0	31	0	0	0	0	0	59	
7:55 AM	19	8	0	0	0	5	2	0	5	0	24	0	0	0	0	0	63	509
8:00 AM	8	4	0	0	0	13	1	0	4	0	17	0	0	0	0	0	47	531
8:05 AM	11	6	0	0	0	13	0	0	3	0	25	0	0	0	0	0	58	549
8:10 AM	12	5	0	0	0	4	2	0	3	0	24	0	0	0	0	0	50	566
8:15 AM	4	9	0	0	0	4	2	0	2	0	15	0	0	0	0	0	36	560
8:20 AM	10	2	0	0	0	20	1	0	3	0	25	0	0	0	0	0	61	585
8:25 AM	7	5	0	0	0	12	1	0	3	0	18	0	0	0	0	0	46	577
8:30 AM	7	6	0	0	0	7	3	0	1	0	14	0	0	0	0	0	38	577
8:35 AM	9	5	0	0	0	7	2	0	0	0	20	0	0	0	0	0	43	585
8:40 AM	10	11	0	0	0	6	1	0	3	0	7	0	0	0	0	0	38	580
8:45 AM	5	3	0	0	0	16	3	0	2	0	11	0	0	0	0	0	40	579
8:50 AM	5	4	0	0	0	12	3	0	1	0	21	0	0	0	0	0	46	566
8:55 AM	6	5	0	0	0	13	6	0	3	0	12	0	0	0	0	0	45	548

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	144	80	0	0	0	108	20	0	36	0	288	0	0	0	0	0	676
Heavy Trucks	16	20	0		0	8	4		4	0	16		0	0	0		68
Buses																	
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM

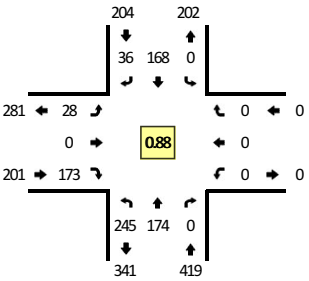
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

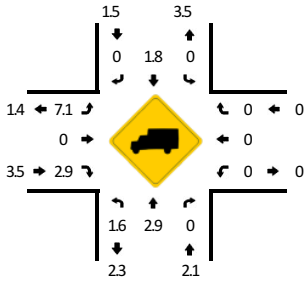
LOCATION: 10. NE 10th Ave -- NE 149th St
CITY/STATE: Salmon Creek, WA

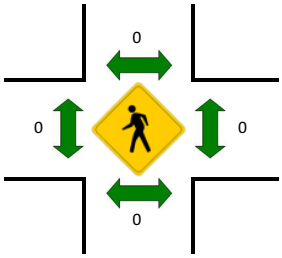
QC JOB #: 17363020
DATE: Thu, Dec 4 2025

Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

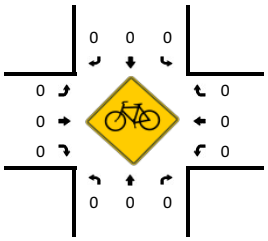


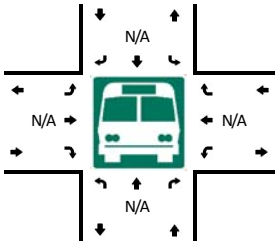




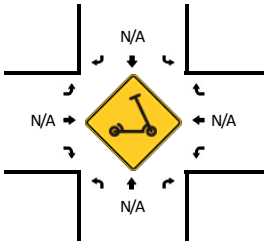












5-Min Count Period Beginning At	10. NE 10th Ave (Northbound)				10. NE 10th Ave (Southbound)				NE 149th St (Eastbound)				NE 149th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	16	20	0	0	0	14	2	0	8	0	19	0	0	0	0	0	79	
4:05 PM	16	19	0	0	0	12	4	0	0	0	27	0	0	0	0	0	78	
4:10 PM	29	8	0	0	0	14	4	0	4	0	18	0	0	0	0	0	77	
4:15 PM	37	11	0	0	0	10	2	0	1	0	9	0	0	0	0	0	70	
4:20 PM	22	11	0	0	0	15	3	0	3	0	17	0	0	0	0	0	71	
4:25 PM	16	18	0	0	0	11	3	0	1	0	15	0	0	0	0	0	64	
4:30 PM	22	9	0	0	0	26	4	0	2	0	10	0	0	0	0	0	73	
4:35 PM	17	16	0	0	0	14	6	0	1	0	13	0	0	0	0	0	67	
4:40 PM	13	17	0	0	0	13	3	0	1	0	11	0	0	0	0	0	58	
4:45 PM	16	22	0	0	0	10	2	0	3	0	16	0	0	0	0	0	69	
4:50 PM	19	13	0	0	0	14	1	0	1	0	6	0	0	0	0	0	54	
4:55 PM	22	10	0	0	0	15	2	0	3	0	12	0	0	0	0	0	64	824
5:00 PM	25	15	0	0	0	13	1	0	1	0	18	0	0	0	0	0	73	818
5:05 PM	28	10	0	0	0	9	2	0	0	0	14	0	0	0	0	0	63	803
5:10 PM	16	15	0	0	0	14	1	0	2	0	13	0	0	0	0	0	61	787
5:15 PM	32	15	0	0	0	13	3	0	0	0	9	0	0	0	0	0	72	789
5:20 PM	28	10	0	0	0	14	7	0	1	0	17	0	0	0	0	0	77	795
5:25 PM	14	20	0	0	0	14	2	0	0	0	12	0	0	0	0	0	62	793
5:30 PM	29	10	0	0	0	10	1	0	2	0	15	0	0	0	0	0	67	787
5:35 PM	33	12	0	0	0	9	3	0	0	0	26	0	0	0	0	0	83	803
5:40 PM	15	16	0	0	0	1	1	0	3	0	14	0	0	0	0	0	50	795
5:45 PM	21	10	0	0	0	10	1	0	0	0	10	0	0	0	0	0	52	778
5:50 PM	12	11	0	0	0	8	0	0	0	0	12	0	0	0	0	0	43	767
5:55 PM	9	11	0	0	0	10	0	0	3	0	7	0	0	0	0	0	40	743

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	244	188	0	0	0	160	40	0	48	0	256	0	0	0	0	0	936
Heavy Trucks	0	0	0		0	4	0		0	0	16		0	0	0		20
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

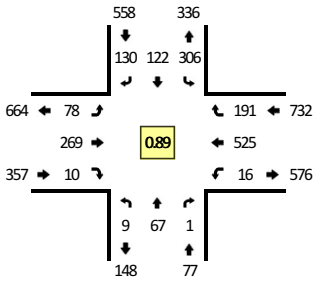
Report generated on 12/10/2025 2:13 PM

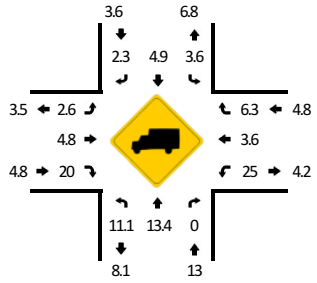
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

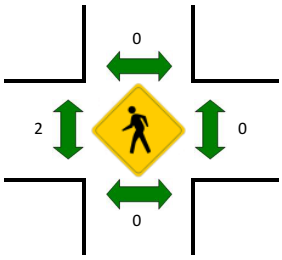
LOCATION: 11. NE 10th Ave -- NE 139th St | **QC JOB #:** 17363021
CITY/STATE: Salmon Creek, WA | **DATE:** Thu, Dec 4 2025

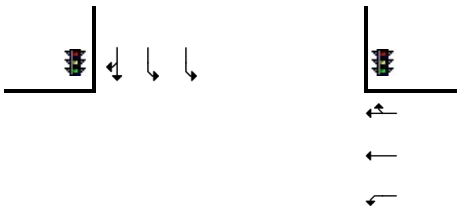
Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 8:10 AM -- 8:25 AM

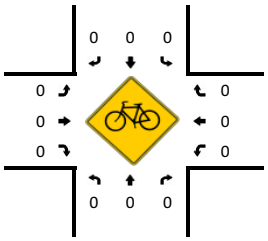


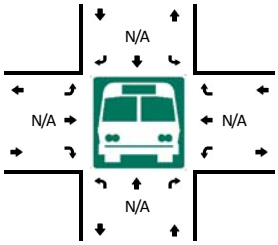


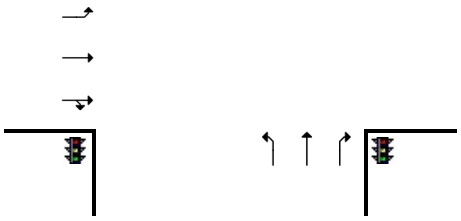
TRUE DATA TO IMPROVE MOBILITY

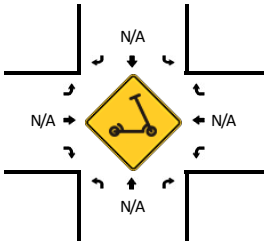












5-Min Count Period Beginning At	11. NE 10th Ave (Northbound)				11. NE 10th Ave (Southbound)				NE 139th St (Eastbound)				NE 139th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	0	0	20	7	1	0	3	15	0	0	0	9	7	0	63	
7:05 AM	1	3	0	0	20	12	4	0	3	19	0	0	2	16	13	0	93	
7:10 AM	0	3	0	0	21	5	5	0	0	13	0	0	0	7	9	0	63	
7:15 AM	2	4	0	0	20	6	7	0	4	12	2	0	3	17	10	0	87	
7:20 AM	0	3	0	0	20	7	3	0	5	18	2	0	2	17	20	0	97	
7:25 AM	2	4	0	0	20	9	5	0	2	23	2	0	2	29	15	0	113	
7:30 AM	1	6	0	0	24	11	8	0	1	18	4	0	1	20	8	0	102	
7:35 AM	2	7	0	0	20	8	4	0	4	12	5	0	0	22	8	0	92	
7:40 AM	0	2	0	0	31	7	4	0	5	17	2	0	5	31	10	0	114	
7:45 AM	1	5	0	0	40	3	10	0	4	22	0	0	1	26	8	0	120	
7:50 AM	0	8	0	0	30	9	12	0	2	13	0	0	0	27	26	0	127	
7:55 AM	3	4	0	0	24	10	7	0	7	26	0	0	0	40	25	0	146	1217
8:00 AM	1	6	0	0	20	4	10	0	7	24	2	0	1	54	26	0	155	1309
8:05 AM	1	7	0	0	28	17	11	0	8	20	2	0	2	40	12	0	148	1364
8:10 AM	1	6	0	0	18	8	21	0	7	15	0	0	1	67	13	0	157	1458
8:15 AM	1	7	1	0	22	6	21	0	7	20	1	0	2	62	10	0	160	1531
8:20 AM	0	7	0	0	15	17	14	0	9	31	0	0	3	61	13	0	170	1604
8:25 AM	0	4	0	0	27	17	7	0	5	26	2	0	1	51	16	0	156	1647
8:30 AM	0	4	0	0	24	9	4	0	7	25	1	0	0	42	13	0	129	1674
8:35 AM	1	7	0	0	27	15	9	0	10	30	0	0	0	24	19	0	142	1724
8:40 AM	1	4	0	0	17	6	3	0	9	27	0	0	3	23	13	0	106	1716
8:45 AM	0	6	0	0	18	10	8	0	4	32	3	0	4	29	7	0	121	1717
8:50 AM	0	3	0	0	29	10	11	0	7	29	1	0	5	18	15	0	128	1718
8:55 AM	0	9	0	0	11	10	9	0	4	19	2	0	1	33	6	0	104	1676

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	80	4	0	220	124	224	0	92	264	4	0	24	760	144	0	1948
Heavy Trucks	0	20	0		4	8	4		0	12	0		4	28	8		88
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

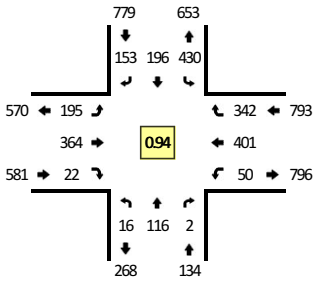
Report generated on 12/10/2025 2:13 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

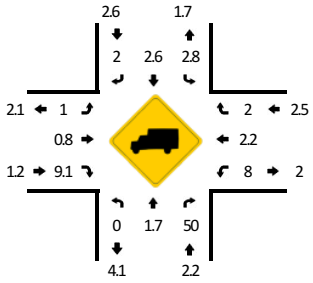
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 11. NE 10th Ave -- NE 139th St
CITY/STATE: Salmon Creek, WA

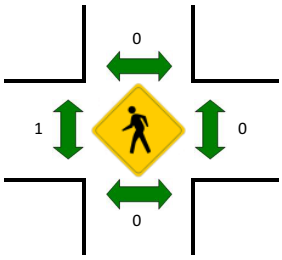
QC JOB #: 17363022
DATE: Thu, Dec 4 2025

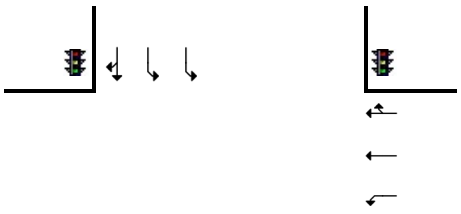
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

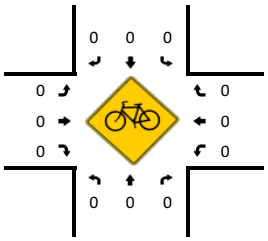


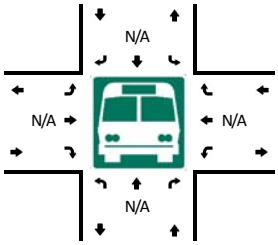


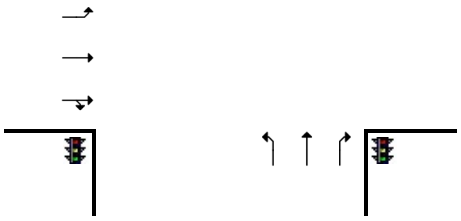
TRUE DATA TO IMPROVE MOBILITY

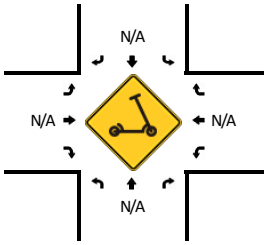












5-Min Count Period Beginning At	11. NE 10th Ave (Northbound)				11. NE 10th Ave (Southbound)				NE 139th St (Eastbound)				NE 139th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	9	0	0	37	17	7	0	23	28	3	0	4	23	29	0	181	
4:05 PM	2	9	0	0	46	22	15	0	13	43	2	0	7	42	29	0	230	
4:10 PM	3	14	0	0	34	24	16	0	17	23	2	0	4	25	36	0	198	
4:15 PM	1	8	0	0	31	15	12	0	17	27	3	0	1	27	36	0	178	
4:20 PM	2	8	0	0	30	15	9	0	21	30	4	0	6	41	24	0	190	
4:25 PM	3	17	0	0	43	18	15	0	13	18	1	0	2	36	28	0	194	
4:30 PM	0	7	0	0	32	9	13	0	23	36	3	0	2	43	27	0	195	
4:35 PM	2	11	1	0	30	12	22	0	7	25	1	0	5	33	24	0	173	
4:40 PM	0	8	0	0	52	23	18	0	14	31	0	0	6	34	23	0	209	
4:45 PM	0	7	0	0	41	15	11	0	19	30	1	0	3	28	25	0	180	
4:50 PM	1	8	0	0	23	11	6	0	14	45	2	0	7	33	29	0	179	
4:55 PM	1	10	1	0	31	15	9	0	14	28	0	0	3	36	32	0	180	2287
5:00 PM	0	11	0	0	22	8	10	0	10	32	3	0	0	34	36	0	166	2272
5:05 PM	1	5	2	0	34	17	15	0	16	31	2	0	7	26	29	0	185	2227
5:10 PM	1	19	1	0	39	13	21	0	7	34	1	0	3	36	30	0	205	2234
5:15 PM	0	5	0	0	31	10	11	0	18	37	0	0	7	26	29	0	174	2230
5:20 PM	1	5	0	0	30	10	6	0	9	22	3	0	0	41	30	0	157	2197
5:25 PM	0	9	0	0	29	11	8	0	9	43	0	0	5	38	24	0	176	2179
5:30 PM	0	11	0	0	27	15	15	0	9	33	3	0	3	40	26	0	182	2166
5:35 PM	2	9	0	0	29	9	13	0	17	29	1	0	4	33	31	0	177	2170
5:40 PM	1	5	0	0	31	9	10	0	17	33	2	0	1	26	25	0	160	2121
5:45 PM	1	6	3	0	35	8	12	0	9	15	3	0	3	34	29	0	158	2099
5:50 PM	0	7	0	0	22	9	10	0	13	30	0	0	0	48	23	1	163	2083
5:55 PM	0	5	1	0	25	14	16	0	10	31	1	0	5	34	17	0	159	2062

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	24	128	0	0	468	252	152	0	212	376	28	0	60	360	376	0	2436
Heavy Trucks	0	0	0		24	8	4		0	4	4		8	8	8		68
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

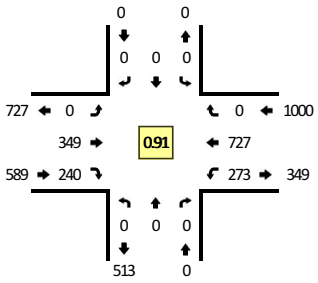
Report generated on 12/10/2025 2:13 PM

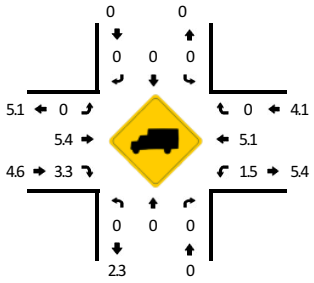
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

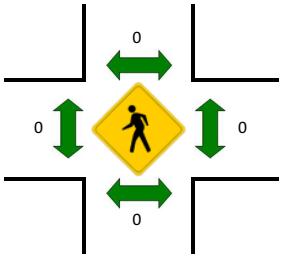
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 12. I-5 SB On-Ramp -- NE 139th St | **QC JOB #:** 17363023
CITY/STATE: Salmon Creek, WA | **DATE:** Wed, Dec 10 2025

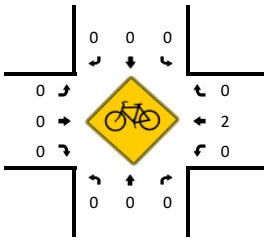
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

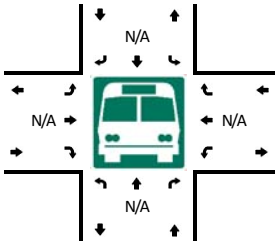




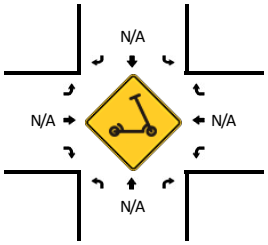












5-Min Count Period Beginning At	12. I-5 SB On-Ramp (Northbound)				12. I-5 SB On-Ramp (Southbound)				NE 139th St (Eastbound)				NE 139th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	13	14	0	21	28	0	0	76	
7:05 AM	0	0	0	0	0	0	0	0	0	22	16	0	14	24	0	0	76	
7:10 AM	0	0	0	0	0	0	0	0	0	22	16	0	23	25	0	0	86	
7:15 AM	0	0	0	0	0	0	0	0	0	25	24	0	15	39	0	0	103	
7:20 AM	0	0	0	0	0	0	0	0	0	22	15	0	22	28	0	0	87	
7:25 AM	0	0	0	0	0	0	0	0	0	31	12	0	25	43	0	0	111	
7:30 AM	0	0	0	0	0	0	0	0	0	28	14	0	20	32	0	0	94	
7:35 AM	0	0	0	0	0	0	0	0	0	29	21	0	20	37	0	0	107	
7:40 AM	0	0	0	0	0	0	0	0	0	34	16	0	15	31	0	0	96	
7:45 AM	0	0	0	0	0	0	0	0	0	20	10	0	28	47	0	0	105	
7:50 AM	0	0	0	0	0	0	0	0	0	19	28	0	32	36	0	0	115	
7:55 AM	0	0	0	0	0	0	0	0	0	24	17	0	23	65	0	0	129	1185
8:00 AM	0	0	0	0	0	0	0	0	0	23	10	0	26	58	0	0	117	1226
8:05 AM	0	0	0	0	0	0	0	0	0	24	20	0	25	67	0	0	136	1286
8:10 AM	0	0	0	0	0	0	0	0	0	27	17	0	16	63	0	0	123	1323
8:15 AM	0	0	0	0	0	0	0	0	0	32	21	0	23	88	0	0	164	1384
8:20 AM	0	0	0	0	0	0	0	0	0	22	22	0	19	83	0	0	146	1443
8:25 AM	0	0	0	0	0	0	0	0	0	30	15	0	28	55	0	0	128	1460
8:30 AM	0	0	0	0	0	0	0	0	0	40	18	0	25	54	0	0	137	1503
8:35 AM	0	0	0	0	0	0	0	0	0	38	20	0	24	58	0	0	140	1536
8:40 AM	0	0	0	0	0	0	0	0	0	36	23	0	18	38	0	0	115	1555
8:45 AM	0	0	0	0	0	0	0	0	0	33	23	0	23	44	0	0	123	1573
8:50 AM	0	0	0	0	0	0	0	0	0	22	22	0	24	62	0	0	130	1588
8:55 AM	0	0	0	0	0	0	0	0	0	22	29	0	22	57	0	0	130	1589

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	336	232	0	280	904	0	0	1752
Heavy Trucks	0	0	0		0	0	0		0	16	8		4	36	0		64
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	8	0		8
Scooters																	

Comments:

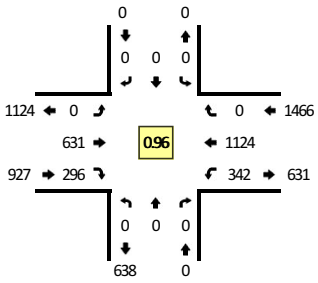
Report generated on 12/24/2025 11:20 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

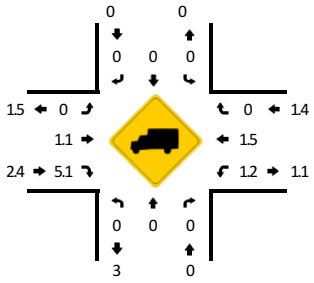
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

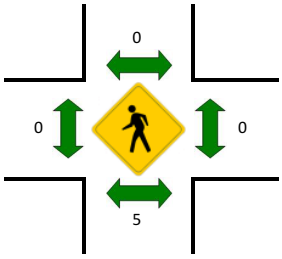
LOCATION: 12. I-5 SB On-Ramp -- NE 139th St
CITY/STATE: Salmon Creek, WA

QC JOB #: 17363024
DATE: Wed, Dec 10 2025

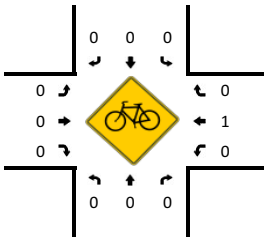
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:45 PM -- 5:00 PM

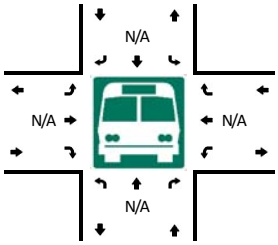




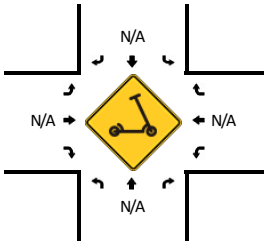












5-Min Count Period Beginning At	12. I-5 SB On-Ramp (Northbound)				12. I-5 SB On-Ramp (Southbound)				NE 139th St (Eastbound)				NE 139th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	0	0	0	61	30	0	24	86	0	0	201	
4:05 PM	0	0	0	0	0	0	0	0	0	53	28	0	30	79	0	0	190	
4:10 PM	0	0	0	0	0	0	0	0	0	53	21	0	26	80	0	0	180	
4:15 PM	0	0	0	0	0	0	0	0	0	48	20	0	29	115	0	0	212	
4:20 PM	0	0	0	0	0	0	0	0	0	53	18	0	31	112	0	0	214	
4:25 PM	0	0	0	0	0	0	0	0	0	63	18	0	28	89	0	0	198	
4:30 PM	0	0	0	0	0	0	0	0	0	49	32	0	27	88	0	0	196	
4:35 PM	0	0	0	0	0	0	0	0	0	56	18	0	26	90	0	0	190	
4:40 PM	0	0	0	0	0	0	0	0	0	40	26	0	27	94	0	0	187	
4:45 PM	0	0	0	0	0	0	0	0	0	50	39	0	34	95	0	0	218	
4:50 PM	0	0	0	0	0	0	0	0	0	49	25	0	31	95	0	0	200	
4:55 PM	0	0	0	0	0	0	0	0	0	56	21	0	29	101	0	0	207	2393
5:00 PM	0	0	0	0	0	0	0	0	0	32	24	0	23	78	0	0	157	2349
5:05 PM	0	0	0	0	0	0	0	0	0	57	26	0	31	68	0	0	182	2341
5:10 PM	0	0	0	0	0	0	0	0	0	65	24	0	31	75	0	0	195	2356
5:15 PM	0	0	0	0	0	0	0	0	0	51	30	0	31	76	0	0	188	2332
5:20 PM	0	0	0	0	0	0	0	0	0	49	17	0	31	91	0	0	188	2306
5:25 PM	0	0	0	0	0	0	0	0	0	44	13	0	30	70	0	0	157	2265
5:30 PM	0	0	0	0	0	0	0	0	0	46	24	0	24	75	0	0	169	2238
5:35 PM	0	0	0	0	0	0	0	0	0	46	12	0	36	68	0	0	162	2210
5:40 PM	0	0	0	0	0	0	0	0	0	52	24	0	32	75	0	0	183	2206
5:45 PM	0	0	0	0	0	0	0	0	0	36	16	0	22	62	0	0	136	2124
5:50 PM	0	0	0	0	0	0	0	0	0	35	21	0	16	79	0	0	151	2075
5:55 PM	0	0	0	0	0	0	0	0	0	32	10	0	18	62	0	0	122	1990

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	0	0	0	620	340	0	376	1164	0	0	2500
Heavy Trucks	0	0	0		0	0	0		0	8	20		4	16	0		48
Buses																	
Pedestrians		8				0				0				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

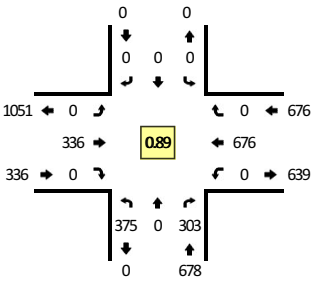
Report generated on 12/24/2025 11:20 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

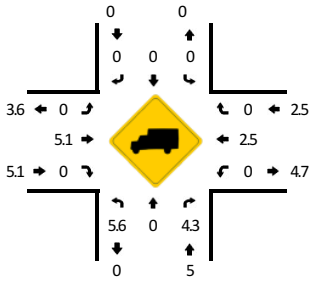
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

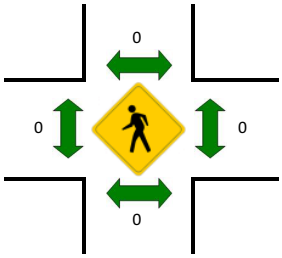
LOCATION: 13. I-5 NB Off-Ramp -- NE 139th St | **QC JOB #:** 17363025
CITY/STATE: Salmon Creek, WA | **DATE:** Thu, Dec 4 2025

Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

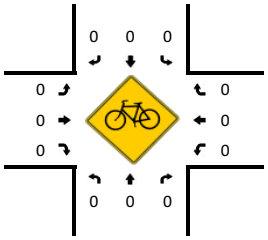


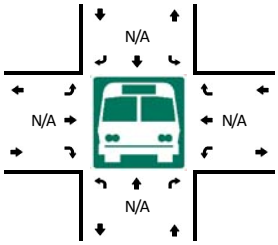
TRUE DATA TO IMPROVE MOBILITY



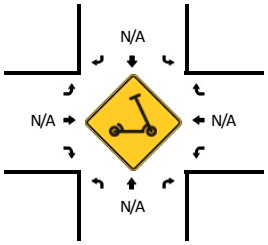












5-Min Count Period Beginning At	13. I-5 NB Off-Ramp (Northbound)				13. I-5 NB Off-Ramp (Southbound)				NE 139th St (Eastbound)				NE 139th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	13	0	17	0	0	0	0	0	0	16	0	0	0	30	0	0	76	
7:05 AM	10	0	11	0	0	0	0	0	0	26	0	0	0	36	0	0	83	
7:10 AM	10	0	18	0	0	0	0	0	0	23	0	0	0	30	0	0	81	
7:15 AM	10	0	19	0	0	0	0	0	0	16	0	0	0	35	0	0	80	
7:20 AM	26	0	27	0	0	0	0	0	0	28	0	0	0	49	0	0	130	
7:25 AM	14	0	18	0	0	0	0	0	0	26	0	0	0	51	0	0	109	
7:30 AM	17	0	18	0	0	0	0	0	0	29	0	0	0	36	0	0	100	
7:35 AM	20	0	23	0	0	0	0	0	0	24	0	0	0	50	0	0	117	
7:40 AM	26	0	32	0	0	0	0	0	0	25	0	0	0	44	0	0	127	
7:45 AM	20	0	28	0	0	0	0	0	0	32	0	0	0	54	0	0	134	
7:50 AM	34	0	29	0	0	0	0	0	0	19	0	0	0	48	0	0	130	
7:55 AM	38	0	22	0	0	0	0	0	0	36	0	0	0	69	0	0	165	1332
8:00 AM	36	0	31	0	0	0	0	0	0	24	0	0	0	61	0	0	152	1408
8:05 AM	46	0	29	0	0	0	0	0	0	31	0	0	0	50	0	0	156	1481
8:10 AM	45	0	22	0	0	0	0	0	0	18	0	0	0	58	0	0	143	1543
8:15 AM	38	0	27	0	0	0	0	0	0	24	0	0	0	68	0	0	157	1620
8:20 AM	29	0	24	0	0	0	0	0	0	29	0	0	0	58	0	0	140	1630
8:25 AM	23	0	24	0	0	0	0	0	0	32	0	0	0	54	0	0	133	1654
8:30 AM	32	0	19	0	0	0	0	0	0	30	0	0	0	46	0	0	127	1681
8:35 AM	22	0	19	0	0	0	0	0	0	27	0	0	0	55	0	0	123	1687
8:40 AM	12	0	29	0	0	0	0	0	0	34	0	0	0	55	0	0	130	1690
8:45 AM	22	0	18	0	0	0	0	0	0	20	0	0	0	45	0	0	105	1661
8:50 AM	24	0	24	0	0	0	0	0	0	41	0	0	0	47	0	0	136	1667
8:55 AM	24	0	26	0	0	0	0	0	0	17	0	0	0	37	0	0	104	1606

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	480	0	328	0	0	0	0	0	0	364	0	0	0	720	0	0	1892
Heavy Trucks	36	0	16		0	0	0		0	8	0		0	28	0		88
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

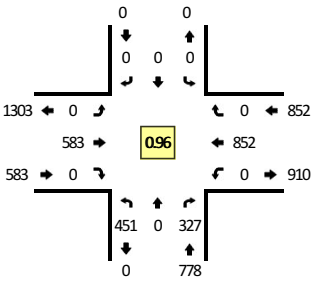
Comments:

Report generated on 12/10/2025 2:13 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

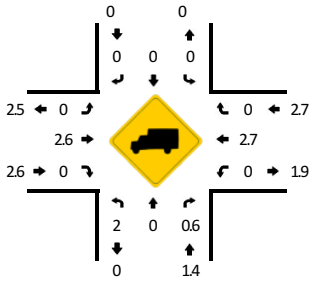
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

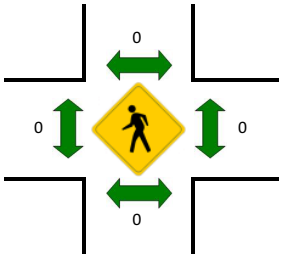
LOCATION: 13. I-5 NB Off-Ramp -- NE 139th St | **QC JOB #:** 17363026
CITY/STATE: Salmon Creek, WA | **DATE:** Thu, Dec 4 2025

Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

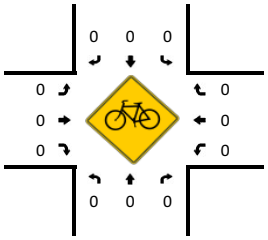


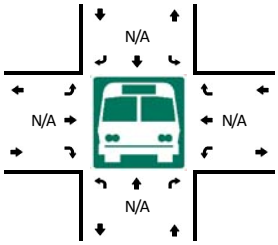
TRUE DATA TO IMPROVE MOBILITY



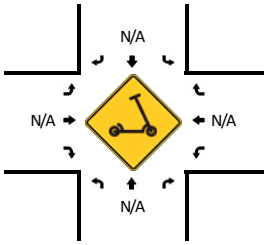












5-Min Count Period Beginning At	13. I-5 NB Off-Ramp (Northbound)				13. I-5 NB Off-Ramp (Southbound)				NE 139th St (Eastbound)				NE 139th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	24	0	26	0	0	0	0	0	0	62	0	0	0	73	0	0	185	
4:05 PM	36	0	26	0	0	0	0	0	0	56	0	0	0	74	0	0	192	
4:10 PM	50	0	26	0	0	0	0	0	0	38	0	0	0	62	0	0	176	
4:15 PM	51	0	23	0	0	0	0	0	0	53	0	0	0	69	0	0	196	
4:20 PM	47	0	19	0	0	0	0	0	0	45	0	0	0	65	0	0	176	
4:25 PM	39	0	32	0	0	0	0	0	0	31	0	0	0	63	0	0	165	
4:30 PM	37	0	22	0	0	0	0	0	0	44	0	0	0	67	0	0	170	
4:35 PM	31	0	18	0	0	0	0	0	0	45	0	0	0	60	0	0	154	
4:40 PM	37	0	16	0	0	0	0	0	0	46	0	0	0	62	0	0	161	
4:45 PM	35	0	26	0	0	0	0	0	0	54	0	0	0	73	0	0	188	
4:50 PM	45	0	32	0	0	0	0	0	0	48	0	0	0	66	0	0	191	
4:55 PM	43	0	29	0	0	0	0	0	0	53	0	0	0	61	0	0	186	2140
5:00 PM	35	0	23	0	0	0	0	0	0	39	0	0	0	64	0	0	161	2116
5:05 PM	36	0	28	0	0	0	0	0	0	46	0	0	0	76	0	0	186	2110
5:10 PM	42	0	32	0	0	0	0	0	0	61	0	0	0	66	0	0	201	2135
5:15 PM	29	0	25	0	0	0	0	0	0	53	0	0	0	72	0	0	179	2118
5:20 PM	36	0	26	0	0	0	0	0	0	45	0	0	0	91	0	0	198	2140
5:25 PM	36	0	31	0	0	0	0	0	0	43	0	0	0	61	0	0	171	2146
5:30 PM	34	0	27	0	0	0	0	0	0	47	0	0	0	82	0	0	190	2166
5:35 PM	43	0	21	0	0	0	0	0	0	35	0	0	0	64	0	0	163	2175
5:40 PM	37	0	27	0	0	0	0	0	0	59	0	0	0	76	0	0	199	2213
5:45 PM	47	0	35	0	0	0	0	0	0	32	0	0	0	59	0	0	173	2198
5:50 PM	39	0	18	0	0	0	0	0	0	38	0	0	0	59	0	0	154	2161
5:55 PM	35	0	21	0	0	0	0	0	0	43	0	0	0	51	0	0	150	2125

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	428	0	332	0	0	0	0	0	0	636	0	0	0	916	0	0	2312
Heavy Trucks	8	0	4		0	0	0		0	16	0		0	20	0		48
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

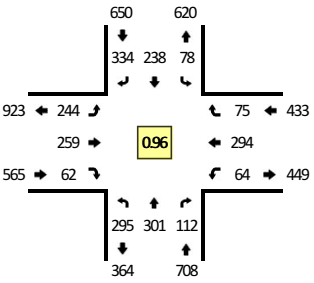
Report generated on 12/10/2025 2:13 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

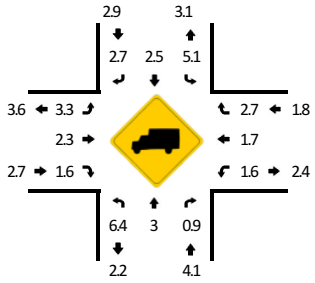
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: 14. NE 20th Ave -- NE 139th St
CITY/STATE: Mount Vista, WA

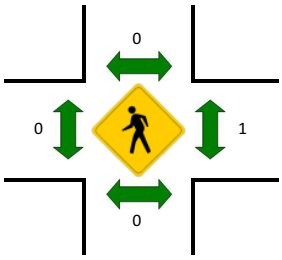
QC JOB #: 17363027
DATE: Thu, Dec 4 2025

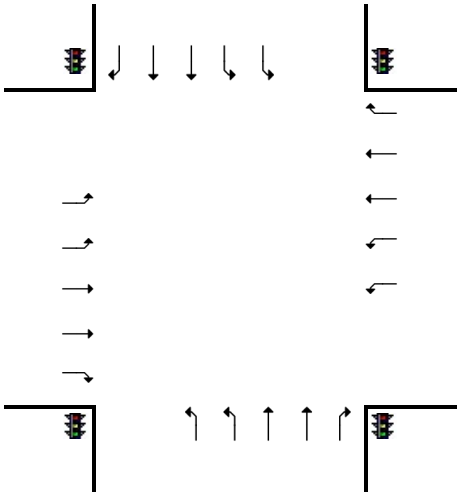
Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

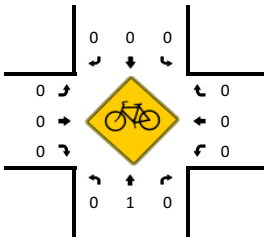


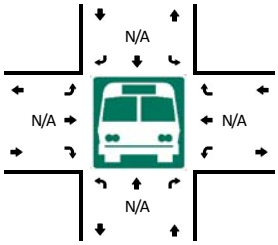


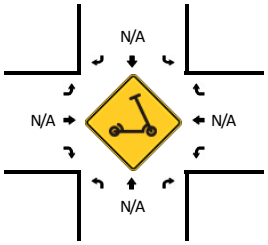
TRUE DATA TO IMPROVE MOBILITY











5-Min Count Period Beginning At	14. NE 20th Ave (Northbound)				14. NE 20th Ave (Southbound)				NE 139th St (Eastbound)				NE 139th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	10	8	5	0	2	12	13	0	14	21	3	0	1	9	6	0	104	
7:05 AM	9	11	6	0	0	13	22	0	10	11	6	0	1	16	4	0	109	
7:10 AM	11	16	1	0	2	15	15	0	7	14	5	0	1	22	4	0	113	
7:15 AM	17	16	5	0	10	15	17	0	13	12	4	0	2	12	9	0	132	
7:20 AM	19	9	6	0	8	11	31	0	17	23	6	0	2	19	6	0	157	
7:25 AM	18	16	5	0	4	26	28	0	11	22	8	0	0	26	2	0	166	
7:30 AM	17	22	7	0	4	17	18	0	16	11	7	0	6	27	6	0	158	
7:35 AM	27	14	5	0	2	28	26	0	11	15	5	0	5	19	6	0	163	
7:40 AM	22	24	11	0	5	18	26	0	23	31	5	0	6	27	10	0	208	
7:45 AM	22	28	9	0	6	31	27	0	7	25	4	0	8	25	3	0	195	
7:50 AM	27	29	13	0	10	28	24	0	16	24	8	0	4	21	5	0	209	
7:55 AM	27	25	14	0	6	21	32	0	20	25	4	0	9	27	2	0	212	1926
8:00 AM	23	10	8	0	9	15	24	0	24	32	3	0	3	32	3	0	186	2008
8:05 AM	22	35	9	0	4	24	23	0	24	15	7	0	6	32	10	0	211	2110
8:10 AM	16	27	4	0	3	19	33	0	19	14	3	0	3	16	6	0	163	2160
8:15 AM	35	17	8	0	5	17	30	0	22	19	4	0	6	26	6	0	195	2223
8:20 AM	16	31	10	0	10	15	31	0	22	18	8	0	5	23	4	0	193	2259
8:25 AM	24	27	9	0	8	18	28	0	24	21	8	0	6	22	17	0	212	2305
8:30 AM	33	26	6	0	8	15	26	0	22	13	4	0	4	17	6	0	180	2327
8:35 AM	28	22	11	0	4	17	30	0	21	22	4	0	4	26	3	0	192	2356
8:40 AM	27	20	6	0	5	23	22	0	20	29	6	0	2	27	6	0	193	2341
8:45 AM	17	19	7	0	5	22	35	0	19	12	2	0	3	22	5	0	168	2314
8:50 AM	18	24	11	0	7	18	21	0	22	25	2	0	7	16	3	0	174	2279
8:55 AM	19	26	15	0	6	20	23	0	23	21	4	0	6	21	8	0	192	2259

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	304	328	144	0	88	320	332	0	172	296	64	0	84	292	40	0	2464
Heavy Trucks	16	12	0		4	0	4		0	8	0		4	4	4		56
Buses																	
Pedestrians		0				0				0				4			4
Bicycles	0	4	0		0	0	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

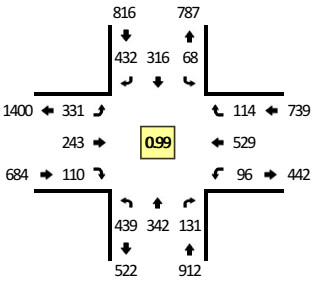
Type of peak hour being reported: Intersection Peak

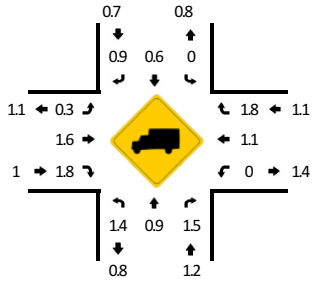
Method for determining peak hour: Total Entering Volume

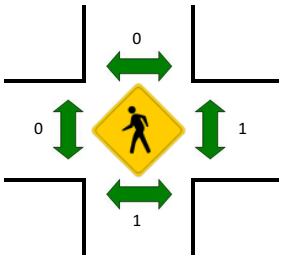
LOCATION: 14. NE 20th Ave -- NE 139th St
CITY/STATE: Mount Vista, WA

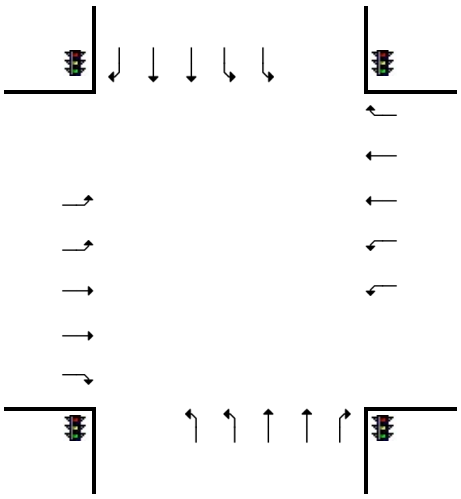
QC JOB #: 17363028
DATE: Thu, Dec 4 2025

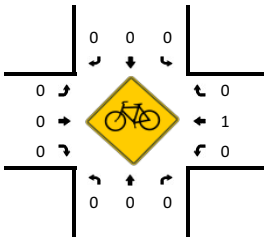
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 4:55 PM -- 5:10 PM

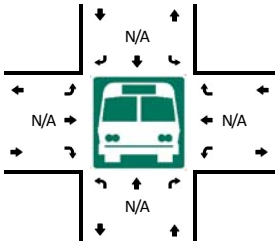


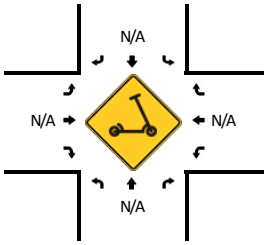












5-Min Count Period Beginning At	14. NE 20th Ave (Northbound)				14. NE 20th Ave (Southbound)				NE 139th St (Eastbound)				NE 139th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	36	37	12	0	9	30	38	0	21	13	10	0	10	21	9	0	246	
4:05 PM	40	37	7	0	7	25	31	0	37	24	10	0	5	35	5	0	263	
4:10 PM	26	24	10	0	5	23	23	0	28	24	8	0	19	39	9	0	238	
4:15 PM	24	41	8	0	3	34	35	0	16	18	6	0	11	53	9	0	258	
4:20 PM	26	21	5	0	4	26	41	0	36	6	9	0	9	38	11	0	232	
4:25 PM	34	38	2	1	5	31	32	0	20	26	4	0	5	30	10	0	238	
4:30 PM	27	17	4	0	7	14	31	0	37	22	11	0	15	43	5	0	233	
4:35 PM	23	35	9	0	5	37	34	0	37	20	3	0	13	41	9	0	266	
4:40 PM	39	36	8	0	2	27	32	0	30	20	8	0	3	28	15	0	248	
4:45 PM	35	30	6	0	6	34	33	0	43	23	8	0	8	42	15	0	283	
4:50 PM	36	16	9	0	8	18	36	0	25	33	9	0	9	43	7	0	249	
4:55 PM	41	29	9	0	4	34	32	0	27	17	8	0	7	33	12	0	253	3007
5:00 PM	51	33	10	0	9	28	38	0	29	12	8	0	9	27	10	0	264	3025
5:05 PM	42	27	21	0	5	15	36	0	25	21	12	0	8	52	15	0	279	3041
5:10 PM	31	22	7	0	0	30	32	0	31	20	8	0	5	55	7	0	248	3051
5:15 PM	34	31	7	0	4	34	38	0	20	16	11	0	13	51	10	0	269	3062
5:20 PM	38	32	15	0	8	27	43	0	25	18	10	0	8	39	10	0	273	3103
5:25 PM	35	22	11	0	8	16	39	0	26	23	10	0	8	44	5	0	247	3112
5:30 PM	16	23	7	0	6	33	47	0	38	24	9	0	5	50	7	0	265	3144
5:35 PM	45	43	20	0	1	22	28	0	16	12	5	0	8	52	10	0	262	3140
5:40 PM	35	34	9	0	9	25	30	0	26	24	12	0	8	41	6	0	259	3151
5:45 PM	23	20	8	0	4	22	27	0	27	18	8	0	8	35	11	0	211	3079
5:50 PM	32	20	7	0	6	32	28	0	25	16	7	0	6	35	9	0	223	3053
5:55 PM	32	23	11	0	3	13	25	0	18	9	7	0	4	25	12	0	182	2982

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	536	356	160	0	72	308	424	0	324	200	112	0	96	448	148	0	3184
Heavy Trucks	8	4	0		0	4	4		0	4	4		0	0	0		28
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	4	0		4
Scooters																	

Comments:

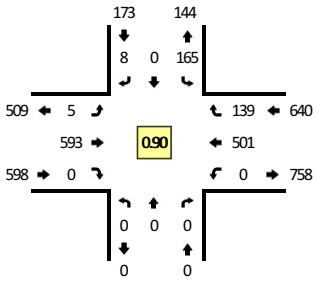
Report generated on 12/10/2025 2:13 PM

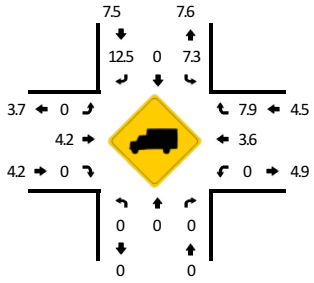
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

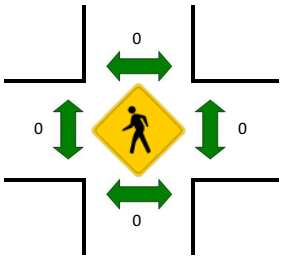
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

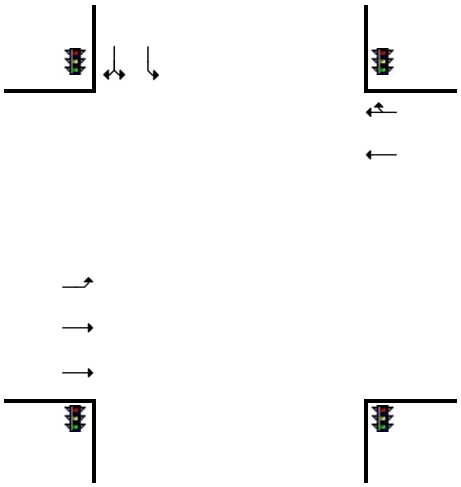
LOCATION: 15. NE 10th Ave -- NE Tenney Rd | **QC JOB #:** 17363029
CITY/STATE: Salmon Creek, WA | **DATE:** Thu, Dec 4 2025

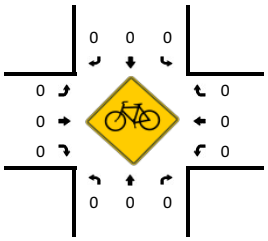
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

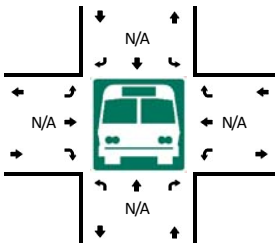


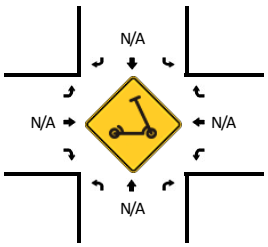












5-Min Count Period Beginning At	15. NE 10th Ave (Northbound)				15. NE 10th Ave (Southbound)				NE Tenney Rd (Eastbound)				NE Tenney Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	6	0	0	0	1	31	0	0	0	19	3	0	60	
7:05 AM	0	0	0	0	7	0	1	0	0	30	0	0	0	16	10	0	64	
7:10 AM	0	0	0	0	13	0	1	0	0	41	0	0	0	20	11	0	86	
7:15 AM	0	0	0	0	9	0	1	0	0	27	0	0	0	13	15	0	65	
7:20 AM	0	0	0	0	13	0	1	0	0	21	0	0	0	24	9	0	68	
7:25 AM	0	0	0	0	11	0	1	0	0	42	0	0	0	14	11	0	79	
7:30 AM	0	0	0	0	14	0	0	0	3	33	0	0	0	36	22	0	108	
7:35 AM	0	0	0	0	17	0	1	0	1	42	0	0	0	22	11	0	94	
7:40 AM	0	0	0	0	6	0	0	0	1	38	0	0	0	19	14	0	78	
7:45 AM	0	0	0	0	11	0	0	0	0	45	0	0	0	28	11	0	95	
7:50 AM	0	0	0	0	9	0	0	0	0	53	0	0	0	31	13	0	106	
7:55 AM	0	0	0	0	13	0	0	0	2	29	0	0	0	37	12	0	93	996
8:00 AM	0	0	0	0	6	0	0	0	0	42	0	0	0	54	13	0	115	1051
8:05 AM	0	0	0	0	14	0	0	0	0	44	0	0	0	49	8	0	115	1102
8:10 AM	0	0	0	0	15	0	1	0	1	49	0	0	0	25	10	0	101	1117
8:15 AM	0	0	0	0	8	0	0	0	2	44	0	0	0	57	11	0	122	1174
8:20 AM	0	0	0	0	15	0	2	0	0	60	0	0	0	57	11	0	145	1251
8:25 AM	0	0	0	0	23	0	3	0	0	53	0	0	0	41	7	0	127	1299
8:30 AM	0	0	0	0	10	0	1	0	1	43	0	0	0	40	10	0	105	1296
8:35 AM	0	0	0	0	15	0	1	0	0	72	0	0	0	28	15	0	131	1333
8:40 AM	0	0	0	0	15	0	0	0	0	53	0	0	0	43	16	0	127	1382
8:45 AM	0	0	0	0	10	0	0	0	0	47	0	0	0	31	13	0	101	1388
8:50 AM	0	0	0	0	20	0	0	0	1	47	0	0	0	38	13	0	119	1401
8:55 AM	0	0	0	0	14	0	0	0	0	39	0	0	0	38	12	0	103	1411

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	184	0	20	0	8	628	0	0	0	620	116	0	1576
Heavy Trucks	0	0	0		16	0	4		0	32	0		0	16	12		80
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

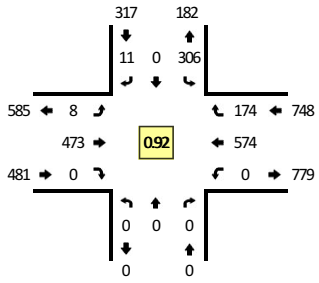
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

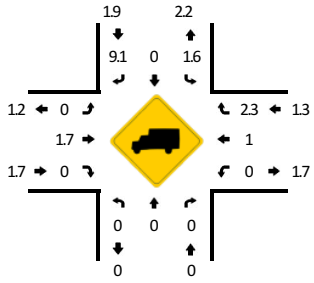
LOCATION: 15. NE 10th Ave -- NE Tenney Rd
CITY/STATE: Salmon Creek, WA

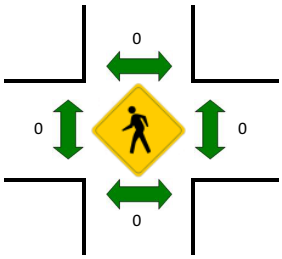
QC JOB #: 17363030
DATE: Thu, Dec 4 2025

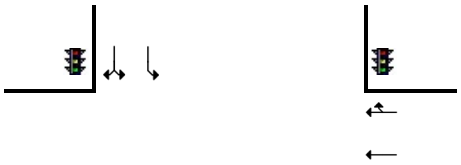
Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:05 PM -- 4:20 PM

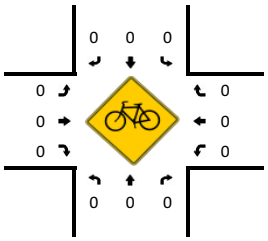


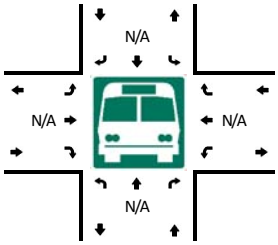




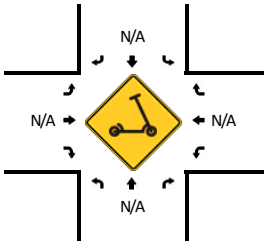












5-Min Count Period Beginning At	15. NE 10th Ave (Northbound)				15. NE 10th Ave (Southbound)				NE Tenney Rd (Eastbound)				NE Tenney Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	27	0	1	0	0	52	0	0	0	39	8	0	127	
4:05 PM	0	0	0	0	32	0	1	0	2	44	0	0	0	49	16	0	144	
4:10 PM	0	0	0	0	34	0	3	0	0	39	0	0	0	51	16	0	143	
4:15 PM	0	0	0	0	27	0	0	0	2	36	0	0	0	55	13	0	133	
4:20 PM	0	0	0	0	26	0	1	0	1	46	0	0	0	50	20	0	144	
4:25 PM	0	0	0	0	21	0	0	0	0	39	0	0	0	39	16	0	115	
4:30 PM	0	0	0	0	24	0	1	0	0	40	0	0	0	60	11	0	136	
4:35 PM	0	0	0	0	23	0	1	0	1	25	0	0	0	44	18	0	112	
4:40 PM	0	0	0	0	29	0	1	0	0	36	0	0	0	38	10	0	114	
4:45 PM	0	0	0	0	11	0	0	0	1	59	0	0	0	43	8	0	122	
4:50 PM	0	0	0	0	37	0	1	0	1	38	0	0	0	45	15	0	137	
4:55 PM	0	0	0	0	25	0	0	0	0	27	0	0	0	49	12	0	113	1540
5:00 PM	0	0	0	0	17	0	2	0	0	44	0	0	0	51	19	0	133	1546
5:05 PM	0	0	0	0	21	0	1	0	0	49	0	0	0	40	19	0	130	1532
5:10 PM	0	0	0	0	27	0	3	0	2	43	0	0	0	38	27	0	140	1529
5:15 PM	0	0	0	0	15	0	1	0	0	27	0	0	0	34	12	0	89	1485
5:20 PM	0	0	0	0	12	0	1	0	3	47	0	0	0	43	9	0	115	1456
5:25 PM	0	0	0	0	22	0	0	0	0	53	0	0	0	45	10	0	130	1471
5:30 PM	0	0	0	0	18	0	2	0	0	34	0	0	0	33	14	0	101	1436
5:35 PM	0	0	0	0	11	0	0	0	0	33	0	0	0	40	17	0	101	1425
5:40 PM	0	0	0	0	14	0	0	0	0	51	0	0	0	36	14	0	115	1426
5:45 PM	0	0	0	0	13	0	0	0	1	36	0	0	0	47	7	0	104	1408
5:50 PM	0	0	0	0	16	0	3	0	0	43	0	0	0	44	11	0	117	1388
5:55 PM	0	0	0	0	19	0	0	0	0	32	0	0	0	50	10	0	111	1386

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	372	0	16	0	16	476	0	0	0	620	180	0	1680
Heavy Trucks	0	0	0		4	0	0		0	12	0		0	8	0		24
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

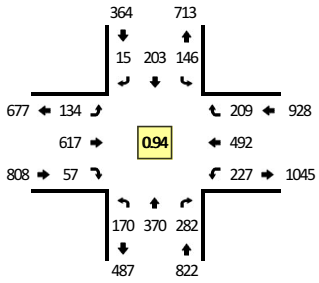
Report generated on 12/10/2025 2:13 PM

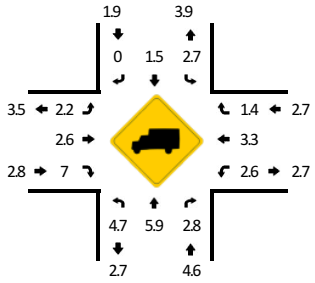
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

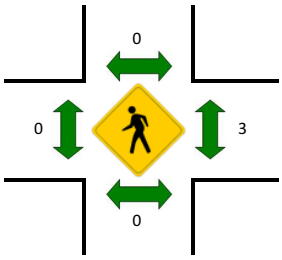
LOCATION: 16. NE 20th Ave -- NE 134th St | **QC JOB #:** 17363031
CITY/STATE: Salmon Creek, WA | **DATE:** Thu, Dec 4 2025

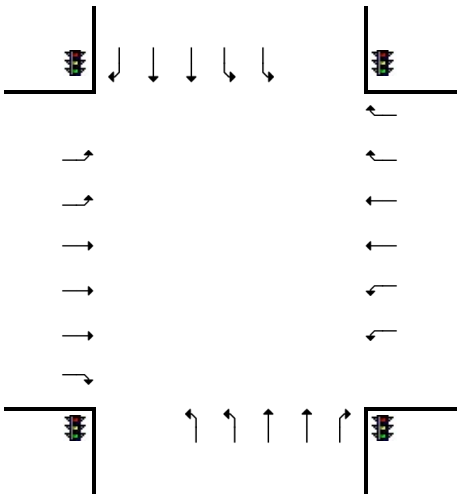
Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

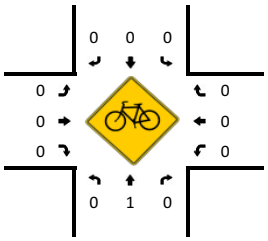


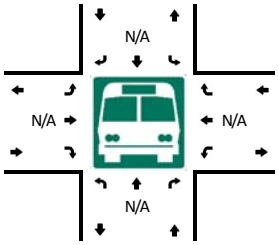


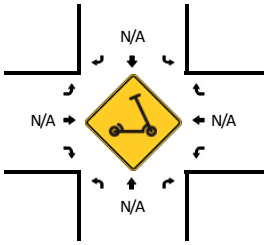
TRUE DATA TO IMPROVE MOBILITY











5-Min Count Period Beginning At	16. NE 20th Ave (Northbound)				16. NE 20th Ave (Southbound)				NE 134th St (Eastbound)				NE 134th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	7	17	20	0	12	5	1	0	1	50	8	0	18	23	9	0	171	
7:05 AM	5	13	23	0	19	4	0	0	2	26	0	0	18	10	7	0	127	
7:10 AM	8	12	33	0	18	3	0	0	2	42	6	0	18	18	16	0	176	
7:15 AM	2	11	41	0	11	5	1	0	8	45	2	0	22	27	13	0	188	
7:20 AM	6	21	37	0	11	9	0	0	6	47	5	0	13	24	10	0	189	
7:25 AM	8	15	36	0	12	7	1	0	5	44	8	0	11	27	17	0	191	
7:30 AM	14	28	36	0	18	5	3	0	9	36	3	0	11	33	18	0	214	
7:35 AM	13	25	33	0	23	20	0	0	6	41	1	0	20	32	12	0	226	
7:40 AM	8	32	20	0	15	24	2	0	13	47	5	0	20	37	16	0	239	
7:45 AM	12	26	21	0	16	23	0	0	12	45	6	0	14	47	24	0	246	
7:50 AM	10	25	25	0	10	24	2	0	14	64	8	0	23	48	22	0	275	
7:55 AM	14	28	28	0	10	27	3	0	12	48	5	0	24	44	16	0	259	2501
8:00 AM	16	30	26	0	7	11	0	0	7	48	2	0	22	41	14	0	224	2554
8:05 AM	17	39	28	0	10	18	1	0	11	50	4	0	15	42	16	0	251	2678
8:10 AM	13	35	26	0	12	15	2	0	4	49	4	0	18	27	12	0	217	2719
8:15 AM	26	31	24	0	21	15	0	0	12	38	4	0	20	40	16	0	247	2778
8:20 AM	21	30	21	0	11	15	0	0	19	49	3	0	24	49	17	0	259	2848
8:25 AM	11	31	26	0	10	15	2	0	12	49	4	0	14	45	25	0	244	2901
8:30 AM	15	25	18	0	8	2	0	0	9	68	7	0	13	34	21	0	220	2907
8:35 AM	7	38	19	0	16	14	3	0	9	62	5	0	20	38	10	0	241	2922
8:40 AM	23	27	25	0	20	7	0	0	6	66	3	0	18	26	12	0	233	2916
8:45 AM	12	24	18	0	21	13	0	0	8	57	4	0	17	35	14	0	223	2893
8:50 AM	13	25	24	0	14	13	1	0	15	75	6	0	17	37	14	0	254	2872
8:55 AM	10	28	28	0	17	14	2	0	22	55	5	0	32	41	23	0	277	2890

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	144	316	296	0	144	296	20	0	152	628	76	0	244	556	248	0	3120
Heavy Trucks	8	20	12		4	0	0		4	16	12		0	28	0		104
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	4	0		0	0	0		0	0	0		0	0	0		4
Scooters																	

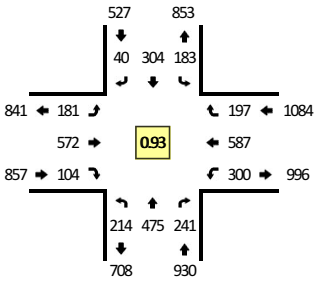
Comments:

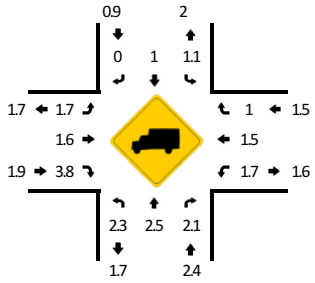
Report generated on 12/10/2025 2:13 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

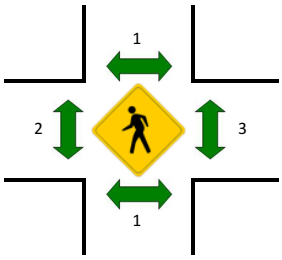
LOCATION: 16. NE 20th Ave -- NE 134th St | **QC JOB #:** 17363032
CITY/STATE: Salmon Creek, WA | **DATE:** Thu, Dec 4 2025

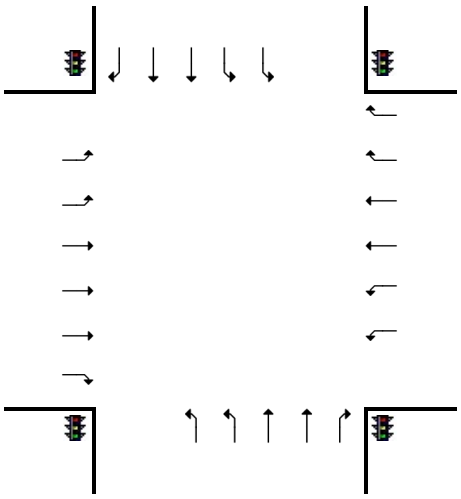
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

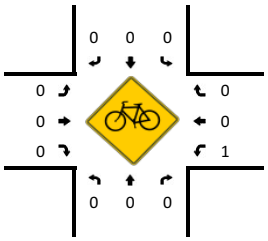


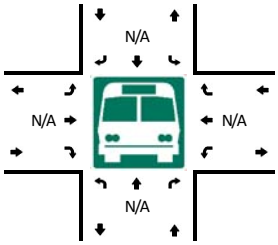


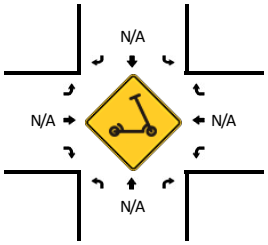
TRUE DATA TO IMPROVE MOBILITY









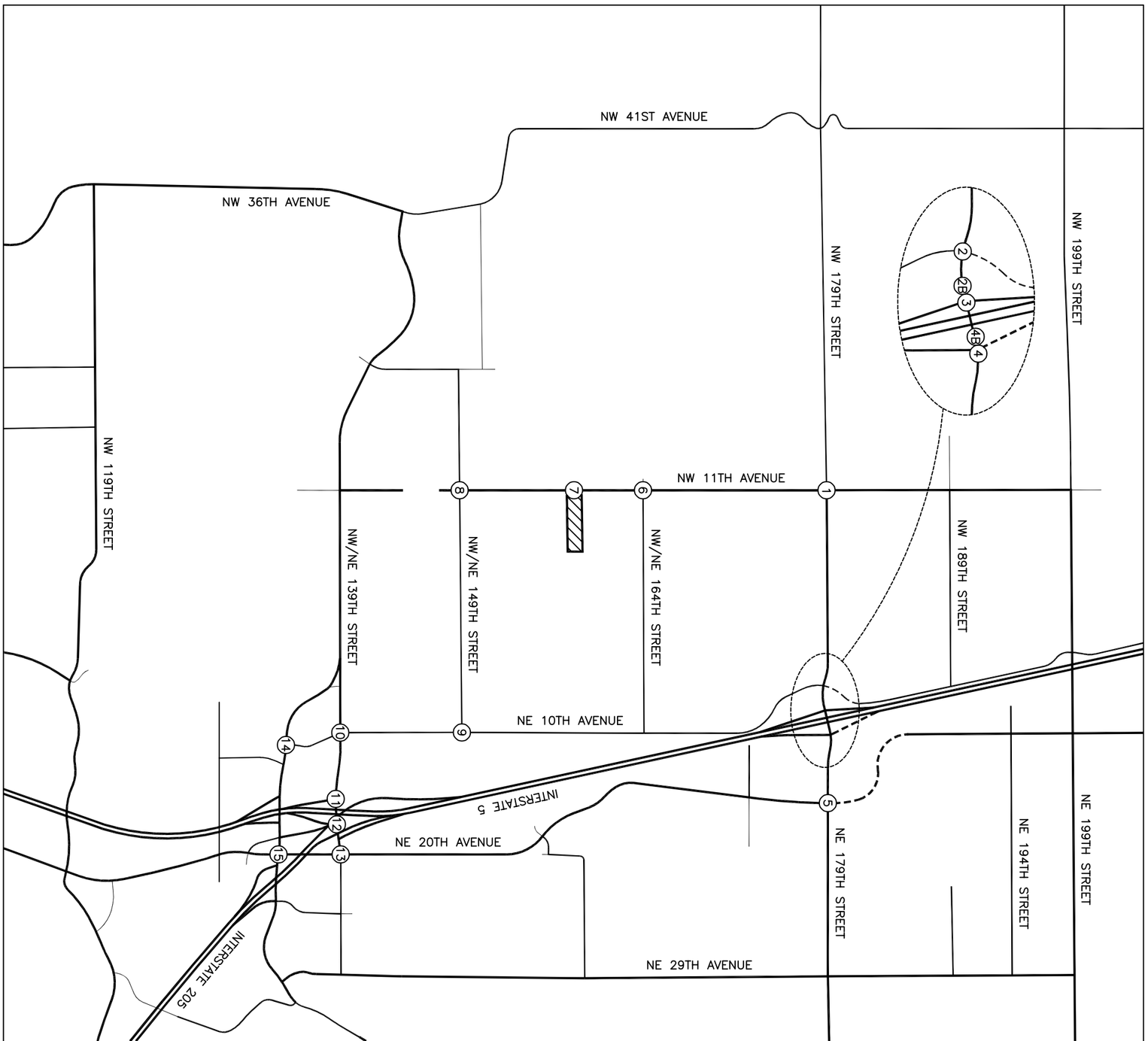


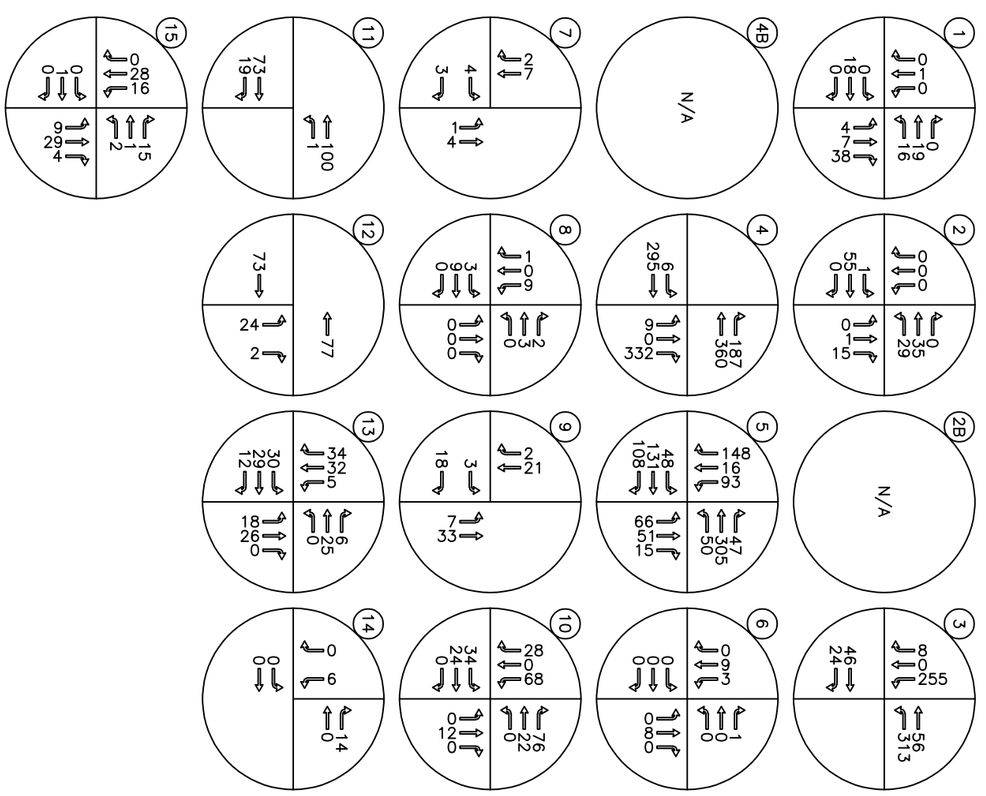
5-Min Count Period Beginning At	16. NE 20th Ave (Northbound)				16. NE 20th Ave (Southbound)				NE 134th St (Eastbound)				NE 134th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	17	46	14	0	17	18	4	0	23	56	6	0	36	54	27	0	318	
4:05 PM	24	36	29	0	12	29	4	0	12	67	6	0	25	61	17	0	322	
4:10 PM	16	25	24	0	19	22	3	0	19	49	7	0	26	49	17	0	276	
4:15 PM	25	44	28	0	15	17	4	0	16	43	7	0	20	48	18	0	285	
4:20 PM	18	40	38	0	18	32	2	0	8	46	8	0	18	30	13	0	271	
4:25 PM	13	32	19	0	25	19	4	0	17	47	11	0	21	46	18	0	272	
4:30 PM	12	21	22	0	16	38	1	0	16	39	4	0	34	52	12	0	267	
4:35 PM	20	46	16	0	12	20	3	0	12	67	9	0	27	53	15	0	300	
4:40 PM	17	43	19	0	14	25	1	0	14	41	10	0	20	46	16	0	266	
4:45 PM	10	35	13	0	14	28	4	0	12	42	18	0	21	43	18	0	258	
4:50 PM	25	57	11	0	10	25	7	0	16	40	14	0	25	51	12	0	293	
4:55 PM	17	50	8	0	11	31	3	0	16	35	4	0	27	54	14	0	270	3398
5:00 PM	16	37	5	0	10	41	4	0	22	42	6	0	27	50	23	0	283	3363
5:05 PM	22	49	9	0	12	22	3	0	17	34	5	0	25	43	21	0	262	3303
5:10 PM	14	38	7	1	12	24	4	0	13	43	13	0	33	56	20	0	278	3305
5:15 PM	15	31	5	0	10	39	4	1	15	37	14	0	17	48	16	0	252	3272
5:20 PM	19	43	4	0	11	20	6	0	20	29	4	0	26	58	14	0	254	3255
5:25 PM	30	39	10	0	13	28	6	0	14	30	18	0	21	38	10	0	257	3240
5:30 PM	26	55	15	0	7	27	1	0	16	26	13	0	29	38	7	0	260	3233
5:35 PM	22	54	11	0	11	25	3	0	20	31	23	0	19	39	19	0	277	3210
5:40 PM	15	31	10	0	10	35	6	0	18	28	10	0	31	37	15	0	246	3190
5:45 PM	15	30	12	0	6	27	4	0	19	32	11	0	37	38	11	0	242	3174
5:50 PM	17	27	21	0	15	21	2	0	13	32	13	0	28	57	17	0	263	3144
5:55 PM	15	32	13	0	11	20	2	0	12	33	15	0	27	36	14	0	230	3104

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	228	428	268	0	192	276	44	0	216	688	76	0	348	656	244	0	3664
Heavy Trucks	16	12	12		8	4	0		0	4	4		8	24	0		92
Buses																	
Pedestrians		0				0				0				4			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 12/10/2025 2:13 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212





NOT TO SCALE

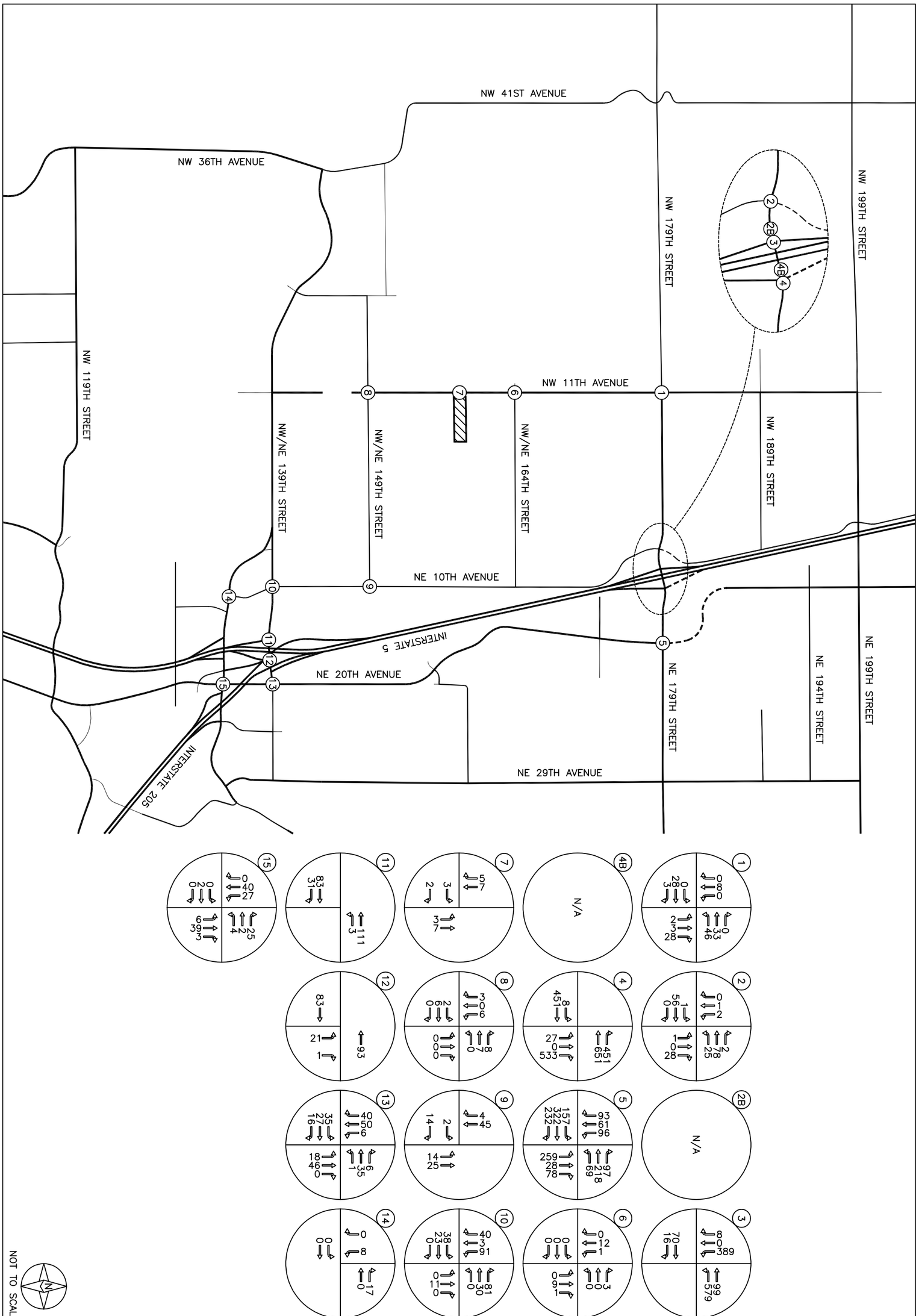
PLS ENGINEERING

IN-PROCESS DEVELOPMENT TRIPS

AM PEAK HOUR

FIGURE A

TOWHEE CREEK SUBDIVISION

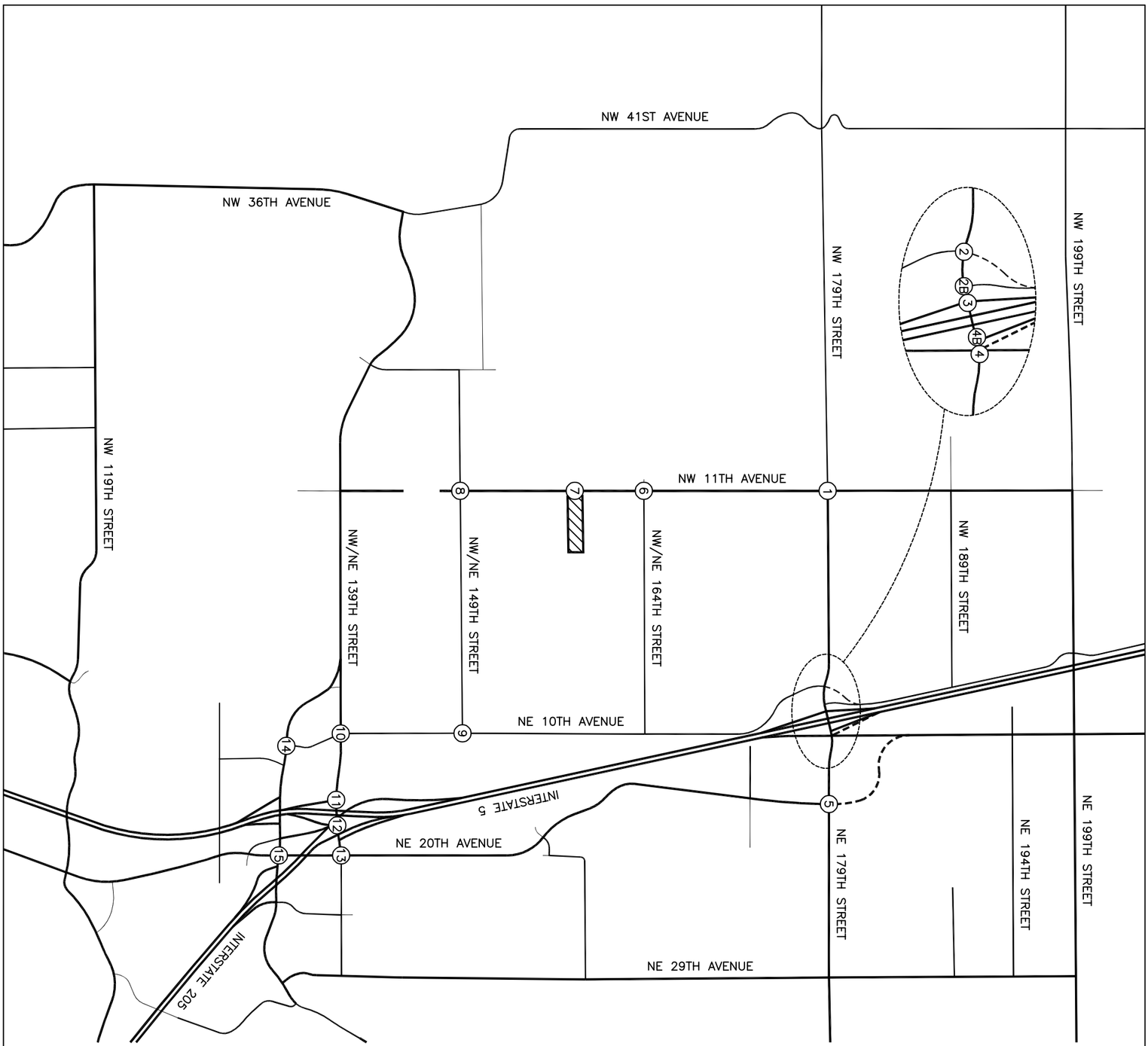


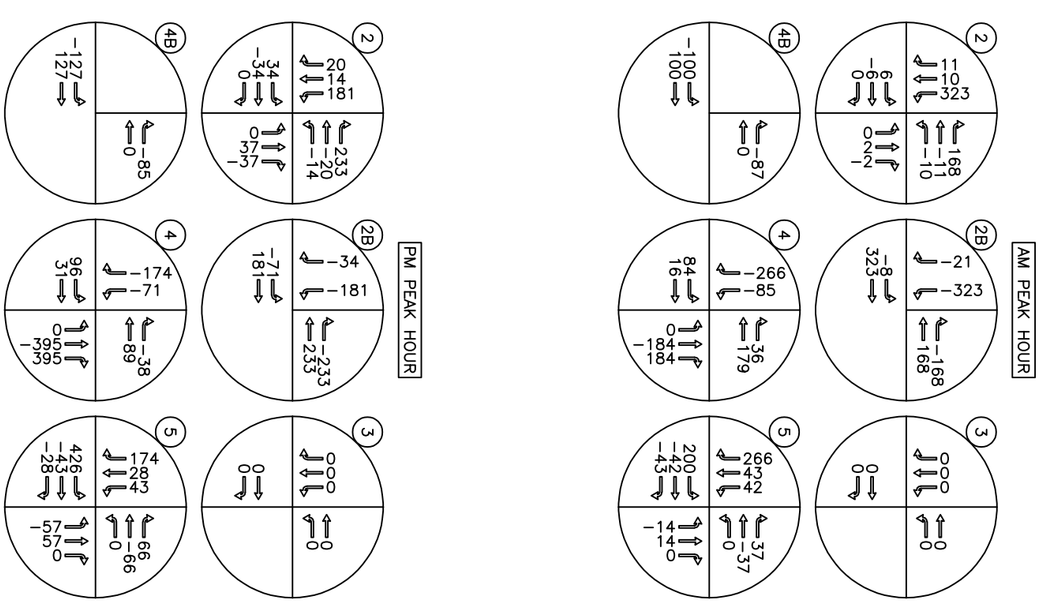
IN-PROCESS DEVELOPMENT TRIPS

PM PEAK HOUR

FIGURE B

TOWHEE CREEK SUBDIVISION





NOT TO SCALE

REROUTED YEAR 2028 VOLUMES

AM & PM PEAK HOURS

FIGURE C

TOWHEE CREEK SUBDIVISION

APPENDIX E – OPERATION ANALYSIS

Level of Service Descriptions
Synchro Capacity Results
Sidra Capacity Results

LEVEL OF SERVICE

Intersection Level of Service (LOS) is a qualitative measure used to evaluate the performance of intersections and roadways based on the traffic flow, average control delay, and overall operations. The Highway Capacity Manual (HCM) defines LOS for signalized and unsignalized intersections as a function of the average vehicle control delay. LOS may be calculated per movement or per approach for any intersection configuration, but LOS for the intersection as a whole is generally defined for signalized, roundabout, and all-way stop configurations.

The LOS metric is categorized using a graded scale from A to F. Descriptions of these LOS grade levels are provided below:

LOS Grade	Description	Control Delay Per Vehicle	
		Signalized & Roundabout Intersections	**Unsignalized Intersections**
A	Indicative of relatively freeflow traffic conditions with minimal delays and high comfort for drivers. Low intersection delays and clearing of vehicles occur in a single cycle at signalized intersections.	≤ 10 seconds	≤ 10 seconds
B	Representative of reasonably free flow conditions, where speeds are maintained but maneuverability is slightly restricted. Slightly higher delays at intersections are observed.	10-20 seconds	10-15 seconds
C	Indicative of stable flow, where maneuverability is noticeably restricted, and lane changes require more driver awareness. Moderate delays at intersections may be observed, and the occasional queued vehicle may not clear in a single cycle length.	20-35 seconds	15-25 seconds
D	Signifies approaching unstable flow, with significant delays and reduced comfort. Longer delays and congestion may be apparent at an intersection. More than one cycle length at a signalized intersection may be necessary to service queued vehicles.	35-55 seconds	25-35 seconds
E	Representative of unstable flow, where traffic is at or nearing capacity, leading to long delays. High delays at an intersection are expected, and extended queuing may be observed. Cycle failures at signalized intersections are expected to occur.	55-80 seconds	35-50 seconds
F	Indicative of forced flow, where traffic demand exceeds capacity, resulting in severe congestion and delays. Very high delays and significant queues are common at intersections. Frequent cycle failures are expected to occur at signalized intersections.	>80 seconds	>50 seconds

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	97	3	39	81	14	8	17	65	24	10	5
Future Vol, veh/h	7	97	3	39	81	14	8	17	65	24	10	5
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	5	5	5	17	17	17	8	8	8	5	5	5
Mvmt Flow	8	113	3	45	94	16	9	20	76	28	12	6
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, s/veh	8.4	8.9	8	8.2
HCM LOS	A	A	A	A

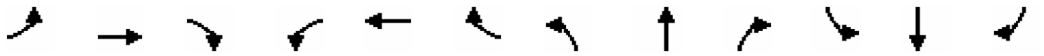
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	7%	29%	62%
Vol Thru, %	19%	91%	60%	26%
Vol Right, %	72%	3%	10%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	107	134	39
LT Vol	8	7	39	24
Through Vol	17	97	81	10
RT Vol	65	3	14	5
Lane Flow Rate	105	124	156	45
Geometry Grp	1	1	1	1
Degree of Util (X)	0.126	0.156	0.202	0.061
Departure Headway (Hd)	4.339	4.506	4.668	4.815
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	827	796	770	745
Service Time	2.361	2.529	2.691	2.84
HCM Lane V/C Ratio	0.127	0.156	0.203	0.06
HCM Control Delay, s/veh	8	8.4	8.9	8.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.6	0.8	0.2



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	195	7	129	136	9	78
Future Volume (veh/h)	195	7	129	136	9	78
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1722	1722	1707	1707
Adj Flow Rate, veh/h	219	4	145	153	10	9
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	5	12	12	13	13
Cap, veh/h	858	16	789	1901	41	36
Arrive On Green	0.25	0.25	0.14	0.58	0.03	0.03
Sat Flow, veh/h	3577	64	1640	3358	1626	1447
Grp Volume(v), veh/h	109	114	145	153	10	9
Grp Sat Flow(s),veh/h/ln	1735	1814	1640	1636	1626	1447
Q Serve(g_s), s	1.0	1.0	1.0	0.4	0.1	0.1
Cycle Q Clear(g_c), s	1.0	1.0	1.0	0.4	0.1	0.1
Prop In Lane		0.04	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	427	447	789	1901	41	36
V/C Ratio(X)	0.25	0.26	0.18	0.08	0.25	0.25
Avail Cap(c_a), veh/h	1794	1877	1210	5319	1522	1354
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	6.2	6.2	3.2	1.9	9.7	9.7
Incr Delay (d2), s/veh	0.3	0.3	0.1	0.0	3.1	3.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.0	0.0	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	6.5	6.5	3.4	1.9	12.8	13.2
LnGrp LOS	A	A	A	A	B	B
Approach Vol, veh/h	223			298	19	
Approach Delay, s/veh	6.5			2.6	13.0	
Approach LOS	A			A	B	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	6.8	9.0				15.8	4.5
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	8.0	21.0				33.0	19.0
Max Q Clear Time (g_c+I1), s	3.0	3.0				2.4	2.1
Green Ext Time (p_c), s	0.1	1.0				0.9	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	4.6
HCM 7th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	141	501	342	294	0	0	0	0	80	1	85
Future Volume (veh/h)	0	141	501	342	294	0	0	0	0	80	1	85
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1811	1811	1796	1796	0				1781	1781	1781
Adj Flow Rate, veh/h	0	152	0	381	298	0				86	1	17
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	6	6	7	7	0				8	8	8
Cap, veh/h	0	294		981	515	0				272	3	245
Arrive On Green	0.00	0.16	0.00	0.29	0.29	0.00				0.16	0.16	0.16
Sat Flow, veh/h	0	1811	1535	3421	1796	0				1678	20	1510
Grp Volume(v), veh/h	0	152	0	381	298	0				87	0	17
Grp Sat Flow(s),veh/h/ln	0	1811	1535	1711	1796	0				1698	0	1510
Q Serve(g_s), s	0.0	2.4	0.0	2.8	4.4	0.0				1.4	0.0	0.3
Cycle Q Clear(g_c), s	0.0	2.4	0.0	2.8	4.4	0.0				1.4	0.0	0.3
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	294		981	515	0				275	0	245
V/C Ratio(X)	0.00	0.52		0.39	0.58	0.00				0.32	0.00	0.07
Avail Cap(c_a), veh/h	0	1174		2052	1077	0				1073	0	954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.8	0.0	8.8	9.4	0.0				11.4	0.0	11.0
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.3	1.0	0.0				0.7	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.0	0.6	1.1	0.0				0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	13.2	0.0	9.1	10.4	0.0				12.1	0.0	11.1
LnGrp LOS		B		A	B					B		B
Approach Vol, veh/h		152			679						104	
Approach Delay, s/veh		13.2			9.7						11.9	
Approach LOS		B			A						B	

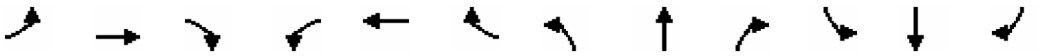
Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				9.0		9.0		12.8				
Change Period (Y+Rc), s				4.0		4.0		4.0				
Max Green Setting (Gmax), s				20.0		19.5		18.5				
Max Q Clear Time (g_c+I1), s				4.4		3.4		6.4				
Green Ext Time (p_c), s				0.6		0.3		2.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	10.5
HCM 7th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

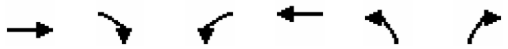
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	119	0	0	300	48	170	173	92	80	0	251
Future Volume (veh/h)	15	119	0	0	300	48	170	173	92	80	0	251
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1811	1811	0	0	1811	1811	1781	1781	1781	1722	0	1722
Adj Flow Rate, veh/h	16	127	0	0	319	28	181	184	21	85	0	55
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, %	6	6	0	0	6	6	8	8	8	12	0	12
Cap, veh/h	165	348	0	0	685	60	444	548	62	293	0	0
Arrive On Green	0.21	0.21	0.00	0.00	0.21	0.21	0.13	0.18	0.18	0.18	0.00	0.00
Sat Flow, veh/h	101	1629	0	0	3293	279	3291	3066	346	1640	85	
Grp Volume(v), veh/h	143	0	0	0	170	177	181	101	104	85	10.5	
Grp Sat Flow(s),veh/h/ln	1730	0	0	0	1721	1761	1646	1692	1719	1640	B	
Q Serve(g_s), s	0.0	0.0	0.0	0.0	2.4	2.5	1.4	1.5	1.5	1.3		
Cycle Q Clear(g_c), s	1.9	0.0	0.0	0.0	2.4	2.5	1.4	1.5	1.5	1.3		
Prop In Lane	0.11		0.00	0.00		0.16	1.00		0.20	1.00		
Lane Grp Cap(c), veh/h	513	0	0	0	368	377	444	302	307	293		
V/C Ratio(X)	0.28	0.00	0.00	0.00	0.46	0.47	0.41	0.33	0.34	0.29		
Avail Cap(c_a), veh/h	1256	0	0	0	1137	1164	3940	1119	1137	645		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	9.4	0.0	0.0	0.0	9.6	9.6	11.1	10.0	10.0	10.0		
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.0	0.9	0.9	0.6	0.6	0.7	0.5		
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		
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.0	0.0	0.6	0.6	0.3	0.3	0.3	0.3		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	9.7	0.0	0.0	0.0	10.5	10.5	11.7	10.7	10.7	10.5		
LnGrp LOS	A				B	B	B	B	B	B		
Approach Vol, veh/h		143			347			386				
Approach Delay, s/veh		9.7			10.5			11.2				
Approach LOS		A			B			B				

Timer - Assigned Phs	1	2		4	5			8				
Phs Duration (G+Y+Rc), s	9.0	9.0		10.0	7.8			10.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				
Max Green Setting (Gmax), s	11.0	18.5		18.5	33.5			18.5				
Max Q Clear Time (g_c+I1), s	3.3	3.5		3.9	3.4			4.5				
Green Ext Time (p_c), s	0.1	0.8		0.5	0.6			1.5				

Intersection Summary												
HCM 7th Control Delay, s/veh			10.6									
HCM 7th LOS			B									



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	133	137	55	245	94	27
Future Volume (vph)	133	137	55	245	94	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frt	0.93			1.00	1.00	0.85
Flt Protected	1.00			0.99	0.95	1.00
Satd. Flow (prot)	1670			1776	1687	1509
Flt Permitted	1.00			0.90	0.95	1.00
Satd. Flow (perm)	1670			1619	1687	1509
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	156	161	65	288	111	32
RTOR Reduction (vph)	54	0	0	0	0	26
Lane Group Flow (vph)	263	0	0	353	111	6
Heavy Vehicles (%)	6%	6%	6%	6%	7%	7%
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	4			8		
Permitted Phases			8		2	2
Actuated Green, G (s)	19.8			19.8	6.4	6.4
Effective Green, g (s)	19.8			19.8	6.4	6.4
Actuated g/C Ratio	0.58			0.58	0.19	0.19
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	966			937	315	282
v/s Ratio Prot	0.16					
v/s Ratio Perm				c0.22	c0.07	0.00
v/c Ratio	0.27			0.38	0.35	0.02
Uniform Delay, d1	3.6			3.9	12.1	11.3
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.2			0.3	0.7	0.0
Delay (s)	3.8			4.1	12.8	11.4
Level of Service	A			A	B	B
Approach Delay (s/veh)	3.8			4.1	12.5	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	5.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	34.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	2	0	5	0	31	6	8	20	0
Future Vol, veh/h	0	0	0	2	0	5	0	31	6	8	20	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	0	0	0	14	14	14	11	11	11	18	18	18
Mvmt Flow	0	0	0	2	0	6	0	38	7	10	24	0
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, s/veh	0	7	7.3	7.5
HCM LOS	-	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	29%	29%
Vol Thru, %	84%	100%	0%	71%
Vol Right, %	16%	0%	71%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	37	0	7	28
LT Vol	0	0	2	8
Through Vol	31	0	0	20
RT Vol	6	0	5	0
Lane Flow Rate	45	0	9	34
Geometry Grp	1	1	1	1
Degree of Util (X)	0.051	0	0.009	0.041
Departure Headway (Hd)	4.031	4.043	3.902	4.313
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	891	0	913	833
Service Time	2.042	2.087	1.945	2.324
HCM Lane V/C Ratio	0.051	0	0.01	0.041
HCM Control Delay, s/veh	7.3	7.1	7	7.5
HCM Lane LOS	A	N	A	A
HCM 95th-tile Q	0.2	0	0	0.1

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	143	8	17	129	5	8	1	19	6	2	25
Future Vol, veh/h	22	143	8	17	129	5	8	1	19	6	2	25
Conflicting Peds, #/hr	0	0	4	4	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	7	7	7	9	9	9	14	14	14	9	9	9
Mvmt Flow	28	179	10	21	161	6	10	1	24	8	3	31

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	168	0	0	193	0	0	448	453	189	442	455	164
Stage 1	-	-	-	-	-	-	243	243	-	207	207	-
Stage 2	-	-	-	-	-	-	205	210	-	235	248	-
Critical Hdwy	4.17	-	-	4.19	-	-	7.24	6.64	6.34	7.19	6.59	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-	6.24	5.64	-	6.19	5.59	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.24	5.64	-	6.19	5.59	-
Follow-up Hdwy	2.263	-	-	2.281	-	-	3.626	4.126	3.426	3.581	4.081	3.381
Pot Cap-1 Maneuver	1380	-	-	1340	-	-	501	485	823	514	491	862
Stage 1	-	-	-	-	-	-	735	683	-	779	718	-
Stage 2	-	-	-	-	-	-	770	706	-	752	689	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1380	-	-	1335	-	-	460	464	819	477	470	862
Mov Cap-2 Maneuver	-	-	-	-	-	-	460	464	-	477	470	-
Stage 1	-	-	-	-	-	-	716	666	-	766	705	-
Stage 2	-	-	-	-	-	-	727	694	-	712	671	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.97	0.87	10.8	10.3
HCM LOS			B	B

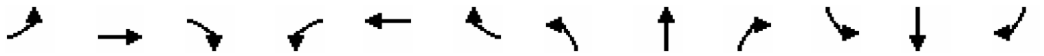
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	655	227	-	-	201	-	-	720
HCM Lane V/C Ratio	0.053	0.02	-	-	0.016	-	-	0.057
HCM Ctrl Dly (s/v)	10.8	7.7	0	-	7.7	0	-	10.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.2



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	33	264	100	60	113	15
Future Volume (veh/h)	33	264	100	60	113	15
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1707	1707	1737	1737
Adj Flow Rate, veh/h	38	69	115	69	130	9
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	4	4	13	13	11	11
Cap, veh/h	191	170	699	899	369	26
Arrive On Green	0.11	0.11	0.11	0.53	0.23	0.23
Sat Flow, veh/h	1753	1560	1626	1707	1606	111
Grp Volume(v), veh/h	38	69	115	69	0	139
Grp Sat Flow(s),veh/h/ln	1753	1560	1626	1707	0	1717
Q Serve(g_s), s	0.4	0.9	0.9	0.4	0.0	1.5
Cycle Q Clear(g_c), s	0.4	0.9	0.9	0.4	0.0	1.5
Prop In Lane	1.00	1.00	1.00			0.06
Lane Grp Cap(c), veh/h	191	170	699	899	0	394
V/C Ratio(X)	0.20	0.41	0.16	0.08	0.00	0.35
Avail Cap(c_a), veh/h	1677	1492	883	2410	0	1720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.9	9.1	4.1	2.6	0.0	7.1
Incr Delay (d2), s/veh	0.5	1.5	0.1	0.0	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.9	0.1	0.0	0.0	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	9.4	10.7	4.2	2.6	0.0	7.6
LnGrp LOS	A	B	A	A		A
Approach Vol, veh/h	107			184	139	
Approach Delay, s/veh	10.2			3.6	7.6	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		15.6		6.4	6.5	9.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		31.0		21.0	5.0	22.0
Max Q Clear Time (g_c+I1), s		2.4		2.9	2.9	3.5
Green Ext Time (p_c), s		0.3		0.2	0.0	0.6

Intersection Summary	
HCM 7th Control Delay, s/veh	6.5
HCM 7th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	269	10	16	525	191	9	67	1	306	122	130
Future Volume (veh/h)	78	269	10	16	525	191	9	67	1	306	122	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1707	1707	1707	1841	1841	1841
Adj Flow Rate, veh/h	88	302	8	18	590	168	10	75	0	344	137	88
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	5	5	5	5	5	13	13	13	4	4	4
Cap, veh/h	112	1874	50	37	1332	378	21	138	147	432	204	131
Arrive On Green	0.06	0.54	0.54	0.02	0.50	0.50	0.01	0.08	0.00	0.13	0.20	0.20
Sat Flow, veh/h	1739	3453	91	1739	2667	758	1626	1707	1447	3401	1046	672
Grp Volume(v), veh/h	88	151	159	18	383	375	10	75	0	344	0	225
Grp Sat Flow(s),veh/h/ln	1739	1735	1809	1739	1735	1690	1626	1707	1447	1700	0	1717
Q Serve(g_s), s	3.5	3.1	3.1	0.7	9.9	10.0	0.4	3.0	0.0	6.9	0.0	8.5
Cycle Q Clear(g_c), s	3.5	3.1	3.1	0.7	9.9	10.0	0.4	3.0	0.0	6.9	0.0	8.5
Prop In Lane	1.00		0.05	1.00		0.45	1.00		1.00	1.00		0.39
Lane Grp Cap(c), veh/h	112	941	982	37	866	844	21	138	147	432	0	335
V/C Ratio(X)	0.79	0.16	0.16	0.49	0.44	0.44	0.49	0.54	0.00	0.80	0.00	0.67
Avail Cap(c_a), veh/h	149	941	982	124	866	844	116	439	403	437	0	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	0.00	0.90	0.00	0.90
Uniform Delay (d), s/veh	32.3	8.0	8.0	33.9	11.3	11.3	34.3	30.9	0.0	29.7	0.0	26.1
Incr Delay (d2), s/veh	17.8	0.4	0.4	9.6	1.6	1.7	16.8	3.3	0.0	8.9	0.0	2.1
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	2.0	1.1	1.1	0.4	3.6	3.6	0.3	1.3	0.0	3.2	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.1	8.4	8.4	43.5	12.9	12.9	51.1	34.2	0.0	38.6	0.0	28.2
LnGrp LOS	D	A	A	D	B	B	D	C		D		C
Approach Vol, veh/h		398			776			85			569	
Approach Delay, s/veh		17.6			13.6			36.2			34.5	
Approach LOS		B			B			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	42.0	4.9	17.7	8.5	39.0	12.9	9.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	22.0	5.0	22.0	6.0	21.0	9.0	18.0
Max Q Clear Time (g_c+I1), s	2.7	5.1	2.4	10.5	5.5	12.0	8.9	5.0
Green Ext Time (p_c), s	0.0	1.5	0.0	0.9	0.0	3.1	0.0	0.2

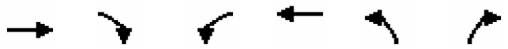
Intersection Summary	
HCM 7th Control Delay, s/veh	22.0
HCM 7th LOS	C



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	349	240	273	727	0	0
Future Volume (veh/h)	349	240	273	727	0	0
Initial Q (Qb), veh	0	0	0	0		
Lane Width Adj.	1.00	1.00	1.00	1.00		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1826	1826	1841	1841		
Adj Flow Rate, veh/h	384	182	300	799		
Peak Hour Factor	0.91	0.91	0.91	0.91		
Percent Heavy Veh, %	5	5	4	4		
Cap, veh/h	2569	1146	429	3264		
Arrive On Green	0.74	0.74	0.25	1.00		
Sat Flow, veh/h	3561	1547	3401	3589		
Grp Volume(v), veh/h	384	182	300	799		
Grp Sat Flow(s),veh/h/ln	1735	1547	1700	1749		
Q Serve(g_s), s	1.9	2.1	4.8	0.0		
Cycle Q Clear(g_c), s	1.9	2.1	4.8	0.0		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	2569	1146	429	3264		
V/C Ratio(X)	0.15	0.16	0.70	0.24		
Avail Cap(c_a), veh/h	2569	1146	1077	3264		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.88	0.88	0.90	0.90		
Uniform Delay (d), s/veh	2.3	2.3	21.4	0.0		
Incr Delay (d2), s/veh	0.1	0.3	1.9	0.2		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.3	0.3	1.7	0.1		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	2.4	2.5	23.3	0.2		
LnGrp LOS	A	A	C	A		
Approach Vol, veh/h	566			1099		
Approach Delay, s/veh	2.4			6.5		
Approach LOS	A			A		

Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	11.6	48.4				60.0
Change Period (Y+Rc), s	4.0	4.0				4.0
Max Green Setting (Gmax), s	19.0	33.0				56.0
Max Q Clear Time (g_c+I1), s	6.8	4.1				2.0
Green Ext Time (p_c), s	0.8	3.2				6.5

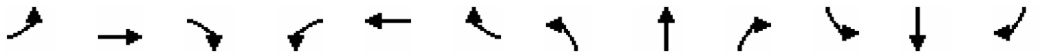
Intersection Summary			
HCM 7th Control Delay, s/veh		5.1	
HCM 7th LOS		A	



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	336	0	0	676	375	303
Future Volume (veh/h)	336	0	0	676	375	303
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	0	0	1856	1826	1826
Adj Flow Rate, veh/h	378	0	0	760	421	153
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	5	0	0	3	5	5
Cap, veh/h	2889	0	0	2936	499	444
Arrive On Green	0.19	0.00	0.00	0.58	0.29	0.29
Sat Flow, veh/h	5313	0	0	5400	1739	1547
Grp Volume(v), veh/h	378	0	0	760	421	153
Grp Sat Flow(s),veh/h/ln	1662	0	0	1689	1739	1547
Q Serve(g_s), s	3.8	0.0	0.0	4.5	13.7	4.7
Cycle Q Clear(g_c), s	3.8	0.0	0.0	4.5	13.7	4.7
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2889	0	0	2936	499	444
V/C Ratio(X)	0.13	0.00	0.00	0.26	0.84	0.34
Avail Cap(c_a), veh/h	2889	0	0	2936	869	774
HCM Platoon Ratio	0.33	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.00	0.00	0.87	1.00	1.00
Uniform Delay (d), s/veh	11.7	0.0	0.0	6.2	20.1	16.9
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	4.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	1.2	5.0	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	11.8	0.0	0.0	6.4	24.1	17.4
LnGrp LOS	B			A	C	B
Approach Vol, veh/h	378			760	574	
Approach Delay, s/veh	11.8			6.4	22.3	
Approach LOS	B			A	C	

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	38.8			38.8	21.2
Change Period (Y+Rc), s	4.0			4.0	4.0
Max Green Setting (Gmax), s	22.0			22.0	30.0
Max Q Clear Time (g_c+I1), s	5.8			6.5	15.7
Green Ext Time (p_c), s	2.2			4.6	1.6

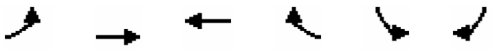
Intersection Summary	
HCM 7th Control Delay, s/veh	12.9
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	259	62	64	294	75	295	301	112	78	238	334
Future Volume (veh/h)	244	259	62	64	294	75	295	301	112	78	238	334
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1856	1856	1856	1870	1870	1870	1841	1841	1841	1856	1856	1856
Adj Flow Rate, veh/h	254	270	28	67	306	21	307	314	48	81	248	224
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, %	3	3	3	2	2	2	4	4	4	3	3	3
Cap, veh/h	316	606	440	187	475	306	366	1639	806	203	1481	805
Arrive On Green	0.09	0.17	0.17	0.05	0.13	0.13	0.04	0.15	0.15	0.06	0.42	0.42
Sat Flow, veh/h	3428	3526	1572	3456	3554	1585	3401	3497	1539	3428	3526	1571
Grp Volume(v), veh/h	254	270	28	67	306	21	307	314	48	81	248	224
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1728	1777	1585	1700	1749	1539	1714	1763	1571
Q Serve(g_s), s	4.7	4.5	0.8	1.2	5.3	0.7	5.8	5.1	1.6	1.5	2.9	5.3
Cycle Q Clear(g_c), s	4.7	4.5	0.8	1.2	5.3	0.7	5.8	5.1	1.6	1.5	2.9	5.3
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	316	606	440	187	475	306	366	1639	806	203	1481	805
V/C Ratio(X)	0.80	0.45	0.06	0.36	0.64	0.07	0.84	0.19	0.06	0.40	0.17	0.28
Avail Cap(c_a), veh/h	316	1031	629	266	984	533	366	1639	806	264	1481	805
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	0.96	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	24.1	17.2	29.7	26.7	21.5	30.8	16.7	12.4	29.5	11.8	9.0
Incr Delay (d2), s/veh	13.3	0.5	0.1	1.2	1.5	0.1	15.0	0.2	0.1	1.3	0.2	0.9
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	2.4	1.8	0.3	0.5	2.2	0.3	3.1	1.9	0.5	0.6	1.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.3	24.6	17.2	30.8	28.2	21.6	45.8	17.0	12.5	30.7	12.0	9.9
LnGrp LOS	D	C	B	C	C	C	D	B	B	C	B	A
Approach Vol, veh/h		552			394			669			553	
Approach Delay, s/veh		32.4			28.3			29.9			13.9	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	34.5	7.5	15.2	11.0	31.3	10.0	12.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	20.0	5.0	19.0	7.0	18.0	6.0	18.0
Max Q Clear Time (g_c+I1), s	3.5	7.1	3.2	6.5	7.8	7.3	6.7	7.3
Green Ext Time (p_c), s	0.0	1.6	0.0	1.3	0.0	1.7	0.0	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	26.1
HCM 7th LOS	C



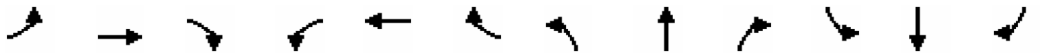
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	593	501	139	165	8
Future Volume (veh/h)	5	593	501	139	165	8
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1841	1841	1826	1826	1781	1781
Adj Flow Rate, veh/h	6	659	557	118	184	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	4	4	5	5	8	8
Cap, veh/h	469	1911	1091	230	483	215
Arrive On Green	0.01	0.55	0.38	0.38	0.14	0.00
Sat Flow, veh/h	1753	3589	2942	602	3393	1510
Grp Volume(v), veh/h	6	659	338	337	184	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1735	1718	1697	1510
Q Serve(g_s), s	0.0	2.7	3.8	3.9	1.3	0.0
Cycle Q Clear(g_c), s	0.0	2.7	3.8	3.9	1.3	0.0
Prop In Lane	1.00			0.35	1.00	1.00
Lane Grp Cap(c), veh/h	469	1911	664	657	483	215
V/C Ratio(X)	0.01	0.34	0.51	0.51	0.38	0.00
Avail Cap(c_a), veh/h	796	4626	1687	1671	2376	1057
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	4.3	3.3	6.1	6.1	10.0	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.6	0.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.7	0.7	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	4.3	3.4	6.7	6.7	10.5	0.0
LnGrp LOS	A	A	A	A	B	
Approach Vol, veh/h		665	675		184	
Approach Delay, s/veh		3.4	6.7		10.5	
Approach LOS		A	A		B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		18.0		7.7	4.2	13.8
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		18.0	5.0	25.0
Max Q Clear Time (g_c+I1), s		4.7		3.3	2.0	5.9
Green Ext Time (p_c), s		4.8		0.5	0.0	4.0

Intersection Summary	
HCM 7th Control Delay, s/veh	5.7
HCM 7th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	617	57	227	492	209	170	370	282	146	203	15
Future Volume (veh/h)	134	617	57	227	492	209	170	370	282	146	203	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1856	1856	1856	1856	1856	1856	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	143	656	21	241	523	85	181	394	251	155	216	6
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, %	3	3	3	3	3	3	5	5	5	2	2	2
Cap, veh/h	244	978	425	337	777	810	260	1353	747	250	1369	722
Arrive On Green	0.07	0.19	0.19	0.10	0.22	0.22	0.08	0.39	0.39	0.02	0.13	0.13
Sat Flow, veh/h	3428	5066	1572	3428	3526	2768	3374	3469	1524	3456	3554	1581
Grp Volume(v), veh/h	143	656	21	241	523	85	181	394	251	155	216	6
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1763	1384	1687	1735	1524	1728	1777	1581
Q Serve(g_s), s	2.6	7.8	0.6	4.4	8.8	1.5	3.4	5.1	6.6	2.9	3.5	0.2
Cycle Q Clear(g_c), s	2.6	7.8	0.6	4.4	8.8	1.5	3.4	5.1	6.6	2.9	3.5	0.2
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	244	978	425	337	777	810	260	1353	747	250	1369	722
V/C Ratio(X)	0.59	0.67	0.05	0.71	0.67	0.10	0.70	0.29	0.34	0.62	0.16	0.01
Avail Cap(c_a), veh/h	316	1403	556	369	1031	1009	260	1353	747	266	1369	722
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	29.3	24.3	17.6	28.4	23.2	16.8	29.3	13.6	10.2	30.8	19.0	13.7
Incr Delay (d2), s/veh	2.2	0.8	0.0	5.8	1.1	0.1	7.9	0.5	1.2	3.9	0.2	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	1.1	2.9	0.2	2.0	3.5	0.4	1.6	1.8	2.1	1.3	1.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.4	25.1	17.6	34.2	24.3	16.8	37.2	14.2	11.4	34.8	19.2	13.7
LnGrp LOS	C	C	B	C	C	B	D	B	B	C	B	B
Approach Vol, veh/h		820			849			826			377	
Approach Delay, s/veh		26.0			26.4			18.4			25.5	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	29.4	10.4	16.6	9.0	29.0	8.6	18.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	19.0	7.0	18.0	5.0	19.0	6.0	19.0
Max Q Clear Time (g_c+I1), s	4.9	8.6	6.4	9.8	5.4	5.5	4.6	10.8
Green Ext Time (p_c), s	0.0	2.5	0.0	2.8	0.0	1.0	0.1	2.3

Intersection Summary	
HCM 7th Control Delay, s/veh	23.8
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	341	221	158	304	20
Future Vol, veh/h	8	341	221	158	304	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	7	7	9	9	3	3
Mvmt Flow	8	355	230	165	317	21

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	395	0	-	0	507	197
Stage 1	-	-	-	-	313	-
Stage 2	-	-	-	-	194	-
Critical Hdwy	4.24	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.27	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	1125	-	-	-	493	808
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	816	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1125	-	-	-	489	808
Mov Cap-2 Maneuver	-	-	-	-	489	-
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	816	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0.19	0	25.73
HCM LOS			D

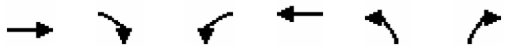
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1125	-	-	-	501
HCM Lane V/C Ratio	0.007	-	-	-	0.673
HCM Ctrl Dly (s/v)	8.2	-	-	-	25.7
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	5

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	104	15	85	93	22	7	12	61	14	25	4
Future Vol, veh/h	5	104	15	85	93	22	7	12	61	14	25	4
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	1	1	1	2	2	2
Mvmt Flow	6	121	17	99	108	26	8	14	71	16	29	5
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, s/veh	8.5	9.3	8	8.3
HCM LOS	A	A	A	A

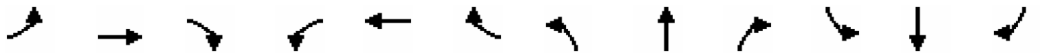
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	4%	43%	33%
Vol Thru, %	15%	84%	47%	58%
Vol Right, %	76%	12%	11%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	124	200	43
LT Vol	7	5	85	14
Through Vol	12	104	93	25
RT Vol	61	15	22	4
Lane Flow Rate	93	144	233	50
Geometry Grp	1	1	1	1
Degree of Util (X)	0.114	0.179	0.287	0.068
Departure Headway (Hd)	4.394	4.457	4.443	4.91
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	815	805	809	729
Service Time	2.425	2.485	2.469	2.945
HCM Lane V/C Ratio	0.114	0.179	0.288	0.069
HCM Control Delay, s/veh	8	8.5	9.3	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.6	1.2	0.2



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	193	7	156	235	10	206
Future Volume (veh/h)	193	7	156	235	10	206
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1811	1841	1841	1870	1870
Adj Flow Rate, veh/h	203	4	164	247	11	26
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	6	4	4	2	2
Cap, veh/h	2360	46	1024	2897	68	61
Arrive On Green	0.68	0.68	0.08	0.83	0.04	0.04
Sat Flow, veh/h	3542	68	1753	3589	1781	1585
Grp Volume(v), veh/h	101	106	164	247	11	26
Grp Sat Flow(s),veh/h/ln	1721	1799	1753	1749	1781	1585
Q Serve(g_s), s	1.2	1.2	1.3	0.8	0.4	1.0
Cycle Q Clear(g_c), s	1.2	1.2	1.3	0.8	0.4	1.0
Prop In Lane		0.04	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1176	1230	1024	2897	68	61
V/C Ratio(X)	0.09	0.09	0.16	0.09	0.16	0.43
Avail Cap(c_a), veh/h	1176	1230	1092	2897	594	528
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	3.2	3.2	1.5	1.0	27.9	28.2
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.1	1.1	4.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.0	0.0	0.2	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	3.3	3.3	1.6	1.0	29.0	32.9
LnGrp LOS	A	A	A	A	C	C
Approach Vol, veh/h	207			411	37	
Approach Delay, s/veh	3.3			1.2	31.7	
Approach LOS	A			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	8.7	45.0				53.7	6.3
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	7.0	21.0				32.0	20.0
Max Q Clear Time (g_c+I1), s	3.3	3.2				2.8	3.0
Green Ext Time (p_c), s	0.1	0.9				1.5	0.1

Intersection Summary							
HCM 7th Control Delay, s/veh			3.6				
HCM 7th LOS			A				



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	201	330	260	448	0	0	0	0	105	3	142
Future Volume (veh/h)	0	201	330	260	448	0	0	0	0	105	3	142
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1856	1856	1870	1870	0				1811	1811	1811
Adj Flow Rate, veh/h	0	214	0	251	513	0				112	3	29
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	3	3	2	2	0				6	6	6
Cap, veh/h	0	358		505	1061	0				259	7	236
Arrive On Green	0.00	0.19	0.00	0.28	0.28	0.00				0.15	0.15	0.15
Sat Flow, veh/h	0	1856	1572	1781	3741	0				1682	45	1535
Grp Volume(v), veh/h	0	214	0	251	513	0				115	0	29
Grp Sat Flow(s),veh/h/ln	0	1856	1572	1781	1870	0				1727	0	1535
Q Serve(g_s), s	0.0	3.4	0.0	3.8	3.7	0.0				2.0	0.0	0.5
Cycle Q Clear(g_c), s	0.0	3.4	0.0	3.8	3.7	0.0				2.0	0.0	0.5
Prop In Lane	0.00		1.00	1.00		0.00				0.97		1.00
Lane Grp Cap(c), veh/h	0	358		505	1061	0				266	0	236
V/C Ratio(X)	0.00	0.60		0.50	0.48	0.00				0.43	0.00	0.12
Avail Cap(c_a), veh/h	0	1085		1097	2303	0				1010	0	898
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.0	0.0	9.7	9.7	0.0				12.5	0.0	11.9
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.8	0.3	0.0				1.1	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	0.0	1.0	1.0	0.0				0.6	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	13.6	0.0	10.5	10.0	0.0				13.6	0.0	12.1
LnGrp LOS		B		B	A					B		B
Approach Vol, veh/h		214			764						144	
Approach Delay, s/veh		13.6			10.1						13.3	
Approach LOS		B			B						B	

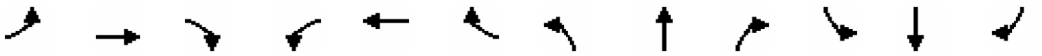
Timer - Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				10.3		9.0		13.2				
Change Period (Y+Rc), s				4.0		4.0		4.0				
Max Green Setting (Gmax), s				19.0		19.0		20.0				
Max Q Clear Time (g_c+I1), s				5.4		4.0		5.8				
Green Ext Time (p_c), s				0.9		0.5		3.4				

Intersection Summary	
HCM 7th Control Delay, s/veh	11.2
HCM 7th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

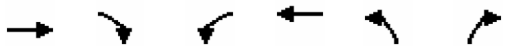
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	164	0	0	273	116	349	372	216	67	0	164
Future Volume (veh/h)	29	164	0	0	273	116	349	372	216	67	0	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	0	0	1870	1870	1870	1870	1870	1841	0	1841
Adj Flow Rate, veh/h	31	174	0	0	290	38	371	396	83	71	0	31
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, %	5	5	0	0	2	2	2	2	2	4	0	4
Cap, veh/h	164	305	0	0	642	83	668	730	152	282	0	0
Arrive On Green	0.20	0.20	0.00	0.00	0.20	0.20	0.19	0.25	0.25	0.16	0.00	0.00
Sat Flow, veh/h	148	1506	0	0	3256	410	3456	2929	608	1753	71	
Grp Volume(v), veh/h	205	0	0	0	162	166	371	239	240	71	11.8	
Grp Sat Flow(s),veh/h/ln	1654	0	0	0	1777	1796	1728	1777	1761	1753	B	
Q Serve(g_s), s	0.9	0.0	0.0	0.0	2.5	2.5	3.0	3.6	3.7	1.1		
Cycle Q Clear(g_c), s	3.5	0.0	0.0	0.0	2.5	2.5	3.0	3.6	3.7	1.1		
Prop In Lane	0.15		0.00	0.00		0.23	1.00		0.35	1.00		
Lane Grp Cap(c), veh/h	469	0	0	0	360	364	668	443	439	282		
V/C Ratio(X)	0.44	0.00	0.00	0.00	0.45	0.46	0.56	0.54	0.55	0.25		
Avail Cap(c_a), veh/h	1117	0	0	0	1065	1077	3719	1099	1089	576		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	11.2	0.0	0.0	0.0	10.8	10.9	11.3	10.1	10.1	11.4		
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.9	0.9	0.7	1.0	1.1	0.5		
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		
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.0	0.7	0.7	0.7	0.9	0.9	0.3		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	11.8	0.0	0.0	0.0	11.7	11.8	12.0	11.1	11.2	11.8		
LnGrp LOS	B				B	B	B	B	B	B		
Approach Vol, veh/h		205			328			850				
Approach Delay, s/veh		11.8			11.7			11.5				
Approach LOS		B			B			B				

Timer - Assigned Phs	1	2		4	5			8				
Phs Duration (G+Y+Rc), s	9.0	11.7		10.3	10.0			10.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0			4.0				
Max Green Setting (Gmax), s	10.2	19.2		18.6	33.4			18.6				
Max Q Clear Time (g_c+I1), s	3.1	5.7		5.5	5.0			4.5				
Green Ext Time (p_c), s	0.1	2.1		0.8	1.2			1.4				

Intersection Summary												
HCM 7th Control Delay, s/veh			11.6									
HCM 7th LOS			B									



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	231	147	60	208	179	85
Future Volume (vph)	231	147	60	208	179	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	1.00	1.00
Frt	0.95			1.00	1.00	0.85
Flt Protected	1.00			0.99	0.95	1.00
Satd. Flow (prot)	1731			1773	1736	1553
Flt Permitted	1.00			0.86	0.95	1.00
Satd. Flow (perm)	1731			1542	1736	1553
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	251	160	65	226	195	92
RTOR Reduction (vph)	37	0	0	0	0	70
Lane Group Flow (vph)	374	0	0	291	195	22
Heavy Vehicles (%)	4%	4%	6%	6%	4%	4%
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	4			8		
Permitted Phases			8		2	2
Actuated Green, G (s)	15.6			15.6	7.6	7.6
Effective Green, g (s)	15.6			15.6	7.6	7.6
Actuated g/C Ratio	0.50			0.50	0.24	0.24
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	865			771	422	378
v/s Ratio Prot	c0.22					
v/s Ratio Perm				0.19	c0.11	0.01
v/c Ratio	0.43			0.38	0.46	0.06
Uniform Delay, d1	5.0			4.8	10.1	9.1
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.3			0.3	0.8	0.1
Delay (s)	5.3			5.1	10.9	9.1
Level of Service	A			A	B	A
Approach Delay (s/veh)	5.3			5.1	10.3	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	31.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	2	1	1	16	0	18	1	16	27	0
Future Vol, veh/h	0	0	2	1	1	16	0	18	1	16	27	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	0	0	0	0	0	0	5	5	5	0	0	0
Mvmt Flow	0	0	2	1	1	19	0	21	1	19	32	0
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, s/veh	6.5	6.6	7.2	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	6%	37%
Vol Thru, %	95%	0%	6%	63%
Vol Right, %	5%	100%	89%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	2	18	43
LT Vol	0	0	1	16
Through Vol	18	0	1	27
RT Vol	1	2	16	0
Lane Flow Rate	22	2	21	51
Geometry Grp	1	1	1	1
Degree of Util (X)	0.025	0.002	0.021	0.057
Departure Headway (Hd)	4.032	3.442	3.506	4.032
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	890	1035	1018	892
Service Time	2.047	1.477	1.538	2.041
HCM Lane V/C Ratio	0.025	0.002	0.021	0.057
HCM Control Delay, s/veh	7.2	6.5	6.6	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0.1	0.2

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	109	4	21	112	11	2	4	16	7	3	17
Future Vol, veh/h	11	109	4	21	112	11	2	4	16	7	3	17
Conflicting Peds, #/hr	0	0	4	4	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	4	4	4	1	1	1	5	5	5	7	7	7
Mvmt Flow	14	136	5	26	140	14	3	5	20	9	4	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	154	0	0	145	0	0	365	377	143	366	372	147
Stage 1	-	-	-	-	-	-	170	170	-	199	199	-
Stage 2	-	-	-	-	-	-	194	206	-	166	173	-
Critical Hdwy	4.14	-	-	4.11	-	-	7.15	6.55	6.25	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.17	5.57	-
Follow-up Hdwy	2.236	-	-	2.209	-	-	3.545	4.045	3.345	3.563	4.063	3.363
Pot Cap-1 Maneuver	1415	-	-	1443	-	-	586	550	897	581	550	887
Stage 1	-	-	-	-	-	-	825	752	-	791	727	-
Stage 2	-	-	-	-	-	-	801	726	-	824	746	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1415	-	-	1438	-	-	549	531	894	546	531	887
Mov Cap-2 Maneuver	-	-	-	-	-	-	549	531	-	546	531	-
Stage 1	-	-	-	-	-	-	813	741	-	775	712	-
Stage 2	-	-	-	-	-	-	762	711	-	792	736	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.67	1.1	9.94	10.26
HCM LOS			A	B

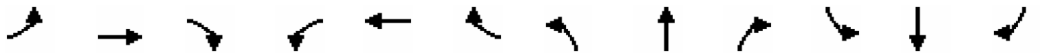
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	757	159	-	-	258	-	-	718
HCM Lane V/C Ratio	0.036	0.01	-	-	0.018	-	-	0.047
HCM Ctrl Dly (s/v)	9.9	7.6	0	-	7.6	0	-	10.3
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.1



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	173	245	174	168	36
Future Volume (veh/h)	28	173	245	174	168	36
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	24	278	198	191	32
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	4	4	2	2	2	2
Cap, veh/h	89	79	985	1526	1041	174
Arrive On Green	0.05	0.05	0.08	0.82	0.67	0.67
Sat Flow, veh/h	1753	1560	1781	1870	1562	262
Grp Volume(v), veh/h	32	24	278	198	0	223
Grp Sat Flow(s),veh/h/ln	1753	1560	1781	1870	0	1823
Q Serve(g_s), s	1.1	0.9	2.4	1.3	0.0	2.8
Cycle Q Clear(g_c), s	1.1	0.9	2.4	1.3	0.0	2.8
Prop In Lane	1.00	1.00	1.00			0.14
Lane Grp Cap(c), veh/h	89	79	985	1526	0	1216
V/C Ratio(X)	0.36	0.30	0.28	0.13	0.00	0.18
Avail Cap(c_a), veh/h	526	468	1135	1526	0	1216
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.76	0.76	0.00	1.00
Uniform Delay (d), s/veh	27.5	27.5	1.9	1.1	0.0	3.8
Incr Delay (d2), s/veh	2.5	2.1	0.1	0.1	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.8	0.2	0.1	0.0	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	30.0	29.6	2.0	1.3	0.0	4.1
LnGrp LOS	C	C	A	A		A
Approach Vol, veh/h	56			476	223	
Approach Delay, s/veh	29.8			1.7	4.1	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		53.0		7.0	9.0	44.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		18.0	10.0	20.0
Max Q Clear Time (g_c+I1), s		3.3		3.1	4.4	4.8
Green Ext Time (p_c), s		1.1		0.1	0.4	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	4.5
HCM 7th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	364	22	50	401	342	16	116	2	430	196	153
Future Volume (veh/h)	195	364	22	50	401	342	16	116	2	430	196	153
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1885	1885	1885	1856	1856	1856	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	207	387	18	53	427	187	17	123	0	457	209	127
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, %	1	1	1	3	3	3	2	2	2	3	3	3
Cap, veh/h	247	1757	82	76	981	425	35	180	221	536	252	153
Arrive On Green	0.14	0.50	0.50	0.04	0.41	0.41	0.02	0.10	0.00	0.16	0.23	0.23
Sat Flow, veh/h	1795	3485	162	1767	2394	1038	1781	1870	1585	3428	1080	656
Grp Volume(v), veh/h	207	198	207	53	313	301	17	123	0	457	0	336
Grp Sat Flow(s),veh/h/ln	1795	1791	1856	1767	1763	1669	1781	1870	1585	1714	0	1736
Q Serve(g_s), s	9.0	4.9	5.0	2.4	10.2	10.4	0.8	5.1	0.0	10.4	0.0	14.7
Cycle Q Clear(g_c), s	9.0	4.9	5.0	2.4	10.2	10.4	0.8	5.1	0.0	10.4	0.0	14.7
Prop In Lane	1.00		0.09	1.00		0.62	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	247	903	936	76	723	684	35	180	221	536	0	404
V/C Ratio(X)	0.84	0.22	0.22	0.69	0.43	0.44	0.49	0.68	0.00	0.85	0.00	0.83
Avail Cap(c_a), veh/h	292	903	936	133	723	684	111	421	425	557	0	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	0.00	0.93	0.00	0.93
Uniform Delay (d), s/veh	33.6	11.1	11.1	37.7	16.9	17.0	38.8	35.0	0.0	32.8	0.0	29.2
Incr Delay (d2), s/veh	16.8	0.6	0.5	10.2	1.8	1.9	10.0	4.5	0.0	11.1	0.0	6.8
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	4.9	1.9	2.0	1.2	4.2	4.0	0.4	2.5	0.0	4.9	0.0	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.4	11.6	11.6	47.9	18.7	18.9	48.8	39.5	0.0	44.0	0.0	36.0
LnGrp LOS	D	B	B	D	B	B	D	D		D		D
Approach Vol, veh/h		612			667			140			793	
Approach Delay, s/veh		24.7			21.1			40.6			40.6	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	44.3	5.6	22.6	15.0	36.8	16.5	11.7
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	27.0	5.0	26.0	13.0	20.0	13.0	18.0
Max Q Clear Time (g_c+I1), s	4.4	7.0	2.8	16.7	11.0	12.4	12.4	7.1
Green Ext Time (p_c), s	0.0	2.2	0.0	1.3	0.1	2.2	0.1	0.4

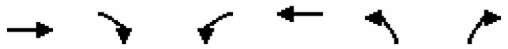
Intersection Summary	
HCM 7th Control Delay, s/veh	30.3
HCM 7th LOS	C



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	631	296	342	1124	0	0
Future Volume (veh/h)	631	296	342	1124	0	0
Initial Q (Qb), veh	0	0	0	0		
Lane Width Adj.	1.00	1.00	1.00	1.00		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1885	1885		
Adj Flow Rate, veh/h	657	227	356	1171		
Peak Hour Factor	0.96	0.96	0.96	0.96		
Percent Heavy Veh, %	2	2	1	1		
Cap, veh/h	2578	1146	492	3343		
Arrive On Green	0.73	0.73	0.28	1.00		
Sat Flow, veh/h	3647	1580	3483	3676		
Grp Volume(v), veh/h	657	227	356	1171		
Grp Sat Flow(s),veh/h/ln	1777	1580	1742	1791		
Q Serve(g_s), s	3.7	2.8	5.5	0.0		
Cycle Q Clear(g_c), s	3.7	2.8	5.5	0.0		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	2578	1146	492	3343		
V/C Ratio(X)	0.25	0.20	0.72	0.35		
Avail Cap(c_a), veh/h	2578	1146	1103	3343		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.83	0.83	0.87	0.87		
Uniform Delay (d), s/veh	2.8	2.6	20.5	0.0		
Incr Delay (d2), s/veh	0.2	0.3	1.8	0.3		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.7	0.5	1.9	0.1		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	3.0	3.0	22.2	0.3		
LnGrp LOS	A	A	C	A		
Approach Vol, veh/h	884			1527		
Approach Delay, s/veh	3.0			5.4		
Approach LOS	A			A		

Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	12.5	47.5				60.0
Change Period (Y+Rc), s	4.0	4.0				4.0
Max Green Setting (Gmax), s	19.0	33.0				56.0
Max Q Clear Time (g_c+I1), s	7.5	5.7				2.0
Green Ext Time (p_c), s	1.0	5.6				11.4

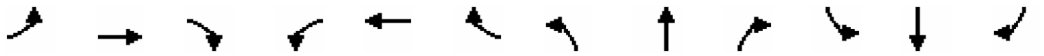
Intersection Summary						
HCM 7th Control Delay, s/veh			4.5			
HCM 7th LOS			A			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	583	0	0	852	451	327
Future Volume (veh/h)	583	0	0	852	451	327
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	0	0	1856	1885	1885
Adj Flow Rate, veh/h	607	0	0	888	470	263
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	0	0	3	1	1
Cap, veh/h	2813	0	0	2813	559	497
Arrive On Green	0.18	0.00	0.00	0.56	0.31	0.31
Sat Flow, veh/h	5400	0	0	5400	1795	1598
Grp Volume(v), veh/h	607	0	0	888	470	263
Grp Sat Flow(s),veh/h/ln	1689	0	0	1689	1795	1598
Q Serve(g_s), s	6.1	0.0	0.0	5.7	14.7	8.1
Cycle Q Clear(g_c), s	6.1	0.0	0.0	5.7	14.7	8.1
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2813	0	0	2813	559	497
V/C Ratio(X)	0.22	0.00	0.00	0.32	0.84	0.53
Avail Cap(c_a), veh/h	2813	0	0	2813	898	799
HCM Platoon Ratio	0.33	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.00	0.00	0.69	1.00	1.00
Uniform Delay (d), s/veh	13.4	0.0	0.0	7.2	19.3	17.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.2	4.1	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	1.6	5.5	2.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	13.6	0.0	0.0	7.4	23.4	17.9
LnGrp LOS	B			A	C	B
Approach Vol, veh/h	607			888	733	
Approach Delay, s/veh	13.6			7.4	21.4	
Approach LOS	B			A	C	

Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	37.3				37.3	22.7
Change Period (Y+Rc), s	4.0				4.0	4.0
Max Green Setting (Gmax), s	22.0				22.0	30.0
Max Q Clear Time (g_c+I1), s	8.1				7.7	16.7
Green Ext Time (p_c), s	3.4				5.2	2.0

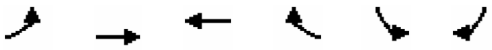
Intersection Summary	
HCM 7th Control Delay, s/veh	13.7
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	331	243	110	96	529	114	439	342	131	68	316	432
Future Volume (veh/h)	331	243	110	96	529	114	439	342	131	68	316	432
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	334	245	53	97	534	34	443	345	51	69	319	348
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	398	896	628	211	704	394	498	1461	748	184	1138	690
Arrive On Green	0.11	0.25	0.25	0.06	0.20	0.20	0.14	0.41	0.41	0.05	0.32	0.32
Sat Flow, veh/h	3483	3582	1596	3483	3582	1574	3483	3582	1596	3483	3582	1596
Grp Volume(v), veh/h	334	245	53	97	534	34	443	345	51	69	319	348
Grp Sat Flow(s),veh/h/ln	1742	1791	1596	1742	1791	1574	1742	1791	1596	1742	1791	1596
Q Serve(g_s), s	6.6	3.9	1.5	1.9	9.9	1.2	8.7	4.4	1.2	1.3	4.7	11.1
Cycle Q Clear(g_c), s	6.6	3.9	1.5	1.9	9.9	1.2	8.7	4.4	1.2	1.3	4.7	11.1
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	398	896	628	211	704	394	498	1461	748	184	1138	690
V/C Ratio(X)	0.84	0.27	0.08	0.46	0.76	0.09	0.89	0.24	0.07	0.38	0.28	0.50
Avail Cap(c_a), veh/h	398	1075	707	249	921	489	498	1461	748	249	1138	690
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	21.1	13.3	31.8	26.5	20.2	29.5	13.6	10.2	32.0	17.9	14.4
Incr Delay (d2), s/veh	14.0	0.2	0.1	1.6	2.7	0.1	16.4	0.3	0.2	1.3	0.6	2.6
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	3.4	1.5	0.5	0.8	4.2	0.4	4.5	1.6	0.4	0.6	1.8	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.4	21.3	13.4	33.3	29.2	20.3	45.9	13.9	10.4	33.3	18.5	17.1
LnGrp LOS	D	C	B	C	C	C	D	B	B	C	B	B
Approach Vol, veh/h		632			665			839			736	
Approach Delay, s/veh		32.8			29.4			30.6			19.2	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	32.5	8.2	21.5	14.0	26.2	12.0	17.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	23.0	5.0	21.0	10.0	18.0	8.0	18.0
Max Q Clear Time (g_c+I1), s	3.3	6.4	3.9	5.9	10.7	13.1	8.6	11.9
Green Ext Time (p_c), s	0.0	2.0	0.0	1.4	0.0	1.5	0.0	1.8

Intersection Summary	
HCM 7th Control Delay, s/veh	27.9
HCM 7th LOS	C



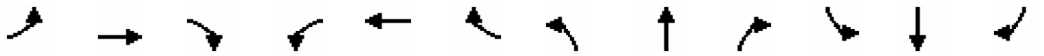
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	473	574	174	306	11
Future Volume (veh/h)	8	473	574	174	306	11
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1885	1870	1870
Adj Flow Rate, veh/h	9	514	624	156	339	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	1	1	2	2
Cap, veh/h	523	2589	1847	461	492	219
Arrive On Green	0.01	0.73	0.65	0.65	0.14	0.00
Sat Flow, veh/h	1781	3647	2934	709	3563	1585
Grp Volume(v), veh/h	9	514	393	387	339	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1758	1781	1585
Q Serve(g_s), s	0.1	2.8	5.9	5.9	5.4	0.0
Cycle Q Clear(g_c), s	0.1	2.8	5.9	5.9	5.4	0.0
Prop In Lane	1.00			0.40	1.00	1.00
Lane Grp Cap(c), veh/h	523	2589	1165	1143	492	219
V/C Ratio(X)	0.02	0.20	0.34	0.34	0.69	0.00
Avail Cap(c_a), veh/h	650	2589	1165	1143	1069	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.71	0.71	1.00	0.00
Uniform Delay (d), s/veh	3.3	2.6	4.7	4.7	24.6	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.6	0.6	1.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	1.5	1.5	2.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	3.3	2.8	5.3	5.3	26.4	0.0
LnGrp LOS	A	A	A	A	C	
Approach Vol, veh/h		523	780		339	
Approach Delay, s/veh		2.8	5.3		26.4	
Approach LOS		A	A		C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		47.7		12.3	4.7	43.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		18.0	5.0	25.0
Max Q Clear Time (g_c+I1), s		4.8		7.4	2.1	7.9
Green Ext Time (p_c), s		3.6		0.9	0.0	4.5

Intersection Summary	
HCM 7th Control Delay, s/veh	8.8
HCM 7th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	572	104	300	587	197	214	475	241	183	304	40
Future Volume (veh/h)	181	572	104	300	587	197	214	475	241	183	304	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	195	615	38	323	631	95	230	511	211	197	327	17
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, %	2	2	2	2	2	2	2	2	2	1	1	1
Cap, veh/h	291	1052	448	372	815	839	266	1291	745	268	1301	714
Arrive On Green	0.08	0.21	0.21	0.11	0.23	0.23	0.08	0.36	0.36	0.08	0.36	0.36
Sat Flow, veh/h	3456	5106	1583	3456	3554	2723	3456	3554	1581	3483	3582	1594
Grp Volume(v), veh/h	195	615	38	323	631	95	230	511	211	197	327	17
Grp Sat Flow(s),veh/h/ln	1728	1702	1583	1728	1777	1362	1728	1777	1581	1742	1791	1594
Q Serve(g_s), s	3.6	7.1	1.1	6.0	10.8	1.6	4.3	7.0	5.3	3.6	4.2	0.4
Cycle Q Clear(g_c), s	3.6	7.1	1.1	6.0	10.8	1.6	4.3	7.0	5.3	3.6	4.2	0.4
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	291	1052	448	372	815	839	266	1291	745	268	1301	714
V/C Ratio(X)	0.67	0.58	0.08	0.87	0.77	0.11	0.87	0.40	0.28	0.74	0.25	0.02
Avail Cap(c_a), veh/h	372	1414	560	372	984	969	266	1291	745	268	1301	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	28.9	23.3	17.1	28.5	23.5	16.2	29.7	15.4	10.5	29.4	14.5	10.0
Incr Delay (d2), s/veh	3.0	0.5	0.1	19.1	3.2	0.1	24.4	0.9	1.0	9.6	0.4	0.1
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	1.5	2.7	0.4	3.3	4.5	0.5	2.5	2.6	1.8	1.7	1.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.8	23.8	17.2	47.6	26.7	16.3	54.1	16.3	11.4	38.9	14.9	10.1
LnGrp LOS	C	C	B	D	C	B	D	B	B	D	B	B
Approach Vol, veh/h		848			1049			952			541	
Approach Delay, s/veh		25.3			32.2			24.4			23.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	27.6	11.0	17.4	9.0	27.6	9.5	18.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	19.0	7.0	18.0	5.0	19.0	7.0	18.0
Max Q Clear Time (g_c+I1), s	5.6	9.0	8.0	9.1	6.3	6.2	5.6	12.8
Green Ext Time (p_c), s	0.0	2.8	0.0	2.8	0.0	1.6	0.1	2.0

Intersection Summary	
HCM 7th Control Delay, s/veh	26.9
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	8.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	67	363	367	220	171	32
Future Vol, veh/h	67	363	367	220	171	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	60	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	3	2	2	3	3
Mvmt Flow	74	403	408	244	190	36

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	652	0	-	0	881	326
Stage 1	-	-	-	-	530	-
Stage 2	-	-	-	-	351	-
Critical Hdwy	4.16	-	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	-	3.53	3.33
Pot Cap-1 Maneuver	924	-	-	-	284	667
Stage 1	-	-	-	-	552	-
Stage 2	-	-	-	-	681	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	924	-	-	-	261	667
Mov Cap-2 Maneuver	-	-	-	-	261	-
Stage 1	-	-	-	-	507	-
Stage 2	-	-	-	-	681	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.44	0	50.54
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	924	-	-	-	289
HCM Lane V/C Ratio	0.081	-	-	-	0.78
HCM Ctrl Dly (s/v)	9.2	-	-	-	50.5
HCM Lane LOS	A	-	-	-	F
HCM 95th %tile Q(veh)	0.3	-	-	-	6

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	121	3	57	105	15	12	25	107	25	12	5
Future Vol, veh/h	7	121	3	57	105	15	12	25	107	25	12	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	5	5	5	17	17	17	8	8	8	5	5	5
Mvmt Flow	8	132	3	62	114	16	13	27	116	27	13	5
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, s/veh	8.8	9.6	8.6	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	5%	32%	60%
Vol Thru, %	17%	92%	59%	29%
Vol Right, %	74%	2%	8%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	144	131	177	42
LT Vol	12	7	57	25
Through Vol	25	121	105	12
RT Vol	107	3	15	5
Lane Flow Rate	157	142	192	46
Geometry Grp	1	1	1	1
Degree of Util (X)	0.195	0.185	0.259	0.064
Departure Headway (Hd)	4.476	4.688	4.842	5.036
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	800	763	741	709
Service Time	2.51	2.73	2.881	3.08
HCM Lane V/C Ratio	0.196	0.186	0.259	0.065
HCM Control Delay, s/veh	8.6	8.8	9.6	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.7	1	0.2

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	2	0	6	0	41	6	11	30	0
Future Vol, veh/h	0	0	0	2	0	6	0	41	6	11	30	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	14	14	14	11	11	11	18	18	18
Mvmt Flow	0	0	0	2	0	7	0	45	7	12	33	0
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, s/veh	0	7	7.3	7.6
HCM LOS	-	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	25%	27%
Vol Thru, %	87%	100%	0%	73%
Vol Right, %	13%	0%	75%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	47	0	8	41
LT Vol	0	0	2	11
Through Vol	41	0	0	30
RT Vol	6	0	6	0
Lane Flow Rate	51	0	9	45
Geometry Grp	1	1	1	1
Degree of Util (X)	0.058	0	0.009	0.053
Departure Headway (Hd)	4.06	4.072	3.903	4.313
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	885	0	911	833
Service Time	2.073	2.123	1.952	2.326
HCM Lane V/C Ratio	0.058	0	0.01	0.054
HCM Control Delay, s/veh	7.3	7.1	7	7.6
HCM Lane LOS	A	N	A	A
HCM 95th-tile Q	0.2	0	0	0.2

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	3	1	43	30	2
Future Vol, veh/h	4	3	1	43	30	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	11	11	18	18
Mvmt Flow	4	3	1	47	33	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	83	34	35	0	-	0
Stage 1	34	-	-	-	-	-
Stage 2	49	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.21	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.299	-	-	-
Pot Cap-1 Maneuver	919	1040	1520	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	919	1040	1520	-	-	-
Mov Cap-2 Maneuver	919	-	-	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	8.75	0.17	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	41	-	967	-	-
HCM Lane V/C Ratio	0.001	-	0.008	-	-
HCM Ctrl Dly (s/v)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	26	161	8	18	140	7	8	1	20	15	2	28
Future Vol, veh/h	26	161	8	18	140	7	8	1	20	15	2	28
Conflicting Peds, #/hr	0	0	4	4	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	7	7	7	9	9	9	14	14	14	9	9	9
Mvmt Flow	28	175	9	20	152	8	9	1	22	16	2	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	160	0	0	188	0	0	432	439	184	428	439	156
Stage 1	-	-	-	-	-	-	240	240	-	195	195	-
Stage 2	-	-	-	-	-	-	192	199	-	233	244	-
Critical Hdwy	4.17	-	-	4.19	-	-	7.24	6.64	6.34	7.19	6.59	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-	6.24	5.64	-	6.19	5.59	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.24	5.64	-	6.19	5.59	-
Follow-up Hdwy	2.263	-	-	2.281	-	-	3.626	4.126	3.426	3.581	4.081	3.381
Pot Cap-1 Maneuver	1390	-	-	1345	-	-	513	494	828	525	501	872
Stage 1	-	-	-	-	-	-	737	685	-	791	726	-
Stage 2	-	-	-	-	-	-	782	714	-	754	691	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1390	-	-	1340	-	-	473	473	824	490	480	872
Mov Cap-2 Maneuver	-	-	-	-	-	-	473	473	-	490	480	-
Stage 1	-	-	-	-	-	-	718	667	-	778	715	-
Stage 2	-	-	-	-	-	-	741	703	-	716	673	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.02	0.84	10.64	10.77
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	670	238	-	-	195	-	-	673
HCM Lane V/C Ratio	0.047	0.02	-	-	0.015	-	-	0.073
HCM Ctrl Dly (s/v)	10.6	7.6	0	-	7.7	0	-	10.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	38	298	113	97	141	18
Future Volume (veh/h)	38	298	113	97	141	18
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1707	1707	1737	1737
Adj Flow Rate, veh/h	41	74	123	105	153	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	13	13	11	11
Cap, veh/h	200	178	679	898	360	28
Arrive On Green	0.11	0.11	0.12	0.53	0.23	0.23
Sat Flow, veh/h	1753	1560	1626	1707	1590	125
Grp Volume(v), veh/h	41	74	123	105	0	165
Grp Sat Flow(s),veh/h/ln	1753	1560	1626	1707	0	1715
Q Serve(g_s), s	0.5	1.0	1.0	0.7	0.0	1.8
Cycle Q Clear(g_c), s	0.5	1.0	1.0	0.7	0.0	1.8
Prop In Lane	1.00	1.00	1.00			0.07
Lane Grp Cap(c), veh/h	200	178	679	898	0	389
V/C Ratio(X)	0.20	0.41	0.18	0.12	0.00	0.42
Avail Cap(c_a), veh/h	1576	1402	923	2456	0	1696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.9	9.2	4.2	2.7	0.0	7.4
Incr Delay (d2), s/veh	0.5	1.5	0.1	0.1	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.0	0.0	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	9.4	10.7	4.3	2.7	0.0	8.1
LnGrp LOS	A	B	A	A		A
Approach Vol, veh/h	115			228	165	
Approach Delay, s/veh	10.2			3.6	8.1	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		15.7		6.5	6.7	9.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0		20.0	6.0	22.0
Max Q Clear Time (g_c+I1), s		2.7		3.0	3.0	3.8
Green Ext Time (p_c), s		0.5		0.3	0.1	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	6.6
HCM 7th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	309	11	17	579	279	10	83	1	393	129	166
Future Volume (veh/h)	117	309	11	17	579	279	10	83	1	393	129	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1707	1707	1707	1841	1841	1841
Adj Flow Rate, veh/h	127	336	9	18	629	224	11	90	0	427	140	112
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5	13	13	13	4	4	4
Cap, veh/h	149	1787	48	37	1136	404	22	153	160	486	207	166
Arrive On Green	0.09	0.52	0.52	0.02	0.45	0.45	0.01	0.09	0.00	0.14	0.22	0.22
Sat Flow, veh/h	1739	3452	92	1739	2508	892	1626	1707	1447	3401	946	756
Grp Volume(v), veh/h	127	169	176	18	435	418	11	90	0	427	0	252
Grp Sat Flow(s),veh/h/ln	1739	1735	1809	1739	1735	1665	1626	1707	1447	1700	0	1702
Q Serve(g_s), s	5.0	3.6	3.6	0.7	12.8	12.8	0.5	3.5	0.0	8.6	0.0	9.5
Cycle Q Clear(g_c), s	5.0	3.6	3.6	0.7	12.8	12.8	0.5	3.5	0.0	8.6	0.0	9.5
Prop In Lane	1.00		0.05	1.00		0.54	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	149	898	937	37	786	755	22	153	160	486	0	372
V/C Ratio(X)	0.85	0.19	0.19	0.49	0.55	0.55	0.49	0.59	0.00	0.88	0.00	0.68
Avail Cap(c_a), veh/h	149	898	937	124	786	755	116	439	403	486	0	559
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	0.00	0.89	0.00	0.89
Uniform Delay (d), s/veh	31.6	9.0	9.0	33.9	14.0	14.0	34.3	30.6	0.0	29.4	0.0	25.1
Incr Delay (d2), s/veh	35.0	0.5	0.4	9.6	2.7	2.9	15.7	3.6	0.0	15.2	0.0	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	3.5	1.3	1.3	0.4	5.0	4.8	0.3	1.5	0.0	4.3	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	66.6	9.5	9.5	43.5	16.7	16.8	50.0	34.2	0.0	44.6	0.0	27.0
LnGrp LOS	E	A	A	D	B	B	D	C		D		C
Approach Vol, veh/h		472			871			101			679	
Approach Delay, s/veh		24.8			17.3			35.9			38.0	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	40.2	5.0	19.3	10.0	35.7	14.0	10.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	21.0	5.0	23.0	6.0	20.0	10.0	18.0
Max Q Clear Time (g_c+I1), s	2.7	5.6	2.5	11.5	7.0	14.8	10.6	5.5
Green Ext Time (p_c), s	0.0	1.6	0.0	1.1	0.0	2.4	0.0	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	26.5
HCM 7th LOS	C



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	443	274	291	871	0	0
Future Volume (veh/h)	443	274	291	871	0	0
Initial Q (Qb), veh	0	0	0	0		
Lane Width Adj.	1.00	1.00	1.00	1.00		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1826	1826	1841	1841		
Adj Flow Rate, veh/h	443	190	291	871		
Peak Hour Factor	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	5	5	4	4		
Cap, veh/h	2579	1150	419	3264		
Arrive On Green	0.74	0.74	0.25	1.00		
Sat Flow, veh/h	3561	1547	3401	3589		
Grp Volume(v), veh/h	443	190	291	871		
Grp Sat Flow(s),veh/h/ln	1735	1547	1700	1749		
Q Serve(g_s), s	2.3	2.2	4.7	0.0		
Cycle Q Clear(g_c), s	2.3	2.2	4.7	0.0		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	2579	1150	419	3264		
V/C Ratio(X)	0.17	0.17	0.69	0.27		
Avail Cap(c_a), veh/h	2579	1150	1077	3264		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.81	0.81	0.87	0.87		
Uniform Delay (d), s/veh	2.3	2.3	21.6	0.0		
Incr Delay (d2), s/veh	0.1	0.3	1.8	0.2		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.3	0.3	1.7	0.1		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	2.4	2.5	23.4	0.2		
LnGrp LOS	A	A	C	A		
Approach Vol, veh/h	633			1162		
Approach Delay, s/veh	2.4			6.0		
Approach LOS	A			A		

Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	11.4	48.6				60.0
Change Period (Y+Rc), s	4.0	4.0				4.0
Max Green Setting (Gmax), s	19.0	33.0				56.0
Max Q Clear Time (g_c+I1), s	6.7	4.3				2.0
Green Ext Time (p_c), s	0.8	3.7				7.4

Intersection Summary		
HCM 7th Control Delay, s/veh	4.7	
HCM 7th LOS	A	



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	430	0	0	794	422	324
Future Volume (veh/h)	430	0	0	794	422	324
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	0	0	1856	1826	1826
Adj Flow Rate, veh/h	467	0	0	863	459	222
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	0	0	3	5	5
Cap, veh/h	2768	0	0	2813	541	482
Arrive On Green	0.18	0.00	0.00	0.56	0.31	0.31
Sat Flow, veh/h	5313	0	0	5400	1739	1547
Grp Volume(v), veh/h	467	0	0	863	459	222
Grp Sat Flow(s),veh/h/ln	1662	0	0	1689	1739	1547
Q Serve(g_s), s	4.7	0.0	0.0	5.5	14.8	6.9
Cycle Q Clear(g_c), s	4.7	0.0	0.0	5.5	14.8	6.9
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2768	0	0	2813	541	482
V/C Ratio(X)	0.17	0.00	0.00	0.31	0.85	0.46
Avail Cap(c_a), veh/h	2768	0	0	2813	869	774
HCM Platoon Ratio	0.33	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.00	0.00	0.85	1.00	1.00
Uniform Delay (d), s/veh	12.8	0.0	0.0	7.1	19.3	16.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	4.5	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	1.5	5.5	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	13.0	0.0	0.0	7.4	23.9	17.3
LnGrp LOS	B			A	C	B
Approach Vol, veh/h	467			863	681	
Approach Delay, s/veh	13.0			7.4	21.7	
Approach LOS	B			A	C	

Timer - Assigned Phs	2	6	8
Phs Duration (G+Y+Rc), s	37.3	37.3	22.7
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	22.0	30.0
Max Q Clear Time (g_c+I1), s	6.7	7.5	16.8
Green Ext Time (p_c), s	2.7	5.1	1.9

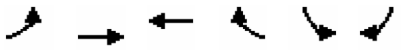
Intersection Summary	
HCM 7th Control Delay, s/veh	13.5
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	289	304	78	68	337	86	331	345	119	88	285	388
Future Volume (veh/h)	289	304	78	68	337	86	331	345	119	88	285	388
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1856	1856	1856	1870	1870	1870	1841	1841	1841	1856	1856	1856
Adj Flow Rate, veh/h	289	304	36	68	337	24	331	345	46	88	285	279
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	2	2	2	4	4	4	3	3	3
Cap, veh/h	316	640	431	188	511	325	314	1597	788	210	1500	814
Arrive On Green	0.09	0.18	0.18	0.05	0.14	0.14	0.03	0.15	0.15	0.06	0.43	0.43
Sat Flow, veh/h	3428	3526	1572	3456	3554	1585	3401	3497	1539	3428	3526	1571
Grp Volume(v), veh/h	289	304	36	68	337	24	331	345	46	88	285	279
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1728	1777	1585	1700	1749	1539	1714	1763	1571
Q Serve(g_s), s	5.4	5.0	1.1	1.2	5.8	0.8	6.0	5.6	1.5	1.6	3.3	6.8
Cycle Q Clear(g_c), s	5.4	5.0	1.1	1.2	5.8	0.8	6.0	5.6	1.5	1.6	3.3	6.8
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	316	640	431	188	511	325	314	1597	788	210	1500	814
V/C Ratio(X)	0.91	0.47	0.08	0.36	0.66	0.07	1.05	0.22	0.06	0.42	0.19	0.34
Avail Cap(c_a), veh/h	316	1031	605	266	984	536	314	1597	788	264	1500	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	23.8	17.5	29.6	26.3	20.9	31.5	17.4	12.7	29.4	11.7	9.2
Incr Delay (d2), s/veh	28.4	0.5	0.1	1.2	1.5	0.1	64.5	0.3	0.1	1.3	0.3	1.1
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	8.3	2.0	0.4	0.5	2.4	0.3	5.2	2.1	0.5	0.7	1.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.7	24.3	17.6	30.8	27.8	21.0	96.0	17.7	12.9	30.7	11.9	10.3
LnGrp LOS	E	C	B	C	C	C	F	B	B	C	B	B
Approach Vol, veh/h		629			429			722			652	
Approach Delay, s/veh		39.3			27.9			53.3			13.8	
Approach LOS		D			C			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	33.7	7.5	15.8	10.0	31.7	10.0	13.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	20.0	5.0	19.0	6.0	19.0	6.0	18.0
Max Q Clear Time (g_c+I1), s	3.0	7.6	3.2	7.0	8.0	8.8	7.4	7.8
Green Ext Time (p_c), s	0.0	1.7	0.0	1.5	0.0	2.0	0.0	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	34.6
HCM 7th LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	629	532	162	181	8
Future Volume (veh/h)	5	629	532	162	181	8
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1841	1841	1826	1826	1781	1781
Adj Flow Rate, veh/h	5	629	532	121	182	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	5	5	8	8
Cap, veh/h	473	1894	1058	240	484	215
Arrive On Green	0.01	0.54	0.38	0.38	0.14	0.00
Sat Flow, veh/h	1753	3589	2901	636	3393	1510
Grp Volume(v), veh/h	5	629	328	325	182	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1735	1711	1697	1510
Q Serve(g_s), s	0.0	2.5	3.7	3.7	1.2	0.0
Cycle Q Clear(g_c), s	0.0	2.5	3.7	3.7	1.2	0.0
Prop In Lane	1.00			0.37	1.00	1.00
Lane Grp Cap(c), veh/h	473	1894	653	645	484	215
V/C Ratio(X)	0.01	0.33	0.50	0.50	0.38	0.00
Avail Cap(c_a), veh/h	807	4696	1713	1690	2412	1073
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	4.3	3.2	6.1	6.1	9.8	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.6	0.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.6	0.6	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	4.3	3.3	6.7	6.7	10.3	0.0
LnGrp LOS	A	A	A	A	B	
Approach Vol, veh/h		634	653		182	
Approach Delay, s/veh		3.4	6.7		10.3	
Approach LOS		A	A		B	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	17.7		7.6	4.2	13.5
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	34.0		18.0	5.0	25.0
Max Q Clear Time (g_c+I1), s	4.5		3.2	2.0	5.7
Green Ext Time (p_c), s	4.5		0.5	0.0	3.8

Intersection Summary	
HCM 7th Control Delay, s/veh	5.7
HCM 7th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	656	60	243	523	237	189	422	303	171	243	16
Future Volume (veh/h)	142	656	60	243	523	237	189	422	303	171	243	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1856	1856	1856	1856	1856	1856	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	142	656	21	243	523	92	189	422	254	171	243	6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	5	5	5	2	2	2
Cap, veh/h	243	978	425	339	780	823	260	1338	741	263	1367	721
Arrive On Green	0.07	0.19	0.19	0.10	0.22	0.22	0.08	0.39	0.39	0.03	0.13	0.13
Sat Flow, veh/h	3428	5066	1572	3428	3526	2768	3374	3469	1524	3456	3554	1581
Grp Volume(v), veh/h	142	656	21	243	523	92	189	422	254	171	243	6
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1763	1384	1687	1735	1524	1728	1777	1581
Q Serve(g_s), s	2.6	7.8	0.6	4.5	8.8	1.6	3.6	5.5	6.7	3.2	4.0	0.2
Cycle Q Clear(g_c), s	2.6	7.8	0.6	4.5	8.8	1.6	3.6	5.5	6.7	3.2	4.0	0.2
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	243	978	425	339	780	823	260	1338	741	263	1367	721
V/C Ratio(X)	0.58	0.67	0.05	0.72	0.67	0.11	0.73	0.32	0.34	0.65	0.18	0.01
Avail Cap(c_a), veh/h	316	1403	556	369	1031	1020	260	1338	741	266	1367	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	29.3	24.3	17.6	28.4	23.2	16.6	29.3	14.0	10.4	30.8	19.2	13.7
Incr Delay (d2), s/veh	2.1	0.8	0.0	5.9	1.1	0.1	9.9	0.6	1.3	5.2	0.3	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	1.1	2.9	0.2	2.0	3.5	0.5	1.7	2.0	2.1	1.5	1.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.4	25.1	17.6	34.3	24.2	16.7	39.2	14.6	11.6	36.1	19.5	13.8
LnGrp LOS	C	C	B	C	C	B	D	B	B	D	B	B
Approach Vol, veh/h		819			858			865			420	
Approach Delay, s/veh		26.0			26.3			19.1			26.1	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	29.1	10.4	16.6	9.0	29.0	8.6	18.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	19.0	7.0	18.0	5.0	19.0	6.0	19.0
Max Q Clear Time (g_c+I1), s	5.2	8.7	6.5	9.8	5.6	6.0	4.6	10.8
Green Ext Time (p_c), s	0.0	2.6	0.0	2.8	0.0	1.1	0.1	2.4

Intersection Summary	
HCM 7th Control Delay, s/veh	24.1
HCM 7th LOS	C

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	138	19	136	132	23	9	16	93	15	35	4
Future Vol, veh/h	5	138	19	136	132	23	9	16	93	15	35	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	1	1	1	2	2	2
Mvmt Flow	5	150	21	148	143	25	10	17	101	16	38	4
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, s/veh	9.2	10.9	8.7	8.8
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	3%	47%	28%
Vol Thru, %	14%	85%	45%	65%
Vol Right, %	79%	12%	8%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	118	162	291	54
LT Vol	9	5	136	15
Through Vol	16	138	132	35
RT Vol	93	19	23	4
Lane Flow Rate	128	176	316	59
Geometry Grp	1	1	1	1
Degree of Util (X)	0.167	0.23	0.408	0.086
Departure Headway (Hd)	4.684	4.692	4.639	5.263
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	761	761	772	676
Service Time	2.743	2.746	2.687	3.332
HCM Lane V/C Ratio	0.168	0.231	0.409	0.087
HCM Control Delay, s/veh	8.7	9.2	10.9	8.8
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.6	0.9	2	0.3

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	2	1	1	20	0	28	1	18	41	0
Future Vol, veh/h	0	0	2	1	1	20	0	28	1	18	41	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	5	5	5	0	0	0
Mvmt Flow	0	0	2	1	1	22	0	30	1	20	45	0
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, s/veh	6.5	6.7	7.2	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	5%	31%
Vol Thru, %	97%	0%	5%	69%
Vol Right, %	3%	100%	91%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	2	22	59
LT Vol	0	0	1	18
Through Vol	28	0	1	41
RT Vol	1	2	20	0
Lane Flow Rate	32	2	24	64
Geometry Grp	1	1	1	1
Degree of Util (X)	0.036	0.002	0.023	0.072
Departure Headway (Hd)	4.057	3.483	3.53	4.03
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	884	1020	1008	892
Service Time	2.074	1.529	1.574	2.04
HCM Lane V/C Ratio	0.036	0.002	0.024	0.072
HCM Control Delay, s/veh	7.2	6.5	6.7	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0	0.1	0.2

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	2	3	27	39	5
Future Vol, veh/h	3	2	3	27	39	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	5	5	0	0
Mvmt Flow	3	2	3	29	42	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	81	45	48	0	-	0
Stage 1	45	-	-	-	-	-
Stage 2	36	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.15	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.245	-	-	-
Pot Cap-1 Maneuver	921	1025	1540	-	-	-
Stage 1	977	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	919	1025	1540	-	-	-
Mov Cap-2 Maneuver	919	-	-	-	-	-
Stage 1	975	-	-	-	-	-
Stage 2	987	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	8.78	0.73	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	180	-	959	-	-
HCM Lane V/C Ratio	0.002	-	0.006	-	-
HCM Ctrl Dly (s/v)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	122	4	22	126	20	2	4	17	13	3	21
Future Vol, veh/h	14	122	4	22	126	20	2	4	17	13	3	21
Conflicting Peds, #/hr	0	0	4	4	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	1	1	1	5	5	5	7	7	7
Mvmt Flow	15	133	4	24	137	22	2	4	18	14	3	23

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	159	0	0	141	0	0	356	376	139	361	367	148
Stage 1	-	-	-	-	-	-	169	169	-	196	196	-
Stage 2	-	-	-	-	-	-	186	207	-	165	171	-
Critical Hdwy	4.14	-	-	4.11	-	-	7.15	6.55	6.25	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.17	5.57	-
Follow-up Hdwy	2.236	-	-	2.209	-	-	3.545	4.045	3.345	3.563	4.063	3.363
Pot Cap-1 Maneuver	1409	-	-	1448	-	-	594	551	902	586	554	886
Stage 1	-	-	-	-	-	-	826	753	-	795	730	-
Stage 2	-	-	-	-	-	-	808	725	-	825	748	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1409	-	-	1443	-	-	556	532	898	552	535	886
Mov Cap-2 Maneuver	-	-	-	-	-	-	556	532	-	552	535	-
Stage 1	-	-	-	-	-	-	813	741	-	780	716	-
Stage 2	-	-	-	-	-	-	770	712	-	794	736	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.76	0.99	9.86	10.46
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	766	179	-	-	229	-	-	700
HCM Lane V/C Ratio	0.033	0.011	-	-	0.017	-	-	0.057
HCM Ctrl Dly (s/v)	9.9	7.6	0	-	7.5	0	-	10.5
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.2



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	198	274	210	223	42
Future Volume (veh/h)	32	198	274	210	223	42
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	29	298	228	242	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	2	2	2	2
Cap, veh/h	96	85	929	1519	1043	164
Arrive On Green	0.05	0.05	0.08	0.81	0.66	0.66
Sat Flow, veh/h	1753	1560	1781	1870	1578	248
Grp Volume(v), veh/h	35	29	298	228	0	280
Grp Sat Flow(s),veh/h/ln	1753	1560	1781	1870	0	1826
Q Serve(g_s), s	1.2	1.1	2.7	1.6	0.0	3.7
Cycle Q Clear(g_c), s	1.2	1.1	2.7	1.6	0.0	3.7
Prop In Lane	1.00	1.00	1.00			0.14
Lane Grp Cap(c), veh/h	96	85	929	1519	0	1207
V/C Ratio(X)	0.37	0.34	0.32	0.15	0.00	0.23
Avail Cap(c_a), veh/h	526	468	1076	1519	0	1207
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.73	0.73	0.00	1.00
Uniform Delay (d), s/veh	27.4	27.3	2.1	1.2	0.0	4.1
Incr Delay (d2), s/veh	2.3	2.3	0.1	0.2	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	0.2	0.1	0.0	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	29.7	29.7	2.3	1.4	0.0	4.5
LnGrp LOS	C	C	A	A		A
Approach Vol, veh/h	64			526	280	
Approach Delay, s/veh	29.7			1.9	4.5	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		52.7		7.3	9.1	43.7
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		18.0	10.0	20.0
Max Q Clear Time (g_c+I1), s		3.6		3.2	4.7	5.7
Green Ext Time (p_c), s		1.3		0.1	0.4	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	4.8
HCM 7th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	409	23	53	456	444	17	134	2	547	211	202
Future Volume (veh/h)	245	409	23	53	456	444	17	134	2	547	211	202
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1885	1885	1885	1856	1856	1856	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	245	409	18	53	456	223	17	134	0	547	211	160
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	3	3	3
Cap, veh/h	269	1676	74	76	858	416	35	191	231	600	252	191
Arrive On Green	0.15	0.48	0.48	0.04	0.37	0.37	0.02	0.10	0.00	0.17	0.26	0.26
Sat Flow, veh/h	1795	3495	153	1767	2301	1117	1781	1870	1585	3428	979	742
Grp Volume(v), veh/h	245	209	218	53	349	330	17	134	0	547	0	371
Grp Sat Flow(s),veh/h/ln	1795	1791	1858	1767	1763	1655	1781	1870	1585	1714	0	1721
Q Serve(g_s), s	10.7	5.5	5.5	2.4	12.4	12.5	0.8	5.5	0.0	12.5	0.0	16.3
Cycle Q Clear(g_c), s	10.7	5.5	5.5	2.4	12.4	12.5	0.8	5.5	0.0	12.5	0.0	16.3
Prop In Lane	1.00		0.08	1.00		0.67	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	269	859	891	76	657	617	35	191	231	600	0	443
V/C Ratio(X)	0.91	0.24	0.24	0.69	0.53	0.54	0.49	0.70	0.00	0.91	0.00	0.84
Avail Cap(c_a), veh/h	269	859	891	133	657	617	111	421	425	600	0	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	0.00	0.92	0.00	0.92
Uniform Delay (d), s/veh	33.5	12.3	12.3	37.7	19.6	19.7	38.8	34.7	0.0	32.4	0.0	28.1
Incr Delay (d2), s/veh	32.2	0.7	0.7	10.1	2.9	3.1	10.0	4.6	0.0	17.2	0.0	7.6
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	6.9	2.2	2.2	1.2	5.2	5.0	0.4	2.7	0.0	6.4	0.0	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.7	12.9	12.9	47.8	22.5	22.8	48.8	39.3	0.0	49.5	0.0	35.7
LnGrp LOS	E	B	B	D	C	C	D	D		D		D
Approach Vol, veh/h		672			732			151			918	
Approach Delay, s/veh		32.2			24.4			40.4			43.9	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	42.4	5.6	24.6	16.0	33.8	18.0	12.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	26.0	5.0	27.0	12.0	20.0	14.0	18.0
Max Q Clear Time (g_c+I1), s	14.4	7.5	2.8	18.3	12.7	14.5	14.5	7.5
Green Ext Time (p_c), s	0.0	2.2	0.0	1.4	0.0	2.0	0.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	34.8
HCM 7th LOS	C



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	753	345	366	1304	0	0
Future Volume (veh/h)	753	345	366	1304	0	0
Initial Q (Qb), veh	0	0	0	0		
Lane Width Adj.	1.00	1.00	1.00	1.00		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1885	1885		
Adj Flow Rate, veh/h	753	272	366	1304		
Peak Hour Factor	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	1	1		
Cap, veh/h	2569	1142	500	3343		
Arrive On Green	0.72	0.72	0.29	1.00		
Sat Flow, veh/h	3647	1580	3483	3676		
Grp Volume(v), veh/h	753	272	366	1304		
Grp Sat Flow(s),veh/h/ln	1777	1580	1742	1791		
Q Serve(g_s), s	4.5	3.5	5.7	0.0		
Cycle Q Clear(g_c), s	4.5	3.5	5.7	0.0		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	2569	1142	500	3343		
V/C Ratio(X)	0.29	0.24	0.73	0.39		
Avail Cap(c_a), veh/h	2569	1142	1045	3343		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.74	0.74	0.84	0.84		
Uniform Delay (d), s/veh	2.9	2.8	20.3	0.0		
Incr Delay (d2), s/veh	0.2	0.4	1.8	0.3		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.8	0.6	2.0	0.1		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	3.1	3.1	22.1	0.3		
LnGrp LOS	A	A	C	A		
Approach Vol, veh/h	1025			1670		
Approach Delay, s/veh	3.1			5.1		
Approach LOS	A			A		

Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	12.6	47.4				60.0
Change Period (Y+Rc), s	4.0	4.0				4.0
Max Green Setting (Gmax), s	18.6	34.0				56.0
Max Q Clear Time (g_c+I1), s	7.7	6.5				2.0
Green Ext Time (p_c), s	0.9	6.7				13.6

Intersection Summary		
HCM 7th Control Delay, s/veh	4.3	
HCM 7th LOS	A	



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	702	0	0	997	500	348
Future Volume (veh/h)	702	0	0	997	500	348
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	0	0	1856	1885	1885
Adj Flow Rate, veh/h	702	0	0	997	500	295
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	0	0	3	1	1
Cap, veh/h	2725	0	0	2725	590	525
Arrive On Green	0.18	0.00	0.00	0.54	0.33	0.33
Sat Flow, veh/h	5400	0	0	5400	1795	1598
Grp Volume(v), veh/h	702	0	0	997	500	295
Grp Sat Flow(s),veh/h/ln	1689	0	0	1689	1795	1598
Q Serve(g_s), s	7.2	0.0	0.0	6.8	15.5	9.1
Cycle Q Clear(g_c), s	7.2	0.0	0.0	6.8	15.5	9.1
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2725	0	0	2725	590	525
V/C Ratio(X)	0.26	0.00	0.00	0.37	0.85	0.56
Avail Cap(c_a), veh/h	2725	0	0	2725	898	799
HCM Platoon Ratio	0.33	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.00	0.00	0.59	1.00	1.00
Uniform Delay (d), s/veh	14.3	0.0	0.0	8.0	18.7	16.6
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.2	4.8	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	2.0	5.9	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	14.6	0.0	0.0	8.2	23.6	17.5
LnGrp LOS	B			A	C	B
Approach Vol, veh/h	702			997	795	
Approach Delay, s/veh	14.6			8.2	21.3	
Approach LOS	B			A	C	

Timer - Assigned Phs	2	6	8
Phs Duration (G+Y+Rc), s	36.3	36.3	23.7
Change Period (Y+Rc), s	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	22.0	30.0
Max Q Clear Time (g_c+I1), s	9.2	8.8	17.5
Green Ext Time (p_c), s	3.8	5.6	2.2

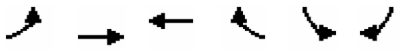
Intersection Summary	
HCM 7th Control Delay, s/veh	14.2
HCM 7th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	386	285	133	103	596	127	484	409	139	78	385	498
Future Volume (veh/h)	386	285	133	103	596	127	484	409	139	78	385	498
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	386	285	64	103	596	37	484	409	55	78	385	449
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	398	947	627	215	759	423	448	1395	721	194	1135	688
Arrive On Green	0.11	0.26	0.26	0.06	0.21	0.21	0.13	0.39	0.39	0.06	0.32	0.32
Sat Flow, veh/h	3483	3582	1596	3483	3582	1575	3483	3582	1596	3483	3582	1596
Grp Volume(v), veh/h	386	285	64	103	596	37	484	409	55	78	385	449
Grp Sat Flow(s),veh/h/ln	1742	1791	1596	1742	1791	1575	1742	1791	1596	1742	1791	1596
Q Serve(g_s), s	7.7	4.5	1.8	2.0	11.0	1.2	9.0	5.5	1.4	1.5	5.8	15.6
Cycle Q Clear(g_c), s	7.7	4.5	1.8	2.0	11.0	1.2	9.0	5.5	1.4	1.5	5.8	15.6
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	398	947	627	215	759	423	448	1395	721	194	1135	688
V/C Ratio(X)	0.97	0.30	0.10	0.48	0.79	0.09	1.08	0.29	0.08	0.40	0.34	0.65
Avail Cap(c_a), veh/h	398	1075	684	249	921	494	448	1395	721	249	1135	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	20.6	13.4	31.7	26.1	19.2	30.5	14.7	10.9	31.9	18.3	15.8
Incr Delay (d2), s/veh	35.8	0.2	0.1	1.6	3.7	0.1	63.7	0.5	0.2	1.3	0.8	4.8
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	5.0	1.8	0.6	0.9	4.8	0.4	7.5	2.1	0.5	0.6	2.3	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	66.6	20.7	13.5	33.4	29.8	19.3	94.2	15.2	11.1	33.3	19.1	20.5
LnGrp LOS	E	C	B	C	C	B	F	B	B	C	B	C
Approach Vol, veh/h		735			736			948			912	
Approach Delay, s/veh		44.2			29.8			55.3			21.0	
Approach LOS		D			C			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	31.3	8.3	22.5	13.0	26.2	12.0	18.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	23.0	5.0	21.0	9.0	19.0	8.0	18.0
Max Q Clear Time (g_c+I1), s	3.5	7.5	4.0	6.5	11.0	17.6	9.7	13.0
Green Ext Time (p_c), s	0.0	2.3	0.0	1.6	0.0	0.6	0.0	1.7

Intersection Summary	
HCM 7th Control Delay, s/veh	37.8
HCM 7th LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	502	609	202	333	12
Future Volume (veh/h)	8	502	609	202	333	12
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1885	1870	1870
Adj Flow Rate, veh/h	8	502	609	165	340	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	1	1	2	2
Cap, veh/h	524	2588	1815	491	493	219
Arrive On Green	0.01	0.73	0.65	0.65	0.14	0.00
Sat Flow, veh/h	1781	3647	2881	754	3563	1585
Grp Volume(v), veh/h	8	502	391	383	340	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1750	1781	1585
Q Serve(g_s), s	0.1	2.7	5.8	5.9	5.5	0.0
Cycle Q Clear(g_c), s	0.1	2.7	5.8	5.9	5.5	0.0
Prop In Lane	1.00			0.43	1.00	1.00
Lane Grp Cap(c), veh/h	524	2588	1166	1139	493	219
V/C Ratio(X)	0.02	0.19	0.34	0.34	0.69	0.00
Avail Cap(c_a), veh/h	654	2588	1166	1139	1069	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.71	0.71	1.00	0.00
Uniform Delay (d), s/veh	3.3	2.6	4.7	4.7	24.6	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.6	0.6	1.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	1.5	1.5	2.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	3.3	2.7	5.2	5.2	26.4	0.0
LnGrp LOS	A	A	A	A	C	
Approach Vol, veh/h		510	774		340	
Approach Delay, s/veh		2.8	5.2		26.4	
Approach LOS		A	A		C	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	47.7		12.3	4.6	43.1
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	34.0		18.0	5.0	25.0
Max Q Clear Time (g_c+I1), s	4.7		7.5	2.1	7.9
Green Ext Time (p_c), s	3.5		0.9	0.0	4.5

Intersection Summary	
HCM 7th Control Delay, s/veh	8.9
HCM 7th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	609	110	322	625	234	233	543	259	221	363	42
Future Volume (veh/h)	192	609	110	322	625	234	233	543	259	221	363	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	192	609	37	322	625	128	233	543	210	221	363	17
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	1	1	1
Cap, veh/h	288	1044	446	372	813	838	266	1296	747	268	1306	714
Arrive On Green	0.08	0.20	0.20	0.11	0.23	0.23	0.08	0.36	0.36	0.08	0.36	0.36
Sat Flow, veh/h	3456	5106	1583	3456	3554	2723	3456	3554	1581	3483	3582	1594
Grp Volume(v), veh/h	192	609	37	322	625	128	233	543	210	221	363	17
Grp Sat Flow(s),veh/h/ln	1728	1702	1583	1728	1777	1362	1728	1777	1581	1742	1791	1594
Q Serve(g_s), s	3.5	7.0	1.1	6.0	10.7	2.2	4.3	7.4	5.3	4.1	4.7	0.4
Cycle Q Clear(g_c), s	3.5	7.0	1.1	6.0	10.7	2.2	4.3	7.4	5.3	4.1	4.7	0.4
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	288	1044	446	372	813	838	266	1296	747	268	1306	714
V/C Ratio(X)	0.67	0.58	0.08	0.87	0.77	0.15	0.88	0.42	0.28	0.82	0.28	0.02
Avail Cap(c_a), veh/h	372	1414	560	372	984	969	266	1296	747	268	1306	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	28.9	23.3	17.2	28.5	23.5	16.4	29.7	15.5	10.4	29.6	14.6	10.0
Incr Delay (d2), s/veh	2.8	0.5	0.1	18.7	3.1	0.1	26.3	1.0	0.9	17.0	0.5	0.1
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	1.5	2.6	0.4	3.3	4.5	0.6	2.6	2.8	1.7	2.2	1.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.7	23.8	17.3	47.3	26.5	16.5	56.0	16.5	11.4	46.6	15.1	10.1
LnGrp LOS	C	C	B	D	C	B	E	B	B	D	B	B
Approach Vol, veh/h		838			1075			986			601	
Approach Delay, s/veh		25.4			31.5			24.7			26.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	27.7	11.0	17.3	9.0	27.7	9.4	18.9
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	19.0	7.0	18.0	5.0	19.0	7.0	18.0
Max Q Clear Time (g_c+I1), s	6.1	9.4	8.0	9.0	6.3	6.7	5.5	12.7
Green Ext Time (p_c), s	0.0	2.9	0.0	2.7	0.0	1.7	0.1	2.1

Intersection Summary	
HCM 7th Control Delay, s/veh	27.3
HCM 7th LOS	C

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	121	3	62	105	15	12	26	118	25	12	5
Future Vol, veh/h	7	121	3	62	105	15	12	26	118	25	12	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	5	5	5	17	17	17	8	8	8	5	5	5
Mvmt Flow	8	132	3	67	114	16	13	28	128	27	13	5
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, s/veh	8.9	9.7	8.7	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	5%	34%	60%
Vol Thru, %	17%	92%	58%	29%
Vol Right, %	76%	2%	8%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	156	131	182	42
LT Vol	12	7	62	25
Through Vol	26	121	105	12
RT Vol	118	3	15	5
Lane Flow Rate	170	142	198	46
Geometry Grp	1	1	1	1
Degree of Util (X)	0.211	0.187	0.268	0.064
Departure Headway (Hd)	4.484	4.729	4.88	5.071
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	799	756	734	704
Service Time	2.521	2.771	2.92	3.119
HCM Lane V/C Ratio	0.213	0.188	0.27	0.065
HCM Control Delay, s/veh	8.7	8.9	9.7	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.7	1.1	0.2

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	2	0	6	0	53	7	11	35	0
Future Vol, veh/h	0	0	0	2	0	6	0	53	7	11	35	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	14	14	14	11	11	11	18	18	18
Mvmt Flow	0	0	0	2	0	7	0	58	8	12	38	0
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, s/veh	0	7	7.4	7.6
HCM LOS	-	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	25%	24%
Vol Thru, %	88%	100%	0%	76%
Vol Right, %	12%	0%	75%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	0	8	46
LT Vol	0	0	2	11
Through Vol	53	0	0	35
RT Vol	7	0	6	0
Lane Flow Rate	65	0	9	50
Geometry Grp	1	1	1	1
Degree of Util (X)	0.074	0	0.01	0.06
Departure Headway (Hd)	4.07	4.105	3.935	4.318
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	882	0	901	831
Service Time	2.087	2.169	1.996	2.336
HCM Lane V/C Ratio	0.074	0	0.01	0.06
HCM Control Delay, s/veh	7.4	7.2	7	7.6
HCM Lane LOS	A	N	A	A
HCM 95th-tile Q	0.2	0	0	0.2

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	0	3	21	0	13	1	43	7	5	30	2
Future Vol, veh/h	4	0	3	21	0	13	1	43	7	5	30	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	11	11	11	18	18	18
Mvmt Flow	4	0	3	23	0	14	1	47	8	5	33	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	93	101	34	96	98	51	35	0	0	54	0	0
Stage 1	45	45	-	53	53	-	-	-	-	-	-	-
Stage 2	49	57	-	43	46	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.21	-	-	4.28	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.299	-	-	2.362	-	-
Pot Cap-1 Maneuver	890	789	1040	886	792	1018	1520	-	-	1454	-	-
Stage 1	969	858	-	960	851	-	-	-	-	-	-	-
Stage 2	964	848	-	971	857	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	874	785	1040	880	788	1018	1520	-	-	1454	-	-
Mov Cap-2 Maneuver	874	785	-	880	788	-	-	-	-	-	-	-
Stage 1	966	855	-	959	850	-	-	-	-	-	-	-
Stage 2	950	847	-	964	854	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.87	9.04	0.14	1.01
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	34	-	-	938	928	240	-	-
HCM Lane V/C Ratio	0.001	-	-	0.008	0.04	0.004	-	-
HCM Ctrl Dly (s/v)	7.4	0	-	8.9	9	7.5	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	161	8	18	140	13	8	1	20	33	2	31
Future Vol, veh/h	27	161	8	18	140	13	8	1	20	33	2	31
Conflicting Peds, #/hr	0	0	4	4	0	0	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	7	7	7	9	9	9	14	14	14	9	9	9
Mvmt Flow	29	175	9	20	152	14	9	1	22	36	2	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	166	0	0	188	0	0	434	447	184	434	445	159
Stage 1	-	-	-	-	-	-	242	242	-	198	198	-
Stage 2	-	-	-	-	-	-	192	205	-	235	246	-
Critical Hdwy	4.17	-	-	4.19	-	-	7.24	6.64	6.34	7.19	6.59	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-	6.24	5.64	-	6.19	5.59	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.24	5.64	-	6.19	5.59	-
Follow-up Hdwy	2.263	-	-	2.281	-	-	3.626	4.126	3.426	3.581	4.081	3.381
Pot Cap-1 Maneuver	1382	-	-	1345	-	-	512	489	828	521	498	868
Stage 1	-	-	-	-	-	-	735	684	-	788	724	-
Stage 2	-	-	-	-	-	-	782	710	-	752	690	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1382	-	-	1340	-	-	469	468	824	485	476	868
Mov Cap-2 Maneuver	-	-	-	-	-	-	469	468	-	485	476	-
Stage 1	-	-	-	-	-	-	715	665	-	775	712	-
Stage 2	-	-	-	-	-	-	738	698	-	713	671	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.06	0.81	10.67	11.67
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	667	246	-	-	186	-	-	612
HCM Lane V/C Ratio	0.047	0.021	-	-	0.015	-	-	0.117
HCM Ctrl Dly (s/v)	10.7	7.7	0	-	7.7	0	-	11.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	38	316	119	97	141	18
Future Volume (veh/h)	38	316	119	97	141	18
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1707	1707	1737	1737
Adj Flow Rate, veh/h	41	79	129	105	153	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	13	13	11	11
Cap, veh/h	206	183	679	898	357	28
Arrive On Green	0.12	0.12	0.12	0.53	0.22	0.22
Sat Flow, veh/h	1753	1560	1626	1707	1590	125
Grp Volume(v), veh/h	41	79	129	105	0	165
Grp Sat Flow(s),veh/h/ln	1753	1560	1626	1707	0	1715
Q Serve(g_s), s	0.5	1.1	1.1	0.7	0.0	1.9
Cycle Q Clear(g_c), s	0.5	1.1	1.1	0.7	0.0	1.9
Prop In Lane	1.00	1.00	1.00			0.07
Lane Grp Cap(c), veh/h	206	183	679	898	0	385
V/C Ratio(X)	0.20	0.43	0.19	0.12	0.00	0.43
Avail Cap(c_a), veh/h	1563	1391	914	2435	0	1681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.9	9.2	4.2	2.7	0.0	7.5
Incr Delay (d2), s/veh	0.5	1.6	0.1	0.1	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.0	0.0	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	9.4	10.8	4.4	2.7	0.0	8.2
LnGrp LOS	A	B	A	A		A
Approach Vol, veh/h	120			234	165	
Approach Delay, s/veh	10.3			3.6	8.2	
Approach LOS	B			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		15.8		6.6	6.8	9.0
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		32.0		20.0	6.0	22.0
Max Q Clear Time (g_c+I1), s		2.7		3.1	3.1	3.9
Green Ext Time (p_c), s		0.5		0.3	0.1	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	6.6
HCM 7th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	309	11	17	579	283	10	85	1	405	134	166
Future Volume (veh/h)	117	309	11	17	579	283	10	85	1	405	134	166
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1826	1826	1826	1826	1826	1826	1707	1707	1707	1841	1841	1841
Adj Flow Rate, veh/h	127	336	9	18	629	226	11	92	0	440	146	114
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5	13	13	13	4	4	4
Cap, veh/h	149	1783	48	37	1130	406	22	155	162	486	210	164
Arrive On Green	0.09	0.52	0.52	0.02	0.45	0.45	0.01	0.09	0.00	0.14	0.22	0.22
Sat Flow, veh/h	1739	3452	92	1739	2501	898	1626	1707	1447	3401	957	747
Grp Volume(v), veh/h	127	169	176	18	436	419	11	92	0	440	0	260
Grp Sat Flow(s),veh/h/ln	1739	1735	1809	1739	1735	1664	1626	1707	1447	1700	0	1704
Q Serve(g_s), s	5.0	3.6	3.7	0.7	12.9	12.9	0.5	3.6	0.0	8.9	0.0	9.8
Cycle Q Clear(g_c), s	5.0	3.6	3.7	0.7	12.9	12.9	0.5	3.6	0.0	8.9	0.0	9.8
Prop In Lane	1.00		0.05	1.00		0.54	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	149	896	935	37	784	752	22	155	162	486	0	375
V/C Ratio(X)	0.85	0.19	0.19	0.49	0.56	0.56	0.49	0.59	0.00	0.91	0.00	0.69
Avail Cap(c_a), veh/h	149	896	935	124	784	752	116	439	403	486	0	560
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.98	0.98	0.98	1.00	1.00	0.00	0.88	0.00	0.88
Uniform Delay (d), s/veh	31.6	9.1	9.1	33.9	14.0	14.0	34.3	30.6	0.0	29.5	0.0	25.1
Incr Delay (d2), s/veh	35.0	0.5	0.4	9.6	2.8	2.9	15.7	3.6	0.0	18.6	0.0	2.0
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	3.5	1.3	1.3	0.4	5.0	4.8	0.3	1.6	0.0	4.7	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	66.6	9.5	9.5	43.5	16.8	17.0	50.0	34.2	0.0	48.1	0.0	27.2
LnGrp LOS	E	A	A	D	B	B	D	C		D		C
Approach Vol, veh/h		472			873			103			700	
Approach Delay, s/veh		24.9			17.4			35.8			40.3	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	40.2	5.0	19.4	10.0	35.6	14.0	10.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	21.0	5.0	23.0	6.0	20.0	10.0	18.0
Max Q Clear Time (g_c+I1), s	2.7	5.7	2.5	11.8	7.0	14.9	10.9	5.6
Green Ext Time (p_c), s	0.0	1.6	0.0	1.1	0.0	2.4	0.0	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	27.4
HCM 7th LOS	C



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	447	282	291	875	0	0
Future Volume (veh/h)	447	282	291	875	0	0
Initial Q (Qb), veh	0	0	0	0		
Lane Width Adj.	1.00	1.00	1.00	1.00		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1826	1826	1841	1841		
Adj Flow Rate, veh/h	447	195	291	875		
Peak Hour Factor	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	5	5	4	4		
Cap, veh/h	2579	1150	419	3264		
Arrive On Green	0.74	0.74	0.25	1.00		
Sat Flow, veh/h	3561	1547	3401	3589		
Grp Volume(v), veh/h	447	195	291	875		
Grp Sat Flow(s),veh/h/ln	1735	1547	1700	1749		
Q Serve(g_s), s	2.3	2.2	4.7	0.0		
Cycle Q Clear(g_c), s	2.3	2.2	4.7	0.0		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	2579	1150	419	3264		
V/C Ratio(X)	0.17	0.17	0.69	0.27		
Avail Cap(c_a), veh/h	2579	1150	1077	3264		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.79	0.79	0.87	0.87		
Uniform Delay (d), s/veh	2.3	2.3	21.6	0.0		
Incr Delay (d2), s/veh	0.1	0.3	1.8	0.2		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.3	0.3	1.7	0.1		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	2.4	2.5	23.4	0.2		
LnGrp LOS	A	A	C	A		
Approach Vol, veh/h	642			1166		
Approach Delay, s/veh	2.4			6.0		
Approach LOS	A			A		

Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	11.4	48.6				60.0
Change Period (Y+Rc), s	4.0	4.0				4.0
Max Green Setting (Gmax), s	19.0	33.0				56.0
Max Q Clear Time (g_c+I1), s	6.7	4.3				2.0
Green Ext Time (p_c), s	0.8	3.7				7.4

Intersection Summary		
HCM 7th Control Delay, s/veh	4.7	
HCM 7th LOS	A	



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	434	0	0	795	425	324
Future Volume (veh/h)	434	0	0	795	425	324
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	0	0	1856	1826	1826
Adj Flow Rate, veh/h	472	0	0	864	462	224
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	0	0	3	5	5
Cap, veh/h	2760	0	0	2805	544	484
Arrive On Green	0.18	0.00	0.00	0.55	0.31	0.31
Sat Flow, veh/h	5313	0	0	5400	1739	1547
Grp Volume(v), veh/h	472	0	0	864	462	224
Grp Sat Flow(s),veh/h/ln	1662	0	0	1689	1739	1547
Q Serve(g_s), s	4.8	0.0	0.0	5.5	14.9	7.0
Cycle Q Clear(g_c), s	4.8	0.0	0.0	5.5	14.9	7.0
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2760	0	0	2805	544	484
V/C Ratio(X)	0.17	0.00	0.00	0.31	0.85	0.46
Avail Cap(c_a), veh/h	2760	0	0	2805	869	774
HCM Platoon Ratio	0.33	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.99	0.00	0.00	0.85	1.00	1.00
Uniform Delay (d), s/veh	12.9	0.0	0.0	7.2	19.3	16.6
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.2	4.6	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	0.0	1.6	5.5	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	13.0	0.0	0.0	7.4	23.9	17.2
LnGrp LOS	B			A	C	B
Approach Vol, veh/h	472			864	686	
Approach Delay, s/veh	13.0			7.4	21.7	
Approach LOS	B			A	C	

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	37.2			37.2	22.8
Change Period (Y+Rc), s	4.0			4.0	4.0
Max Green Setting (Gmax), s	22.0			22.0	30.0
Max Q Clear Time (g_c+I1), s	6.8			7.5	16.9
Green Ext Time (p_c), s	2.7			5.1	1.9

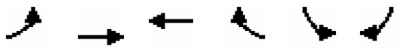
Intersection Summary		
HCM 7th Control Delay, s/veh	13.6	
HCM 7th LOS	B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	305	80	68	337	86	332	345	119	88	285	388
Future Volume (veh/h)	290	305	80	68	337	86	332	345	119	88	285	388
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1856	1856	1856	1870	1870	1870	1841	1841	1841	1856	1856	1856
Adj Flow Rate, veh/h	290	305	37	68	337	24	332	345	46	88	285	279
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	2	2	2	4	4	4	3	3	3
Cap, veh/h	316	640	431	188	511	325	314	1597	788	210	1500	814
Arrive On Green	0.09	0.18	0.18	0.05	0.14	0.14	0.03	0.15	0.15	0.06	0.43	0.43
Sat Flow, veh/h	3428	3526	1572	3456	3554	1585	3401	3497	1539	3428	3526	1571
Grp Volume(v), veh/h	290	305	37	68	337	24	332	345	46	88	285	279
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1728	1777	1585	1700	1749	1539	1714	1763	1571
Q Serve(g_s), s	5.5	5.0	1.1	1.2	5.8	0.8	6.0	5.6	1.5	1.6	3.3	6.8
Cycle Q Clear(g_c), s	5.5	5.0	1.1	1.2	5.8	0.8	6.0	5.6	1.5	1.6	3.3	6.8
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	316	640	431	188	511	325	314	1597	788	210	1500	814
V/C Ratio(X)	0.92	0.48	0.09	0.36	0.66	0.07	1.06	0.22	0.06	0.42	0.19	0.34
Avail Cap(c_a), veh/h	316	1031	605	266	984	536	314	1597	788	264	1500	814
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	23.8	17.5	29.6	26.3	20.9	31.5	17.4	12.7	29.4	11.7	9.2
Incr Delay (d2), s/veh	29.0	0.5	0.1	1.2	1.5	0.1	65.5	0.3	0.1	1.3	0.3	1.1
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	8.4	2.0	0.4	0.5	2.4	0.3	5.3	2.1	0.5	0.7	1.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	58.3	24.4	17.6	30.8	27.8	21.0	97.0	17.7	12.9	30.7	11.9	10.3
LnGrp LOS	E	C	B	C	C	C	F	B	B	C	B	B
Approach Vol, veh/h		632			429			723			652	
Approach Delay, s/veh		39.5			27.9			53.8			13.8	
Approach LOS		D			C			D			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	33.7	7.5	15.8	10.0	31.7	10.0	13.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	20.0	5.0	19.0	6.0	19.0	6.0	18.0
Max Q Clear Time (g_c+I1), s	3.0	7.6	3.2	7.0	8.0	8.8	7.5	7.8
Green Ext Time (p_c), s	0.0	1.7	0.0	1.5	0.0	2.0	0.0	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	34.8
HCM 7th LOS	C



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	629	532	164	186	8
Future Volume (veh/h)	5	629	532	164	186	8
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1841	1841	1826	1826	1781	1781
Adj Flow Rate, veh/h	5	629	532	121	188	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	4	4	5	5	8	8
Cap, veh/h	472	1890	1057	239	491	218
Arrive On Green	0.01	0.54	0.38	0.38	0.14	0.00
Sat Flow, veh/h	1753	3589	2901	636	3393	1510
Grp Volume(v), veh/h	5	629	328	325	188	0
Grp Sat Flow(s),veh/h/ln	1753	1749	1735	1711	1697	1510
Q Serve(g_s), s	0.0	2.6	3.7	3.7	1.3	0.0
Cycle Q Clear(g_c), s	0.0	2.6	3.7	3.7	1.3	0.0
Prop In Lane	1.00			0.37	1.00	1.00
Lane Grp Cap(c), veh/h	472	1890	652	644	491	218
V/C Ratio(X)	0.01	0.33	0.50	0.51	0.38	0.00
Avail Cap(c_a), veh/h	805	4682	1707	1685	2405	1070
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	4.3	3.3	6.1	6.1	9.8	0.0
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.6	0.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.6	0.6	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	4.3	3.4	6.7	6.7	10.3	0.0
LnGrp LOS	A	A	A	A	B	
Approach Vol, veh/h		634	653		188	
Approach Delay, s/veh		3.4	6.7		10.3	
Approach LOS		A	A		B	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	17.7		7.7	4.2	13.6
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	34.0		18.0	5.0	25.0
Max Q Clear Time (g_c+I1), s	4.6		3.3	2.0	5.7
Green Ext Time (p_c), s	4.5		0.5	0.0	3.8

Intersection Summary	
HCM 7th Control Delay, s/veh	5.7
HCM 7th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	661	60	243	525	237	189	423	303	171	245	16
Future Volume (veh/h)	142	661	60	243	525	237	189	423	303	171	245	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	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	1856	1856	1856	1856	1856	1856	1826	1826	1826	1870	1870	1870
Adj Flow Rate, veh/h	142	661	21	243	525	92	189	423	254	171	245	6
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	3	3	3	3	3	5	5	5	2	2	2
Cap, veh/h	243	984	426	339	783	826	260	1334	739	263	1364	719
Arrive On Green	0.07	0.19	0.19	0.10	0.22	0.22	0.08	0.38	0.38	0.03	0.13	0.13
Sat Flow, veh/h	3428	5066	1572	3428	3526	2768	3374	3469	1524	3456	3554	1581
Grp Volume(v), veh/h	142	661	21	243	525	92	189	423	254	171	245	6
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1763	1384	1687	1735	1524	1728	1777	1581
Q Serve(g_s), s	2.6	7.9	0.6	4.5	8.8	1.6	3.6	5.6	6.7	3.2	4.0	0.2
Cycle Q Clear(g_c), s	2.6	7.9	0.6	4.5	8.8	1.6	3.6	5.6	6.7	3.2	4.0	0.2
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	243	984	426	339	783	826	260	1334	739	263	1364	719
V/C Ratio(X)	0.58	0.67	0.05	0.72	0.67	0.11	0.73	0.32	0.34	0.65	0.18	0.01
Avail Cap(c_a), veh/h	316	1403	556	369	1031	1020	260	1334	739	266	1364	719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.97	0.97	0.97	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	29.3	24.3	17.5	28.4	23.1	16.6	29.3	14.0	10.4	30.8	19.2	13.8
Incr Delay (d2), s/veh	2.1	0.8	0.0	5.9	1.1	0.1	9.9	0.6	1.3	5.2	0.3	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	1.1	3.0	0.2	2.0	3.5	0.5	1.7	2.0	2.1	1.5	1.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.4	25.1	17.5	34.3	24.2	16.6	39.2	14.6	11.7	36.1	19.5	13.8
LnGrp LOS	C	C	B	C	C	B	D	B	B	D	B	B
Approach Vol, veh/h		824			860			866			422	
Approach Delay, s/veh		26.0			26.2			19.1			26.1	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	29.0	10.4	16.6	9.0	28.9	8.6	18.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	19.0	7.0	18.0	5.0	19.0	6.0	19.0
Max Q Clear Time (g_c+I1), s	5.2	8.7	6.5	9.9	5.6	6.0	4.6	10.8
Green Ext Time (p_c), s	0.0	2.6	0.0	2.8	0.0	1.1	0.1	2.4

Intersection Summary	
HCM 7th Control Delay, s/veh	24.1
HCM 7th LOS	C

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	5	138	19	147	132	23	9	17	101	15	36	4
Future Vol, veh/h	5	138	19	147	132	23	9	17	101	15	36	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	1	1	1	2	2	2
Mvmt Flow	5	150	21	160	143	25	10	18	110	16	39	4
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, s/veh	9.2	11.2	8.8	8.9
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	3%	49%	27%
Vol Thru, %	13%	85%	44%	65%
Vol Right, %	80%	12%	8%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	127	162	302	55
LT Vol	9	5	147	15
Through Vol	17	138	132	36
RT Vol	101	19	23	4
Lane Flow Rate	138	176	328	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.181	0.232	0.426	0.088
Departure Headway (Hd)	4.714	4.738	4.674	5.312
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	755	754	768	669
Service Time	2.777	2.797	2.726	3.387
HCM Lane V/C Ratio	0.183	0.233	0.427	0.09
HCM Control Delay, s/veh	8.8	9.2	11.2	8.9
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.7	0.9	2.1	0.3

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	2	2	1	20	0	37	3	18	53	0
Future Vol, veh/h	0	0	2	2	1	20	0	37	3	18	53	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	0	0	0	0	0	0	5	5	5	0	0	0
Mvmt Flow	0	0	2	2	1	22	0	40	3	20	58	0
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, s/veh	6.6	6.8	7.3	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	0%	9%	25%
Vol Thru, %	93%	0%	4%	75%
Vol Right, %	8%	100%	87%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	2	23	71
LT Vol	0	0	2	18
Through Vol	37	0	1	53
RT Vol	3	2	20	0
Lane Flow Rate	43	2	25	77
Geometry Grp	1	1	1	1
Degree of Util (X)	0.049	0.002	0.025	0.086
Departure Headway (Hd)	4.045	3.528	3.606	4.031
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	886	1005	985	891
Service Time	2.066	1.583	1.658	2.045
HCM Lane V/C Ratio	0.049	0.002	0.025	0.086
HCM Control Delay, s/veh	7.3	6.6	6.8	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0.1	0.3

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	0	2	13	0	10	3	27	19	13	39	5
Future Vol, veh/h	3	0	2	13	0	10	3	27	19	13	39	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	0	0	0
Mvmt Flow	3	0	2	14	0	11	3	29	21	14	42	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	109	130	45	117	122	40	48	0	0	50	0	0
Stage 1	73	73	-	46	46	-	-	-	-	-	-	-
Stage 2	36	57	-	71	76	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.15	-	-	4.1	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.245	-	-	2.2	-	-
Pot Cap-1 Maneuver	869	761	1025	859	768	1032	1540	-	-	1570	-	-
Stage 1	936	834	-	968	856	-	-	-	-	-	-	-
Stage 2	980	848	-	939	832	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	850	752	1025	848	759	1032	1540	-	-	1570	-	-
Mov Cap-2 Maneuver	850	752	-	848	759	-	-	-	-	-	-	-
Stage 1	927	826	-	965	855	-	-	-	-	-	-	-
Stage 2	967	846	-	929	824	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.97	9.03	0.45	1.67
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	102	-	-	912	919	401	-	-
HCM Lane V/C Ratio	0.002	-	-	0.006	0.027	0.009	-	-
HCM Ctrl Dly (s/v)	7.3	0	-	9	9	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	122	4	22	126	36	2	4	17	24	3	23
Future Vol, veh/h	17	122	4	22	126	36	2	4	17	24	3	23
Conflicting Peds, #/hr	0	0	4	4	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	4	4	4	1	1	1	5	5	5	7	7	7
Mvmt Flow	18	133	4	24	137	39	2	4	18	26	3	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	176	0	0	141	0	0	362	400	139	376	382	157
Stage 1	-	-	-	-	-	-	176	176	-	204	204	-
Stage 2	-	-	-	-	-	-	186	224	-	172	178	-
Critical Hdwy	4.14	-	-	4.11	-	-	7.15	6.55	6.25	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.17	5.57	-
Follow-up Hdwy	2.236	-	-	2.209	-	-	3.545	4.045	3.345	3.563	4.063	3.363
Pot Cap-1 Maneuver	1388	-	-	1448	-	-	588	534	902	572	543	876
Stage 1	-	-	-	-	-	-	819	748	-	786	723	-
Stage 2	-	-	-	-	-	-	808	713	-	819	743	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1388	-	-	1443	-	-	547	515	898	538	523	876
Mov Cap-2 Maneuver	-	-	-	-	-	-	547	515	-	538	523	-
Stage 1	-	-	-	-	-	-	804	734	-	772	710	-
Stage 2	-	-	-	-	-	-	767	700	-	785	729	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.91	0.9	9.91	11.02
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	758	213	-	-	206	-	-	653
HCM Lane V/C Ratio	0.033	0.013	-	-	0.017	-	-	0.083
HCM Ctrl Dly (s/v)	9.9	7.6	0	-	7.5	0	-	11
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0	-	-	0.1	-	-	0.3



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	32	209	290	210	223	42
Future Volume (veh/h)	32	209	290	210	223	42
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1841	1870	1870	1870	1870
Adj Flow Rate, veh/h	35	30	315	228	242	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	2	2	2	2
Cap, veh/h	97	86	931	1518	1035	163
Arrive On Green	0.06	0.06	0.09	0.81	0.66	0.66
Sat Flow, veh/h	1753	1560	1781	1870	1578	248
Grp Volume(v), veh/h	35	30	315	228	0	280
Grp Sat Flow(s),veh/h/ln	1753	1560	1781	1870	0	1826
Q Serve(g_s), s	1.2	1.1	2.9	1.6	0.0	3.7
Cycle Q Clear(g_c), s	1.2	1.1	2.9	1.6	0.0	3.7
Prop In Lane	1.00	1.00	1.00			0.14
Lane Grp Cap(c), veh/h	97	86	931	1518	0	1198
V/C Ratio(X)	0.36	0.35	0.34	0.15	0.00	0.23
Avail Cap(c_a), veh/h	526	468	1099	1518	0	1198
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.72	0.72	0.00	1.00
Uniform Delay (d), s/veh	27.3	27.3	2.2	1.2	0.0	4.2
Incr Delay (d2), s/veh	2.3	2.4	0.2	0.2	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	0.2	0.1	0.0	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	29.6	29.7	2.3	1.4	0.0	4.7
LnGrp LOS	C	C	A	A		A
Approach Vol, veh/h	65			543	280	
Approach Delay, s/veh	29.6			1.9	4.7	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		52.7		7.3	9.3	43.4
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		34.0		18.0	11.0	19.0
Max Q Clear Time (g_c+I1), s		3.6		3.2	4.9	5.7
Green Ext Time (p_c), s		1.3		0.1	0.5	1.3

Intersection Summary	
HCM 7th Control Delay, s/veh	4.8
HCM 7th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	245	409	23	53	456	454	17	139	2	554	214	202
Future Volume (veh/h)	245	409	23	53	456	454	17	139	2	554	214	202
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1885	1885	1885	1856	1856	1856	1870	1870	1870	1856	1856	1856
Adj Flow Rate, veh/h	245	409	18	53	456	228	17	139	0	554	214	161
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	1	1	1	3	3	3	2	2	2	3	3	3
Cap, veh/h	269	1667	73	76	845	419	35	196	235	600	256	192
Arrive On Green	0.15	0.48	0.48	0.04	0.37	0.37	0.02	0.10	0.00	0.17	0.26	0.26
Sat Flow, veh/h	1795	3495	153	1767	2282	1132	1781	1870	1585	3428	982	739
Grp Volume(v), veh/h	245	209	218	53	351	333	17	139	0	554	0	375
Grp Sat Flow(s),veh/h/ln	1795	1791	1858	1767	1763	1652	1781	1870	1585	1714	0	1721
Q Serve(g_s), s	10.7	5.5	5.6	2.4	12.5	12.7	0.8	5.7	0.0	12.7	0.0	16.5
Cycle Q Clear(g_c), s	10.7	5.5	5.6	2.4	12.5	12.7	0.8	5.7	0.0	12.7	0.0	16.5
Prop In Lane	1.00		0.08	1.00		0.69	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	269	854	886	76	652	611	35	196	235	600	0	448
V/C Ratio(X)	0.91	0.24	0.25	0.69	0.54	0.54	0.49	0.71	0.00	0.92	0.00	0.84
Avail Cap(c_a), veh/h	269	854	886	133	652	611	111	421	425	600	0	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.94	0.94	0.94	1.00	1.00	0.00	0.91	0.00	0.91
Uniform Delay (d), s/veh	33.5	12.4	12.4	37.7	19.8	19.9	38.8	34.6	0.0	32.5	0.0	28.0
Incr Delay (d2), s/veh	32.2	0.7	0.7	10.1	3.0	3.2	10.0	4.7	0.0	18.8	0.0	7.6
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	6.9	2.2	2.3	1.2	5.3	5.1	0.4	2.8	0.0	6.6	0.0	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.7	13.1	13.1	47.8	22.8	23.1	48.8	39.3	0.0	51.2	0.0	35.6
LnGrp LOS	E	B	B	D	C	C	D	D		D		D
Approach Vol, veh/h		672			737			156			929	
Approach Delay, s/veh		32.3			24.7			40.3			44.9	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	42.1	5.6	24.8	16.0	33.6	18.0	12.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	6.0	26.0	5.0	27.0	12.0	20.0	14.0	18.0
Max Q Clear Time (g_c+I1), s	4.4	7.6	2.8	18.5	12.7	14.7	14.7	7.7
Green Ext Time (p_c), s	0.0	2.2	0.0	1.5	0.0	1.9	0.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	35.3
HCM 7th LOS	D



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	755	350	366	1314	0	0
Future Volume (veh/h)	755	350	366	1314	0	0
Initial Q (Qb), veh	0	0	0	0		
Lane Width Adj.	1.00	1.00	1.00	1.00		
Ped-Bike Adj(A_pbT)		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00		
Work Zone On Approach	No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1885	1885		
Adj Flow Rate, veh/h	755	277	366	1314		
Peak Hour Factor	1.00	1.00	1.00	1.00		
Percent Heavy Veh, %	2	2	1	1		
Cap, veh/h	2569	1142	500	3343		
Arrive On Green	0.72	0.72	0.29	1.00		
Sat Flow, veh/h	3647	1580	3483	3676		
Grp Volume(v), veh/h	755	277	366	1314		
Grp Sat Flow(s),veh/h/ln	1777	1580	1742	1791		
Q Serve(g_s), s	4.5	3.5	5.7	0.0		
Cycle Q Clear(g_c), s	4.5	3.5	5.7	0.0		
Prop In Lane		1.00	1.00			
Lane Grp Cap(c), veh/h	2569	1142	500	3343		
V/C Ratio(X)	0.29	0.24	0.73	0.39		
Avail Cap(c_a), veh/h	2569	1142	1045	3343		
HCM Platoon Ratio	1.00	1.00	2.00	2.00		
Upstream Filter(I)	0.73	0.73	0.84	0.84		
Uniform Delay (d), s/veh	2.9	2.8	20.3	0.0		
Incr Delay (d2), s/veh	0.2	0.4	1.8	0.3		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.8	0.6	2.0	0.1		
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	3.1	3.2	22.1	0.3		
LnGrp LOS	A	A	C	A		
Approach Vol, veh/h	1032			1680		
Approach Delay, s/veh	3.1			5.0		
Approach LOS	A			A		

Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	12.6	47.4				60.0
Change Period (Y+Rc), s	4.0	4.0				4.0
Max Green Setting (Gmax), s	18.6	34.0				56.0
Max Q Clear Time (g_c+I1), s	7.7	6.5				2.0
Green Ext Time (p_c), s	0.9	6.7				13.8

Intersection Summary		
HCM 7th Control Delay, s/veh	4.3	
HCM 7th LOS	A	



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	704	0	0	1000	507	348
Future Volume (veh/h)	704	0	0	1000	507	348
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	0	0	1856	1885	1885
Adj Flow Rate, veh/h	704	0	0	1000	507	302
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	3	0	0	3	1	1
Cap, veh/h	2701	0	0	2701	599	533
Arrive On Green	0.18	0.00	0.00	0.53	0.33	0.33
Sat Flow, veh/h	5400	0	0	5400	1795	1598
Grp Volume(v), veh/h	704	0	0	1000	507	302
Grp Sat Flow(s),veh/h/ln	1689	0	0	1689	1795	1598
Q Serve(g_s), s	7.2	0.0	0.0	6.9	15.7	9.3
Cycle Q Clear(g_c), s	7.2	0.0	0.0	6.9	15.7	9.3
Prop In Lane		0.00	0.00		1.00	1.00
Lane Grp Cap(c), veh/h	2701	0	0	2701	599	533
V/C Ratio(X)	0.26	0.00	0.00	0.37	0.85	0.57
Avail Cap(c_a), veh/h	2701	0	0	2701	928	825
HCM Platoon Ratio	0.33	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.00	0.00	0.59	1.00	1.00
Uniform Delay (d), s/veh	14.5	0.0	0.0	8.1	18.6	16.4
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.2	4.5	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.0	2.0	5.9	2.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	14.7	0.0	0.0	8.4	23.1	17.4
LnGrp LOS	B			A	C	B
Approach Vol, veh/h	704			1000	809	
Approach Delay, s/veh	14.7			8.4	20.9	
Approach LOS	B			A	C	

Timer - Assigned Phs	2			6	8
Phs Duration (G+Y+Rc), s	36.0			36.0	24.0
Change Period (Y+Rc), s	4.0			4.0	4.0
Max Green Setting (Gmax), s	21.0			21.0	31.0
Max Q Clear Time (g_c+I1), s	9.2			8.9	17.7
Green Ext Time (p_c), s	3.6			5.3	2.3

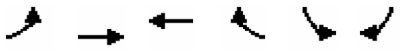
Intersection Summary		
HCM 7th Control Delay, s/veh	14.2	
HCM 7th LOS	B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	386	286	134	103	597	127	486	409	139	78	385	498
Future Volume (veh/h)	386	286	134	103	597	127	486	409	139	78	385	498
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	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	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	386	286	65	103	597	37	486	409	55	78	385	449
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	398	948	628	215	759	423	448	1395	720	194	1134	688
Arrive On Green	0.11	0.26	0.26	0.06	0.21	0.21	0.13	0.39	0.39	0.06	0.32	0.32
Sat Flow, veh/h	3483	3582	1596	3483	3582	1575	3483	3582	1596	3483	3582	1596
Grp Volume(v), veh/h	386	286	65	103	597	37	486	409	55	78	385	449
Grp Sat Flow(s),veh/h/ln	1742	1791	1596	1742	1791	1575	1742	1791	1596	1742	1791	1596
Q Serve(g_s), s	7.7	4.5	1.8	2.0	11.0	1.2	9.0	5.5	1.4	1.5	5.8	15.6
Cycle Q Clear(g_c), s	7.7	4.5	1.8	2.0	11.0	1.2	9.0	5.5	1.4	1.5	5.8	15.6
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	398	948	628	215	759	423	448	1395	720	194	1134	688
V/C Ratio(X)	0.97	0.30	0.10	0.48	0.79	0.09	1.09	0.29	0.08	0.40	0.34	0.65
Avail Cap(c_a), veh/h	398	1075	684	249	921	494	448	1395	720	249	1134	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	20.6	13.4	31.7	26.1	19.2	30.5	14.7	10.9	31.9	18.3	15.8
Incr Delay (d2), s/veh	35.8	0.2	0.1	1.6	3.8	0.1	65.2	0.5	0.2	1.3	0.8	4.8
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	5.0	1.8	0.6	0.9	4.8	0.4	7.5	2.1	0.5	0.6	2.3	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	66.6	20.7	13.5	33.4	29.8	19.3	95.7	15.2	11.1	33.3	19.1	20.6
LnGrp LOS	E	C	B	C	C	B	F	B	B	C	B	C
Approach Vol, veh/h		737			737			950			912	
Approach Delay, s/veh		44.1			29.8			56.1			21.0	
Approach LOS		D			C			E			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	31.3	8.3	22.5	13.0	26.2	12.0	18.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	23.0	5.0	21.0	9.0	19.0	8.0	18.0
Max Q Clear Time (g_c+I1), s	3.5	7.5	4.0	6.5	11.0	17.6	9.7	13.0
Green Ext Time (p_c), s	0.0	2.3	0.0	1.6	0.0	0.6	0.0	1.7

Intersection Summary	
HCM 7th Control Delay, s/veh	38.1
HCM 7th LOS	D



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	8	502	609	207	336	12
Future Volume (veh/h)	8	502	609	207	336	12
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1885	1870	1870
Adj Flow Rate, veh/h	8	502	609	168	343	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	1	1	2	2
Cap, veh/h	522	2585	1804	497	496	221
Arrive On Green	0.01	0.73	0.65	0.65	0.14	0.00
Sat Flow, veh/h	1781	3647	2869	764	3563	1585
Grp Volume(v), veh/h	8	502	393	384	343	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1748	1781	1585
Q Serve(g_s), s	0.1	2.7	5.9	5.9	5.5	0.0
Cycle Q Clear(g_c), s	0.1	2.7	5.9	5.9	5.5	0.0
Prop In Lane	1.00			0.44	1.00	1.00
Lane Grp Cap(c), veh/h	522	2585	1165	1136	496	221
V/C Ratio(X)	0.02	0.19	0.34	0.34	0.69	0.00
Avail Cap(c_a), veh/h	652	2585	1165	1136	1069	476
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.70	0.70	1.00	0.00
Uniform Delay (d), s/veh	3.3	2.6	4.7	4.7	24.6	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.5	0.6	1.7	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.5	1.5	1.5	2.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	3.4	2.8	5.2	5.3	26.3	0.0
LnGrp LOS	A	A	A	A	C	
Approach Vol, veh/h		510	777		343	
Approach Delay, s/veh		2.8	5.3		26.3	
Approach LOS		A	A		C	

Timer - Assigned Phs	2		4	5	6
Phs Duration (G+Y+Rc), s	47.6		12.4	4.6	43.0
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	34.0		18.0	5.0	25.0
Max Q Clear Time (g_c+I1), s	4.7		7.5	2.1	7.9
Green Ext Time (p_c), s	3.5		0.9	0.0	4.5

Intersection Summary	
HCM 7th Control Delay, s/veh	8.9
HCM 7th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	192	612	110	322	630	234	233	545	259	221	364	42
Future Volume (veh/h)	192	612	110	322	630	234	233	545	259	221	364	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	192	612	37	322	630	129	233	545	210	221	364	17
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	1	1	1
Cap, veh/h	288	1050	448	372	817	841	266	1292	745	268	1302	713
Arrive On Green	0.08	0.21	0.21	0.11	0.23	0.23	0.08	0.36	0.36	0.08	0.36	0.36
Sat Flow, veh/h	3456	5106	1583	3456	3554	2723	3456	3554	1581	3483	3582	1594
Grp Volume(v), veh/h	192	612	37	322	630	129	233	545	210	221	364	17
Grp Sat Flow(s),veh/h/ln	1728	1702	1583	1728	1777	1362	1728	1777	1581	1742	1791	1594
Q Serve(g_s), s	3.5	7.0	1.1	6.0	10.8	2.2	4.3	7.5	5.3	4.1	4.7	0.4
Cycle Q Clear(g_c), s	3.5	7.0	1.1	6.0	10.8	2.2	4.3	7.5	5.3	4.1	4.7	0.4
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	288	1050	448	372	817	841	266	1292	745	268	1302	713
V/C Ratio(X)	0.67	0.58	0.08	0.87	0.77	0.15	0.88	0.42	0.28	0.82	0.28	0.02
Avail Cap(c_a), veh/h	372	1414	560	372	984	969	266	1292	745	268	1302	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	28.9	23.3	17.1	28.5	23.4	16.4	29.7	15.6	10.5	29.6	14.7	10.0
Incr Delay (d2), s/veh	2.8	0.5	0.1	18.7	3.1	0.1	26.3	1.0	0.9	17.0	0.5	0.1
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	1.5	2.7	0.4	3.3	4.5	0.6	2.6	2.8	1.7	2.2	1.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.7	23.8	17.2	47.3	26.6	16.5	56.0	16.6	11.4	46.6	15.1	10.1
LnGrp LOS	C	C	B	D	C	B	E	B	B	D	B	B
Approach Vol, veh/h		841			1081			988			602	
Approach Delay, s/veh		25.3			31.5			24.8			26.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	27.6	11.0	17.4	9.0	27.6	9.4	19.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.0	19.0	7.0	18.0	5.0	19.0	7.0	18.0
Max Q Clear Time (g_c+I1), s	6.1	9.5	8.0	9.0	6.3	6.7	5.5	12.8
Green Ext Time (p_c), s	0.0	2.9	0.0	2.8	0.0	1.7	0.1	2.1

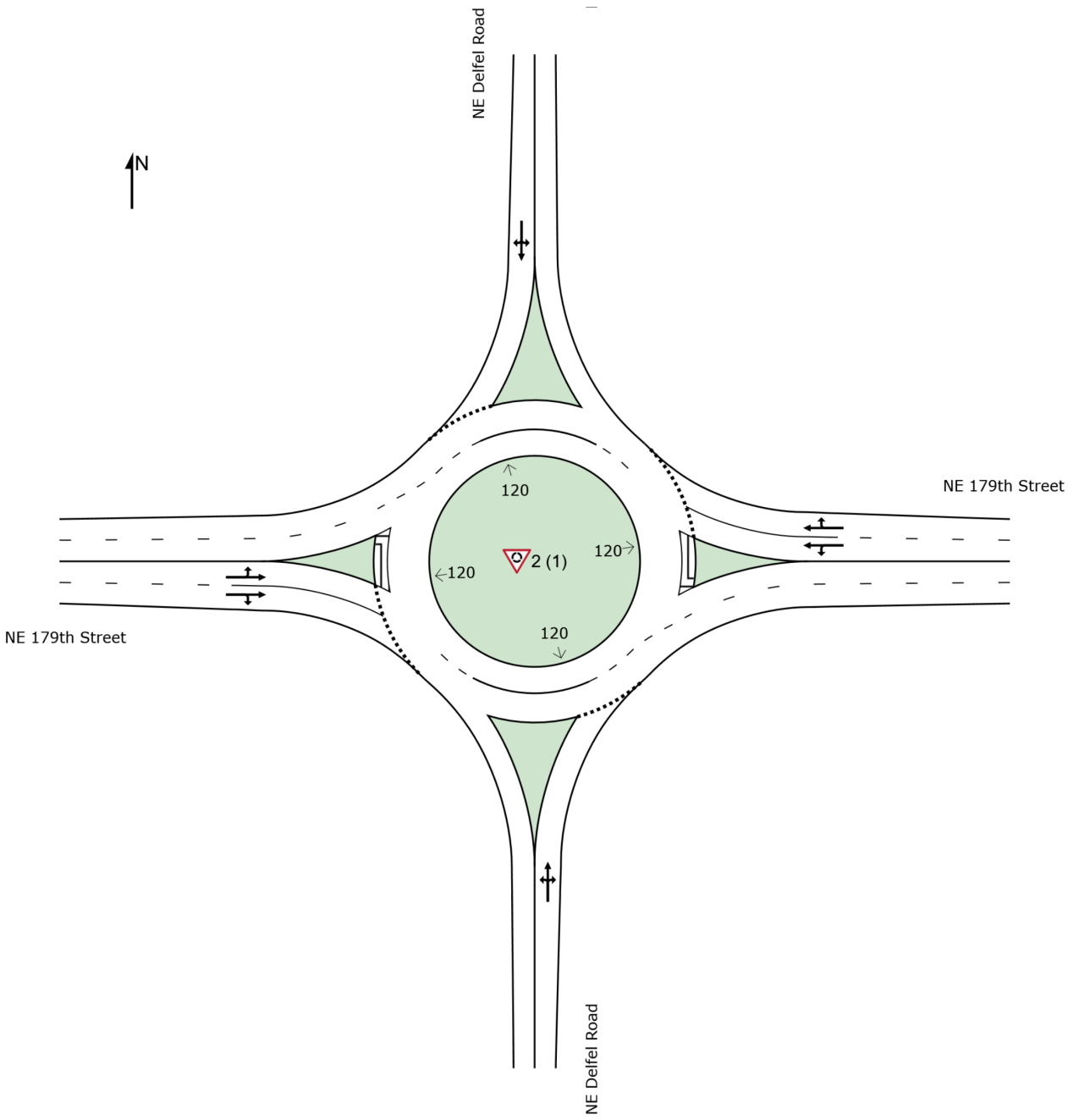
Intersection Summary	
HCM 7th Control Delay, s/veh	27.3
HCM 7th LOS	C

SITE LAYOUT

Site: [2 (1)] 2028 Pre-Development - AM Peak Hour (Int 2)

NE 179th Street at NE Delfel Road
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: [2 (1)] 2028 Pre-Development - AM Peak Hour (Int 2)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

NE 179th Street at NE Delfel Road
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: NE Delfel Road															
3	L2	All MCs	11	12.6	11	12.6	0.146	12.4	LOS B	0.5	14.4	0.49	0.64	0.49	34.2
8	T1	All MCs	3	12.6	3	12.6	0.146	6.0	LOS A	0.5	14.4	0.49	0.64	0.49	35.1
18	R2	All MCs	104	12.6	104	12.6	0.146	6.0	LOS A	0.5	14.4	0.49	0.64	0.49	34.8
Approach			118	12.6	118	12.6	0.146	6.6	LOS A	0.5	14.4	0.49	0.64	0.49	34.7
East: NE 179th Street															
1	L2	All MCs	170	12.1	170	12.1	0.179	10.3	LOS B	1.0	26.6	0.12	0.55	0.12	33.4
6	T1	All MCs	183	12.1	183	12.1	0.179	3.8	LOS A	1.0	27.1	0.12	0.45	0.12	35.5
16	R2	All MCs	183	12.1	183	12.1	0.179	4.0	LOS A	1.0	27.1	0.11	0.39	0.11	35.9
Approach			535	12.1	535	12.1	0.179	6.0	LOS A	1.0	27.1	0.12	0.46	0.12	34.9
North: NE Delfel Road															
7	L2	All MCs	351	2.8	351	2.8	0.348	11.5	LOS B	1.4	36.3	0.43	0.69	0.43	32.3
4	T1	All MCs	11	2.8	11	2.8	0.348	5.1	LOS A	1.4	36.3	0.43	0.69	0.43	32.9
14	R2	All MCs	12	2.8	12	2.8	0.348	5.1	LOS A	1.4	36.3	0.43	0.69	0.43	32.7
Approach			374	2.8	374	2.8	0.348	11.1	LOS B	1.4	36.3	0.43	0.69	0.43	32.3
West: NE 179th Street															
5	L2	All MCs	8	4.5	8	4.5	0.133	12.8	LOS B	0.7	19.0	0.60	0.58	0.60	33.8
2	T1	All MCs	278	4.5	278	4.5	0.133	6.0	LOS A	0.8	21.0	0.59	0.55	0.59	34.7
12	R2	All MCs	8	4.5	8	4.5	0.133	5.9	LOS A	0.8	21.0	0.59	0.54	0.59	34.4
Approach			293	4.5	293	4.5	0.133	6.2	LOS A	0.8	21.0	0.59	0.55	0.59	34.6
All Vehicles			1321	7.8	1321	7.8	0.348	7.5	LOS A	1.4	36.3	0.34	0.56	0.34	34.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [2 (2)] 2028 Post-Development - AM Peak Hour (Int 2)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

NE 179th Street at NE Delfel Road
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: NE Delfel Road															
3	L2	All MCs	11	12.6	11	12.6	0.147	12.5	LOS B	0.5	14.5	0.49	0.64	0.49	34.2
8	T1	All MCs	3	12.6	3	12.6	0.147	6.0	LOS A	0.5	14.5	0.49	0.64	0.49	35.1
18	R2	All MCs	104	12.6	104	12.6	0.147	6.0	LOS A	0.5	14.5	0.49	0.64	0.49	34.7
Approach			118	12.6	118	12.6	0.147	6.6	LOS A	0.5	14.5	0.49	0.64	0.49	34.7
East: NE 179th Street															
1	L2	All MCs	170	12.1	170	12.1	0.180	10.3	LOS B	1.0	26.8	0.12	0.55	0.12	33.4
6	T1	All MCs	187	12.1	187	12.1	0.180	3.8	LOS A	1.0	27.2	0.12	0.45	0.12	35.5
16	R2	All MCs	183	12.1	183	12.1	0.180	4.0	LOS A	1.0	27.2	0.11	0.39	0.11	35.9
Approach			539	12.1	539	12.1	0.180	5.9	LOS A	1.0	27.2	0.12	0.46	0.12	34.9
North: NE Delfel Road															
7	L2	All MCs	351	2.8	351	2.8	0.350	11.5	LOS B	1.4	36.5	0.43	0.69	0.43	32.3
4	T1	All MCs	11	2.8	11	2.8	0.350	5.1	LOS A	1.4	36.5	0.43	0.69	0.43	32.9
14	R2	All MCs	13	2.8	13	2.8	0.350	5.1	LOS A	1.4	36.5	0.43	0.69	0.43	32.7
Approach			375	2.8	375	2.8	0.350	11.1	LOS B	1.4	36.5	0.43	0.69	0.43	32.3
West: NE 179th Street															
5	L2	All MCs	9	4.5	9	4.5	0.138	12.8	LOS B	0.8	19.7	0.60	0.58	0.60	33.8
2	T1	All MCs	288	4.5	288	4.5	0.138	6.0	LOS A	0.8	21.9	0.59	0.56	0.59	34.6
12	R2	All MCs	8	4.5	8	4.5	0.138	5.9	LOS A	0.8	21.9	0.59	0.54	0.59	34.4
Approach			304	4.5	304	4.5	0.138	6.2	LOS A	0.8	21.9	0.59	0.56	0.59	34.6
All Vehicles			1337	7.8	1337	7.8	0.350	7.5	LOS A	1.4	36.5	0.35	0.56	0.35	34.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [2 (3)] 2028 Pre-Development - PM Peak Hour (Int 2)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

NE 179th Street at NE Delfel Road
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: NE Delfel Road															
3	L2	All MCs	12	1.9	12	1.9	0.248	11.4	LOS B	1.0	24.6	0.43	0.56	0.43	34.8
8	T1	All MCs	37	1.9	37	1.9	0.248	5.0	LOS A	1.0	24.6	0.43	0.56	0.43	35.5
18	R2	All MCs	210	1.9	210	1.9	0.248	5.0	LOS A	1.0	24.6	0.43	0.56	0.43	35.3
Approach			259	1.9	259	1.9	0.248	5.3	LOS A	1.0	24.6	0.43	0.56	0.43	35.3
East: NE 179th Street															
1	L2	All MCs	177	4.1	177	4.1	0.233	10.5	LOS B	1.3	33.6	0.25	0.52	0.25	33.8
6	T1	All MCs	307	4.1	307	4.1	0.233	4.0	LOS A	1.3	34.3	0.24	0.46	0.24	35.3
16	R2	All MCs	235	4.1	235	4.1	0.233	4.1	LOS A	1.3	34.3	0.23	0.40	0.23	35.8
Approach			719	4.1	719	4.1	0.233	5.7	LOS A	1.3	34.3	0.24	0.46	0.24	35.0
North: NE Delfel Road															
7	L2	All MCs	183	2.5	183	2.5	0.214	11.6	LOS B	0.8	20.4	0.43	0.69	0.43	32.6
4	T1	All MCs	15	2.5	15	2.5	0.214	5.2	LOS A	0.8	20.4	0.43	0.69	0.43	33.2
14	R2	All MCs	20	2.5	20	2.5	0.214	5.1	LOS A	0.8	20.4	0.43	0.69	0.43	33.0
Approach			218	2.5	218	2.5	0.214	10.5	LOS B	0.8	20.4	0.43	0.69	0.43	32.6
West: NE 179th Street															
5	L2	All MCs	35	5.5	35	5.5	0.109	11.8	LOS B	0.6	14.4	0.48	0.56	0.48	33.6
2	T1	All MCs	227	5.5	227	5.5	0.109	5.1	LOS A	0.6	15.4	0.47	0.50	0.47	34.9
12	R2	All MCs	7	5.5	7	5.5	0.109	5.1	LOS A	0.6	15.4	0.46	0.46	0.46	34.8
Approach			269	5.5	269	5.5	0.109	6.0	LOS A	0.6	15.4	0.47	0.51	0.47	34.7
All Vehicles			1465	3.7	1465	3.7	0.248	6.4	LOS A	1.3	34.3	0.34	0.52	0.34	34.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [2 (4)] 2028 Post-Development - PM Peak Hour (Int 2)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

NE 179th Street at NE Delfel Road
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: NE Delfel Road															
3	L2	All MCs	12	1.9	12	1.9	0.249	11.5	LOS B	1.0	24.7	0.44	0.57	0.44	34.8
8	T1	All MCs	37	1.9	37	1.9	0.249	5.1	LOS A	1.0	24.7	0.44	0.57	0.44	35.5
18	R2	All MCs	210	1.9	210	1.9	0.249	5.0	LOS A	1.0	24.7	0.44	0.57	0.44	35.2
Approach			259	1.9	259	1.9	0.249	5.3	LOS A	1.0	24.7	0.44	0.57	0.44	35.3
East: NE 179th Street															
1	L2	All MCs	177	4.1	177	4.1	0.236	10.5	LOS B	1.3	34.1	0.25	0.52	0.25	33.8
6	T1	All MCs	316	4.1	316	4.1	0.236	4.0	LOS A	1.3	34.8	0.24	0.46	0.24	35.3
16	R2	All MCs	235	4.1	235	4.1	0.236	4.1	LOS A	1.3	34.8	0.23	0.40	0.23	35.8
Approach			728	4.1	728	4.1	0.236	5.6	LOS A	1.3	34.8	0.24	0.45	0.24	35.1
North: NE Delfel Road															
7	L2	All MCs	183	2.5	183	2.5	0.215	11.6	LOS B	0.8	20.6	0.44	0.69	0.44	32.6
4	T1	All MCs	15	2.5	15	2.5	0.215	5.2	LOS A	0.8	20.6	0.44	0.69	0.44	33.2
14	R2	All MCs	21	2.5	21	2.5	0.215	5.2	LOS A	0.8	20.6	0.44	0.69	0.44	33.0
Approach			219	2.5	219	2.5	0.215	10.5	LOS B	0.8	20.6	0.44	0.69	0.44	32.7
West: NE 179th Street															
5	L2	All MCs	36	5.5	36	5.5	0.112	11.8	LOS B	0.6	14.9	0.48	0.56	0.48	33.6
2	T1	All MCs	234	5.5	234	5.5	0.112	5.1	LOS A	0.6	15.9	0.47	0.50	0.47	34.9
12	R2	All MCs	7	5.5	7	5.5	0.112	5.1	LOS A	0.6	15.9	0.46	0.46	0.46	34.8
Approach			277	5.5	277	5.5	0.112	6.0	LOS A	0.6	15.9	0.47	0.51	0.47	34.7
All Vehicles			1483	3.7	1483	3.7	0.249	6.4	LOS A	1.3	34.8	0.35	0.52	0.35	34.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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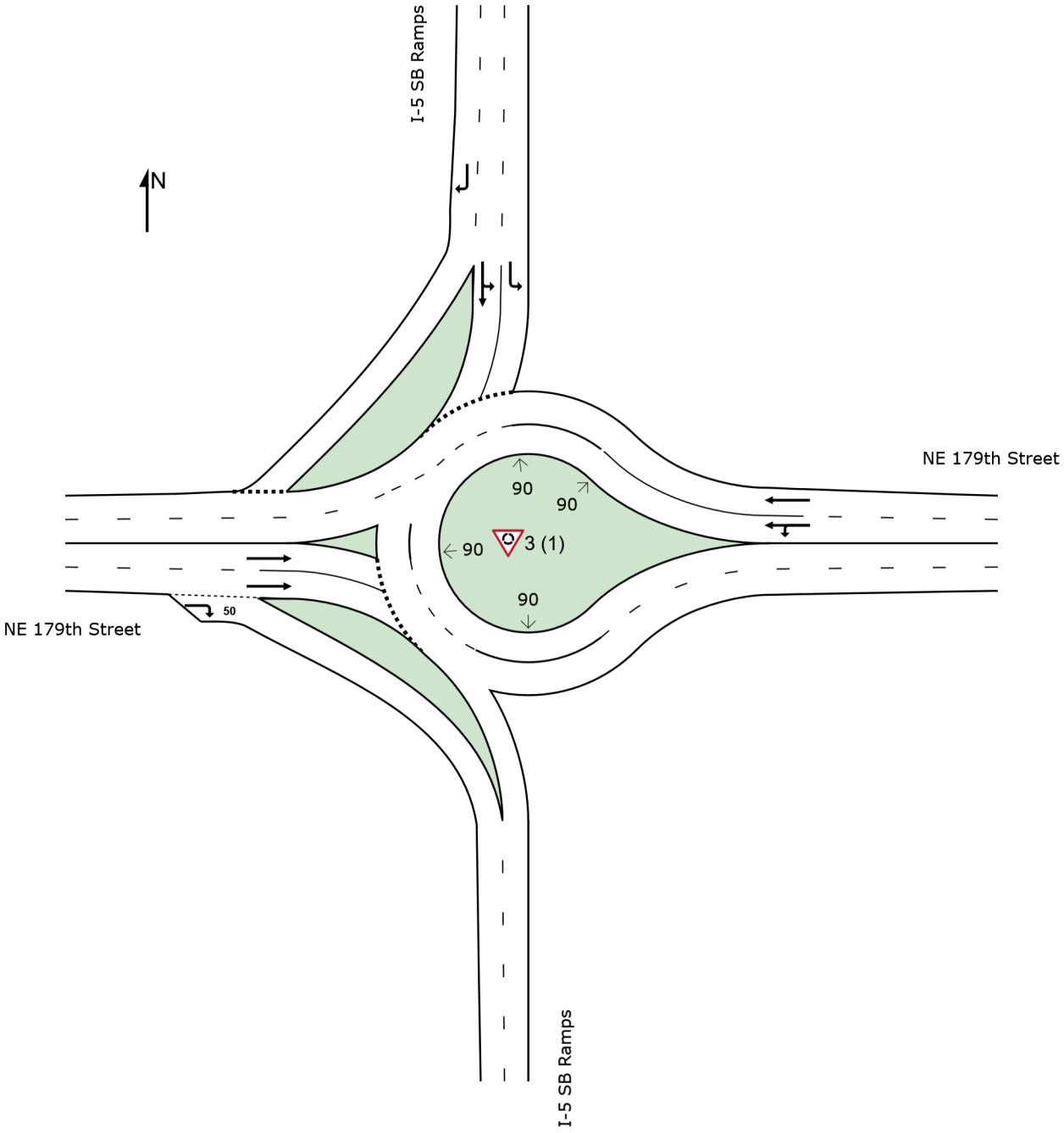
SITE LAYOUT

Site: [3 (1)] 2028 Pre-Development - AM Peak Hour (Int 3)

I-5 SB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: [3 (1)] 2028 Pre-Development - AM Peak Hour (Int 3)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

I-5 SB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
East: NE 179th Street															
1	L2	All MCs	676	7.1	676	7.1	0.480	9.8	LOS A	0.0	0.0	0.00	0.66	0.00	32.9
6	T1	All MCs	368	7.1	368	7.1	0.302	4.3	LOS A	0.0	0.0	0.00	0.39	0.00	36.4
Approach			1044	7.1	1044	7.1	0.480	7.8	LOS A	0.0	0.0	0.00	0.57	0.00	34.0
North: I-5 SB Ramps															
7	L2	All MCs	340	7.8	340	7.8	0.168	12.5	LOS B	0.7	18.3	0.56	0.77	0.56	31.6
4	T1	All MCs	1	7.8	1	7.8	0.168	6.6	LOS A	0.7	18.3	0.55	0.75	0.55	32.4
14	R2	All MCs	98	7.8	98	7.8	0.071	5.3	LOS A	0.3	7.9	0.37	0.53	0.37	34.9
Approach			439	7.8	439	7.8	0.168	10.9	LOS B	0.7	18.3	0.51	0.72	0.51	32.2
West: NE 179th Street															
2	T1	All MCs	196	6.4	196	6.4	0.106	7.3	LOS A	0.5	13.9	0.63	0.66	0.63	34.2
12	R2	All MCs	556	6.4	556	6.4	0.353	4.1	LOS A	0.0	0.0	0.00	0.46	0.00	36.1
Approach			752	6.4	752	6.4	0.353	4.9	LOS A	0.5	13.9	0.16	0.51	0.16	35.6
All Vehicles			2235	7.0	2235	7.0	0.480	7.5	LOS A	0.7	18.3	0.16	0.58	0.16	34.1

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3 (2)] 2028 Post-Development - AM Peak Hour (Int 3)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

I-5 SB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
East: NE 179th Street															
1	L2	All MCs	676	7.1	676	7.1	0.480	9.8	LOS A	0.0	0.0	0.00	0.66	0.00	32.9
6	T1	All MCs	370	7.1	370	7.1	0.303	4.3	LOS A	0.0	0.0	0.00	0.39	0.00	36.4
Approach			1046	7.1	1046	7.1	0.480	7.8	LOS A	0.0	0.0	0.00	0.57	0.00	34.0
North: I-5 SB Ramps															
7	L2	All MCs	340	7.8	340	7.8	0.168	12.5	LOS B	0.7	18.3	0.56	0.77	0.56	31.6
4	T1	All MCs	1	7.8	1	7.8	0.168	6.6	LOS A	0.7	18.3	0.55	0.75	0.55	32.4
14	R2	All MCs	100	7.8	100	7.8	0.073	5.3	LOS A	0.3	8.1	0.37	0.53	0.37	34.9
Approach			441	7.8	441	7.8	0.168	10.9	LOS B	0.7	18.3	0.51	0.71	0.51	32.3
West: NE 179th Street															
2	T1	All MCs	205	6.4	205	6.4	0.111	7.3	LOS A	0.6	14.5	0.63	0.66	0.63	34.2
12	R2	All MCs	556	6.4	556	6.4	0.353	4.1	LOS A	0.0	0.0	0.00	0.46	0.00	36.1
Approach			761	6.4	761	6.4	0.353	4.9	LOS A	0.6	14.5	0.17	0.52	0.17	35.5
All Vehicles			2248	7.0	2248	7.0	0.480	7.5	LOS A	0.7	18.3	0.16	0.58	0.16	34.1

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3 (3)] 2028 Pre-Development - PM Peak Hour (Int 3)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

I-5 SB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
East: NE 179th Street															
1	L2	All MCs	855	2.0	855	2.0	0.579	9.7	LOS A	0.0	0.0	0.00	0.67	0.00	33.0
6	T1	All MCs	574	2.0	574	2.0	0.434	4.2	LOS A	0.0	0.0	0.00	0.40	0.00	36.5
Approach			1429	2.0	1429	2.0	0.579	7.5	LOS A	0.0	0.0	0.00	0.56	0.00	34.3
North: I-5 SB Ramps															
7	L2	All MCs	500	6.0	500	6.0	0.264	13.6	LOS B	1.2	31.7	0.65	0.81	0.65	31.2
4	T1	All MCs	3	6.0	3	6.0	0.264	7.6	LOS A	1.2	31.7	0.65	0.79	0.65	32.1
14	R2	All MCs	159	6.0	159	6.0	0.124	6.1	LOS A	0.6	15.7	0.49	0.58	0.49	34.7
Approach			662	6.0	662	6.0	0.264	11.8	LOS B	1.2	31.7	0.61	0.76	0.61	32.0
West: NE 179th Street															
2	T1	All MCs	283	2.8	283	2.8	0.176	8.9	LOS A	1.0	26.6	0.76	0.74	0.76	33.7
12	R2	All MCs	366	2.8	366	2.8	0.225	4.0	LOS A	0.0	0.0	0.00	0.46	0.00	36.2
Approach			649	2.8	649	2.8	0.225	6.1	LOS A	1.0	26.6	0.33	0.58	0.33	35.1
All Vehicles			2740	3.2	2740	3.2	0.579	8.2	LOS A	1.2	31.7	0.23	0.61	0.23	33.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [3 (4)] 2028 Post-Development - PM Peak Hour (Int 3)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

I-5 SB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
East: NE 179th Street															
1	L2	All MCs	855	2.0	855	2.0	0.579	9.7	LOS A	0.0	0.0	0.00	0.67	0.00	33.0
6	T1	All MCs	579	2.0	579	2.0	0.437	4.2	LOS A	0.0	0.0	0.00	0.40	0.00	36.5
Approach			1434	2.0	1434	2.0	0.579	7.5	LOS A	0.0	0.0	0.00	0.56	0.00	34.3
North: I-5 SB Ramps															
7	L2	All MCs	500	6.0	500	6.0	0.265	13.6	LOS B	1.2	31.8	0.65	0.81	0.65	31.2
4	T1	All MCs	3	6.0	3	6.0	0.265	7.6	LOS A	1.2	31.8	0.65	0.79	0.65	32.1
14	R2	All MCs	163	6.0	163	6.0	0.127	6.1	LOS A	0.6	16.2	0.49	0.58	0.49	34.7
Approach			666	6.0	666	6.0	0.265	11.7	LOS B	1.2	31.8	0.61	0.76	0.61	32.0
West: NE 179th Street															
2	T1	All MCs	290	2.8	290	2.8	0.180	8.9	LOS A	1.1	27.3	0.76	0.74	0.76	33.7
12	R2	All MCs	366	2.8	366	2.8	0.225	4.0	LOS A	0.0	0.0	0.00	0.46	0.00	36.2
Approach			656	2.8	656	2.8	0.225	6.1	LOS A	1.1	27.3	0.34	0.58	0.34	35.1
All Vehicles			2756	3.2	2756	3.2	0.579	8.2	LOS A	1.2	31.8	0.23	0.61	0.23	33.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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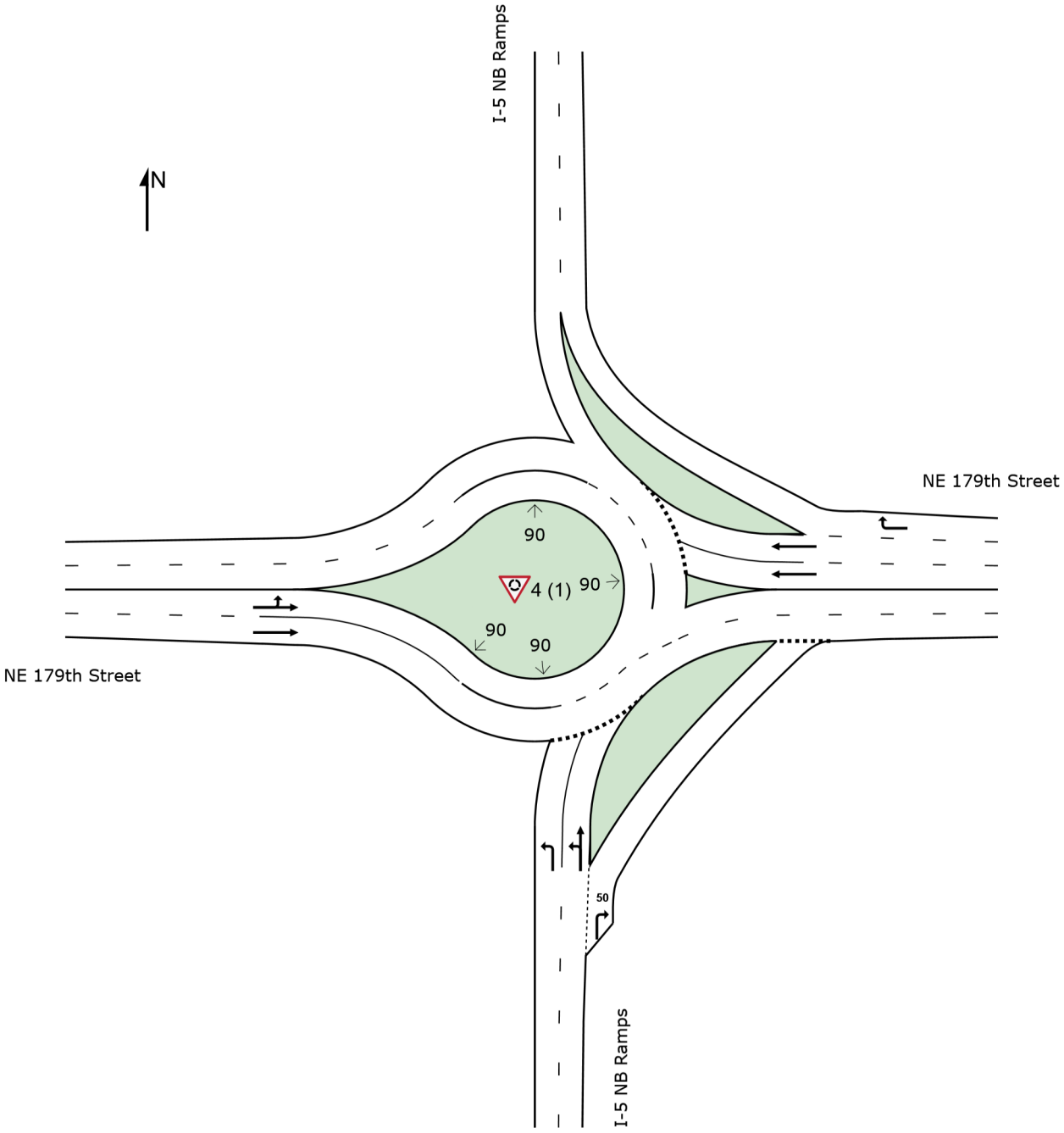
SITE LAYOUT

Site: [4 (1)] 2028 Pre-Development - AM Peak Hour (Int 4)

I-5 NB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: [4 (1)] 2028 Pre-Development - AM Peak Hour (Int 4)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

I-5 NB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: I-5 NB Ramps															
3	L2	All MCs	189	8.0	189	8.0	0.079	11.0	LOS B	0.3	7.0	0.38	0.69	0.38	32.1
8	T1	All MCs	1	8.0	1	8.0	0.079	5.3	LOS A	0.3	7.0	0.37	0.68	0.37	32.8
18	R2	All MCs	614	8.0	614	8.0	0.443	5.6	LOS A	2.1	55.0	0.46	0.59	0.46	34.7
Approach			804	8.0	804	8.0	0.443	6.9	LOS A	2.1	55.0	0.44	0.62	0.44	34.0
East: NE 179th Street															
6	T1	All MCs	857	5.5	857	5.5	0.324	5.2	LOS A	1.5	39.2	0.39	0.48	0.39	35.0
16	R2	All MCs	274	5.5	274	5.5	0.173	4.0	LOS A	0.0	0.0	0.00	0.46	0.00	36.2
Approach			1131	5.5	1131	5.5	0.324	4.9	LOS A	1.5	39.2	0.30	0.48	0.30	35.3
West: NE 179th Street															
5	L2	All MCs	106	6.0	106	6.0	0.196	9.8	LOS A	0.0	0.0	0.00	0.54	0.00	34.5
2	T1	All MCs	437	6.0	437	6.0	0.196	4.3	LOS A	0.0	0.0	0.00	0.45	0.00	36.0
Approach			543	6.0	543	6.0	0.196	5.3	LOS A	0.0	0.0	0.00	0.46	0.00	35.6
All Vehicles			2478	6.4	2478	6.4	0.443	5.6	LOS A	2.1	55.0	0.28	0.52	0.28	34.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4 (2)] 2028 Post-Development - AM Peak Hour (Int 4)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

I-5 NB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: I-5 NB Ramps															
3	L2	All MCs	189	8.0	189	8.0	0.080	11.0	LOS B	0.3	7.0	0.38	0.69	0.38	32.0
8	T1	All MCs	1	8.0	1	8.0	0.080	5.3	LOS A	0.3	7.0	0.37	0.68	0.37	32.8
18	R2	All MCs	614	8.0	614	8.0	0.444	5.6	LOS A	2.1	55.2	0.46	0.59	0.46	34.7
Approach			804	8.0	804	8.0	0.444	6.9	LOS A	2.1	55.2	0.44	0.62	0.44	34.0
East: NE 179th Street															
6	T1	All MCs	859	5.5	859	5.5	0.325	5.2	LOS A	1.5	39.4	0.40	0.48	0.40	35.0
16	R2	All MCs	274	5.5	274	5.5	0.173	4.0	LOS A	0.0	0.0	0.00	0.46	0.00	36.2
Approach			1133	5.5	1133	5.5	0.325	4.9	LOS A	1.5	39.4	0.30	0.48	0.30	35.3
West: NE 179th Street															
5	L2	All MCs	110	6.0	110	6.0	0.199	9.8	LOS A	0.0	0.0	0.00	0.54	0.00	34.4
2	T1	All MCs	442	6.0	442	6.0	0.199	4.3	LOS A	0.0	0.0	0.00	0.45	0.00	35.9
Approach			552	6.0	552	6.0	0.199	5.4	LOS A	0.0	0.0	0.00	0.47	0.00	35.6
All Vehicles			2489	6.4	2489	6.4	0.444	5.7	LOS A	2.1	55.2	0.28	0.52	0.28	34.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4 (3)] 2028 Pre-Development - PM Peak Hour (Int 4)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

I-5 NB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: I-5 NB Ramps															
3	L2	All MCs	397	2.0	397	2.0	0.161	11.3	LOS B	0.6	14.9	0.45	0.73	0.45	32.1
8	T1	All MCs	1	2.0	1	2.0	0.161	5.6	LOS A	0.6	14.9	0.44	0.72	0.44	32.7
18	R2	All MCs	1157	2.0	1157	2.0	0.821	9.3	LOS A	8.9	227.1	0.74	0.95	1.08	34.2
Approach			1555	2.0	1555	2.0	0.821	9.8	LOS A	8.9	227.1	0.67	0.89	0.92	33.6
East: NE 179th Street															
6	T1	All MCs	1030	2.3	1030	2.3	0.412	5.7	LOS A	2.1	52.9	0.53	0.53	0.53	34.6
16	R2	All MCs	536	2.3	536	2.3	0.327	4.0	LOS A	0.0	0.0	0.00	0.46	0.00	36.2
Approach			1566	2.3	1566	2.3	0.412	5.1	LOS A	2.1	52.9	0.35	0.51	0.35	35.1
West: NE 179th Street															
5	L2	All MCs	135	5.2	135	5.2	0.283	9.8	LOS A	0.0	0.0	0.00	0.52	0.00	34.6
2	T1	All MCs	656	5.2	656	5.2	0.283	4.3	LOS A	0.0	0.0	0.00	0.44	0.00	36.0
Approach			791	5.2	791	5.2	0.283	5.2	LOS A	0.0	0.0	0.00	0.46	0.00	35.8
All Vehicles			3912	2.8	3912	2.8	0.821	7.0	LOS A	8.9	227.1	0.40	0.65	0.51	34.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [4 (4)] 2028 Post-Development - PM Peak Hour (Int 4)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

I-5 NB Ramps at NE 179th Street
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: I-5 NB Ramps															
3	L2	All MCs	397	2.0	397	2.0	0.161	11.3	LOS B	0.6	14.9	0.45	0.73	0.45	32.1
8	T1	All MCs	1	2.0	1	2.0	0.161	5.6	LOS A	0.6	14.9	0.44	0.72	0.44	32.7
18	R2	All MCs	1157	2.0	1157	2.0	0.822	9.3	LOS A	9.0	228.3	0.74	0.95	1.09	34.2
Approach			1555	2.0	1555	2.0	0.822	9.8	LOS A	9.0	228.3	0.67	0.90	0.93	33.6
East: NE 179th Street															
6	T1	All MCs	1035	2.3	1035	2.3	0.414	5.7	LOS A	2.1	53.4	0.53	0.53	0.53	34.6
16	R2	All MCs	536	2.3	536	2.3	0.327	4.0	LOS A	0.0	0.0	0.00	0.46	0.00	36.2
Approach			1571	2.3	1571	2.3	0.414	5.1	LOS A	2.1	53.4	0.35	0.51	0.35	35.1
West: NE 179th Street															
5	L2	All MCs	138	5.2	138	5.2	0.286	9.8	LOS A	0.0	0.0	0.00	0.52	0.00	34.6
2	T1	All MCs	660	5.2	660	5.2	0.286	4.3	LOS A	0.0	0.0	0.00	0.44	0.00	36.0
Approach			798	5.2	798	5.2	0.286	5.2	LOS A	0.0	0.0	0.00	0.46	0.00	35.7
All Vehicles			3924	2.8	3924	2.8	0.822	7.0	LOS A	9.0	228.3	0.40	0.65	0.51	34.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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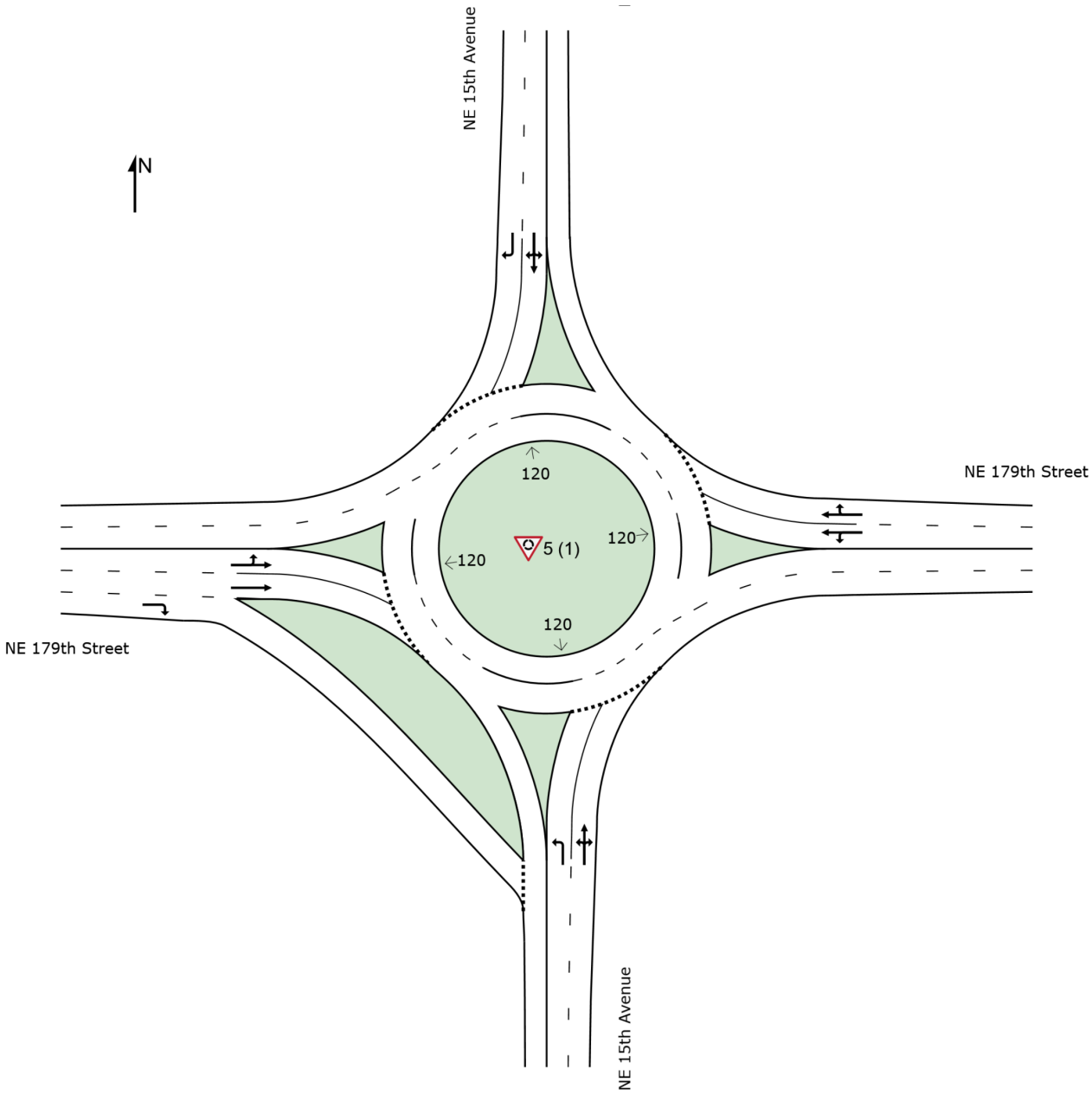
SITE LAYOUT

Site: [5 (1)] 2028 Pre-Development - AM Peak Hour (Int 5)

NE 179th Street at NE 15th Avenue
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: [5 (1)] 2028 Pre-Development - AM Peak Hour (Int 5)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

NE 179th Street at NE 15th Avenue
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: NE 15th Avenue															
3	L2	All MCs	165	6.6	165	6.6	0.150	12.3	LOS B	0.6	16.2	0.52	0.71	0.52	32.2
8	T1	All MCs	71	6.6	71	6.6	0.150	5.4	LOS A	0.6	16.2	0.51	0.61	0.51	34.5
18	R2	All MCs	48	6.6	48	6.6	0.150	5.6	LOS A	0.6	16.2	0.51	0.61	0.51	34.2
Approach			284	6.6	284	6.6	0.150	9.4	LOS A	0.6	16.2	0.52	0.67	0.52	33.1
East: NE 179th Street															
1	L2	All MCs	117	6.0	117	6.0	0.374	12.3	LOS B	1.7	45.1	0.54	0.63	0.54	33.4
6	T1	All MCs	574	6.0	574	6.0	0.374	5.6	LOS A	1.8	47.0	0.53	0.57	0.53	34.6
16	R2	All MCs	91	6.0	91	6.0	0.374	5.6	LOS A	1.8	47.0	0.53	0.53	0.53	34.6
Approach			783	6.0	783	6.0	0.374	6.6	LOS A	1.8	47.0	0.53	0.57	0.53	34.4
North: NE 15th Avenue															
7	L2	All MCs	147	11.8	147	11.8	0.417	14.4	LOS B	1.9	53.3	0.67	0.83	0.76	32.1
4	T1	All MCs	64	11.8	64	11.8	0.417	7.9	LOS A	1.9	53.3	0.67	0.83	0.76	32.9
14	R2	All MCs	450	11.8	450	11.8	0.417	7.2	LOS A	2.1	56.8	0.66	0.76	0.73	34.1
Approach			661	11.8	661	11.8	0.417	8.8	LOS A	2.1	56.8	0.66	0.78	0.74	33.5
West: NE 179th Street															
5	L2	All MCs	270	5.6	270	5.6	0.197	11.0	LOS B	1.0	27.1	0.43	0.63	0.43	32.3
2	T1	All MCs	250	5.6	250	5.6	0.197	4.9	LOS A	1.0	27.1	0.44	0.48	0.44	35.0
12	R2	All MCs	228	5.6	228	5.6	0.141	4.3	LOS A	0.6	16.7	0.28	0.46	0.28	35.6
Approach			748	5.6	748	5.6	0.197	6.9	LOS A	1.0	27.1	0.39	0.53	0.39	34.1
All Vehicles			2475	7.5	2475	7.5	0.417	7.6	LOS A	2.1	56.8	0.52	0.63	0.54	33.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [5 (2)] 2028 Post-Development - AM Peak Hour (Int 5)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

NE 179th Street at NE 15th Avenue
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: NE 15th Avenue															
3	L2	All MCs	166	6.6	166	6.6	0.151	12.3	LOS B	0.6	16.3	0.52	0.71	0.52	32.2
8	T1	All MCs	71	6.6	71	6.6	0.151	5.4	LOS A	0.6	16.3	0.51	0.61	0.51	34.5
18	R2	All MCs	48	6.6	48	6.6	0.151	5.6	LOS A	0.6	16.3	0.51	0.61	0.51	34.2
Approach			285	6.6	285	6.6	0.151	9.5	LOS A	0.6	16.3	0.52	0.67	0.52	33.1
East: NE 179th Street															
1	L2	All MCs	117	6.0	117	6.0	0.375	12.3	LOS B	1.7	45.3	0.55	0.63	0.55	33.3
6	T1	All MCs	575	6.0	575	6.0	0.375	5.6	LOS A	1.8	47.2	0.54	0.57	0.54	34.6
16	R2	All MCs	91	6.0	91	6.0	0.375	5.6	LOS A	1.8	47.2	0.53	0.53	0.53	34.6
Approach			784	6.0	784	6.0	0.375	6.6	LOS A	1.8	47.2	0.54	0.57	0.54	34.4
North: NE 15th Avenue															
7	L2	All MCs	147	11.8	147	11.8	0.418	14.4	LOS B	2.0	53.4	0.67	0.83	0.76	32.1
4	T1	All MCs	64	11.8	64	11.8	0.418	7.9	LOS A	2.0	53.4	0.67	0.83	0.76	32.9
14	R2	All MCs	450	11.8	450	11.8	0.418	7.2	LOS A	2.1	56.9	0.66	0.76	0.73	34.1
Approach			661	11.8	661	11.8	0.418	8.9	LOS A	2.1	56.9	0.66	0.78	0.74	33.5
West: NE 179th Street															
5	L2	All MCs	271	5.6	271	5.6	0.198	11.0	LOS B	1.0	27.3	0.43	0.63	0.43	32.3
2	T1	All MCs	253	5.6	253	5.6	0.198	4.9	LOS A	1.0	27.3	0.44	0.48	0.44	35.0
12	R2	All MCs	229	5.6	229	5.6	0.142	4.3	LOS A	0.6	16.8	0.28	0.46	0.28	35.6
Approach			753	5.6	753	5.6	0.198	6.9	LOS A	1.0	27.3	0.39	0.53	0.39	34.1
All Vehicles			2483	7.5	2483	7.5	0.418	7.6	LOS A	2.1	56.9	0.52	0.63	0.54	33.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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MOVEMENT SUMMARY

Site: [5 (3)] 2028 Pre-Development - PM Peak Hour (Int 5)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

NE 179th Street at NE 15th Avenue
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: NE 15th Avenue															
3	L2	All MCs	392	3.8	392	3.8	0.441	15.1	LOS B	2.6	66.7	0.77	0.90	0.90	31.3
8	T1	All MCs	85	3.8	85	3.8	0.441	7.7	LOS A	2.6	66.7	0.77	0.84	0.88	33.5
18	R2	All MCs	168	3.8	168	3.8	0.441	7.9	LOS A	2.6	66.7	0.77	0.84	0.88	33.2
Approach			645	3.8	645	3.8	0.441	12.3	LOS B	2.6	66.7	0.77	0.87	0.89	32.0
East: NE 179th Street															
1	L2	All MCs	133	6.0	133	6.0	0.442	15.7	LOS B	2.4	63.4	0.75	0.86	0.89	31.8
6	T1	All MCs	373	6.0	373	6.0	0.442	8.5	LOS A	2.7	69.6	0.76	0.82	0.87	33.4
16	R2	All MCs	163	6.0	163	6.0	0.442	8.1	LOS A	2.7	69.6	0.76	0.79	0.86	33.8
Approach			669	6.0	669	6.0	0.442	9.8	LOS A	2.7	69.6	0.76	0.82	0.87	33.2
North: NE 15th Avenue															
7	L2	All MCs	139	3.5	139	3.5	0.291	13.1	LOS B	1.3	32.8	0.64	0.75	0.64	32.5
4	T1	All MCs	89	3.5	89	3.5	0.291	6.7	LOS A	1.3	32.8	0.64	0.75	0.64	33.2
14	R2	All MCs	267	3.5	267	3.5	0.269	6.1	LOS A	1.3	32.3	0.62	0.69	0.62	34.7
Approach			495	3.5	495	3.5	0.291	8.1	LOS A	1.3	32.8	0.63	0.72	0.63	33.8
West: NE 179th Street															
5	L2	All MCs	583	3.7	583	3.7	0.412	11.3	LOS B	2.6	67.2	0.51	0.64	0.51	32.1
2	T1	All MCs	524	3.7	524	3.7	0.412	5.3	LOS A	2.6	67.2	0.53	0.51	0.53	34.8
12	R2	All MCs	360	3.7	360	3.7	0.223	4.4	LOS A	1.2	29.7	0.34	0.47	0.34	35.5
Approach			1467	3.7	1467	3.7	0.412	7.4	LOS A	2.6	67.2	0.48	0.55	0.48	33.8
All Vehicles			3276	4.2	3276	4.2	0.442	9.0	LOS A	2.7	69.6	0.61	0.70	0.66	33.3

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [5 (4)] 2028 Post-Development - PM Peak Hour (Int 5)
Output produced by SIDRA INTERSECTION Version: 10.0.8.241

NE 179th Street at NE 15th Avenue
Site Category: (None)
Roundabout
Site Scenario: 1 | Local Volumes

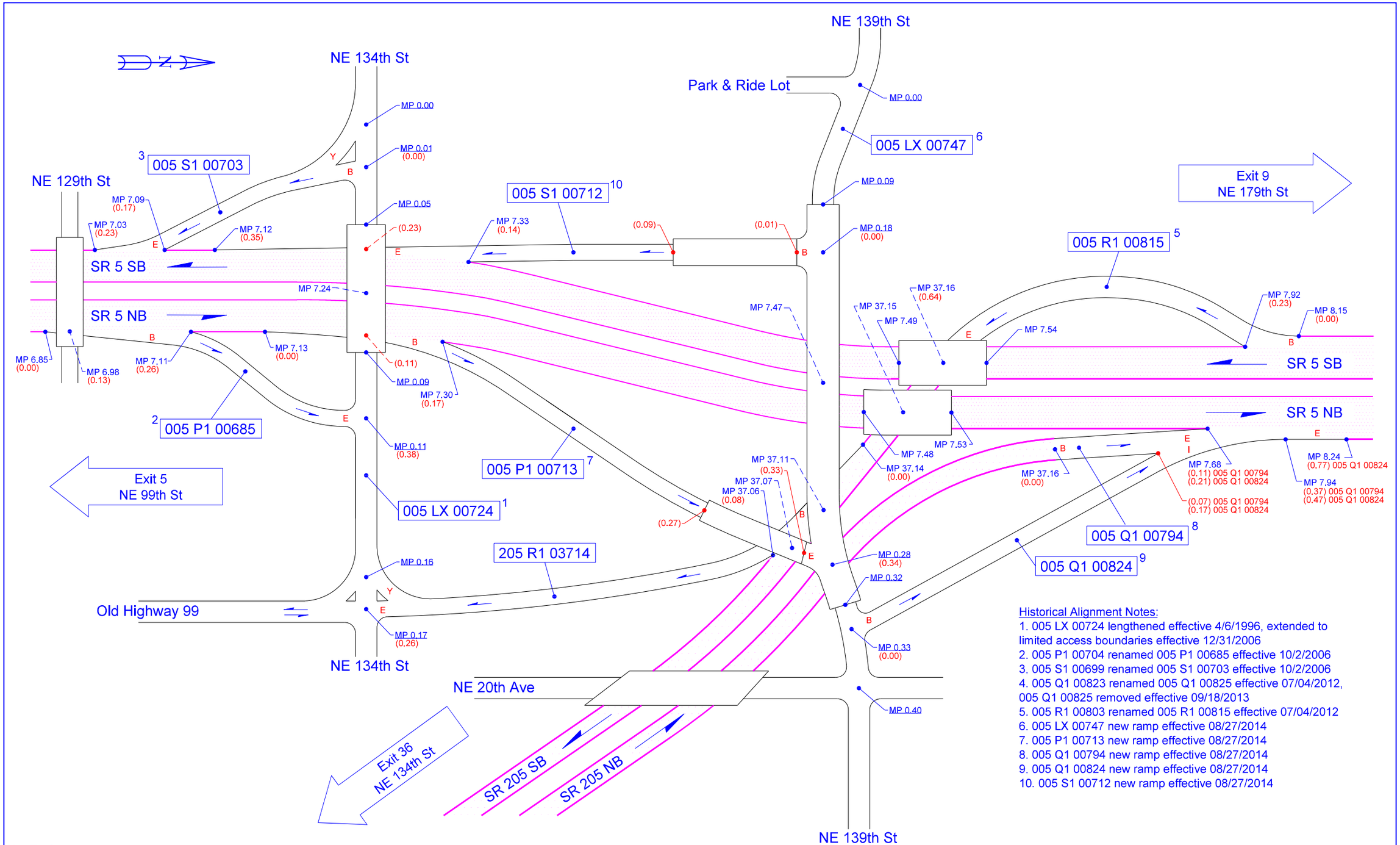
Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] ft	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed mph
South: NE 15th Avenue															
3	L2	All MCs	393	3.8	393	3.8	0.442	15.2	LOS B	2.6	67.1	0.77	0.90	0.90	31.3
8	T1	All MCs	85	3.8	85	3.8	0.442	7.7	LOS A	2.6	67.1	0.77	0.84	0.88	33.5
18	R2	All MCs	168	3.8	168	3.8	0.442	7.9	LOS A	2.6	67.1	0.77	0.84	0.88	33.2
Approach			646	3.8	646	3.8	0.442	12.3	LOS B	2.6	67.1	0.77	0.87	0.89	32.0
East: NE 179th Street															
1	L2	All MCs	133	6.0	133	6.0	0.445	15.7	LOS B	2.4	64.0	0.76	0.87	0.89	31.8
6	T1	All MCs	376	6.0	376	6.0	0.445	8.5	LOS A	2.7	70.3	0.76	0.82	0.87	33.4
16	R2	All MCs	163	6.0	163	6.0	0.445	8.1	LOS A	2.7	70.3	0.76	0.79	0.86	33.8
Approach			672	6.0	672	6.0	0.445	9.9	LOS A	2.7	70.3	0.76	0.82	0.87	33.2
North: NE 15th Avenue															
7	L2	All MCs	139	3.5	139	3.5	0.292	13.1	LOS B	1.3	32.9	0.64	0.75	0.64	32.5
4	T1	All MCs	89	3.5	89	3.5	0.292	6.7	LOS A	1.3	32.9	0.64	0.75	0.64	33.2
14	R2	All MCs	268	3.5	268	3.5	0.270	6.1	LOS A	1.3	32.5	0.62	0.69	0.62	34.7
Approach			496	3.5	496	3.5	0.292	8.2	LOS A	1.3	32.9	0.63	0.72	0.63	33.8
West: NE 179th Street															
5	L2	All MCs	584	3.7	584	3.7	0.413	11.3	LOS B	2.6	67.5	0.51	0.64	0.51	32.1
2	T1	All MCs	526	3.7	526	3.7	0.413	5.3	LOS A	2.6	67.5	0.53	0.51	0.53	34.8
12	R2	All MCs	361	3.7	361	3.7	0.224	4.4	LOS A	1.2	29.8	0.34	0.47	0.34	35.5
Approach			1471	3.7	1471	3.7	0.413	7.4	LOS A	2.6	67.5	0.48	0.55	0.48	33.8
All Vehicles			3285	4.2	3285	4.2	0.445	9.0	LOS A	2.7	70.3	0.61	0.70	0.66	33.3

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: Same as Signalised Intersections.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
Intersection and Approach LOS values are based on average delay for all movements (v/c not used).
Roundabout Capacity Model: SIDRA HCM.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

APPENDIX F – SAFETY ANALYSIS

Crash History Reports

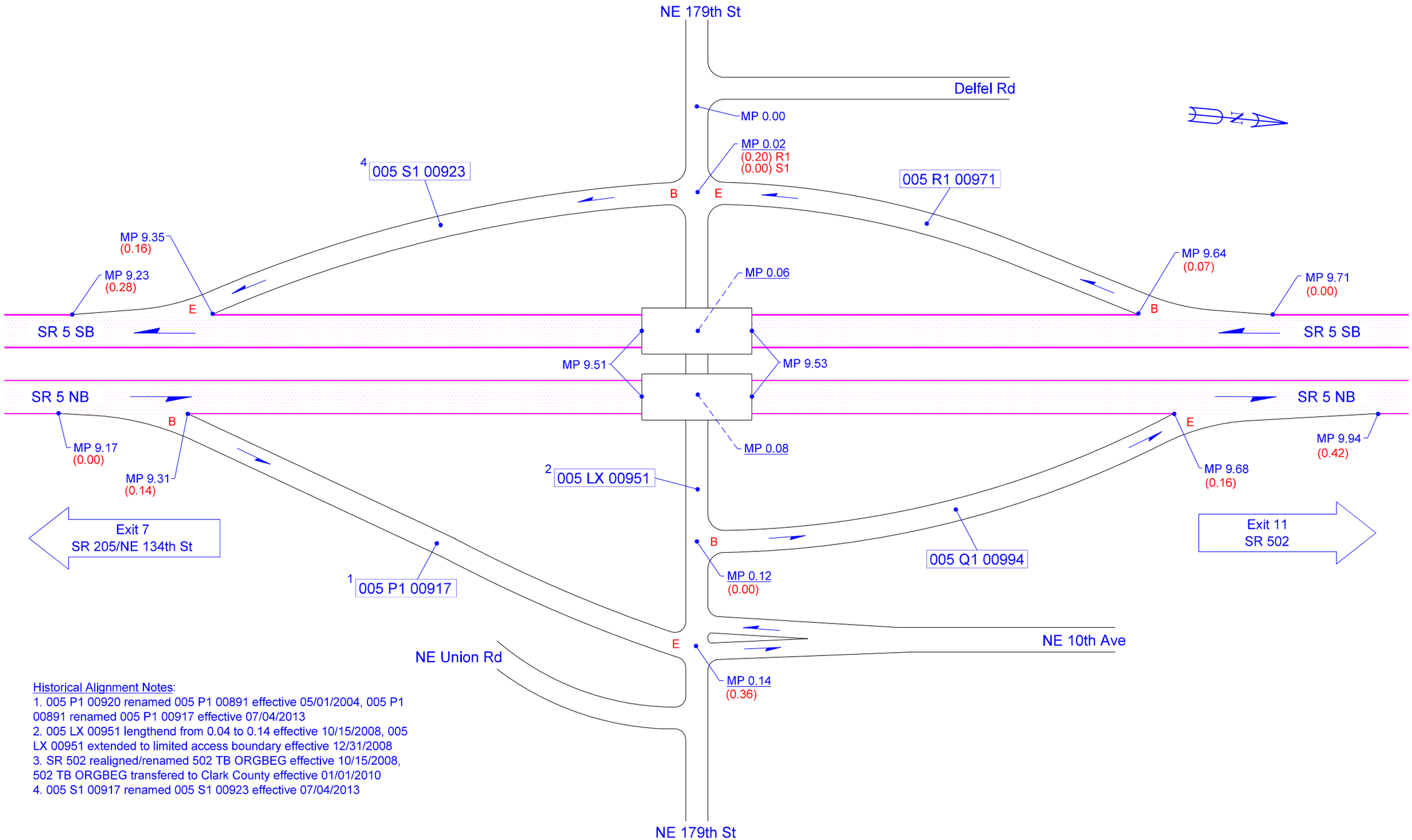


Historical Alignment Notes:

1. 005 LX 00724 lengthened effective 4/6/1996, extended to limited access boundaries effective 12/31/2006
2. 005 P1 00704 renamed 005 P1 00685 effective 10/2/2006
3. 005 S1 00699 renamed 005 S1 00703 effective 10/2/2006
4. 005 Q1 00823 renamed 005 Q1 00825 effective 07/04/2012, 005 Q1 00825 removed effective 09/18/2013
5. 005 R1 00803 renamed 005 R1 00815 effective 07/04/2012
6. 005 LX 00747 new ramp effective 08/27/2014
7. 005 P1 00713 new ramp effective 08/27/2014
8. 005 Q1 00794 new ramp effective 08/27/2014
9. 005 Q1 00824 new ramp effective 08/27/2014
10. 005 S1 00712 new ramp effective 08/27/2014

Not To Scale

08/10/2016	KLK	WSDOT SOUTHWEST REGION	CLARK COUNTY	JUNCTION SR 205/NE 134TH ST/139TH ST	SR 5 - EXIT 7



Historical Alignment Notes:
1. 005 P1 00920 renamed 005 P1 00891 effective 05/01/2004, 005 P1 00891 renamed 005 P1 00917 effective 07/04/2013
2. 005 LX 00951 lengthend from 0.04 to 0.14 effective 10/15/2008, 005 LX 00951 extended to limited access boundary effective 12/31/2008
3. SR 502 realigned/renamed 502 TB ORGBEG effective 10/15/2008, 502 TB ORGBEG transfered to Clark County effective 01/01/2010
4. 005 S1 00917 renamed 005 S1 00923 effective 07/04/2013

Not To Scale

02/16/2017	KLK	WSDOT SOUTHWEST REGION	CLARK COUNTY	JUNCTION NE 179TH ST	SR 5 - EXIT 9

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

179th St (Co Rd # 94300, mp 1.470 – 1.510) @ 11th Ave (Co Rd # 41410, mp 1.480 – 1.520)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NW 179TH ST	94300	1.490			41410	1.500						No	EA46538	07/10/2020	19:44	Possible Injury	1	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NW 179TH ST	94300	1.490			41410	1.500						No	EE68817	03/23/2024	14:46	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Wet	Daylight
County Road	Clark		NW 179TH ST	94300	1.490			41410	1.500						No	EB78674	10/06/2021	21:00	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear	Wet	Dark-No Street Lights
County Road	Clark		NW 179TH ST	94300	1.490			41410	1.500						No	EC65850	07/08/2022	07:25	Possible Injury	3	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NW 179TH ST	94300	1.490			41410	1.500						No	EC65854	07/15/2022	08:35	Unknown	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

179th St (Co Rd # 94300, mp 1.470 – 1.510) @ 11th Ave (Co Rd # 41410, mp 1.480 – 1.520)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

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FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North	West	East	Disregard Traffic Sign and Signals			None						Lane of Primary Trafficway	1083390.06	159881.86
From same direction - both going straight - one stopped - rear-end	Stopped at Signal or Stop Sign	Going Straight Ahead	Vehicle Stopped	Vehicle Stopped	West	East	None			Other Contributing Circ Not Listed						Lane of Primary Trafficway	1083431.55	159867.64
Entering at angle	Starting in Traffic Lane	Going Straight Ahead	South	North	East	West	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1083390.46	159883.29
Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East	South	North	None			Did Not Grant RW to Vehicle						Lane of Primary Trafficway	1083390.46	159883.29
Entering at angle	Starting in Traffic Lane	Going Straight Ahead	South	North	West	East	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1083390.46	159883.29

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

179th St (Co Rd # 94300, mp 2.280 – 2.320) @ Delfel Rd (Co Rd # 41471, mp 0.000 – 0.020 – South Leg)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NE 179TH ST	41471	0.000			94300	2.300						No	EC53045	06/03/2022	22:43	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	Intersection Related but Not at Intersection	Raining	Wet	Dark-Street Lights On
County Road	Clark		NE 179TH ST	94300	2.300			41471	0.000						No	EE75164	05/07/2024	14:39	Suspected Minor Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	Intersection Related but Not at Intersection	Overcast	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

179th St (Co Rd # 94300, mp 2.280 – 2.320) @ Delfel Rd (Co Rd # 41471, mp 0.000 – 0.020 – South Leg)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Slowing	West	East	West	East	Under Influence of Alcohol			None						Lane of Primary Trafficway	1087553.13	159699.2
From same direction - both going straight - both moving - sideswipe	Changing Lanes	Going Straight Ahead	East	West	East	West	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1088884.28	159835.45

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.00 – 0.02 East Leg & Co Rd # 94300, mp 2.350 – 2.370- West Leg) @ Delfel Rd (Co Rd # 41860, mp 0.000 – 0.020)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NE 179TH ST	94300	2.370			41860	0.000						No	EB11344	02/28/2021	15:58	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 179TH ST	94300	2.370			41860	0.000						No	EB30674	04/26/2021	17:00	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	Intersection Related but Not at Intersection	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 179TH ST	94300	2.370			41860	0.000						No	EC75587	08/16/2022	17:30	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.00									0.00	No	EE97595	07/17/2024	07:43	No Apparent Injury	0	0	3	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.00									0.00	No	ED91868	07/24/2023	12:52	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.00 – 0.02 East Leg & Co Rd # 94300, mp 2.350 – 2.370- West Leg) @ Delfel Rd (Co Rd # 41860, mp 0.000 – 0.020)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Entering at angle	Making Left Turn	Going Straight Ahead	North	East	East	West	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1088006.14	159687.14
From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped for Traffic	West	East	Vehicle Stopped	Vehicle Stopped	Follow Too Closely			None						Lane of Primary Trafficway	1087841.97	159671.61
Entering at angle	Making Right Turn	Going Straight Ahead	East	North	North	South	Under Influence of Alcohol			None						Intersecting Trafficway	1088006.14	159687.14
Entering at angle	Making Left Turn	Going Straight Ahead	North	East	East	West	Did Not Grant RW to Vehicle			None						Lane 1 LX Decreasing Milepost	1088035.39	159683.65
Entering at angle	Making Left Turn	Going Straight Ahead	North	East	West	East	Did Not Grant RW to Vehicle			None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1088036.25	159686.66

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.00 - 0.07) @ SR 005 SB on-off ramps

SR 005R100971 (SR 005 SB off-ramp, mp 0.12 – 0.20) @ SR 005LX00951 (aka 179th St, mp 0.00 - 0.07)

SR 005S100923 (SR 005 SB on-ramp, mp 0.00 – 0.10) @ SR 005LX00951 (aka 179th St, mp 0.00 - 0.07)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

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JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.00 - 0.07) @ SR 005 SB on-off ramps

SR 005R100971 (SR 005 SB off-ramp, mp 0.12 – 0.20) @ SR 005LX00951 (aka 179th St, mp 0.00 - 0.07)

SR 005S100923 (SR 005 SB on-ramp, mp 0.00 – 0.10) @ SR 005LX00951 (aka 179th St, mp 0.00 - 0.07)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

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FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.10 - 0.14) @ SR 005 NB on-ramp

SR 005Q100994 (SR 005 NB on-ramp, mp 0.00 – 0.02) @ SR 005LX00951 (aka 179th St, mp 0.10 - 0.14) - *No Reported Crashes*

SR 005LX00951 (aka 179th St, mp 0.12 - 0.14 -West Leg & Co Rd # 94360, mp 2.470 – 2.490 – East Leg) @ SR 005 NB off-ramp / 10th Ave (Co Rd # 41761, mp 0.000 – 0.020)

SR 005P100917 (SR 005 NB off-ramp, mp 0.27 – 0.36) @ SR 005LX00951 (aka 179th St, mp 0.12 - 0.14 -West Leg & Co Rd # 94360, mp 2.470 – 2.490 – East Leg) - *No Reported Crashes*

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

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JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NE 10TH AVE	41761	0.000			94360	0.000						No	EE82582	05/27/2024	12:19	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.12									0.12	No	EE53383	02/18/2024	12:25	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.12									0.12	No	EC17012	02/02/2022	16:58	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Raining	Wet	Daylight
State Route	Clark		005LX00951	005LX00951	0.12									0.12	No	ED04036	11/12/2022	21:45	Suspected Minor Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	Intersection Related but Not at Intersection	Overcast	Dry	Dark-Street Lights On
State Route	Clark		005LX00951	005LX00951	0.12									0.12	No	EF91823	05/02/2025	16:21	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EB89575	11/13/2021	13:55	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	ED31404	01/29/2023	15:53	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EE74078	04/29/2024	11:22	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EC06793	12/23/2021	22:09	Suspected Minor Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Raining	Wet	Dark-Street Lights On
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EG01604	06/15/2025	15:52	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.10 - 0.14) @ SR 005 NB on-ramp

SR 005Q100994 (SR 005 NB on-ramp, mp 0.00 – 0.02) @ SR 005LX00951 (aka 179th St, mp 0.10 - 0.14) - *No Reported Crashes*

SR 005LX00951 (aka 179th St, mp 0.12 - 0.14 -West Leg & Co Rd # 94360, mp 2.470 – 2.490 – East Leg) @ SR 005 NB off-ramp / 10th Ave (Co Rd # 41761, mp 0.000 – 0.020)

SR 005P100917 (SR 005 NB off-ramp, mp 0.27 – 0.36) @ SR 005LX00951 (aka 179th St, mp 0.12 - 0.14 -West Leg & Co Rd # 94360, mp 2.470 – 2.490 – East Leg) - *No Reported Crashes*

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West	South	North	Under Influence of Alcohol	Did Not Grant R/W to Non Motorist	Disregard Traffic Sign and Signals	None						Lane of Primary Trafficway	1088702.83	159822.35
From same direction - all others	Backing	Stopped for Traffic	West	Vehicle Backing	West	Vehicle Stopped	Improper Backing			None						Left Turn Lane LX Increasing Milepost (Prior to 2002 Impact Location Code was	1088596.51	159795.69
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	North	East	West	Did Not Grant RW to Vehicle			None						Lane 1 LX Decreasing Milepost	1088598.62	159796.09
From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Going Straight Ahead	West	East	West	East	Under Influence of Alcohol	Other Contributing Circ Not Listed		None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1088623.21	159792.89
From opposite direction - one left turn - one straight	Stopped in Roadway	Going Straight Ahead	South	Vehicle Stopped	East	West	Did Not Grant RW to Vehicle	Improper Turn/Merge		None						Lane 1 LX Decreasing Milepost	1088598.37	159791.35
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	West	North	East	West	Improper Turn/Merge			None						Lane 2 LX Decreasing Milepost	1088718.52	159822.31
From same direction - one right turn - one straight	Making Right Turn	Going Straight Ahead	South	East	South	East	Improper Turn/Merge			None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1088723.3	159814.68
Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West	South	North	Disregard Traffic Sign and Signals			None						Lane 1 LX Decreasing Milepost	1088702.83	159822.34
From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	South	North	North	East	Under Influence of Alcohol	Disregard Traffic Sign and Signals		None						Lane 1 LX Decreasing Milepost	1088703.59	159812.87
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	West	North	East	West	Improper Turn/Merge			None						Lane 1 LX Decreasing Milepost	1088722.37	159819.34

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.10 - 0.14) @ SR 005 NB on-ramp

SR 005Q100994 (SR 005 NB on-ramp, mp 0.00 – 0.02) @ SR 005LX00951 (aka 179th St, mp 0.10 - 0.14) - *No Reported Crashes*

SR 005LX00951 (aka 179th St, mp 0.12 - 0.14 -West Leg & Co Rd # 94360, mp 2.470 – 2.490 – East Leg) @ SR 005 NB off-ramp / 10th Ave (Co Rd # 41761, mp 0.000 – 0.020)

SR 005P100917 (SR 005 NB off-ramp, mp 0.27 – 0.36) @ SR 005LX00951 (aka 179th St, mp 0.12 - 0.14 -West Leg & Co Rd # 94360, mp 2.470 – 2.490 – East Leg) - *No Reported Crashes*

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EC94425	10/16/2022	15:05	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EC21583	02/07/2022	14:48	Possible Injury	1	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EF84426	04/15/2025	12:20	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	EF88726	01/03/2025	12:58	Suspected Minor Injury	1	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Raining	Wet	Daylight
State Route	Clark		005LX00951	005LX00951	0.14									0.14	No	ED15354	12/14/2022	14:06	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.10 - 0.14) @ SR 005 NB on-ramp

SR 005Q100994 (SR 005 NB on-ramp, mp 0.00 – 0.02) @ SR 005LX00951 (aka 179th St, mp 0.10 - 0.14) - *No Reported Crashes*

SR 005LX00951 (aka 179th St, mp 0.12 - 0.14 -West Leg & Co Rd # 94360, mp 2.470 – 2.490 – East Leg) @ SR 005 NB off-ramp / 10th Ave (Co Rd # 41761, mp 0.000 – 0.020)

SR 005P100917 (SR 005 NB off-ramp, mp 0.27 – 0.36) @ SR 005LX00951 (aka 179th St, mp 0.12 - 0.14 -West Leg & Co Rd # 94360, mp 2.470 – 2.490 – East Leg) - *No Reported Crashes*

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West	South	North	Unknown Distraction	Disregard Traffic Sign and Signals		None						Lane 2 LX Decreasing Milepost	1088704.33	159814.79
Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West	South	North	Disregard Traffic Sign and Signals			None						Lane 1 LX Decreasing Milepost	1088721.82	159822.1
From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	East	West	West	North	None			Did Not Grant RW to Vehicle						Lane 1 LX Decreasing Milepost	1088704.33	159814.79
Entering at angle	Going Straight Ahead	Making Left Turn	West	East	South	West	Disregard Traffic Sign and Signals			None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1088704.33	159814.79
Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West	South	North	Disregard Traffic Sign and Signals			None						Lane 1 LX Decreasing Milepost	1088704.33	159814.79

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

179th St (Co Rd # 94360, mp 0.260 – 0.300) @ 15th Ave (Co Rd # 43110, mp 2.490 – 2.510)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NE 179TH ST	94360	0.280			43110	2.510						No	EC80219	08/15/2022	12:02	No Apparent Injury	0	0	2	0	0	Truck (Flatbad,Van,etc)	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 179TH ST	94360	0.280			43110	2.510						No	ED88656	06/02/2023	07:30	No Apparent Injury	0	0	2	0	0	Truck (Flatbad,Van,etc)	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 179TH ST	94360	0.280			43110	2.510						No	EA75716	10/22/2020	16:34	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 179TH ST	94360	0.280			43110	2.510						No	EE68818	03/23/2024	18:02	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Daylight
County Road	Clark		NE 179TH ST	94360	0.280			43110	2.510						No	EC07748	01/02/2022	12:41	Possible Injury	1	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Overcast	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

179th St (Co Rd # 94360, mp 0.260 – 0.300) @ 15th Ave (Co Rd # 43110, mp 2.490 – 2.510)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Entering at angle	Going Straight Ahead	Making Left Turn	West	East	South	West	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1090128.54	159720.94
Entering at angle	Going Straight Ahead	Making Left Turn	West	East	South	West	Disregard Traffic Sign and Signals			None						Lane of Primary Trafficway	1090128.54	159720.94
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South	West	East	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1090128.54	159720.94
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South	West	East	Other Distractions			None						Lane of Primary Trafficway	1090128.54	159720.94
Entering at angle	Making Right Turn	Going Straight Ahead	South	East	East	West	Exceeding Reas. Safe Speed			None						Lane of Primary Trafficway	1090128.54	159720.94

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

164th St (Co Rd # 41500, mp 0.000 – 0.020) @ 11th Ave (Co Rd # 41410, mp 0.730 – 0.770) – *No Reported Crashes*

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

164th St (Co Rd # 41500, mp 0.000 – 0.020) @ 11th Ave (Co Rd # 41410, mp 0.730 – 0.770) – *No Reported Crashes*

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

149th St (Co Rd # 41300, mp 0.980 – 1.020) @ 11th Ave (Co Rd # 41410, mp 0.000 – 0.020 – East Leg & Co Rd # 41332, mp 0.000 – 0.020 – West Leg)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NW 149TH ST	41300	1.000			41410	0.000						No	EB68694	09/17/2021	09:16	Suspected Serious Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

149th St (Co Rd # 41300, mp 0.980 – 1.020) @ 11th Ave (Co Rd # 41410, mp 0.000 – 0.020 – East Leg & Co Rd # 41332, mp 0.000 – 0.020 – West Leg)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South	West	East	Disregard Traffic Sign and Signals			None						Lane of Primary Trafficway	1083179.16	151956.93

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

149th St (Co Rd # 41300, mp 0.000 – 0.020) @ 10th Ave (Co Rd # 41150, mp 0.730 – 0.770)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NE 10TH AVE	41150	0.750			41300	0.000						No	EB10334	02/14/2021	20:13	No Apparent Injury	0	0	1	0	0	Pickup,Panel Truck or Vanette under 10,000 lb		At Intersection and Related	Raining	Snow/Slush	Dark-Street Lights Off
County Road	Clark		NE 10TH AVE	41150	0.750			41300	0.000						No	EE20690	10/24/2023	17:19	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Daylight
County Road	Clark		NE 10TH AVE	41150	0.750			41300	0.000						No	EF04830	08/07/2024	14:50	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear	Dry	Daylight
County Road	Clark		NE 10TH AVE	41300	0.000			41150	0.750						No	ED57813	04/11/2023	23:45	No Apparent Injury	0	0	1	0	0	Passenger Car		At Intersection and Related	Clear	Dry	Dark-Street Lights On

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

149th St (Co Rd # 41300, mp 0.000 – 0.020) @ 10th Ave (Co Rd # 41150, mp 0.730 – 0.770)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Guardrail - Face	Making Left Turn		South	West			Distractions Outside Vehicle									Outside Shoulder of Primary Trafficway	1088425.21	151874.82
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	South	West	North	South	Unknown Distraction			Unknown Distraction						Lane of Primary Trafficway	1088425.21	151874.82
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	South	West	North	South	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1088425.21	151874.82
Fence	Making Left Turn		South	West			Unknown Distraction									Intersecting Trafficway	1088425.21	151874.82

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

139th St (Co Rd # 41151, mp 0.000 – 0.020 – West Leg & Co Rd # 41120, mp 0.000 – 0.020 – East Leg) @ 10th Ave (Co Rd # 41150, mp 0.230 – 0.270)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NE 139TH ST	41120	0.000			41150	0.250						No	EB88858	11/12/2021	08:57	Possible Injury	1	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Daylight
County Road	Clark		NE 139TH ST	41120	0.000			41150	0.250						No	EE07543	09/10/2023	23:03	Possible Injury	1	0	1	0	0	Passenger Car		At Intersection and Related	Clear	Dry	Dark-Street Lights On
County Road	Clark		NE 10TH AVE	41150	0.250			41151	0.000						No	EA85572	10/28/2020	15:02	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 10TH AVE	41151	0.000			41150	0.250						No	EA85576	11/24/2020	19:18	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Overcast	Wet	Dark-Street Lights On

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

139th St (Co Rd # 41151, mp 0.000 – 0.020 – West Leg & Co Rd # 41120, mp 0.000 – 0.020 – East Leg) @ 10th Ave (Co Rd # 41150, mp 0.230 – 0.270)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign	East	West	Vehicle Stopped	Vehicle Stopped	Operating Defective Equipment			None						Lane of Primary Trafficway	1088350.18	149263.46
Signal Pole	Making Left Turn		East	South			Improper Turn/Merge	Operating Defective Equipment	Exceeding Reas. Safe Speed							Other Location (City/County/Misc. Trafficway)	1088351.19	149227.51
From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign	South	West	Vehicle Stopped	Vehicle Stopped	Unknown Distraction			None						Lane of Primary Trafficway	1088350.18	149263.46
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	North	East	South	North	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1088350.18	149263.46

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00747 (aka 139th St, mp 0.13 – 0.28) SR 005 SB on-ramp

SR 005S100712 (SR 005 SB on-ramp, mp 0.00 – 0.10) @ SR 005LX00747 (aka 139th St, mp 0.13 – 0.28) - *No Reported Crashes*

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
State Route	Clark		005LX00747	005LX00747	0.18									0.18	No	EG21765	08/18/2025	12:30	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Truck (Flatbad,Van,etc)	At Intersection and Related	Clear	Dry	Daylight
State Route	Clark		005LX00747	005LX00747	0.18									0.18	No	EC45417	04/30/2022	14:31	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Wet	Daylight
State Route	Clark		005LX00747	005LX00747	0.18									0.18	No	EF74233	01/23/2025	06:20	Suspected Minor Injury	1	0	1	0	0	Pickup,Panel Truck or Vanette under 10,000 lb		At Intersection and Related	Clear	Dry	Dawn
State Route	Clark		005LX00747	005LX00747	0.18									0.18	No	EE21779	11/12/2023	11:40	Suspected Minor Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00747 (aka 139th St, mp 0.13 – 0.28) SR 005 SB on-ramp

SR 005S100712 (SR 005 SB on-ramp, mp 0.00 – 0.10) @ SR 005LX00747 (aka 139th St, mp 0.13 – 0.28) - *No Reported Crashes*

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South	West	East	Disregard Traffic Sign and Signals			None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1089803.14	149104.22
From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	West	East	East	South	Distractions Outside Vehicle	Disregard Traffic Sign and Signals		None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1089803.15	149104.31
Bridge Rail - Face	Making Left Turn		East	South			Other Contributing Circ Not Listed									Right Shoulder LX Increasing Milepost (Prior to 2002 Impact Location Code was	1089801.14	149101.26
From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	West	East	East	South	None			None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1089799.53	149106.26

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00747 (aka 139th ST, mp 0.21 - 0.31) @ SR 005 NB off-ramp

SR 005P100713 (SR 005 NB off-ramp, mp 0.23 - 0.34) @ SR 005LX00747 (aka 139th ST, mp 0.21 - 0.31)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	EE75165	05/07/2024	08:34	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Overcast	Dry	Daylight
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	EA79002	10/24/2020	18:55	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Dark-Street Lights On
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	EE62538	03/23/2024	17:54	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear	Dry	Daylight
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	EA00258	01/01/2020	08:40	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Overcast	Wet	Daylight
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	EC87330	09/21/2022	10:57	Possible Injury	1	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	EB30179	04/28/2021	22:26	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear	Dry	Dark-Street Lights On
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	EE76785	04/26/2024	19:27	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Daylight
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	ED57815	05/03/2023	15:44	Possible Injury	2	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Daylight
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	EA59949	08/23/2020	11:34	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	EC30040	03/20/2022	05:57	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear	Wet	Dark-Street Lights On
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	EA80959	11/10/2020	10:11	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Overcast	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00747 (aka 139th ST, mp 0.21 - 0.31) @ SR 005 NB off-ramp

SR 005P100713 (SR 005 NB off-ramp, mp 0.23 - 0.34) @ SR 005LX00747 (aka 139th ST, mp 0.21 - 0.31)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

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FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Entering at angle	Going Straight Ahead	Making Left Turn	West	East	South	West	Disregard Traffic Sign and Signals			None						Lane 2 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1090330.86	149108.77
Entering at angle	Going Straight Ahead	Making Left Turn	East	West	North	West	Unknown Distraction	Disregard Traffic Sign and Signals		None						Lane 2 LX Decreasing Milepost	1090334.47	149112.64
Entering at angle	Going Straight Ahead	Making Left Turn	West	East	South	North	Unknown Distraction	Disregard Traffic Sign and Signals		None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1090337.01	149107.26
Entering at angle	Going Straight Ahead	Making Left Turn	West	East	South	West	Disregard Stop and Go Light			None						Lane 2 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1090333.92	149110.94
Entering at angle	Making Left Turn	Going Straight Ahead	South	West	West	East	Unknown Distraction			Unknown Distraction						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1090334.24	149108.52
Entering at angle	Making Left Turn	Going Straight Ahead	South	West	East	West	None			None						Lane 1 LX Decreasing Milepost	1090334.53	149108.68
Entering at angle	Making Right Turn	Backing	South	East	East	Vehicle Backing	Operating Recklessly or Aggressively	Improper Turn/Merge		None						Lane 2 LX Decreasing Milepost	1090335.85	149107.09
Entering at angle	Going Straight Ahead	Making Left Turn	West	East	South	West	Unknown Distraction			None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1090333.88	149108.73
Entering at angle	Making Left Turn	Going Straight Ahead	South	Northwest	West	East	Disregard Traffic Sign and Signals			None						Lane 2 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1090333.44	149108.49
Entering at angle	Making Left Turn	Going Straight Ahead	South	West	West	East	Unknown Distraction			Unknown Distraction						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1090330.82	149108.85
Entering at angle	Going Straight Ahead	Making Left Turn	West	East	South	North	Disregard Traffic Sign and Signals			None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1090331.32	149113.96

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00747 (aka 139th ST, mp 0.21 - 0.31) @ SR 005 NB off-ramp

SR 005P100713 (SR 005 NB off-ramp, mp 0.23 - 0.34) @ SR 005LX00747 (aka 139th ST, mp 0.21 - 0.31)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

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JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	EC06790	12/26/2021	20:49	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear	Ice	Dark-Street Lights On
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	ED94337	07/16/2023	15:55	Possible Injury	3	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear	Dry	Daylight
State Route	Clark		005LX00747	005LX00747	0.28									0.28	No	EC69390	07/29/2022	13:05	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00747 (aka 139th ST, mp 0.21 - 0.31) @ SR 005 NB off-ramp

SR 005P100713 (SR 005 NB off-ramp, mp 0.23 - 0.34) @ SR 005LX00747 (aka 139th ST, mp 0.21 - 0.31)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Entering at angle	Going Straight Ahead	Making Left Turn	West	East	South	West	Exceeding Reas. Safe Speed			None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1090334.53	149108.68
Entering at angle	Going Straight Ahead	Making Left Turn	West	East	South	West	Disregard Traffic Sign and Signals			None						Lane 2 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1090334.51	149109.74
Entering at angle	Going Straight Ahead	Making Left Turn	West	East	South	West	Disregard Traffic Sign and Signals			None						Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was	1090334.53	149108.68

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00747 (aka 139th St, mp 0.35 - 0.40 – West Leg & Co Rd # 43180, mp 0.470 – 0.490) @ 20th Ave (Co Rd # 43110, mp 0.380 – 0.420)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
State Route	Clark		005LX00747	005LX00747	0.40									0.40	No	EB42922	06/23/2021	22:31	Possible Injury	1	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On
State Route	Clark		005LX00747	005LX00747	0.40									0.40	No	ED10605	12/01/2022	15:05	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00747	005LX00747	0.40									0.40	No	EF78167	03/07/2025	07:30	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Overcast	Dry	Daylight
State Route	Clark		005LX00747	005LX00747	0.40									0.40	No	EE07544	09/23/2023	03:20	Suspected Serious Injury	1	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear	Dry	Dark-Street Lights On
State Route	Clark		005LX00747	005LX00747	0.40									0.40	No	EF89028	05/05/2025	17:38	Suspected Minor Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
State Route	Clark		005LX00747	005LX00747	0.40									0.40	No	EF01366	07/17/2024	21:39	Possible Injury	3	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

STATE ROUTE INTERSECTIONS

SR 005LX00747 (aka 139th St, mp 0.35 - 0.40 – West Leg & Co Rd # 43180, mp 0.470 – 0.490) @ 20th Ave (Co Rd # 43110, mp 0.380 – 0.420)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	West	North	East	West	Distracted by Other Occupant			None						Lane 1 LX Decreasing Milepost	1090985.54	149174.1
Entering at angle	Making Left Turn	Making Left Turn	West	North	South	West	Improper Turn/Merge	Other Contributing Circ Not Listed	Did Not Grant RW to Vehicle	None						Lane 1 LX Decreasing Milepost	1090964.94	149189.38
Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South	East	West	Did Not Grant RW to Vehicle			None						Lane 1 LX Decreasing Milepost	1090983.6	149173.04
From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign	South	Northwest	South	Northwest	Under Influence of Alcohol			None						Intersecting Road Increasing Milepost	1090964.94	149189.38
Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South	East	West	Operating Hands-Free Cell Phone	Disregard Traffic Sign and Signals		None						Lane 1 LX Decreasing Milepost	1090964.94	149189.38
From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	West	North	East	West	Disregard Traffic Sign and Signals			None						Lane 2 LX Decreasing Milepost	1090986.51	149172.69

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

Tenney Rd Co Rd # 94200, mp 2.790 – 2.830) @ 10th Ave (Co Rd # 41150, mp 0.000 – 0.020)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NE 10TH AVE	94200	2.810			41150	0.000						No	EC35928	03/29/2022	07:38	Suspected Minor Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Overcast	Dry	Daylight
County Road	Clark		NE TENNEY RD	94200	2.810			41150	0.000						No	EF37030	11/12/2024	09:39	No Apparent Injury	0	0	3	0	0	Passenger Car	Passenger Car	At Intersection and Related	Raining	Standing Water	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

Tenney Rd Co Rd # 94200, mp 2.790 – 2.830) @ 10th Ave (Co Rd # 41150, mp 0.000 – 0.020)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Entering at angle	Going Straight Ahead	Making Left Turn	East	West	North	East	Disregard Traffic Sign and Signals			None						Lane of Primary Trafficway	1088571.38	148062.32
Linear Curb	Making Left Turn	Making Left Turn	North	East	North	East	None			None						Outside Shoulder of Primary Trafficway	1088584.77	148101.5

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

134th St (Co Rd # 43140, mp 0.640 – 0.680) @ 20th Ave (Co Rd # 43110, mp 0.110 – 0.150)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NE HIGHWAY 99	43110	0.130			43140	0.660						No	ED21976	12/30/2022	20:28	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Wet	Dark-Street Lights On
County Road	Clark		NE 20TH AVE	43110	0.130			43140	0.660						No	EB24619	04/11/2021	11:16	Possible Injury	1	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 20TH AVE	43110	0.130			43140	0.660						No	EC96040	10/21/2022	19:00	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Dark-Street Lights On
County Road	Clark		NE 20TH AVE	43110	0.130			43140	0.660						No	EE41145	01/16/2024	12:25	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear	Ice	Daylight
County Road	Clark		NE 20TH AVE	43110	0.130			43140	0.660						No	EC65853	07/15/2022	10:01	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 20TH AVE	43110	0.130			43140	0.660						No	EE47552	02/04/2024	12:49	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 134TH ST	43140	0.660			43110	0.130						No	EE71330	04/02/2024	20:03	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear	Dry	Dark-Street Lights On
County Road	Clark		NE 134TH ST	43140	0.660			43110	0.130						No	EB42879	06/19/2021	09:28	Suspected Minor Injury	1	0	1	1	0	Not Stated		At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 134TH ST	43140	0.660			43110	0.130						No	EC72103	08/07/2022	16:23	No Apparent Injury	0	0	2	0	0	Truck Tractor & Semi-Trailer	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 134TH ST	43140	0.660			43110	0.130						No	EB78446	10/05/2021	14:34	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Raining	Wet	Daylight
County Road	Clark		NE 134TH ST	43140	0.660			43110	0.130						No	ED98147	09/06/2023	22:39	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

134th St (Co Rd # 43140, mp 0.640 – 0.680) @ 20th Ave (Co Rd # 43110, mp 0.110 – 0.150)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	West	East	West	North	None			None						Lane of Primary Trafficway	1090882.33	147165.21
Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East	North	South	Apparently Asleep or Fatigued	Disregard Traffic Sign and Signals		None						Lane of Primary Trafficway	1090924.45	147823.98
Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East	South	North	Unknown Distraction			Unknown Distraction						Lane of Primary Trafficway	1090924.45	147823.98
Same direction -- both turning right -- both moving -- sideswipe	Making Right Turn	Making Right Turn	South	East	South	East	Exceeding Reas. Safe Speed			None						Lane of Primary Trafficway	1090924.45	147823.98
Entering at angle	Making Right Turn	Slowing	East	North	North	South	Unknown Distraction			None						Intersecting Trafficway	1090925.65	147851.54
From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	South	North	North	East	None			None						Lane of Primary Trafficway	1090972.47	147817.83
Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East	South	North	Disregard Traffic Sign and Signals			None						Lane of Primary Trafficway	1090924.45	147823.98
Vehicle going straight hits pedestrian	Going Straight Ahead		West	East			Other Contributing Circ Not Listed						Did Not Grant RW to Vehicle	Apparently Emotional (Depressed, Angry,		Lane of Primary Trafficway	1090925.92	147850.82
Same direction -- both turning left -- both moving -- sideswipe	Making Left Turn	Going Straight Ahead	South	North	South	North	Improper Turn/Merge			None						Lane of Primary Trafficway	1090924.45	147823.98
From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	West	East	East	South	Disregard Traffic Sign and Signals			None						Lane of Primary Trafficway	1090924.45	147823.98
From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	East	West	West	North	Disregard Traffic Sign and Signals			None						Lane of Primary Trafficway	1090924.45	147823.98

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

134th St (Co Rd # 43140, mp 0.640 – 0.680) @ 20th Ave (Co Rd # 43110, mp 0.110 – 0.150)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

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JURISDICTION	COUNTY	CITY	CO ONLY COUNTY ROAD NAME	PRIMARY TRAFFICWAY	MILEPOST	A / B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	CO ONLY INTERSECTING COUNTY ROAD MP	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
County Road	Clark		NE 134TH ST	43140	0.660			43110	0.130						No	ED51242	04/03/2023	12:14	No Apparent Injury	0	0	2	0	0	Passenger Car	Pickup,Panel Truck or Vanette under 10,000 lb	Intersection Related but Not at Intersection	Clear	Wet	Daylight
County Road	Clark		NE 134TH ST	43140	0.660			43110	0.130						No	EC39781	04/18/2022	20:50	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Raining	Wet	Dark-Street Lights On
County Road	Clark		NE 134TH ST	43140	0.660			43110	0.130						No	EB18436	03/24/2021	13:04	No Apparent Injury	0	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Overcast	Dry	Daylight
County Road	Clark		NE 134TH ST	43140	0.660			43110	0.130						No	EE88423	06/14/2024	10:23	Suspected Serious Injury	2	0	2	0	0	Passenger Car	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
County Road	Clark		NE 134TH ST	43140	0.660			43110	0.130						No	EB72931	09/11/2021	22:28	Possible Injury	1	0	2	0	0	Motorcycle	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On
County Road	Clark		NE 20TH AVE												No	EG21401	08/20/2025	16:54	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Passenger Car	At Intersection and Related	Clear	Dry	Daylight
County Road	Clark		NE 134TH ST												No	EG32386	08/30/2025	11:07	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight

OFFICER REPORTED CRASHES THAT OCCURRED AT MULTIPLE INTERECTIONS IN CLARK COUNTY

COUNTY ROAD INTERSECTIONS

134th St (Co Rd # 43140, mp 0.640 – 0.680) @ 20th Ave (Co Rd # 43110, mp 0.110 – 0.150)

01/01/2020 - *Avail 2025* *See 2nd tab below for road info & interchange drawings*

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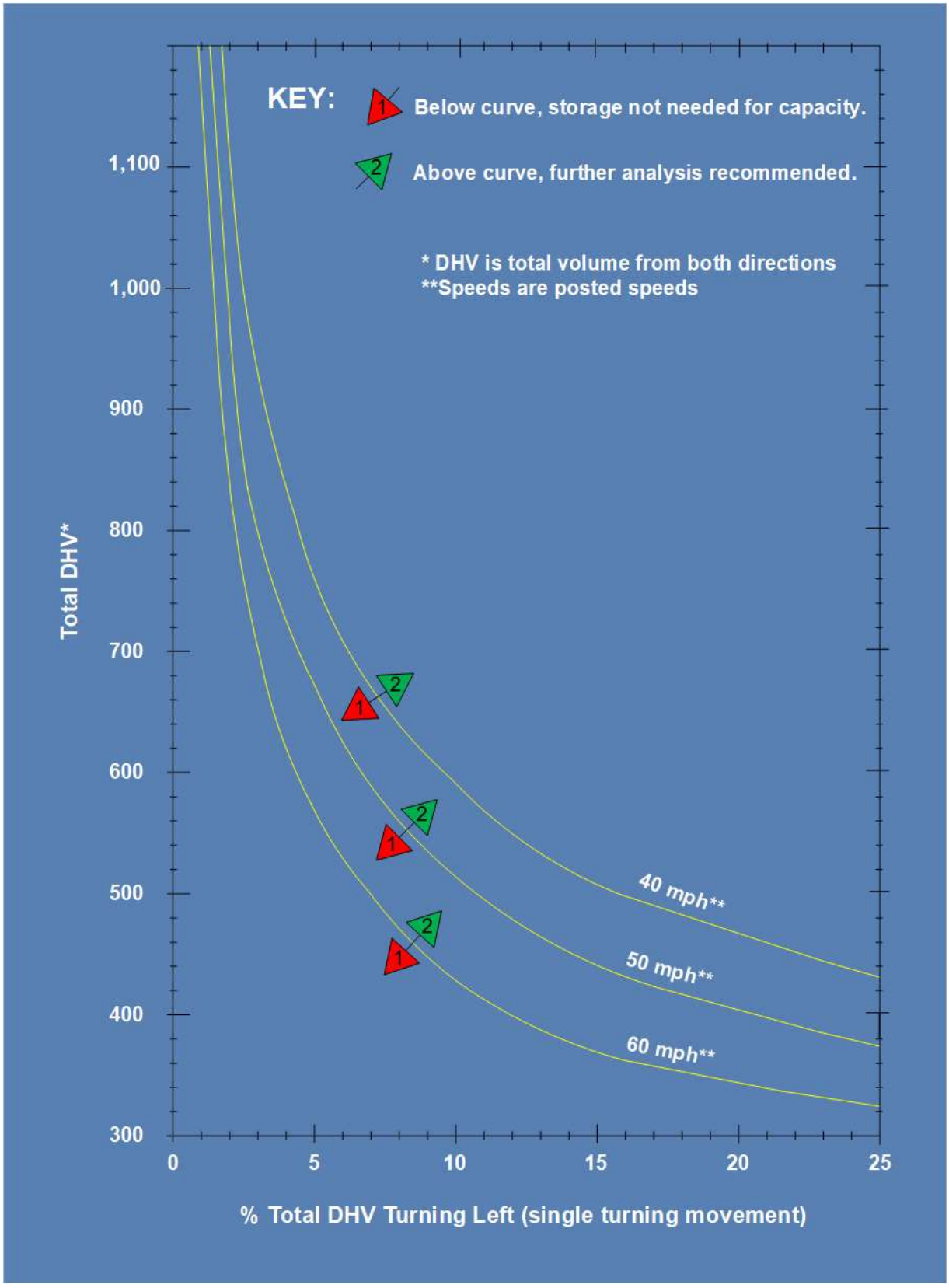
FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	PEDESTRIAN CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped for Traffic	East	West	Vehicle Stopped	Vehicle Stopped	Operating Defective Equipment			None						Lane of Primary Trafficway	1090751.34	147841.48
Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West	North	South	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1090924.45	147823.98
From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Starting in Traffic Lane	West	East	West	East	Follow Too Closely			None						Lane of Primary Trafficway	1090924.45	147823.98
Entering at angle	Making Left Turn	Going Straight Ahead	South	West	East	West	Disregard Traffic Sign and Signals			None						Lane of Primary Trafficway	1090924.45	147823.98
From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign	East	West	Vehicle Stopped	Vehicle Stopped	Under Influence of Alcohol			None						Lane of Primary Trafficway	1090973.51	147872.33
Entering at angle	Making Right Turn	Going Straight Ahead	South	East	West	East	Did Not Grant RW to Vehicle			None						Lane of Primary Trafficway	1090924.45	147823.98
Entering at angle	Making Left Turn	Going Straight Ahead	West	North	South	North	Distractions Outside Vehicle	Disregard Traffic Sign and Signals		None						Lane of Primary Trafficway	1090953.1	147858.79

APPENDIX G – WARRANT ANALYSIS

Left-Turn Lane Warrant Calculations
Preliminary Signal Warrant Calculations

Exhibit 1310-9 Left-Turn Storage Guidelines: Two-Lane, Unsignalized



Preliminary Traffic Signal Warrants

Manual on Uniform Traffic Control Devices (MUTCD) 11th Edition

Project Name: Towhee Creek Subdivision
Date: 12/29/2025
Intersection: 1. NW 179th Street at NW 11th Avenue
Analysis Scenario: 2028 Post-Development

Cross-Street	Number of Lanes	Volumes			
		AM Peak Hour	PM Peak Hour	8th Highest Hr	4th Highest Hr
Major Street	1	313	464	262	363
Minor Street	1	127	102	58	80

Warrants Evaluated?	70%

Notes: *8th highest hour volumes assumed to reflect a K-50 factor, or approximately 5.65% of the AADT through the intersection. The AADT is assumed to be ten times the PM peak hour.*
4th highest hour volumes assumed to be the midpoint, or average, of the PM peak hour and 8th highest hour volumes.
A 25% reduction on the minor street right-turn volumes was assumed to account for right-turns on red.

Warrant 1, Eight-Hour Vehicular Volume (Table 4C-1)

Number of Approach Lanes (Major/Minor)		Condition A				Condition B				Combination A/B*							
		100%		70%		100%		70%		Condition A 80%		Condition B 80%		Condition A 56%		Condition B 56%	
		Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor
1 / 1	X	500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1		600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+		600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+		500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
Threshold Volume				350	105			525	53								
8th Highest Hour Volume				262	58			262	58								
Warrant Met?				**No**				**No**									

Notes: *100% warrants represent the basic minimum hourly volumes.*
70% warrants may be used when major street speeds exceed 40 mph or in an isolated community with a population of less than 10,000.
** The combination of Conditions A and B is intended for application at locations where Condition A is not satisfied and Condition B is not satisfied. The combination warrants should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems (i.e., the combination warrants should generally only be used if an operational issue is present at the intersection).*
80% combination warrants represent the basic minimum hourly volumes.
56% combination warrants may be used when major street speeds exceed 40 mph or in an isolated community with a population of less than 10,000.

Warrant 2, Four-Hour Vehicular Volume (Figures 4C-1 & 4C-2 plus accompanying Tables)														
Number of Approach Lanes (Major/Minor)			**Volumes**											
100%	1 / 1		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	80	80	80	80	100	120	150	180	220	260	310
	2+ / 1		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	80	90	100	120	150	175	200	250	290	340	390
	2+ / 2+		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	115	115	145	165	200	240	275	340	390	460	-
	1 / 2+		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	115	115	115	120	150	175	200	250	290	340	390
70%	1 / 1	X	Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	60	60	60	70	90	125	160	205	-	-	-
	2+ / 1		Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	60	65	80	100	130	165	215	265	-	-	-
	2+ / 2+		Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	80	80	105	140	175	225	290	-	-	-	-
	1 / 2+		Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	80	80	80	100	130	165	215	265	-	-	-
Threshold Volume			Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	60	60	60	70	90	125	160	205	-	-	-
4th Highest Hour Volume			Major	363	363	363	363	363	363	363	363	363	363	363
			Minor	80	80	80	80	80	80	80	80	80	80	80
Warrant Met?			Major	No	No	No	No	No	No	No	Yes	#VALUE!	#VALUE!	#VALUE!
			Minor	Yes	Yes	Yes	Yes	No	No	No	No	#VALUE!	#VALUE!	#VALUE!
			Overall	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**#VALUE!**	**#VALUE!**	**#VALUE!**

Notes: *100% warrants represent the basic minimum hourly volumes.*
70% warrants may be used when major street speeds exceed 40 mph or in an isolated community with a population of less than 10,000.

Preliminary Traffic Signal Warrants

Manual on Uniform Traffic Control Devices (MUTCD) 11th Edition

Project Name: Towhee Creek Subdivision
Date: 12/29/2025
Intersection: 6. NW 164th Street at NW 11th Avenue
Analysis Scenario: 2028 Post-Development

Cross-Street	Number of Lanes	Volumes			
		AM Peak Hour	PM Peak Hour	8th Highest Hr	4th Highest Hr
Major Street	1	106	111	63	87
Minor Street	1	7	18	10	14

Warrants Evaluated?	70%

Notes: *8th highest hour volumes assumed to reflect a K-50 factor, or approximately 5.65% of the AADT through the intersection. The AADT is assumed to be ten times the PM peak hour.*
4th highest hour volumes assumed to be the midpoint, or average, of the PM peak hour and 8th highest hour volumes.
A 25% reduction on the minor street right-turn volumes was assumed to account for right-turns on red.

Warrant 1, Eight-Hour Vehicular Volume (Table 4C-1)

Number of Approach Lanes (Major/Minor)		Condition A				Condition B				Combination A/B*							
		100%		70%		100%		70%		Condition A 80%		Condition B 80%		Condition A 56%		Condition B 56%	
		Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor
1 / 1	X	500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1		600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+		600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+		500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
Threshold Volume				350	105			525	53								
8th Highest Hour Volume				63	10			63	10								
Warrant Met?				**No**				**No**									

Notes: *100% warrants represent the basic minimum hourly volumes.*
70% warrants may be used when major street speeds exceed 40 mph or in an isolated community with a population of less than 10,000.
** The combination of Conditions A and B is intended for application at locations where Condition A is not satisfied and Condition B is not satisfied. The combination warrants should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems (i.e., the combination warrants should generally only be used if an operational issue is present at the intersection).*
80% combination warrants represent the basic minimum hourly volumes.
56% combination warrants may be used when major street speeds exceed 40 mph or in an isolated community with a population of less than 10,000.

Warrant 2, Four-Hour Vehicular Volume (Figures 4C-1 & 4C-2 plus accompanying Tables)														
Number of Approach Lanes (Major/Minor)			**Volumes**											
100%	1 / 1		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	80	80	80	80	100	120	150	180	220	260	310
	2+ / 1		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	80	90	100	120	150	175	200	250	290	340	390
	2+ / 2+		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	115	115	145	165	200	240	275	340	390	460	-
	1 / 2+		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	115	115	115	120	150	175	200	250	290	340	390
70%	1 / 1	X	Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	60	60	60	70	90	125	160	205	-	-	-
	2+ / 1		Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	60	65	80	100	130	165	215	265	-	-	-
	2+ / 2+		Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	80	80	105	140	175	225	290	-	-	-	-
	1 / 2+		Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	80	80	80	100	130	165	215	265	-	-	-
Threshold Volume			Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	60	60	60	70	90	125	160	205	-	-	-
4th Highest Hour Volume			Major	87	87	87	87	87	87	87	87	87	87	87
			Minor	14	14	14	14	14	14	14	14	14	14	14
Warrant Met?			Major	No	No	No	No	No	No	No	No	#VALUE!	#VALUE!	#VALUE!
			Minor	No	No	No	No	No	No	No	No	#VALUE!	#VALUE!	#VALUE!
			Overall	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**#VALUE!**	**#VALUE!**	**#VALUE!**

Notes: *100% warrants represent the basic minimum hourly volumes.*
70% warrants may be used when major street speeds exceed 40 mph or in an isolated community with a population of less than 10,000.

Preliminary Traffic Signal Warrants

Manual on Uniform Traffic Control Devices (MUTCD) 11th Edition

Project Name: Towhee Creek Subdivision
Date: 12/29/2025
Intersection: 7. Site Access at NW 11th Avenue
Analysis Scenario: 2028 Post-Development

Cross-Street	Number of Lanes	Volumes			
		AM Peak Hour	PM Peak Hour	8th Highest Hr	4th Highest Hr
Major Street	1	88	106	60	83
Minor Street	1	31	21	12	17

Warrants Evaluated?	70%

Notes: *8th highest hour volumes assumed to reflect a K-50 factor, or approximately 5.65% of the AADT through the intersection. The AADT is assumed to be ten times the PM peak hour.*
4th highest hour volumes assumed to be the midpoint, or average, of the PM peak hour and 8th highest hour volumes.
A 25% reduction on the minor street right-turn volumes was assumed to account for right-turns on red.

Warrant 1, Eight-Hour Vehicular Volume (Table 4C-1)

Number of Approach Lanes (Major/Minor)		Condition A				Condition B				Combination A/B*							
		100%		70%		100%		70%		Condition A 80%		Condition B 80%		Condition A 56%		Condition B 56%	
		Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor
1 / 1	X	500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1		600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+		600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+		500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
Threshold Volume				350	105			525	53								
8th Highest Hour Volume				60	12			60	12								
Warrant Met?				**No**				**No**									

Notes: *100% warrants represent the basic minimum hourly volumes.*
70% warrants may be used when major street speeds exceed 40 mph or in an isolated community with a population of less than 10,000.
** The combination of Conditions A and B is intended for application at locations where Condition A is not satisfied and Condition B is not satisfied. The combination warrants should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems (i.e., the combination warrants should generally only be used if an operational issue is present at the intersection).*
80% combination warrants represent the basic minimum hourly volumes.
56% combination warrants may be used when major street speeds exceed 40 mph or in an isolated community with a population of less than 10,000.

Warrant 2, Four-Hour Vehicular Volume (Figures 4C-1 & 4C-2 plus accompanying Tables)														
Number of Approach Lanes (Major/Minor)			**Volumes**											
100%	1 / 1		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	80	80	80	80	100	120	150	180	220	260	310
	2+ / 1		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	80	90	100	120	150	175	200	250	290	340	390
	2+ / 2+		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	115	115	145	165	200	240	275	340	390	460	-
	1 / 2+		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	115	115	115	120	150	175	200	250	290	340	390
70%	1 / 1	X	Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	60	60	60	70	90	125	160	205	-	-	-
	2+ / 1		Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	60	65	80	100	130	165	215	265	-	-	-
	2+ / 2+		Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	80	80	105	140	175	225	290	-	-	-	-
	1 / 2+		Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	80	80	80	100	130	165	215	265	-	-	-
Threshold Volume			Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	60	60	60	70	90	125	160	205	-	-	-
4th Highest Hour Volume			Major	83	83	83	83	83	83	83	83	83	83	83
			Minor	17	17	17	17	17	17	17	17	17	17	17
Warrant Met?			Major	No	No	No	No	No	No	No	No	#VALUE!	#VALUE!	#VALUE!
			Minor	No	No	No	No	No	No	No	No	#VALUE!	#VALUE!	#VALUE!
			Overall	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**#VALUE!**	**#VALUE!**	**#VALUE!**

Notes: *100% warrants represent the basic minimum hourly volumes.*
70% warrants may be used when major street speeds exceed 40 mph or in an isolated community with a population of less than 10,000.

Preliminary Traffic Signal Warrants

Manual on Uniform Traffic Control Devices (MUTCD) 11th Edition

Project Name: Towhee Creek Subdivision
Date: 12/29/2025
Intersection: 7. Site Access at NW 11th Avenue
Analysis Scenario: 2028 Post-Development

Cross-Street	Number of Lanes	Volumes			
		AM Peak Hour	PM Peak Hour	8th Highest Hr	4th Highest Hr
Major Street	1	367	327	185	256
Minor Street	1	58	44	25	35

Warrants Evaluated?	70%

Notes: *8th highest hour volumes assumed to reflect a K-50 factor, or approximately 5.65% of the AADT through the intersection. The AADT is assumed to be ten times the PM peak hour.*
4th highest hour volumes assumed to be the midpoint, or average, of the PM peak hour and 8th highest hour volumes.
A 25% reduction on the minor street right-turn volumes was assumed to account for right-turns on red.

Warrant 1, Eight-Hour Vehicular Volume (Table 4C-1)

Number of Approach Lanes (Major/Minor)		Condition A				Condition B				Combination A/B*							
		100%		70%		100%		70%		Condition A 80%		Condition B 80%		Condition A 56%		Condition B 56%	
		Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor	Major	Minor
1 / 1	X	500	150	350	105	750	75	525	53	400	120	600	60	280	84	420	42
2+ / 1		600	150	420	105	900	75	630	53	480	120	720	60	336	84	504	42
2+ / 2+		600	200	420	140	900	100	630	70	480	160	720	80	336	112	504	56
1 / 2+		500	200	350	140	750	100	525	70	400	160	600	80	280	112	420	56
Threshold Volume				350	105			525	53								
8th Highest Hour Volume				185	25			185	25								
Warrant Met?				**No**				**No**									

Notes: *100% warrants represent the basic minimum hourly volumes.*
70% warrants may be used when major street speeds exceed 40 mph or in an isolated community with a population of less than 10,000.
** The combination of Conditions A and B is intended for application at locations where Condition A is not satisfied and Condition B is not satisfied. The combination warrants should be applied only after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems (i.e., the combination warrants should generally only be used if an operational issue is present at the intersection).*
80% combination warrants represent the basic minimum hourly volumes.
56% combination warrants may be used when major street speeds exceed 40 mph or in an isolated community with a population of less than 10,000.

Warrant 2, Four-Hour Vehicular Volume (Figures 4C-1 & 4C-2 plus accompanying Tables)														
Number of Approach Lanes (Major/Minor)			**Volumes**											
100%	1 / 1		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	80	80	80	80	100	120	150	180	220	260	310
	2+ / 1		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	80	90	100	120	150	175	200	250	290	340	390
	2+ / 2+		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	115	115	145	165	200	240	275	340	390	460	-
	1 / 2+		Major	1400	1300	1200	1100	1000	900	800	700	600	500	400
			Minor	115	115	115	120	150	175	200	250	290	340	390
70%	1 / 1	X	Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	60	60	60	70	90	125	160	205	-	-	-
	2+ / 1		Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	60	65	80	100	130	165	215	265	-	-	-
	2+ / 2+		Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	80	80	105	140	175	225	290	-	-	-	-
	1 / 2+		Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	80	80	80	100	130	165	215	265	-	-	-
Threshold Volume			Major	1000	900	800	700	600	500	400	300	-	-	-
			Minor	60	60	60	70	90	125	160	205	-	-	-
4th Highest Hour Volume			Major	256	256	256	256	256	256	256	256	256	256	256
			Minor	35	35	35	35	35	35	35	35	35	35	35
Warrant Met?			Major	No	No	No	No	No	No	No	No	#VALUE!	#VALUE!	#VALUE!
			Minor	No	No	No	No	No	No	No	No	#VALUE!	#VALUE!	#VALUE!
			Overall	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**	**#VALUE!**	**#VALUE!**	**#VALUE!**

Notes: *100% warrants represent the basic minimum hourly volumes.*

70% warrants may be used when major street speeds exceed 40 mph or in an isolated community with a population of less than 10,000.



HEATH & ASSOCIATES

Transportation Planning & Engineering

TRAFFIC IMPACT ANALYSIS

SALMON CREEK APARTMENTS

Clark County, Washington

December 2025

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SALMON CREEK APARTMENTS
TRAFFIC IMPACT ANALYSIS

Prepared for:

Clark County

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12/02/2025

SALMON CREEK APARTMENTS
TRAFFIC IMPACT ANALYSIS

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SALMON CREEK APARTMENTS
TRAFFIC IMPACT ANALYSIS

1. INTRODUCTION

This Traffic Impact Analysis (TIA) describes the impacts of Salmon Creek Apartments, a proposed multifamily residential development in unincorporated Clark County herein referred to as the project. This report describes existing traffic conditions in the site vicinity and future conditions with and without the project. The report concludes with a summary of findings and recommendations consistent with Clark County plans and policies. The methods and assumptions of this TIA were established during a scoping process with Clark County staff.

2. PROJECT DESCRIPTION

- **Land Use**
  - Salmon Creek Apartments is a multifamily residential development consisting of 126 apartment units in six buildings.
  - A total of 198 off-street parking spaces will be provided.

- **Location**
  - The subject site, located at 16001 NW 11th Avenue, is bordered by NW 11th Avenue to the west, by low-density single-family residential development to the north and east, and by an undeveloped 10-acre property to the south.
  - The 4.85-acre site consists of tax parcels 182200000 and 182212000.
  - The site is zoned Mixed Use (MX) and is located in the Vancouver Urban Growth Area.
  - The site is occupied by one single-family detached dwelling unit.

- **Site Access**
  - Site ingress/egress is proposed via three accesses on a new east-west public street "Road A" which will be constructed along the northern edge of the project site. The site accesses will be located approximately 150 feet, 380 feet, and 530 feet east of NW 11th Avenue on Road A.
  - Road A will intersect NW 11th Avenue approximately 1,000 feet south of NW 164th Street and will include a 35-foot right-of-way dedication

A vicinity map is provided on the following page in **Figure 1** with the subject site highlighted in red. A conceptual site plan is presented in **Figure 2**.

Figure 1: Vicinity Map



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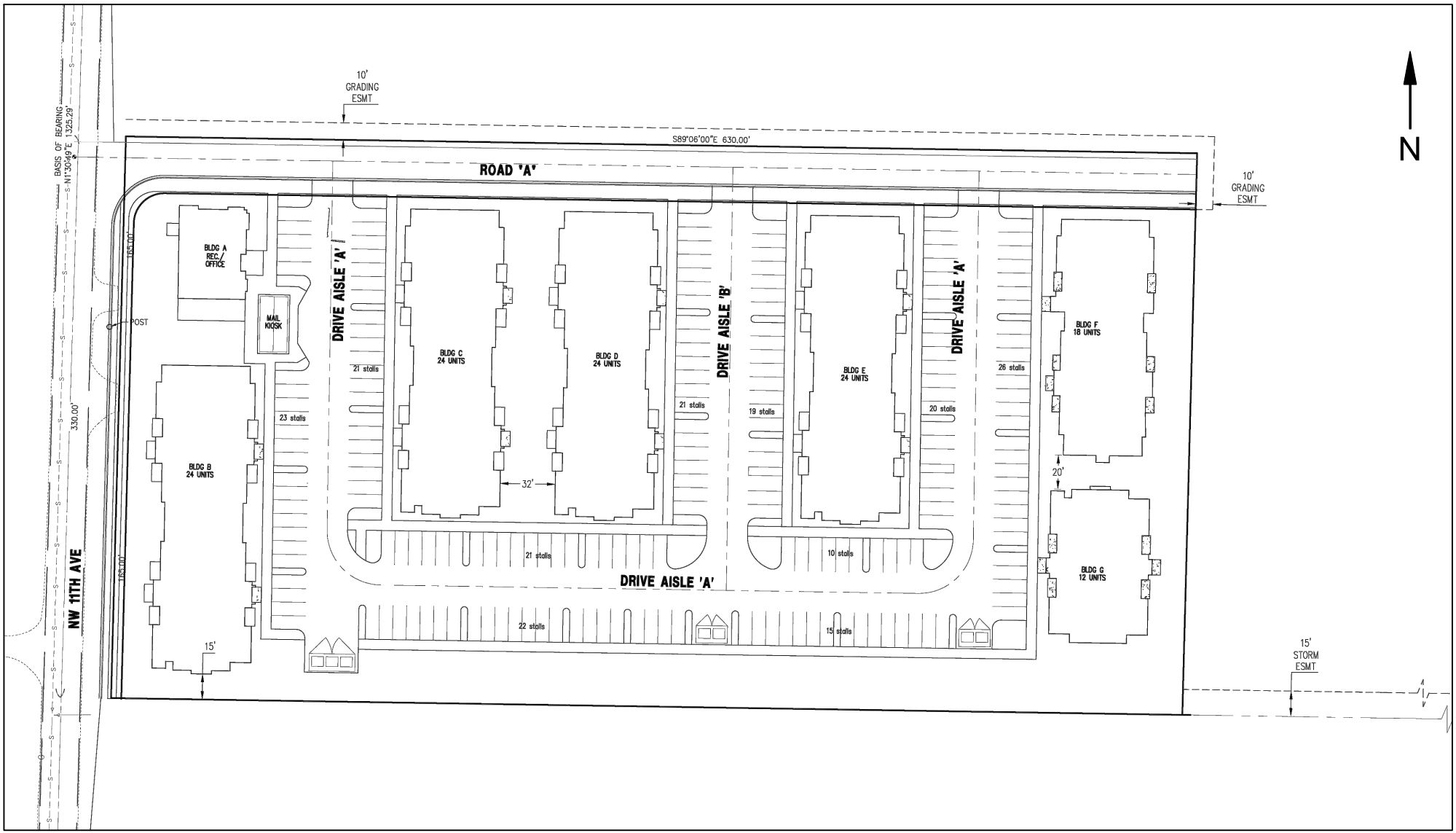
SALMON CREEK APARTMENTS
VICINITY MAP
FIGURE 1



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SALMON CREEK APARTMENTS

SITE PLAN
FIGURE 2

3. PROJECT TRIP FORECAST AND STUDY AREA

3.1 Project Trip Generation

Trip generation estimates were derived from the Institute of Transportation Engineers (ITE) *Trip Generation,* 12th Edition. The project will consist of 126 multifamily dwelling units in six buildings and is consistent with ITE Land Use Code (LUC) 220 "Multifamily Housing (Low-Rise)." The existing single-family detached dwelling unit will be removed. The project trip generation forecast is summarized in **Table 1**.

Table 1: Project Trip Generation

Land Use	Units	AWDT	AM Pk Hr Trips			PM Pk Hr Trips		
			In	Out	Total	In	Out	Total
Low-Rise Multifamily Housing (LUC 220)	126 DU	830	14	43	**57**	42	26	**68**
Single-Family Housing (LUC 210)	-1 DU	-9	0	-1	**-1**	-1	0	**-1**
Net New Trips		821	14	42	**56**	41	26	**67**

The project will generate 821 new weekday daily trips, 56 new AM peak hour trips (14 inbound / 42 outbound), and 67 new PM peak hour trips (41 inbound / 26 outbound).

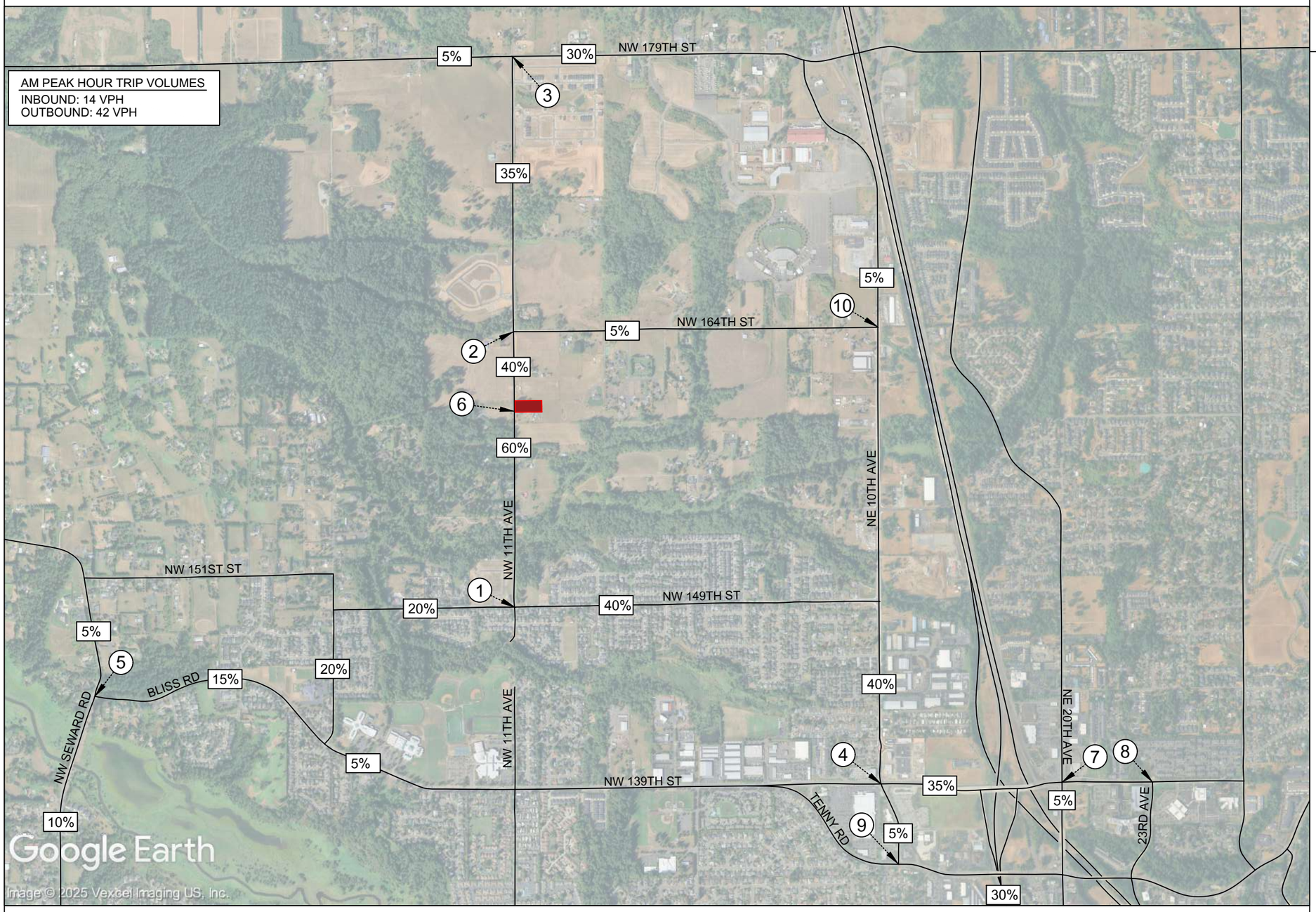
3.2 Project Distribution & Assignment

Project-generated trips were distributed and assigned to the surrounding street network based on a review of the existing street network and development patterns and were verified by Clark County staff during the scoping process. Refer to **Figure 3** and **Figure 4** for the AM and PM peak hour trip distribution & assignment forecasts.

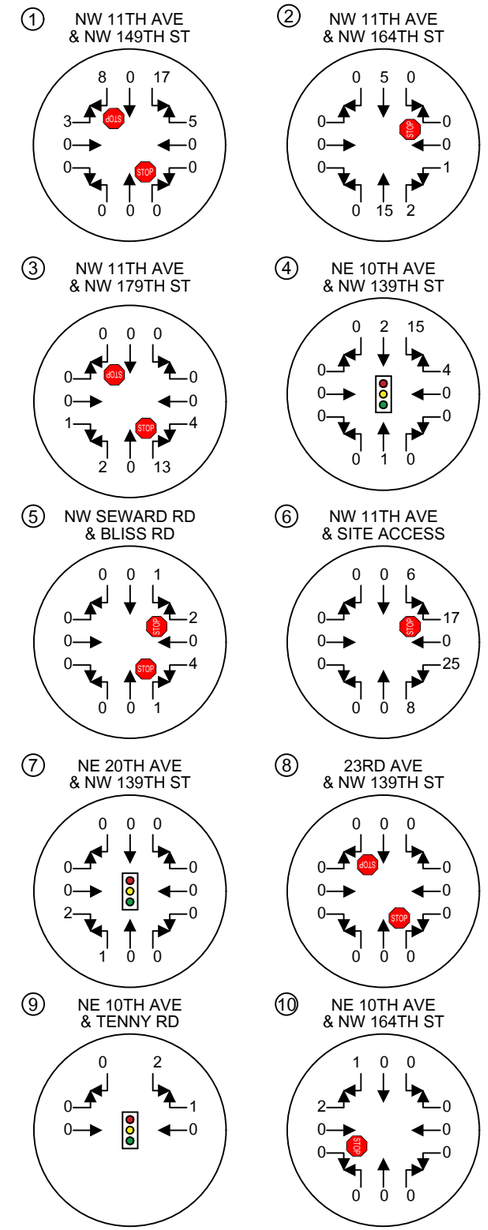
3.3 Study Area

Study intersections were determined based on Clark County Code 40.350.020, which requires analysis of intersections at which a failing approach will be impacted by five or more peak hour project-generated trips. Intersections which meet the five-trip threshold are shown below and in **Figures 3** and **4**.

1. NW 11th Avenue & NW 149th Street
2. NW 11th Avenue & NW 164th Street
3. NW 11th Avenue & NW 179th Street
4. NE 139th Street & NE 10th Avenue
5. NW Bliss Road & NW Seward Road



STUDY INTERSECTIONS



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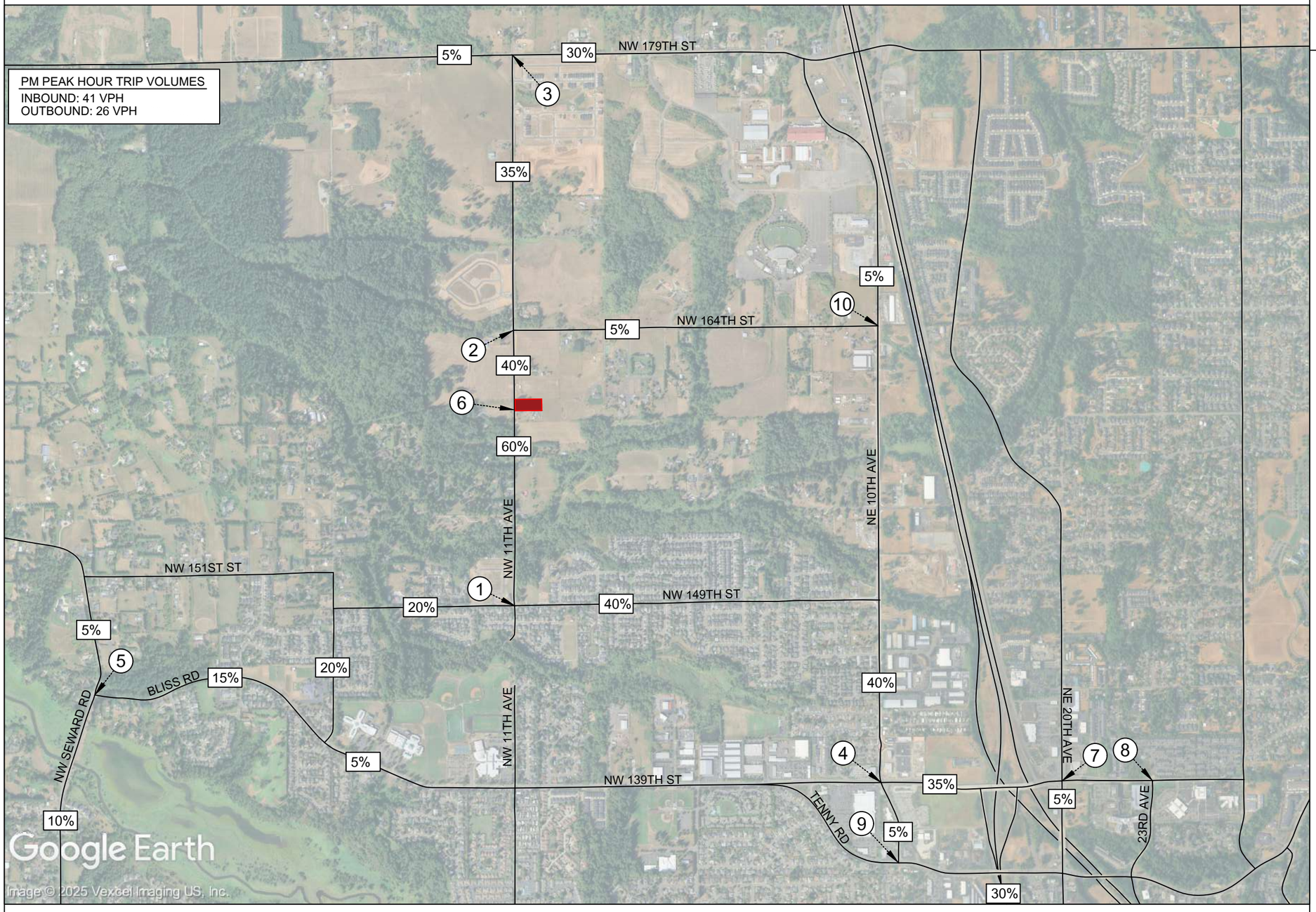
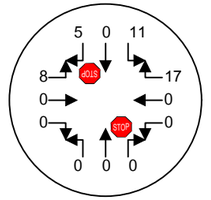
SALMON CREEK APARTMENTS

AM PEAK HOUR TRIP DISTRIBUTION AND ASSIGNMENT
FIGURE 3



STUDY INTERSECTIONS

① NW 11TH AVE & NW 149TH ST



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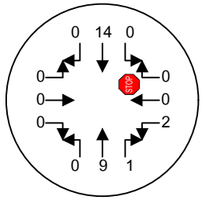

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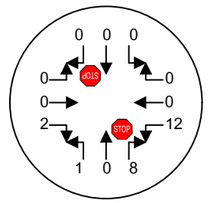

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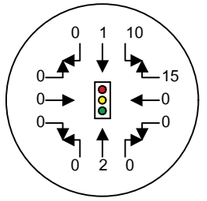

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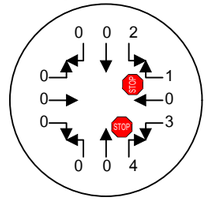

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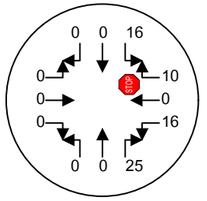

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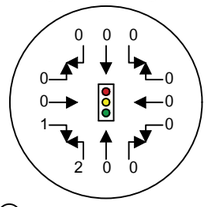

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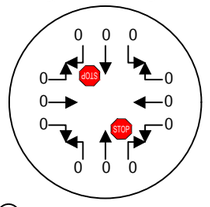

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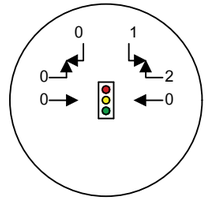
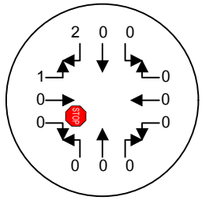


⑩ NE 10TH AVE & NW 164TH ST



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PM PEAK HOUR TRIP DISTRIBUTION AND ASSIGNMENT
FIGURE 4

4. EXISTING CONDITIONS

4.1 Existing Street System

Characteristics of key streets in the project vicinity are summarized in **Table 2**.

Table 2: Roadway Network

Clark County Classification	Roadway	Speed Limit (mph)	Lanes	Sidewalk	Bike Facilities
Principal Arterial (Pr-4cb)	NW 179th Street[1]	25	2-3	One side	No
Minor Arterial (M-4cb)	NW 139th Street	35	4-5	Yes	Yes
Minor Arterial (M-2cb)	NW 11th Avenue	35	2	No	No
	NW Bliss Road	35	2	Partial	Shoulder
	NW Seward Rd[2]	40	2	No	Shoulder
Urban Collector (C-2cb)	NW 164th Street	35	2	No	No
Urban Collector (C-2)	NW 149th Street	35	2	Yes	Shoulder
	NW 21st Avenue	35	2	Yes	Yes

[1] Principal arterial east of NW 11th Avenue; Rural Collector west of NW 11th Avenue
[2]Minor Arterial north of NW Bliss Road; Rural Collector south of NW Bliss Road

4.2 Roadway Improvements

The Clark County 2025-2030 Transportation Improvement Program was reviewed to identify planned transportation improvement projects in the site vicinity. The TIP identifies the following projects to the north and east of the project on NE 179th Street, NE 10th Avenue, and NE Delfel Road, but none of the planned improvement projects impact study intersections or roadways.

4.3 Existing Peak Hour Volumes and Travel Patterns

Intersection turning movement counts were collected from 7-9 AM and from 4-6 PM on Tuesday, July 29, 2025 at the following intersections:

6. NW 11th Avenue & NW 149th Street
7. NW 11th Avenue & NW 164th Street
8. NW 11th Avenue & NW 179th Street
9. NE 139th Street & NE 10th Avenue
10. NW Bliss Road & NW Seward Road

Given the proximity of Skyview High School (1,740 students), Alki Middle School (610 students), and Chinook Elementary School (550 students) and the timing of the July

2025 traffic counts during the summer academic recess, supplemental 2024 peak hour traffic counts were provided by Clark County staff at the following intersections:

1. NW 11th Avenue & NW 149th Street (May 2024)[1]
2. NW 11th Avenue & NW 164th Street (May 2024)[1]
3. NW 11th Avenue & NW 179th Street (May 2024)[1]
4. NE 139th Street & NE 10th Avenue (November 2024)[2]

A comparison of July 2025 traffic counts and 2024 counts indicated higher traffic volumes during the academic year at each of the four intersections. Therefore, for locations where 2024 traffic counts were provided, 2025 baseline volumes were calculated by applying a 2 percent growth factor to 2024 counts.

For the intersection of NW Bliss Road & NW Seward Road, 2025 baseline volumes were calculated based on the relationship between July 2025 and November 2024 counts at the intersection of NE 139th Street & NE 10th Avenue. These included a 27 percent adjustment factor in the AM peak hour counts and a 14 percent adjustment factor to July 2025 PM peak hour counts.

Figures 5 and **6** illustrate baseline AM and PM peak hour volumes. Raw turning movement count sheets are provided in the appendix.

4.4 Nonmotorized Conditions

Nonmotorized traffic volumes were included in the 2025 AM and PM peak hour counts and are provided in the Appendix.

NW 11th Avenue in the project vicinity consists of a rural two-lane paved section with no sidewalks or bike lanes. The project will provide curb, gutter, and concrete sidewalk along the NW 11th Avenue frontage as well as on the southern (project) side of the proposed Road A.

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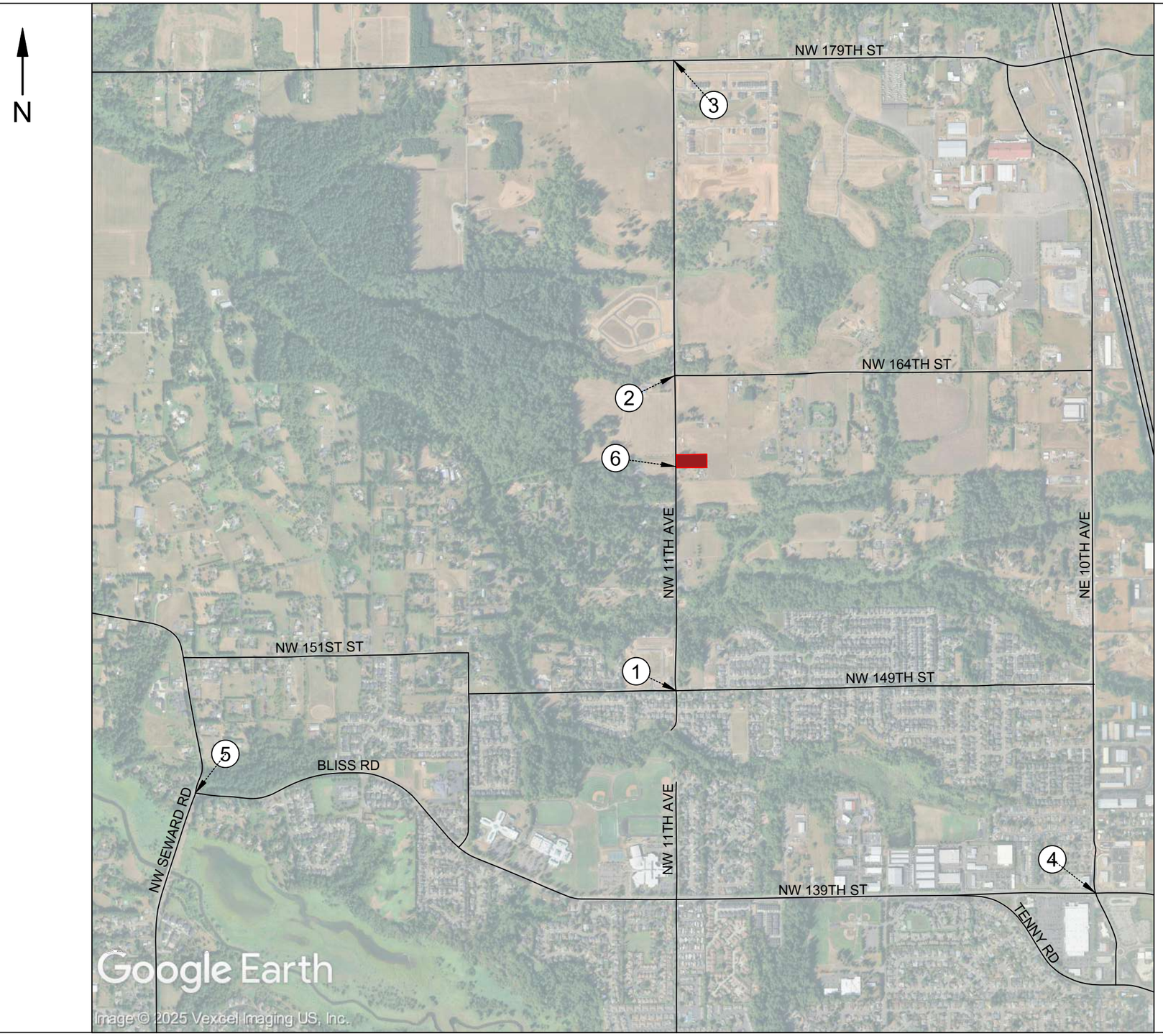
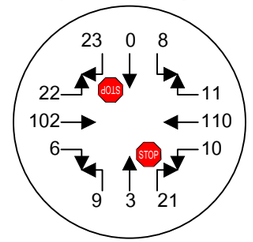
[1] May 2024 traffic counts, per *Emerald Grove Subdivision Transportation Impact Study* (Lancaster Mobley 2024)

[2] November 2024 traffic counts, per *Skyview East Traffic Impact Study* (H. Lee & Associates, PLLC 2024)



STUDY INTERSECTIONS

① NW 11TH AVE & NW 149TH ST



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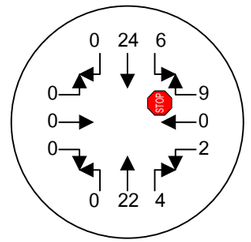

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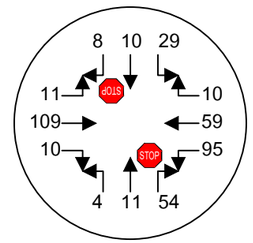

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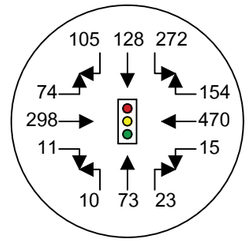

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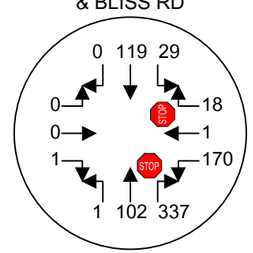
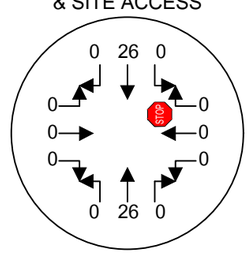
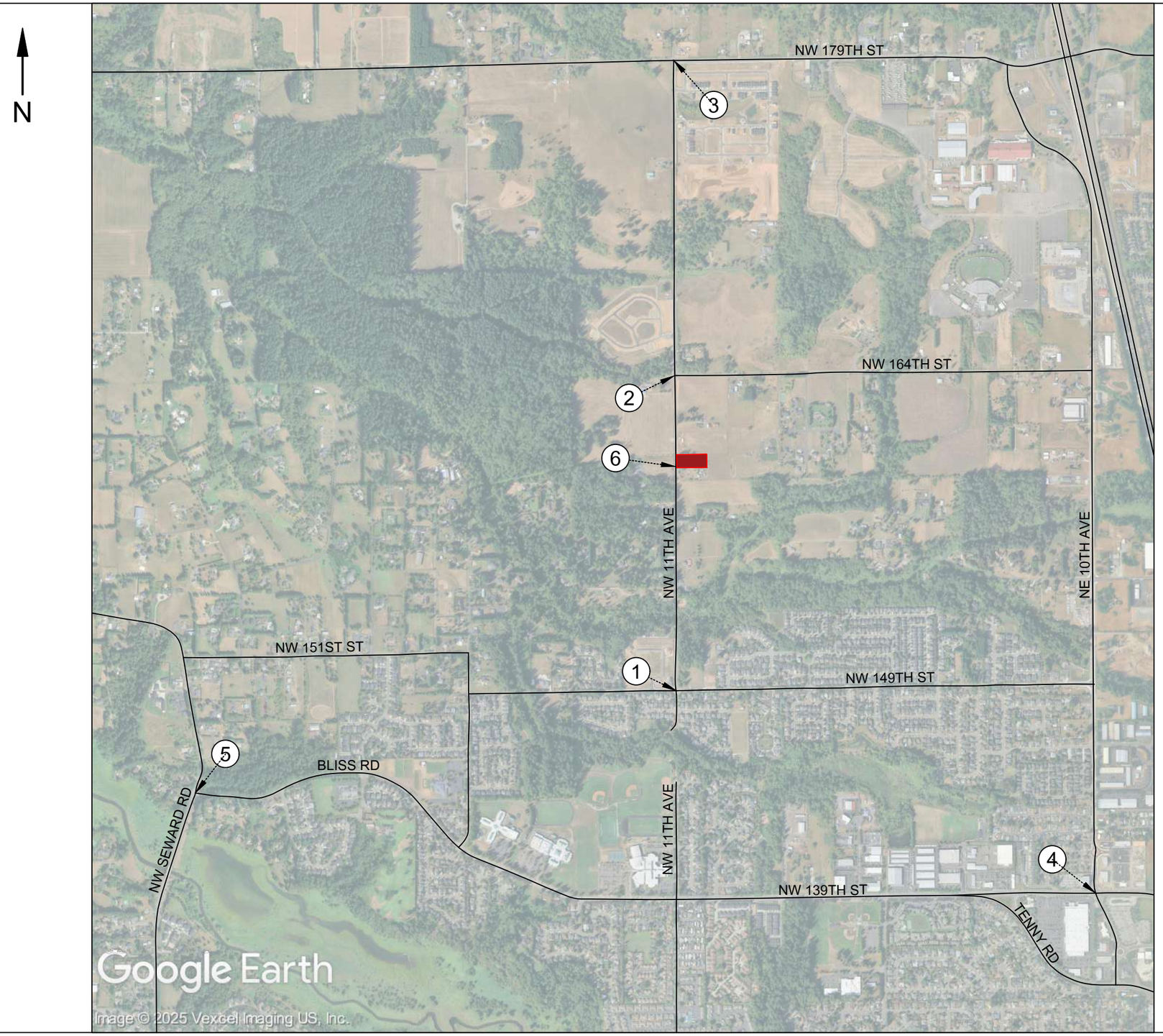


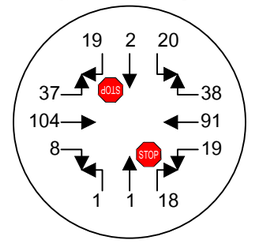
⑥ NW 11TH AVE & SITE ACCESS



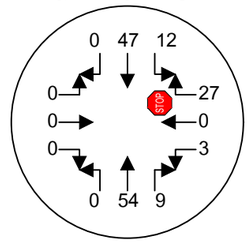


STUDY INTERSECTIONS

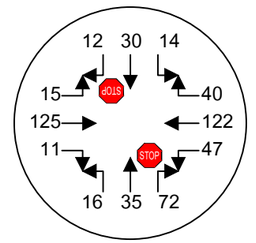
① NW 11TH AVE & NW 149TH ST



② NW 11TH AVE & NW 164TH ST



③ NW 11TH AVE & NW 179TH ST



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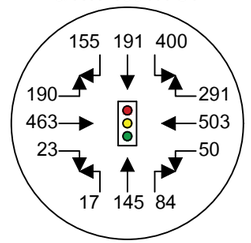

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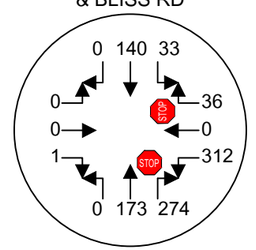

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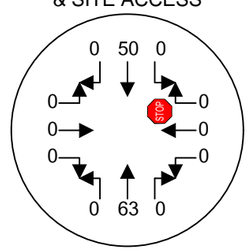


4.5 Existing Levels of Service

Level of Service (LOS) is a measure of congestion for transportation facilities which uses a range[3] from LOS A to LOS F, where LOS A indicates free-flow conditions with low delay and LOS F indicates congested conditions with high delay. For minor-approach stop-controlled intersections, LOS is determined by the highest-delay approach. For all other intersections, LOS is defined by the overall intersection delay. Existing intersection delays and LOS were analyzed in Synchro 12 software using *Highway Capacity Manual 7th Edition* methodologies. Results of the existing LOS analysis are summarized in **Table 3**.

Minimum intersection performance standards are defined in Clark County Unified Development Code (CCC) 40.350.020(G) as indicated below:

- Signalized Intersections: Maximum of two cycle lengths or 240 seconds, whichever is less, on individual movements.
- Unsignalized Intersections of Regional Significance: LOS E or better if warrants are not met; LOS D or better if warrants are met.

Table 3: 2025 Intersection Levels of Service

ID#	Intersection	Control	Peak Hour	Critical Approach	LOS	Delay (sec/veh)
1	11th Avenue & 149th Street	TWSC	AM PM	SB	A B	9.7 10.8
2	11th Avenue & 164th Street	TWSC	AM PM	WB	A A	8.6 8.8
3	11th Avenue & 179th Street	AWSC	AM PM	Overall	A A	8.6 8.9
4	139th Street & 10th Avenue	Signal	AM PM	Overall	B C	17.1 22.9
5	Bliss Road & Seward Road	TWSC	AM PM	WB	B C	14.4 20.1

[3] *Signalized Intersections - Level of Service*

Level of Service	Control Delay (sec/veh)
A	<10
B	≥10 and <20
C	≥20 and <35
D	≥35 and <55
E	≥55 and <80
F	≥80

Stop Controlled Intersections – Level of Service

Level of Service	Control Delay (sec/veh)
A	<10
B	≥10 and <15
C	≥15 and <25
D	≥25 and <35
E	≥35 and <50
F	≥50

Source: *Highway Capacity Manual, 7th Edition*

All study intersections operate at LOS C or better during both peak hours. At the signalized intersection of NE 10th Avenue & NE 139th Street, all movements operate at LOS D or better during both peak hours. Minimum Clark County LOS standards are satisfied.

Existing street segment operations were analyzed based on capacity and LOS standards identified in CCC 40.350.020(G) for the following street segments, which were confirmed by Clark County staff during the TIA scoping process:

1. NW 179th Street from NW 11th Avenue to NE Delfel Road
2. NW 11th Avenue from NW 149th Street to NW 179th Street
3. NW 149th Street from NW 21st Avenue to NW 11th Avenue
4. NW 149th Street from NW 11th Avenue to NE 10th Avenue

Clark County has adopted a maximum volume-to-capacity (v/c) ratio standard of 0.90 for all collector and arterial street segments in the Vancouver Urban Growth Area, but outside the City of Vancouver, in addition to all state highways of regional significance.

Street segment v/c ratios were calculated for each direction of each study segment. The results of the existing street segment operations analysis, summarized in **Table 4**, identify the maximum identified directional v/c ratio for each study segment.

Table 4: 2025 Street Segment Operations

Street	Limits	Class	Capacity (vph)	AM Peak Hr		PM Peak Hr	
				Volume	V/C	Volume	V/C
NW 179th St	NW 11th Ave to NE Delfel Rd	Pr-4cb	1800	192	0.11	148	0.08
NW 11th Ave	NW 149th St to NW 179th St	M-2cb	900	69	0.08	123	0.14
NW 149th St	NW 21st Ave to NW 11th Ave	C-2	800	142	0.18	149	0.19
NW 149th St	NW 11th Ave to NE 10th Ave	C-2	800	131	0.16	148	0.19

All study segments satisfy the Clark County maximum v/c standard.

4.6 Crash History

Crash records for the five-year period from 2020 through 2024 were obtained from WSDOT for all study intersections. **Table 5** summarizes crashes by year.

Table 5: Crash History, 2020-2024

ID	Location	2020	2021	2022	2023	2024	Total	Avg.
1	NW 11th Avenue & NW 149th Street	0	1	0	0	0	1	**0.2**
2	NW 11th Avenue & NW 164th Street	0	0	0	0	0	0	**0.0**
3	NW 11th Avenue & NW 179th Street	1	1	2	0	1	5	**1.0**
4	NE 139th Street & NE 10th Avenue	2	1	0	1	0	4	**0.8**
5	NW Bliss Road & NW Seward Road	1	0	2	2	1	6	**1.2**

A total of 16 crashes were reported at the five study intersections during the five-year study period. One serious injury was reported at the intersection of NW 11th Avenue & NW 149th Street on September 17, 2021 when a vehicle traveling southbound on NW 11th Avenue failed to grant right-of-way to a vehicle traveling eastbound on NW 149th Street. The crash occurred during daylight hours with dry road conditions.

One bicycle-involved collision occurred at the intersection of NW Bliss Road & NW Seward Road when, on December 26, 2020, a westbound left-turning vehicle on NW Bliss Road struck a bicycle. The crash resulted in a possible injury. The crash occurred during daylight hours with wet road conditions.

The crash analysis indicated no significant crash history or safety deficiencies.

5. FUTURE CONDITIONS

5.1 Future Traffic Volumes

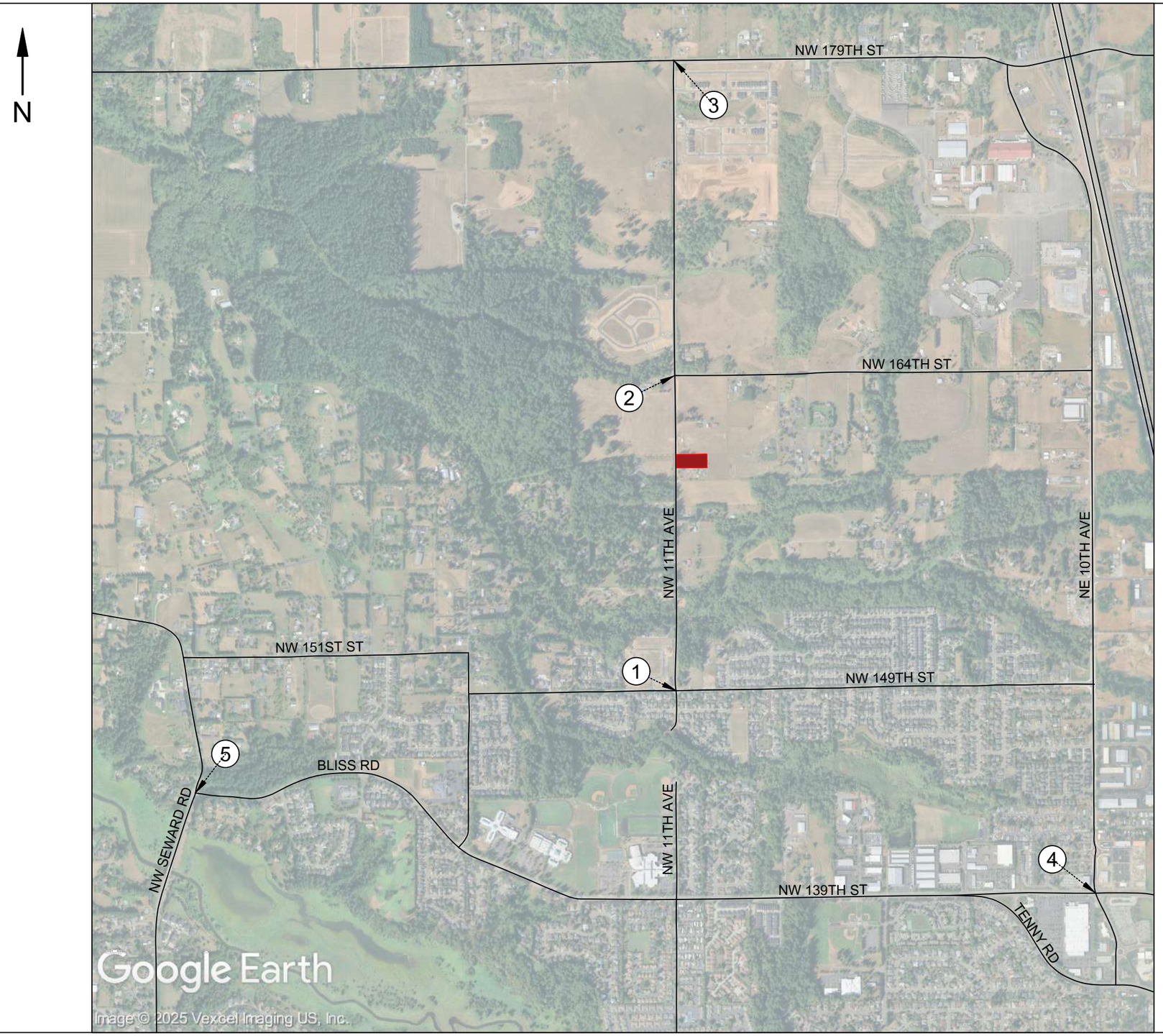
Future traffic volumes were forecast for a three-year (2028) horizon. Non-project-related traffic volume growth was calculated as the sum of two components:

1. **Pipeline growth** reflects the impacts of specific projects which have been permitted in the project vicinity. Clark County staff identified four pipeline projects which will impact the study area:
    a. Emerald Grove Subdivision
    b. Skyview Station East
    c. South Ridge Central Apartments
    d. Three Creeks PUD

    Trips associated with pipeline projects were identified through review of TIA reports provided by Clark County staff.
2. **Background growth** reflects the impacts of other local and regional growth which is anticipated to impact the study area. Background growth was calculated using a 2 percent annual growth rate, consistent with the long-range travel demand growth forecast identified in the Transportation Element of the Clark County Comprehensive Plan.

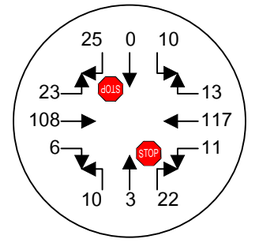
Pipeline and background growth forecasting assumptions were reviewed and approved by Clark County staff during the TIA scoping process.

Future 2028 AM and PM peak hour traffic volumes forecasts are shown graphically in **Figures 7** through **10**.



STUDY INTERSECTIONS

① NW 11TH AVE & NW 149TH ST



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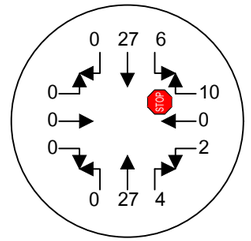
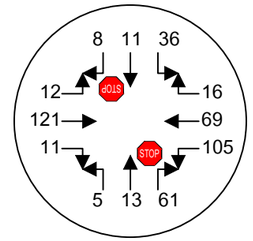


③ NW 11TH AVE & NW 179TH ST



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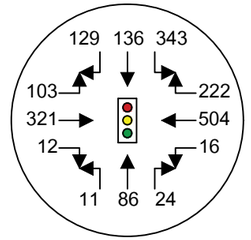
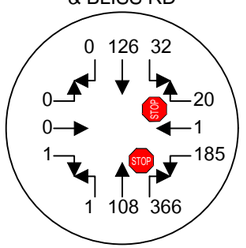
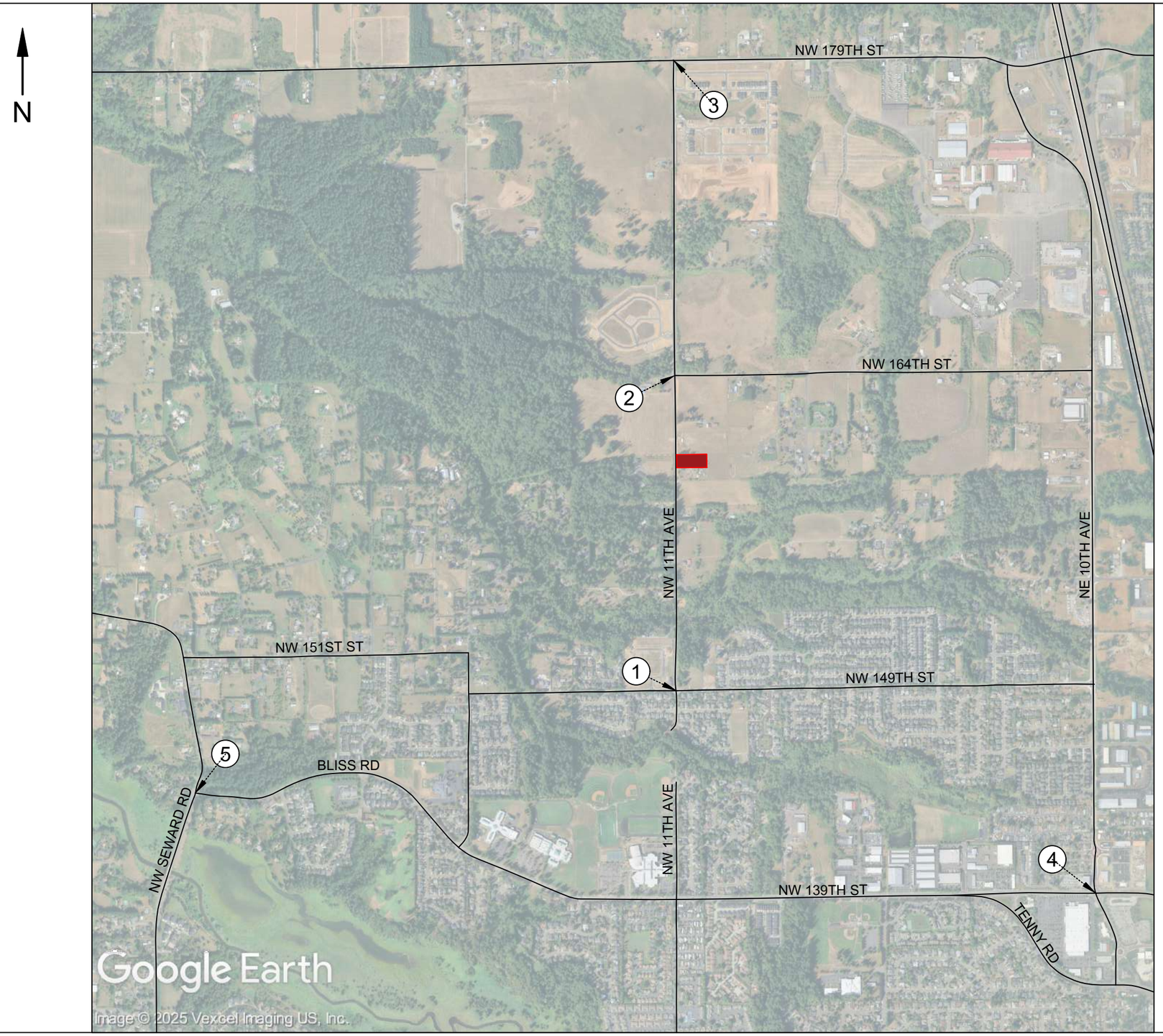


⑤ NW SEWARD RD & BLISS RD





STUDY INTERSECTIONS

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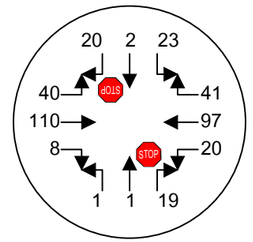
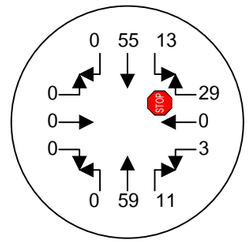


② NW 11TH AVE & NW 164TH ST



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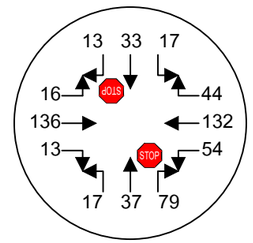

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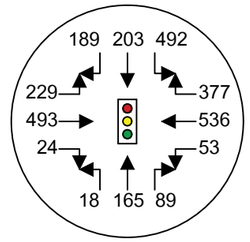

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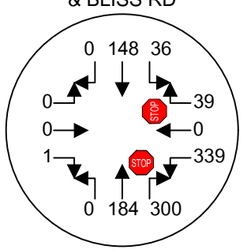

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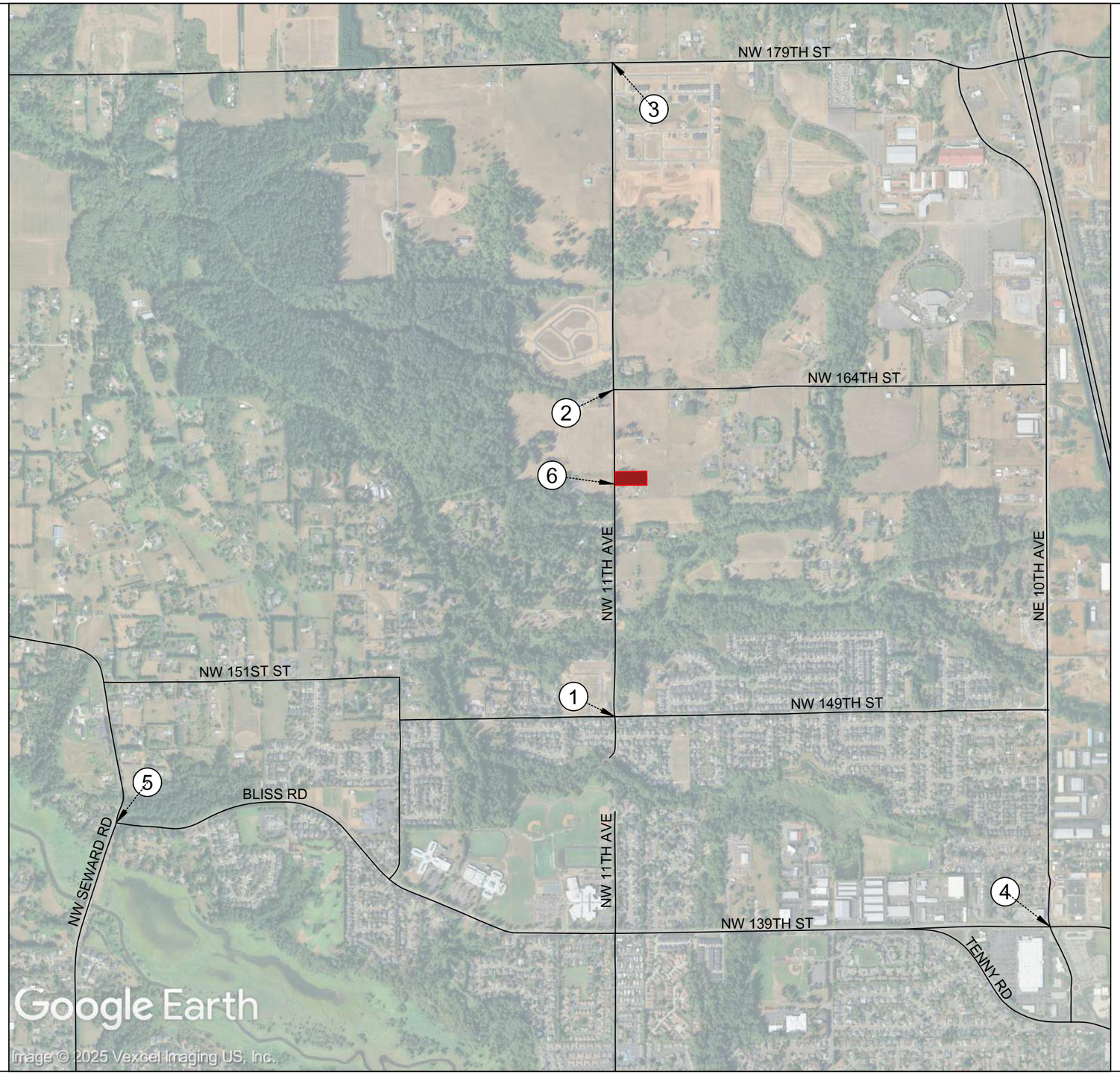

STUDY INTERSECTIONS

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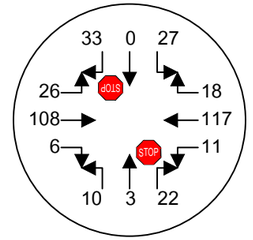

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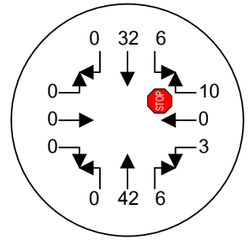

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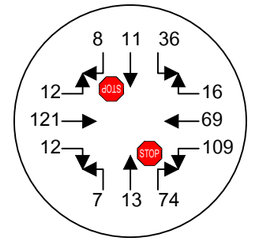

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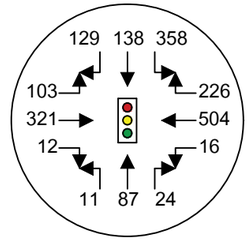
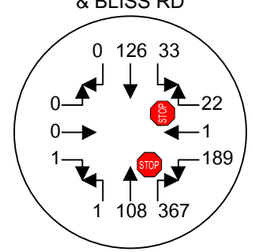
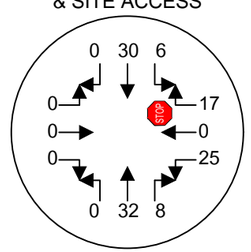
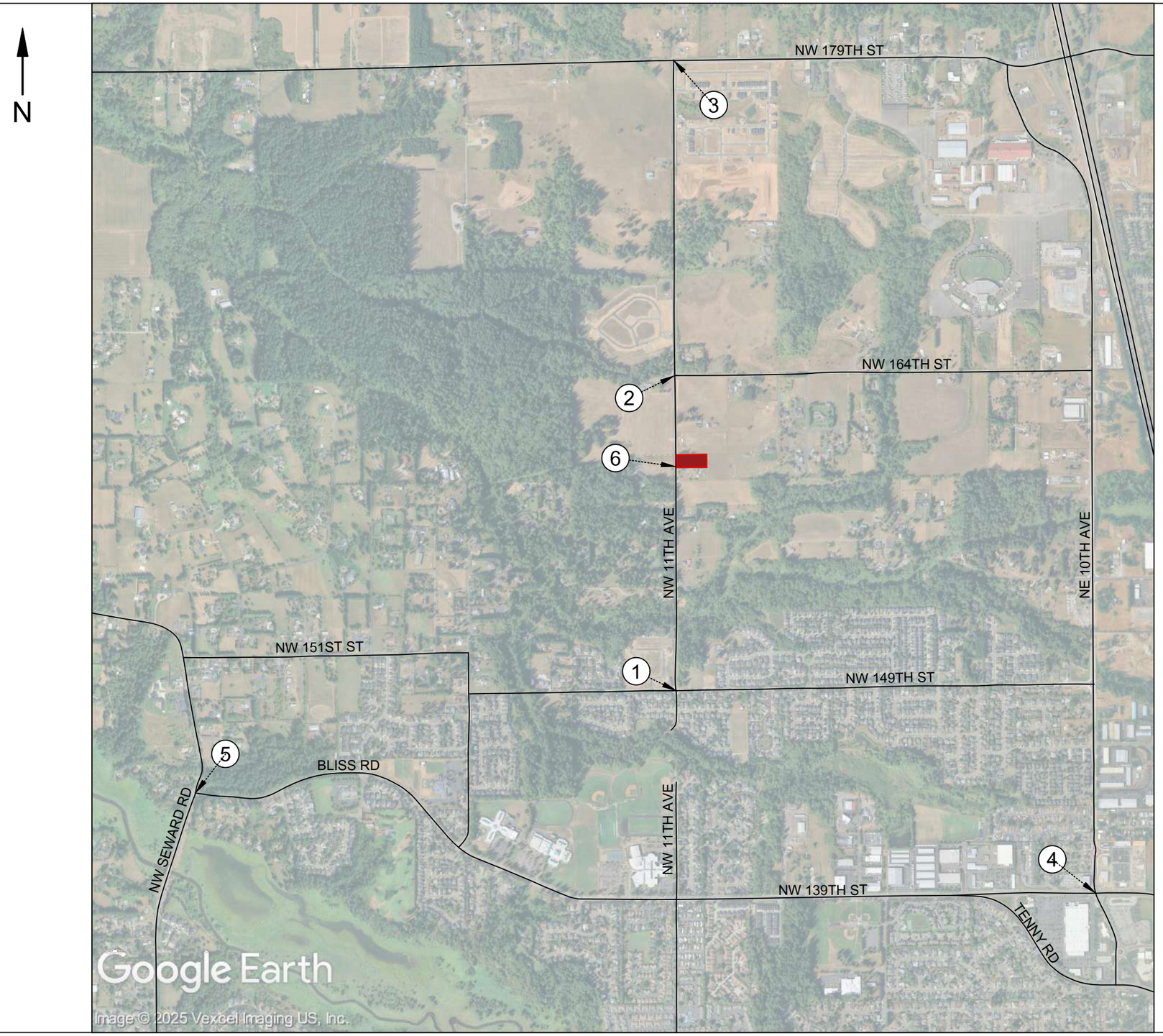


⑤ NW SEWARD RD & BLISS RD



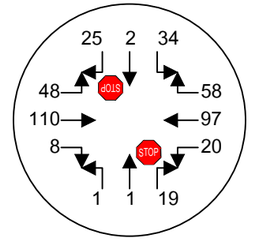
⑥ NW 11TH AVE & SITE ACCESS



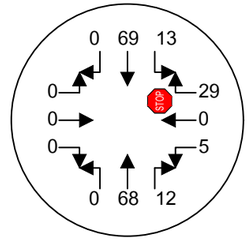


STUDY INTERSECTIONS

① NW 11TH AVE & NW 149TH ST



② NW 11TH AVE & NW 164TH ST



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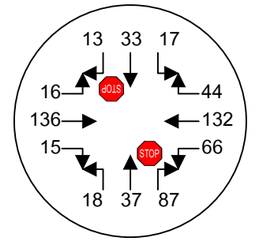

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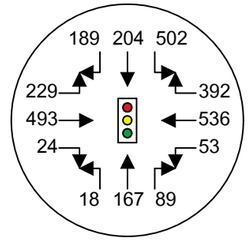
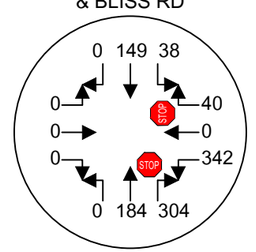
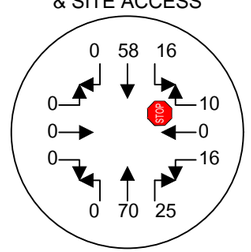


⑤ NW SEWARD RD & BLISS RD



⑥ NW 11TH AVE & SITE ACCESS



5.2 Future Level of Service

Intersection LOS was analyzed for the 2028 without and with project-generated trips. Intersection delay and LOS results are summarized in **Table 6**. Full intersection LOS reports are provided in the Appendix.

Table 6: 2028 Intersection Level of Service

					Without Project		*With Project*	
ID#	**Intersection**	**Control**	**Peak-Hour**	**Critical Approach**	**LOS**	**Delay**	**LOS**	**Delay**
1	11th Avenue & 149th Street	TWSC	AM PM	SB	A B	9.8 11.1	B B	10.6 11.7
2	11th Avenue & 164th Street	TWSC	AM PM	WB	A A	8.6 8.8	A A	8.7 8.9
3	11th Avenue & 179th Street	AWSC	AM PM	Overall	A A	9.0 9.3	A A	9.1 9.4
4	139th Street & 10th Avenue	Signal	AM PM	Overall	B C	18.9 28.9	B C	19.1 29.7
5	Bliss Road & Seward Road	TWSC	AM PM	WB	C D	15.6 25.5	C D	15.8 26.4
6	11th Avenue & Road A	TWSC	AM PM	WB	-	-	A A	8.9 9.3

RAB: Roundabout

All study intersections operate at LOS D or better during both peak hours through 2028. At the signalized intersection of NE 139th Street & NE 10th Avenue, all movements will operate at LOS D or better during both peak hours. Minimum Clark County LOS standards are satisfied.

The intersection of Road A and NW 11th Avenue will operate at LOS A during the AM and PM peak hours.

Street segment v/c ratios were calculated for each direction of each study segment. The results of the existing street segment operations analysis, summarized in **Table 4**, identify the maximum identified directional v/c ratio for each study segment.

Table 7: 2028 Street Segment Operations

Street	Limits	Class	Capacity (vph)	AM Peak Hr		PM Peak Hr	
				Volume	V/C	Volume	V/C
NW 179th St	NW 11th Ave to NE Delfel Rd	Pr-4cb	1800				
		Without Project		218	0.12	230	0.13
		With Project		232	0.13	243	0.14
NW 11th Ave	NW 149th St to NW 179th St	M-2cb	900				
		Without Project		79	0.09	133	0.15
		With Project		95	0.11	142	0.16
NW 149th St	NW 21st Ave to NW 11th Ave	C-2	800				
		Without Project		152	0.19	158	0.20
		With Project		161	0.20	166	0.21
NW 149th St	NW 11th Ave to NE 10th Ave	C-2	800				
		Without Project		140	0.18	157	0.20
		With Project		158	0.20	175	0.22

All study segments will operate with peak hour v/c ratios less than 0.25 through 2028 and will satisfy the Clark County maximum v/c standard with the addition of project-generated trips.

5.3 Site Access

Site access is proposed via three accesses on a new east-west public street "Road A" which will be constructed along the northern edge of the project site. The site accesses will be located approximately 150 feet, 380 feet, and 530 feet east of NW 11th Avenue on Road A. The site access spacing satisfies the minimum 100-foot intersection spacing standard for local access streets, per CCC Table 40.350.030-3.

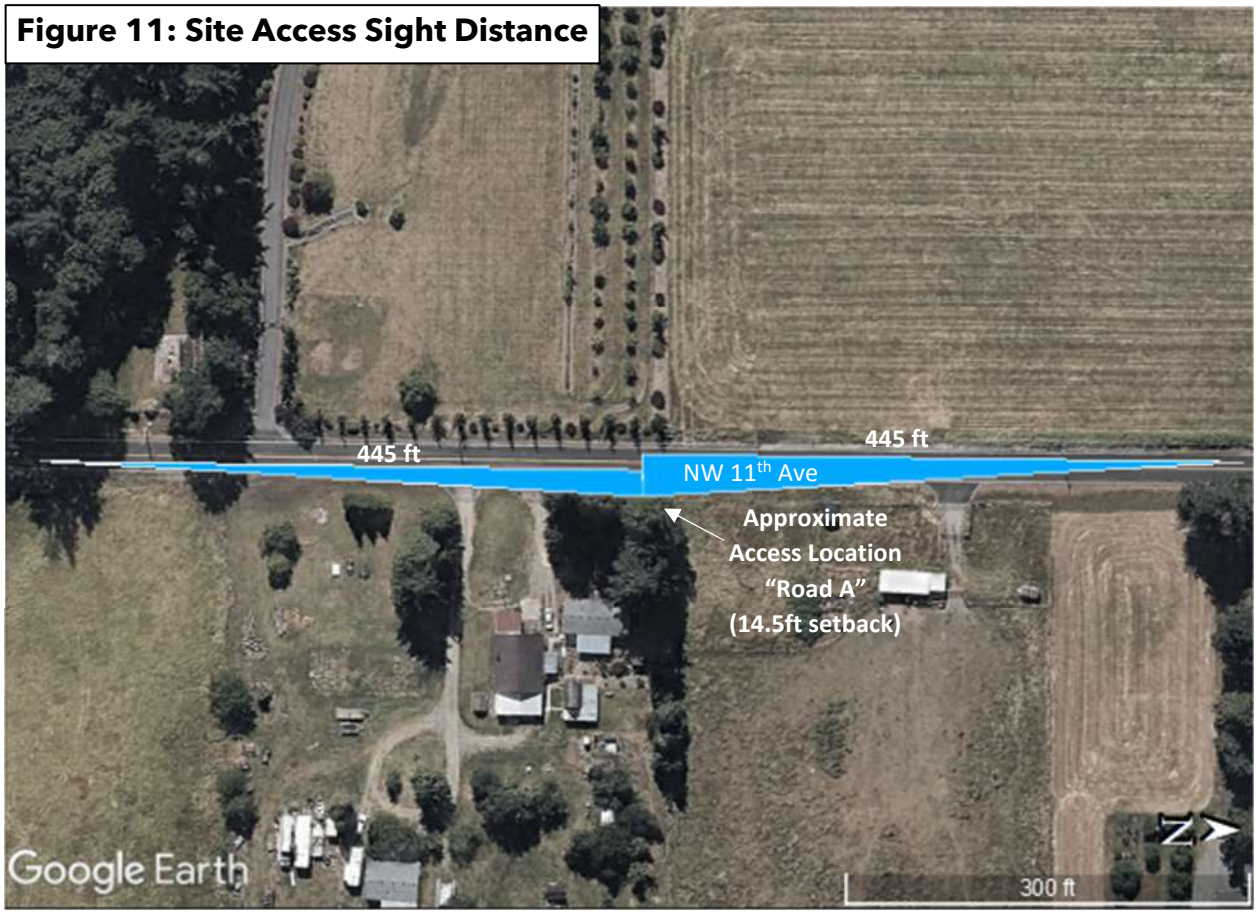
5.4 Sight Distance Analysis

Entering sight distance (ESD) was evaluated at the proposed intersection of NW 11th Avenue & Road A. Minimum required ESD for site egress were calculated using the AASHTO *Green Book* methodology, assuming a 40-mph design speed and a passenger car design vehicle. The minimum required ESD are 445 feet for left-turn movements and 385 feet for right-turn movements.

At the proposed Road A intersection, ESD extends beyond 445 feet in both directions of NW 11th Avenue. Minimum AASHTO ESD design standards are satisfied. An illustration of ESD is provided in **Figures 11.**

Site access points and internal roadways will be designed in compliance with Clark County standards and will be subject to review and approval during the civil engineering plan review process.

Figure 11: Site Access Sight Distance



6. CONCLUSIONS & MITIGATION

Salmon Creek Apartments is a multifamily residential development consisting of 126 apartment units on a 4.85-acre parcel in the Vancouver Urban Growth Area (UGA). Site access will be provided via three driveways on a new east-west local access street, Road A, which will intersect NW 11th Avenue approximately 1,000 feet south of NW 164th Street.

An analysis of existing traffic conditions indicated that all intersections and street segments in the project vicinity satisfy Clark County Level of Service standards. An analysis of five-year crash history indicated one serious injury crash and one bicycle-involved crash in the study area, but no trends or safety deficiencies were identified.

The project will generate 821 new weekday daily trips, 56 new AM peak hour trips, and 67 new PM peak hour trips. Future non-project (pipeline and background) growth were forecast based on growth rates and in-process development TIAs provided by Clark County staff.

A future conditions analysis indicated that all study intersections and street segments will operate at LOS D or better and all movements at the signalized intersection of NE 139th Street & NE 10th Avenue operating at LOS D or better, satisfying Clark County LOS standards through 2028. The addition of project-generated trips will not significantly increase delay, and no mitigation is recommended. The intersection of NW 11th Avenue & Road A will operate well at LOS A or better during both peak hours.

The following mitigation recommendations are provided for consideration:

1. Design of on-site streets, intersections, and frontage improvements should be coordinated with Clark County.

2. The project will be subject to Traffic Impact Fees (TIF) as imposed by Clark County. The project is located in the Mount Vista TIF District, which is assessed at a rate of $1,053 per net new average daily trip as of August 2025. The resulting fee calculation is:

   821 daily trips x $1,053 per daily trip = **$864,513.00**

   Traffic impact fees will be calculated and determined by Clark County at the time of building permit issuance.

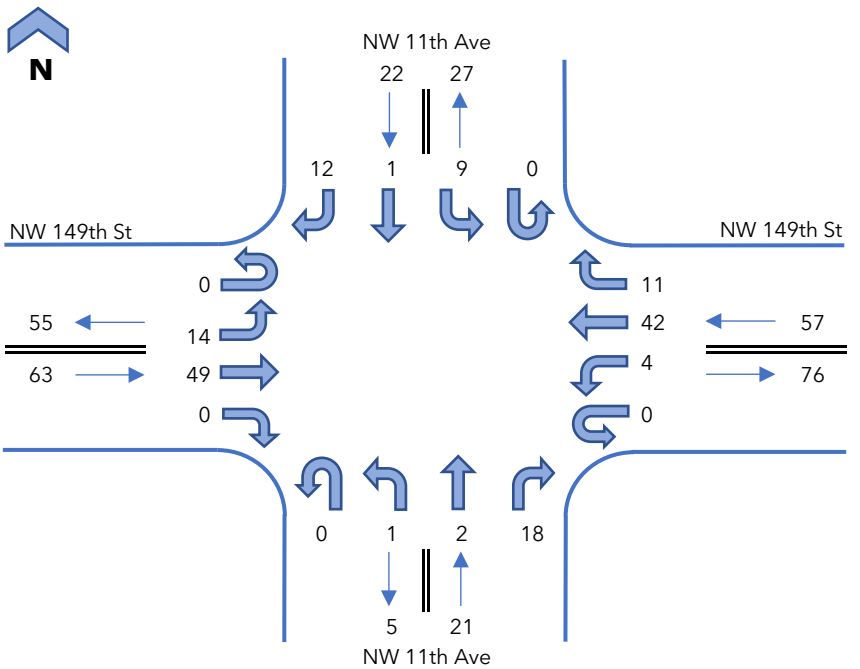
SALMON CREEK APARTMENTS
TRAFFIC IMPACT ANALYSIS

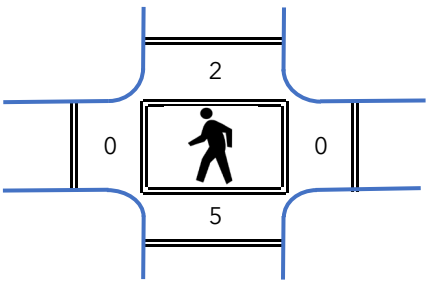
APPENDIX

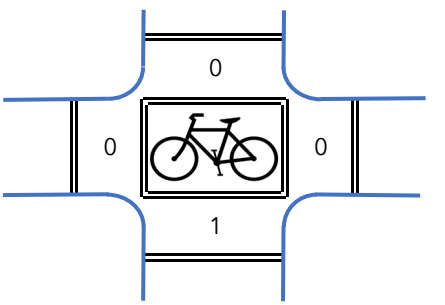
HEATH & ASSOCIATES
Transportation Planning & Engineering

Date Collected: 7/29/2025
Day of the Week: Tuesday
Time Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM

NE 149th Street & NE 11th Avenue







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	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT		
7:00 AM	0	2	11	0	0	0	4	0	0	0	1	8	0	0	0	2	28	
7:15 AM	0	8	15	0	0	0	7	1	0	0	1	7	0	2	0	0	41	
7:30 AM	0	2	12	0	0	2	3	2	0	1	0	2	0	1	0	1	26	
7:45 AM	0	2	14	0	0	0	4	2	0	0	1	4	0	1	1	3	32	127
8:00 AM	0	4	9	0	0	0	5	1	0	0	0	6	0	3	1	4	33	132
8:15 AM	0	3	10	0	0	2	15	3	0	1	0	6	0	1	0	2	43	134
8:30 AM	0	3	18	0	0	2	8	3	0	0	0	4	0	1	0	2	41	149
8:45 AM	0	4	12	0	0	0	14	4	0	0	2	2	0	4	0	4	46	163
Count Total	0	28	101	0	0	6	60	16	0	2	5	39	0	13	2	18	290	--
Peak Hour Total	0	14	49	0	0	4	42	11	0	1	2	18	0	9	1	12	163	--
PHF	0.75				0.71				0.75				0.69				0.89	--
Heavy Vehicles	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	4	--
HV %	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	2.4%	9.1%	0.0%	0.0%	0.0%	5.6%	0.0%	0.0%	0.0%	0.0%	2.5%	--

Interval Start Time	Heavy Vehicles				
	EB	WB	NB	SB	Total
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	1	1
8:00 AM	0	1	0	0	1
8:15 AM	0	0	0	0	0
8:30 AM	1	0	1	0	2
8:45 AM	0	1	0	0	1
Count Total	1	2	1	1	5
Peak Hour Total	1	2	1	0	4
Peak Hour HV%	1.6%	3.5%	4.8%	0.0%	2.5%

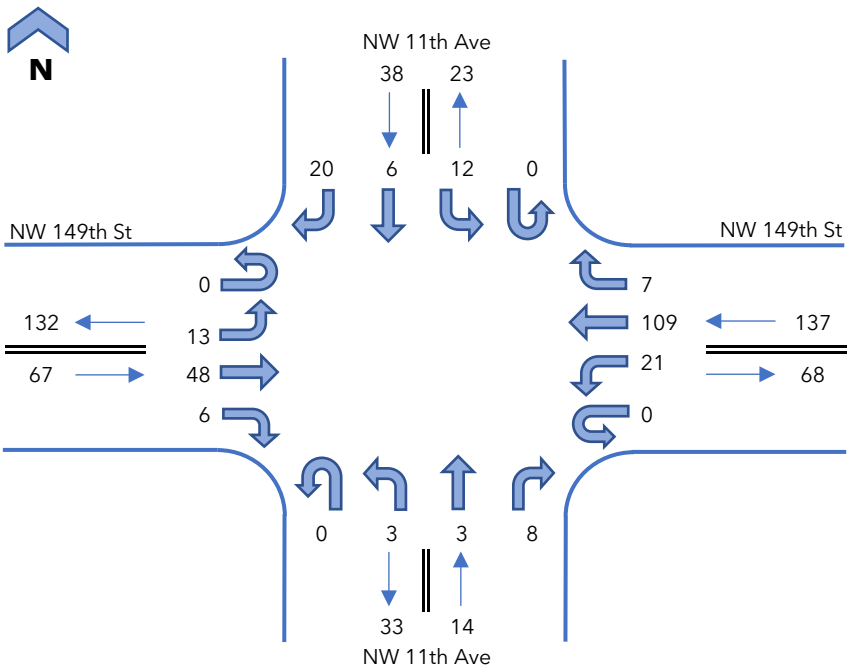
Pedestrians (Leg)					
E	W	N	S	Total
0	0	0	2	2
0	0	0	5	5
0	0	2	0	2
0	0	0	1	1
0	0	0	0	0
0	0	1	2	3
0	0	1	1	2
0	0	0	2	2
0	0	4	13	17
0	0	2	5	7

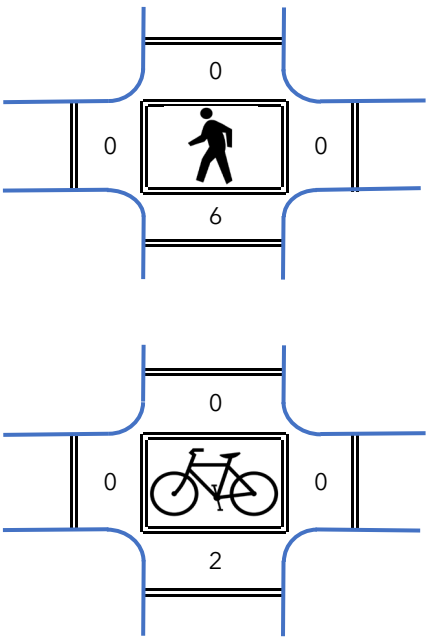
Bicycles (Leg)				
E	W	N	S	Total
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	1	1
0	0	0	1	1

HEATH&ASSOCIATES
Transportation Planning & Engineering

Date Collected: 7/29/2025
Day of the Week: Tuesday
Time Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

NE 149th Street & NE 11th Avenue





Interval Start Time	NW 149th St Eastbound				NW 149th St Westbound				NW 11th Ave Northbound				NW 11th Ave Southbound				15 Minute Totals	Hourly Totals
	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT		
4:00 PM	0	3	8	0	0	4	19	4	0	0	0	8	0	1	1	2	50	
4:15 PM	0	2	17	1	0	6	19	3	0	2	2	1	0	2	0	9	64	
4:30 PM	0	4	18	2	0	2	26	4	0	0	1	2	0	5	1	4	69	
4:45 PM	0	4	12	0	0	4	27	3	0	1	2	1	0	0	0	4	58	241
5:00 PM	0	5	10	2	0	5	25	0	0	1	1	3	0	3	0	4	59	250
5:15 PM	0	1	15	0	0	5	24	1	0	2	1	1	0	2	3	5	60	246
5:30 PM	0	3	12	2	0	2	36	5	0	0	0	2	0	3	2	4	71	248
5:45 PM	0	4	11	2	0	9	24	1	0	0	1	2	0	4	1	7	66	256
Count Total	0	26	103	9	0	37	200	21	0	6	8	20	0	20	8	39	497	--
Peak Hour Total	0	13	48	6	0	21	109	7	0	3	3	8	0	12	6	20	256	--
PHF	0.99				0.80				0.70				0.79				0.90	--
Heavy Vehicles	0	0	0	0	0	1	0	1	0	0	1	0	0	0	1	2	6	--
HV %	0.0%	0.0%	0.0%	0.0%	0.0%	4.8%	0.0%	14.3%	0.0%	0.0%	33.3%	0.0%	0.0%	0.0%	16.7%	10.0%	2.3%	--

Interval Start Time	Heavy Vehicles				
	EB	WB	NB	SB	Total
4:00 PM	0	0	0	0	0
4:15 PM	0	1	0	1	2
4:30 PM	1	0	0	1	2
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	1	2
5:15 PM	0	0	1	2	3
5:30 PM	0	0	0	0	0
5:45 PM	0	1	0	0	1
Count Total	1	3	1	5	10
Peak Hour Total	0	2	1	3	6
Peak Hour HV%	0.0%	1.5%	7.1%	7.9%	2.3%

Pedestrians (Leg)					
E	W	N	S	Total
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	5	5
0	0	0	1	1
0	0	0	0	0
0	0	0	7	7
0	0	0	6	6

Bicycles (Leg)				
E	W	N	S	Total
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	1	1
0	0	0	0	0
0	0	0	3	3
0	0	0	2	2

HEATH & ASSOCIATES
Transportation Planning & Engineering

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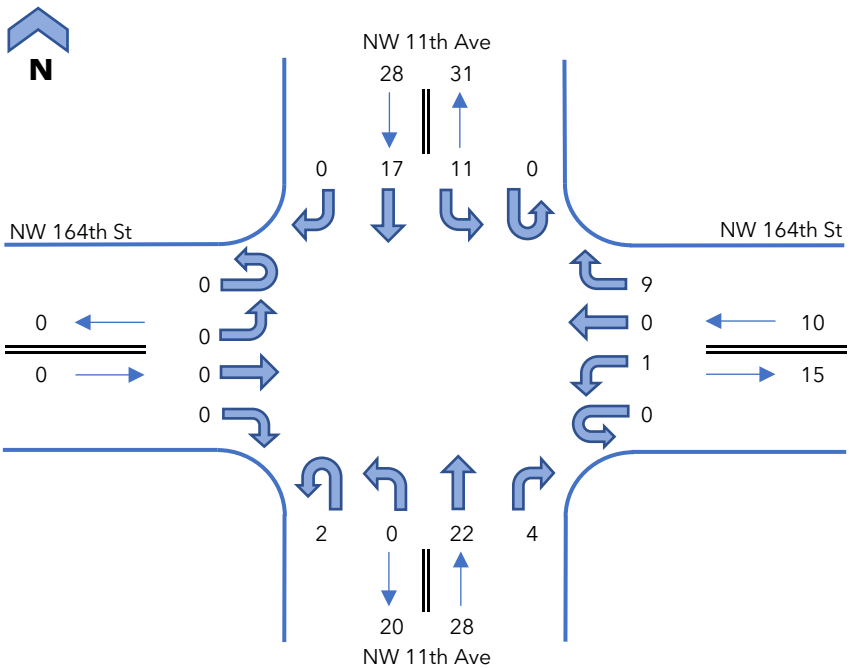
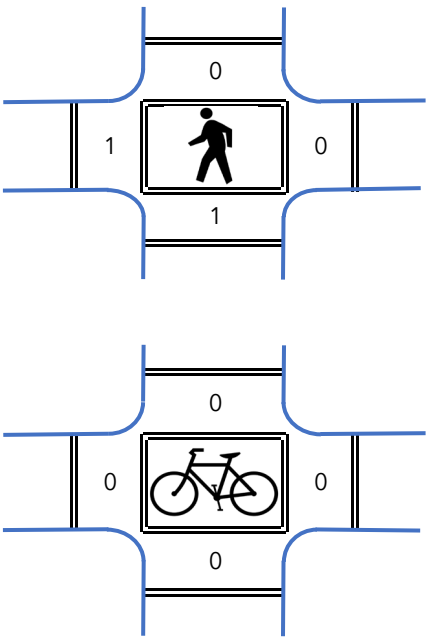
NE 164th Street & NE 11th Avenue





Interval Start Time	NW 164th St Eastbound				NW 164th St Westbound				NW 11th Ave Northbound				NW 11th Ave Southbound				15 Minute Totals	Hourly Totals
	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT		
7:00 AM	0	0	1	0	0	0	0	1	0	0	2	0	0	2	3	0	9	
7:15 AM	0	0	0	0	0	1	0	2	0	0	8	1	0	3	1	0	16	
7:30 AM	0	0	0	0	0	0	0	1	0	0	3	0	0	0	1	0	5	
7:45 AM	0	0	0	0	0	0	0	1	0	0	4	1	0	3	6	0	15	45
8:00 AM	0	0	0	0	0	1	0	3	0	0	4	1	0	4	4	0	17	53
8:15 AM	0	0	0	0	0	0	0	1	0	0	5	0	0	2	3	0	11	48
8:30 AM	0	0	0	0	0	0	0	4	2	0	6	1	0	3	4	0	20	63
8:45 AM	0	0	0	0	0	0	0	1	0	0	7	2	0	2	6	0	18	66
Count Total	0	0	1	0	0	2	0	14	2	0	39	6	0	19	28	0	111	--
Peak Hour Total	0	0	0	0	0	1	0	9	2	0	22	4	0	11	17	0	66	--
PHF	#DIV/0!				0.63				0.78				0.88				0.83	--
Heavy Vehicles	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	0	6	--
HV %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	4.5%	0.0%	0.0%	18.2%	11.8%	0.0%	9.1%	--

Interval Start Time	Heavy Vehicles				
	EB	WB	NB	SB	Total
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	2	2
8:00 AM	0	0	1	1	2
8:15 AM	0	0	0	1	1
8:30 AM	0	0	1	0	1
8:45 AM	0	0	0	2	2
Count Total	0	0	2	6	8
Peak Hour Total	0	0	2	4	6
Peak Hour HV%	#DIV/0!	0.0%	7.1%	14.3%	9.1%

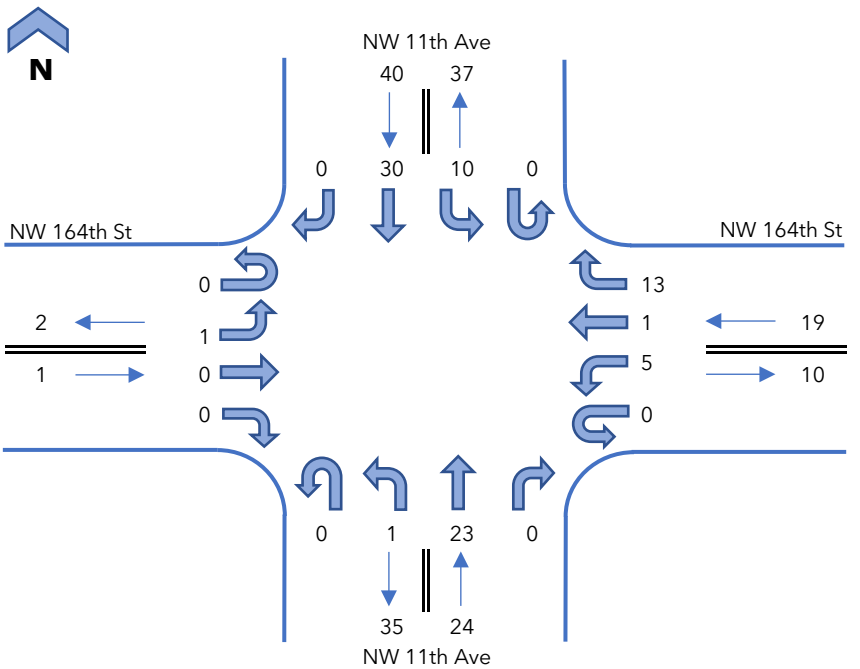
Pedestrians (Leg)					
E	W	N	S	Total
0	0	1	0	1
0	0	2	0	2
0	0	0	0	0
0	1	0	0	1
0	1	0	1	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	2	3	1	6
0	1	0	1	2

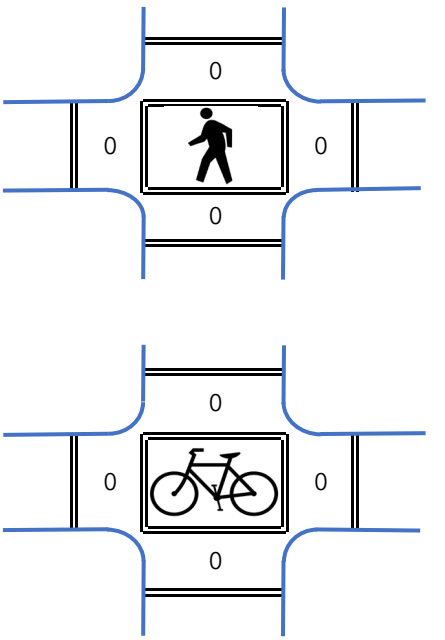
Bicycles (Leg)				
E	W	N	S	Total
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

HEATH & ASSOCIATES
Transportation Planning & Engineering

Date Collected: 7/29/2025
Day of the Week: Tuesday
Time Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

NE 164th Street & NE 11th Avenue





Interval Start Time	NW 164th St Eastbound				NW 164th St Westbound				NW 11th Ave Northbound				NW 11th Ave Southbound				15 Minute Totals	Hourly Totals
	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT		
4:00 PM	0	0	0	0	0	0	0	1	0	0	7	0	1	0	6	0	15	
4:15 PM	0	0	0	0	0	0	0	3	0	0	6	1	0	1	10	0	21	
4:30 PM	0	0	0	0	0	0	0	2	0	0	6	2	0	2	7	0	19	
4:45 PM	0	0	0	0	0	0	0	7	0	0	7	0	0	1	3	0	18	73
5:00 PM	0	0	0	0	0	1	0	2	0	0	8	0	0	1	7	0	19	77
5:15 PM	0	0	0	0	0	3	1	3	0	0	3	0	0	3	6	0	19	75
5:30 PM	0	0	0	0	0	0	0	6	0	0	7	0	0	1	9	0	23	79
5:45 PM	0	1	0	0	0	1	0	2	0	1	5	0	0	5	8	0	23	84
Count Total	0	1	0	0	0	5	1	26	0	1	49	3	1	14	56	0	157	--
Peak Hour Total	0	1	0	0	0	5	1	13	0	1	23	0	0	10	30	0	84	--
PHF	0.25				0.68				0.75				0.77				0.91	--
Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	--
HV %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.0%	0.0%	0.0%	3.3%	0.0%	2.4%	--

Interval Start Time	Heavy Vehicles				
	EB	WB	NB	SB	Total
4:00 PM	0	0	0	1	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	1	1
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	1	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	1	0	1
Count Total	0	0	1	3	4
Peak Hour Total	0	0	1	1	2
Peak Hour HV%	0.0%	0.0%	4.2%	2.5%	2.4%

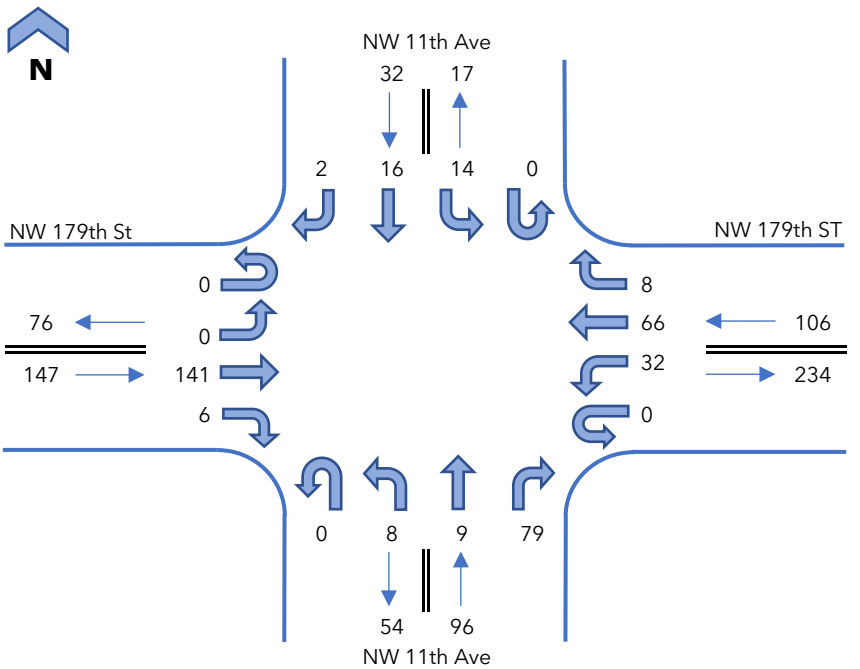
Pedestrians (Leg)					
E	W	N	S	Total
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

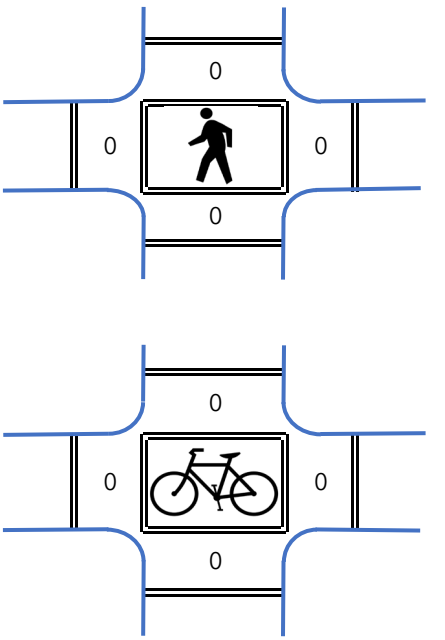
Bicycles (Leg)				
E	W	N	S	Total
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

HEATH & ASSOCIATES
Transportation Planning & Engineering

Date Collected: 7/29/2025
Day of the Week: Tuesday
Time Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM

NW 179th St & NW 11th Ave





Interval Start Time	NW 179th St Eastbound				NW 179th ST Westbound				NW 11th Ave Northbound				NW 11th Ave Southbound				15 Minute Totals	Hourly Totals
	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT		
7:00 AM	0	0	13	0	0	15	10	0	0	1	0	11	0	5	3	0	58	
7:15 AM	0	1	18	1	0	9	11	4	0	0	5	15	0	8	3	0	75	
7:30 AM	0	0	28	0	0	8	17	0	0	3	1	13	0	6	0	0	76	
7:45 AM	0	2	26	1	0	11	22	2	0	2	1	19	0	5	4	0	95	304
8:00 AM	0	0	36	2	0	8	16	1	0	1	1	17	0	7	2	0	91	337
8:15 AM	0	0	30	1	0	7	12	3	0	0	0	20	0	3	2	0	78	340
8:30 AM	0	0	39	1	0	7	21	1	0	3	2	22	0	3	5	0	104	368
8:45 AM	0	0	36	2	0	10	17	3	0	4	6	20	0	1	7	2	108	381
Count Total	0	3	226	8	0	75	126	14	0	14	16	137	0	38	26	2	685	--
Peak Hour Total	0	0	141	6	0	32	66	8	0	8	9	79	0	14	16	2	381	--
PHF	0.92				0.88				0.80				0.80				0.88	--
Heavy Vehicles	0	0	7	0	0	5	9	0	0	0	2	2	0	1	3	0	29	--
HV %	0.0%	0.0%	5.0%	0.0%	0.0%	15.6%	13.6%	0.0%	0.0%	0.0%	22.2%	2.5%	0.0%	7.1%	18.8%	0.0%	7.6%	--

Interval Start Time	Heavy Vehicles				
	EB	WB	NB	SB	Total
7:00 AM	1	4	0	0	5
7:15 AM	4	2	0	1	7
7:30 AM	1	4	0	1	6
7:45 AM	1	5	0	1	7
8:00 AM	0	2	3	1	6
8:15 AM	1	4	0	0	5
8:30 AM	1	6	0	2	9
8:45 AM	5	2	1	1	9
Count Total	14	29	4	7	54
Peak Hour Total	7	14	4	4	29
Peak Hour HV%	4.8%	13.2%	4.2%	12.5%	7.6%

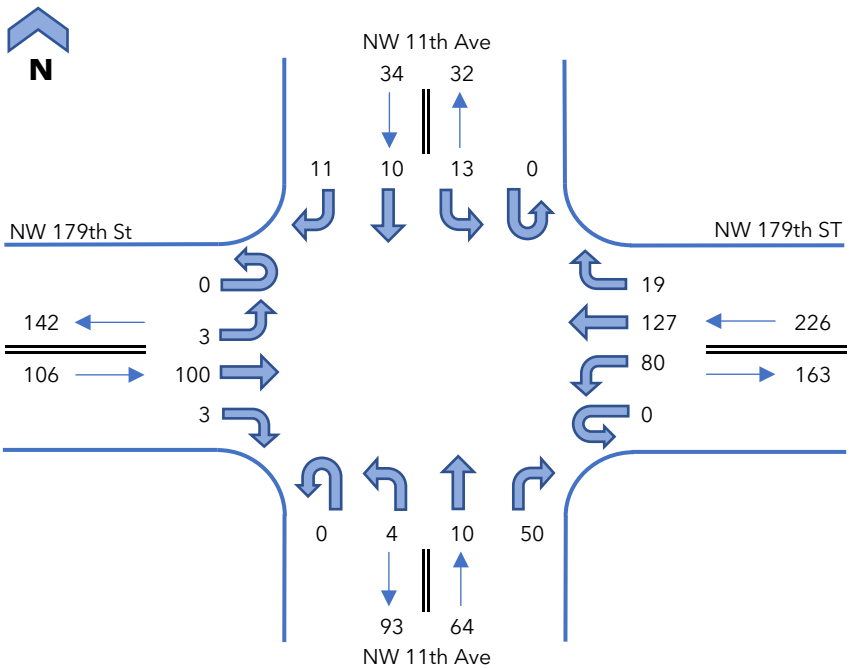
Pedestrians (Leg)					
E	W	N	S	Total
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

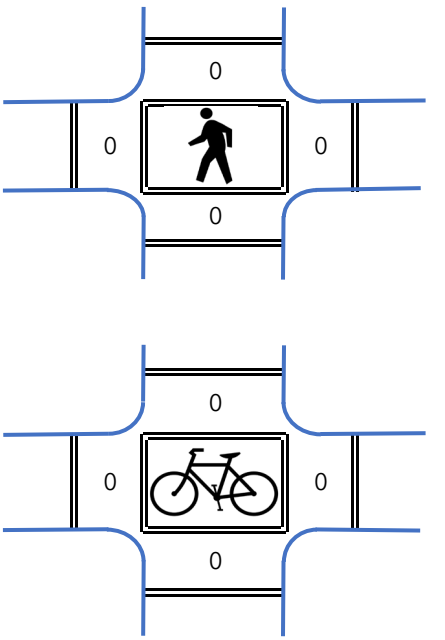
Bicycles (Leg)				
E	W	N	S	Total
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

HEATH&ASSOCIATES
Transportation Planning & Engineering

Date Collected: 7/29/2025
Day of the Week: Tuesday
Time Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

NW 179th St & NW 11th Ave





Interval Start Time	NW 179th St Eastbound				NW 179th ST Westbound				NW 11th Ave Northbound				NW 11th Ave Southbound				15 Minute Totals	Hourly Totals
	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT		
4:00 PM	0	2	27	1	0	18	33	6	0	2	3	20	0	2	1	2	117	
4:15 PM	0	2	26	2	0	15	26	2	0	1	6	13	0	3	6	1	103	
4:30 PM	0	1	26	1	0	21	30	5	0	1	4	11	0	4	2	0	106	
4:45 PM	0	1	24	0	0	16	33	4	0	2	2	13	0	3	2	2	102	428
5:00 PM	0	0	30	1	0	19	37	4	0	1	1	13	0	1	3	5	115	426
5:15 PM	0	1	20	1	0	24	27	6	0	0	3	13	0	5	3	4	107	430
5:30 PM	0	1	20	1	0	20	26	2	0	4	1	7	0	4	5	2	93	417
5:45 PM	0	1	31	2	0	14	29	6	0	1	6	11	0	1	2	0	104	419
Count Total	0	9	204	9	0	147	241	35	0	12	26	101	0	23	24	16	847	--
Peak Hour Total	0	3	100	3	0	80	127	19	0	4	10	50	0	13	10	11	430	--
PHF	0.85				0.94				0.94				0.71				0.93	--
Heavy Vehicles	0	0	1	1	0	4	2	0	0	0	0	1	0	0	0	0	9	--
HV %	0.0%	0.0%	1.0%	33.3%	0.0%	5.0%	1.6%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	2.1%	--

Interval Start Time	Heavy Vehicles				
	EB	WB	NB	SB	Total
4:00 PM	3	2	1	0	6
4:15 PM	3	0	1	0	4
4:30 PM	0	2	0	0	2
4:45 PM	0	0	1	0	1
5:00 PM	2	3	0	0	5
5:15 PM	0	1	0	0	1
5:30 PM	1	0	2	0	3
5:45 PM	2	0	1	0	3
Count Total	11	8	6	0	25
Peak Hour Total	2	6	1	0	9
Peak Hour HV%	1.9%	2.7%	1.6%	0.0%	2.1%

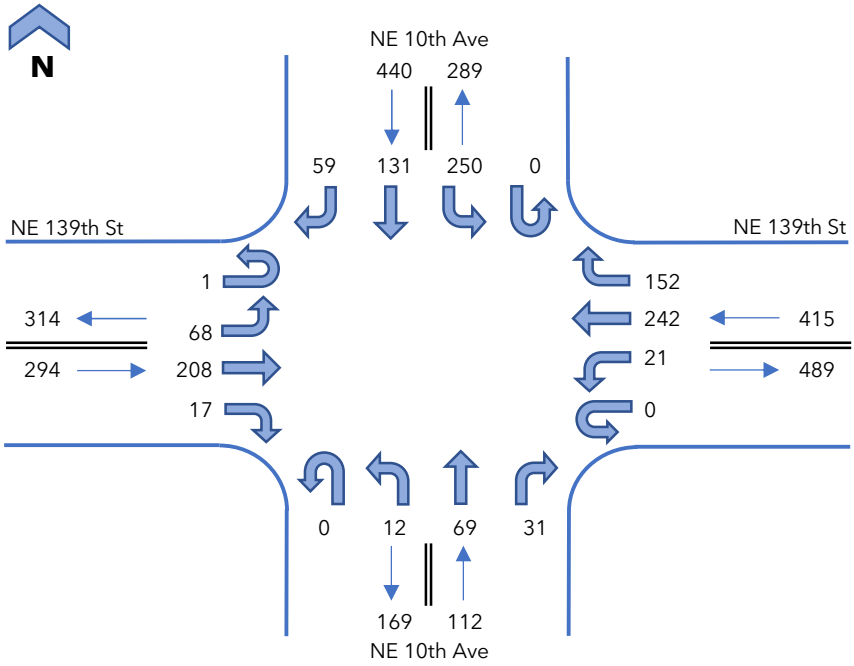
Pedestrians (Leg)					
E	W	N	S	Total
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

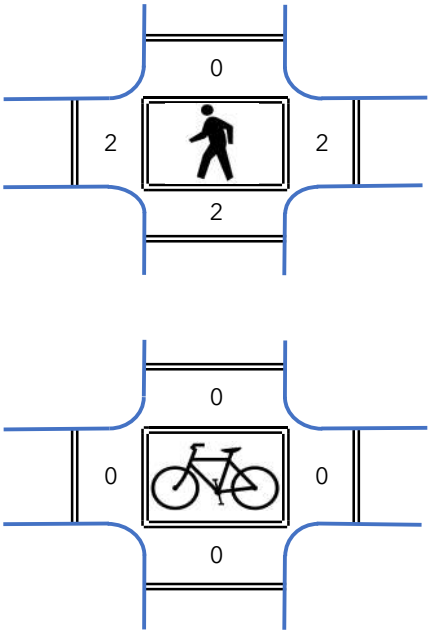
Bicycles (Leg)				
E	W	N	S	Total
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

HEATH & ASSOCIATES
Transportation Planning & Engineering

Date Collected: 7/29/2025
Day of the Week: Tuesday
Time Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM

NE 139th Street & NE 10th Avenue





Interval Start Time	NE 139th St Eastbound				NE 139th St Westbound				NE 10th Ave Northbound				NE 10th Ave Southbound				15 Minute Totals	Hourly Totals
	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT		
7:00 AM	0	11	33	3	0	2	35	21	0	1	8	7	0	47	22	8	198	
7:15 AM	0	10	46	5	0	3	37	34	0	0	21	7	0	52	28	11	254	
7:30 AM	0	11	40	4	0	3	28	36	0	3	19	7	0	57	22	5	235	
7:45 AM	0	11	44	3	0	8	49	40	1	7	17	5	0	45	34	12	276	963
8:00 AM	0	14	41	5	0	4	68	34	0	3	15	8	0	39	34	11	276	1041
8:15 AM	0	15	43	5	0	6	46	32	0	3	16	5	0	68	32	17	288	1075
8:30 AM	0	16	69	2	0	5	58	39	0	3	20	9	0	76	30	16	343	1183
8:45 AM	1	23	55	5	0	6	70	47	0	3	18	9	0	67	35	15	354	1261
Count Total	1	111	371	32	0	37	391	283	1	23	134	57	0	451	237	95	2224	--
Peak Hour Total	1	68	208	17	0	21	242	152	0	12	69	31	0	250	131	59	1261	--
PHF	0.84				0.84				0.88				0.90				0.89	--
Heavy Vehicles	0	3	7	3	0	2	9	8	0	0	6	2	0	13	7	2	62	--
HV %	0.0%	4.4%	3.4%	17.6%	0.0%	9.5%	3.7%	5.3%	0.0%	0.0%	8.7%	6.5%	0.0%	5.2%	5.3%	3.4%	4.9%	--

Interval Start Time	Heavy Vehicles				
	EB	WB	NB	SB	Total
7:00 AM	1	0	1	2	4
7:15 AM	1	2	3	6	12
7:30 AM	1	4	1	3	9
7:45 AM	1	3	1	2	7
8:00 AM	0	3	4	4	11
8:15 AM	3	6	1	9	19
8:30 AM	6	7	2	6	21
8:45 AM	4	3	1	3	11
Count Total	17	28	14	35	94
Peak Hour Total	13	19	8	22	62
Peak Hour HV%	4.4%	4.6%	7.1%	5.0%	4.9%

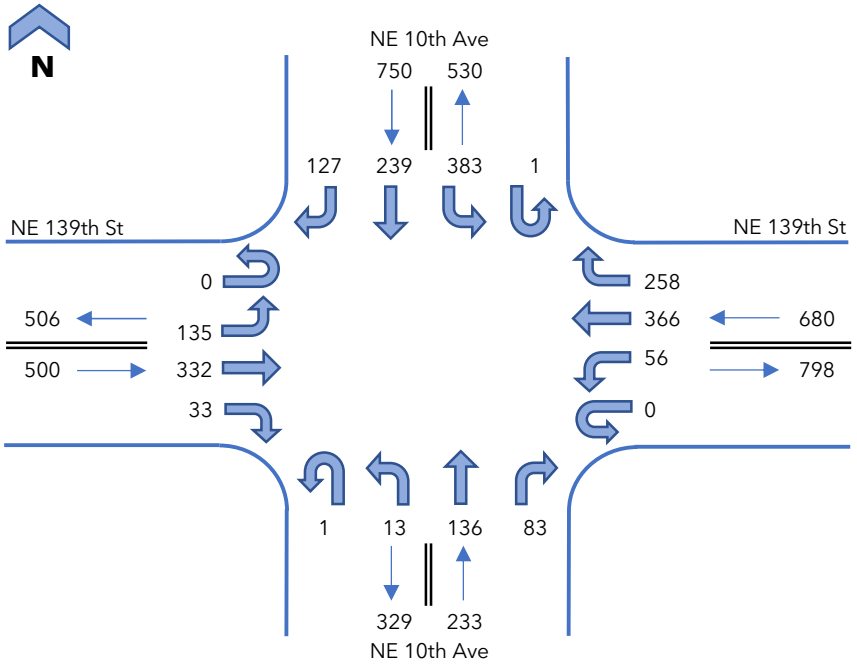
Pedestrians (Leg)				
E	W	N	S	Total
1	0	0	0	1
0	1	0	0	1
0	0	0	0	0
0	3	0	1	4
1	0	0	1	2
0	2	0	0	2
0	0	0	0	0
1	0	0	1	2
3	6	0	3	12
2	2	0	2	6

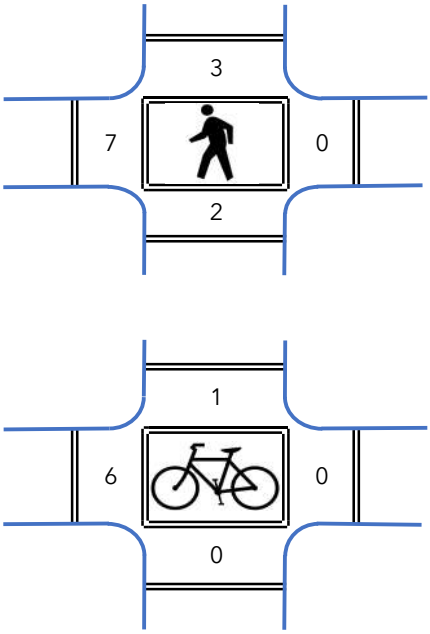
Bicycles (Leg)				
E	W	N	S	Total
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0

HEATH & ASSOCIATES
Transportation Planning & Engineering

Date Collected: 7/29/2025
Day of the Week: Tuesday
Time Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM

NE 139th Street & NE 10th Avenue





Interval Start Time	NE 139th St Eastbound				NE 139th St Westbound				NE 10th Ave Northbound				NE 10th Ave Southbound				15 Minute Totals	Hourly Totals
	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT		
4:00 PM	0	32	93	10	0	17	81	60	0	3	26	23	0	100	60	29	534	
4:15 PM	0	38	77	9	0	14	106	59	0	2	34	27	1	96	55	41	559	
4:30 PM	0	39	86	5	0	14	91	75	0	5	39	19	0	97	56	29	555	
4:45 PM	0	26	76	9	0	11	88	64	1	3	37	14	0	90	68	28	515	2163
5:00 PM	0	39	82	5	0	6	78	60	0	4	32	21	0	118	52	26	523	2152
5:15 PM	0	46	94	4	0	17	82	64	0	2	31	17	0	83	41	36	517	2110
5:30 PM	0	38	74	8	0	14	91	71	0	2	33	26	0	83	39	37	516	2071
5:45 PM	0	42	67	2	0	6	75	62	0	1	28	21	0	65	36	29	434	1990
Count Total	0	300	649	52	0	99	692	515	1	22	260	168	1	732	407	255	4153	--
Peak Hour Total	0	135	332	33	0	56	366	258	1	13	136	83	1	383	239	127	2163	--
PHF	0.93				0.94				0.92				0.97				0.97	--
Heavy Vehicles	0	0	1	3	0	1	2	8	0	0	3	2	0	2	4	2	28	--
HV %	0.0%	0.0%	0.3%	9.1%	0.0%	1.8%	0.5%	3.1%	0.0%	0.0%	2.2%	2.4%	0.0%	0.5%	1.7%	1.6%	1.3%	--

Interval Start Time	Heavy Vehicles				
	EB	WB	NB	SB	Total
4:00 PM	0	2	2	2	6
4:15 PM	4	3	0	2	9
4:30 PM	0	2	2	2	6
4:45 PM	0	4	1	2	7
5:00 PM	2	0	2	0	4
5:15 PM	1	1	0	1	3
5:30 PM	1	2	1	1	5
5:45 PM	0	2	1	0	3
Count Total	8	16	9	10	43
Peak Hour Total	4	11	5	8	28
Peak Hour HV%	0.8%	1.6%	2.1%	1.1%	1.3%

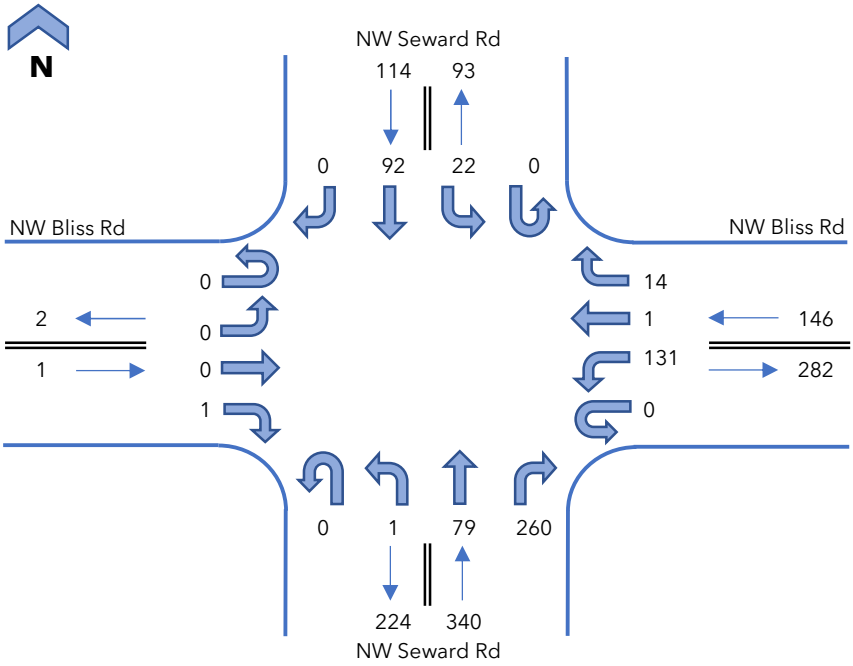
Pedestrians (Leg)				
E	W	N	S	Total
0	0	0	1	1
0	2	2	0	4
0	3	0	0	3
0	2	1	1	4
0	2	0	1	3
0	1	0	3	4
0	0	0	0	0
1	1	0	0	2
1	11	3	6	21
0	7	3	2	12

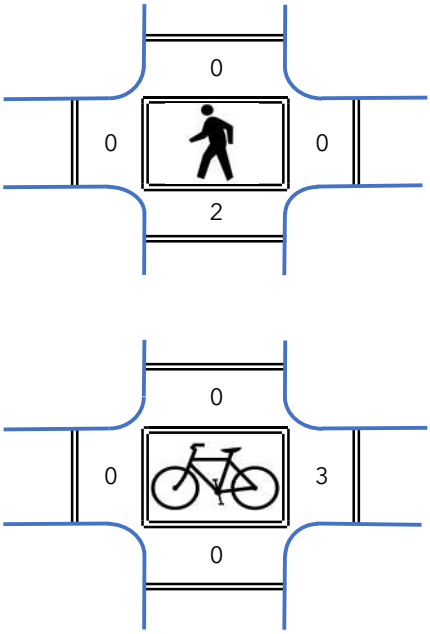
Bicycles (Leg)				
E	W	N	S	Total
0	1	0	0	1
0	1	1	0	2
0	3	0	0	3
0	1	0	0	1
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	1	0	1
0	8	2	0	10
0	6	1	0	7

HEATH & ASSOCIATES
Transportation Planning & Engineering

Date Collected: 7/29/2025
Day of the Week: Tuesday
Time Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM

NE Bliss Road & NW Seward Road





Interval Start Time	NW Bliss Rd Eastbound				NW Bliss Rd Westbound				NW Seward Rd Northbound				NW Seward Rd Southbound				15 Minute Totals	Hourly Totals
	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT		
7:00 AM	0	0	0	0	0	19	0	1	0	0	7	46	0	2	17	0	92	
7:15 AM	0	0	0	0	0	32	0	1	0	0	7	39	0	6	14	0	99	
7:30 AM	0	0	0	0	0	18	0	2	0	2	15	44	0	3	13	0	97	
7:45 AM	0	0	1	0	0	31	0	2	0	0	21	66	0	4	14	0	139	427
8:00 AM	0	0	0	1	0	27	0	3	0	0	22	58	0	5	20	0	136	471
8:15 AM	0	0	0	0	0	28	0	5	0	1	14	53	0	3	23	0	127	499
8:30 AM	0	0	0	0	0	31	1	2	0	0	20	76	0	6	21	0	157	559
8:45 AM	0	0	0	0	0	45	0	4	0	0	23	73	0	8	28	0	181	601
Count Total	0	0	1	1	0	231	1	20	0	3	129	455	0	37	150	0	1028	--
Peak Hour Total	0	0	0	1	0	131	1	14	0	1	79	260	0	22	92	0	601	--
PHF	0.25				0.74				0.89				0.79				0.83	--
Heavy Vehicles	0	0	0	0	0	8	0	1	0	0	3	3	0	1	2	0	18	--
HV %	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%	0.0%	7.1%	0.0%	0.0%	3.8%	1.2%	0.0%	4.5%	2.2%	0.0%	3.0%	--

Interval Start Time	Heavy Vehicles				
	EB	WB	NB	SB	Total
7:00 AM	0	3	3	0	6
7:15 AM	0	2	0	1	3
7:30 AM	0	1	1	1	3
7:45 AM	0	2	0	0	2
8:00 AM	0	0	2	0	2
8:15 AM	0	2	1	0	3
8:30 AM	0	6	0	1	7
8:45 AM	0	1	3	2	6
Count Total	0	17	10	5	32
Peak Hour Total	0	9	6	3	18
Peak Hour HV%	0.0%	6.2%	1.8%	2.6%	3.0%

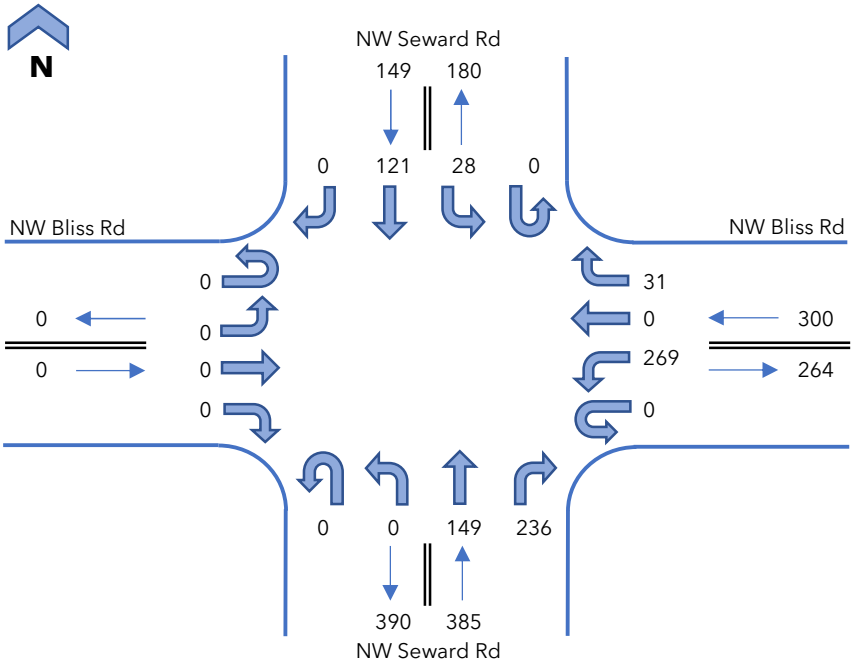
Pedestrians (Leg)				
E	W	N	S	Total
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	2	2
0	0	0	2	2
0	0	0	2	2

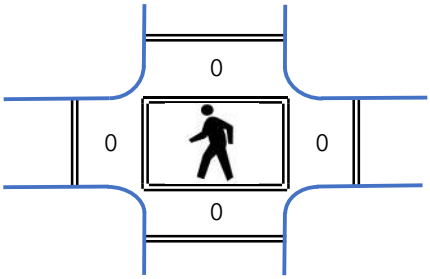
Bicycles (Leg)				
E	W	N	S	Total
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
3	0	0	0	3
0	0	0	0	0
3	2	0	0	5
3	0	0	0	3

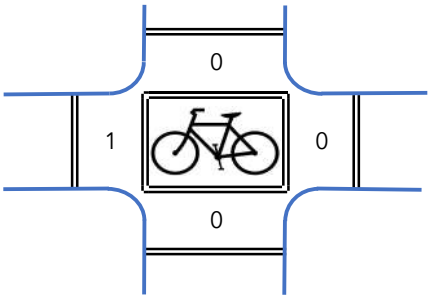
HEATH & ASSOCIATES
Transportation Planning & Engineering

Date Collected: 7/29/2025
Day of the Week: Tuesday
Time Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM

NE Bliss Road & NW Seward Road







Interval Start Time	NW Bliss Rd Eastbound				NW Bliss Rd Westbound				NW Seward Rd Northbound				NW Seward Rd Southbound				15 Minute Totals	Hourly Totals
	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT	UT	LT	T	RT		
4:00 PM	0	0	0	0	0	60	0	9	0	0	29	55	0	7	32	0	192	
4:15 PM	0	0	0	0	0	72	0	8	0	0	30	67	0	12	27	0	216	
4:30 PM	0	0	0	0	0	74	0	9	0	0	39	58	0	2	29	0	211	
4:45 PM	0	0	0	0	0	62	0	9	0	0	39	55	0	7	33	0	205	824
5:00 PM	0	0	0	0	0	61	0	5	0	0	41	56	0	7	32	0	202	834
5:15 PM	0	0	0	0	0	53	0	10	0	0	40	68	0	6	27	0	204	822
5:30 PM	0	0	0	1	0	63	0	3	0	0	29	62	0	5	30	0	193	804
5:45 PM	0	0	0	0	0	90	1	7	0	0	36	56	0	5	30	0	225	824
Count Total	0	0	0	1	0	535	1	60	0	0	283	477	0	51	240	0	1648	--
Peak Hour Total	0	0	0	0	0	269	0	31	0	0	149	236	0	28	121	0	834	--
PHF	#DIV/0!				0.90				0.99				0.93				0.97	--
Heavy Vehicles	0	0	0	0	0	3	0	1	0	0	0	2	0	1	1	0	8	--
HV %	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	3.2%	0.0%	0.0%	0.0%	0.8%	0.0%	3.6%	0.8%	0.0%	1.0%	--

Interval Start Time	Heavy Vehicles				
	EB	WB	NB	SB	Total
4:00 PM	0	0	2	2	4
4:15 PM	0	3	2	0	5
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	1	1
5:00 PM	0	0	0	1	1
5:15 PM	0	2	2	1	5
5:30 PM	0	1	2	0	3
5:45 PM	0	0	2	0	2
Count Total	0	7	10	5	22
Peak Hour Total	0	4	2	2	8
Peak Hour HV%	#DIV/0!	1.3%	0.5%	1.3%	1.0%

Pedestrians (Leg)					
E	W	N	S	Total
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

Bicycles (Leg)				
E	W	N	S	Total
1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	1	0	0	2
0	1	0	0	1

Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

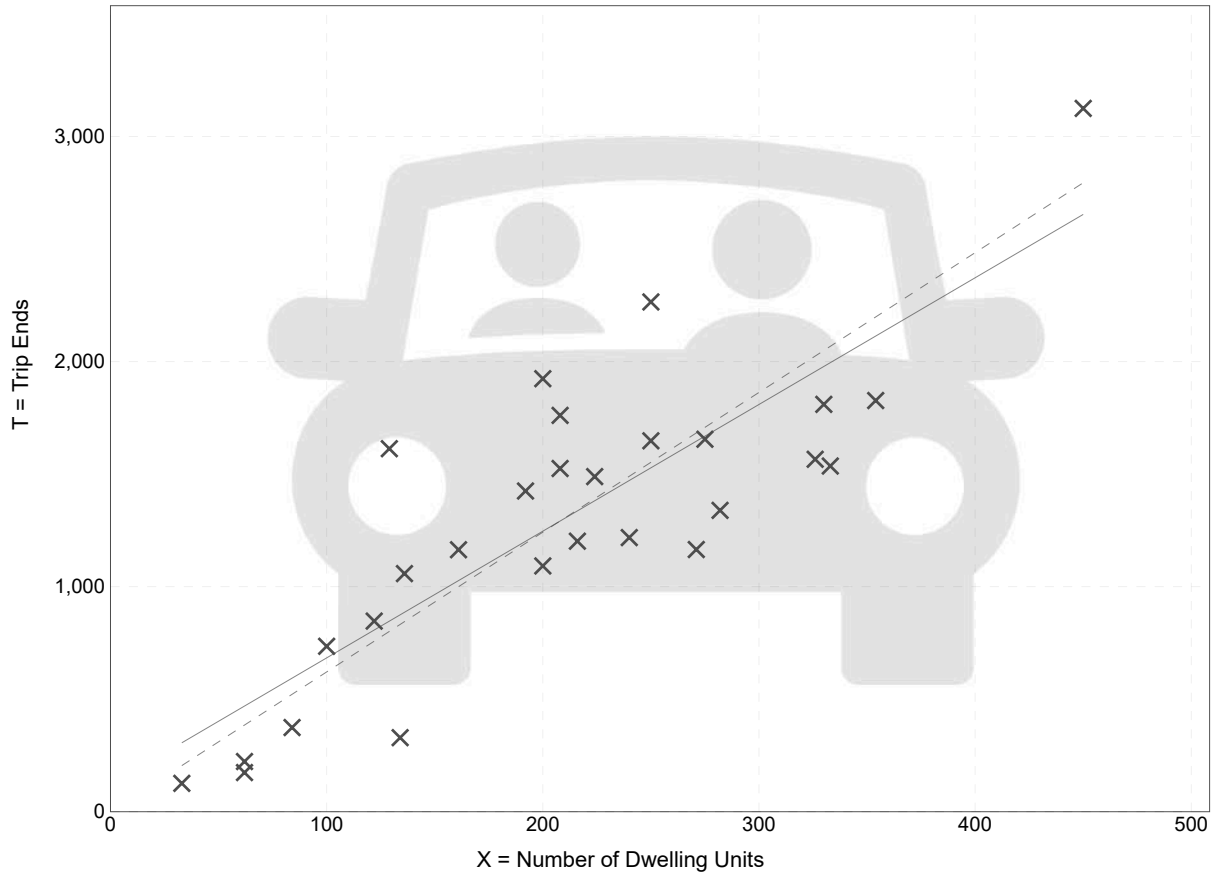
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 28
Avg. Num. of Dwelling Units: 208
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.21	2.46 - 12.50	1.87

Data Plot and Equation



Fitted Curve Equation: T = 5.63(X) + 120.45

R^2= 0.70

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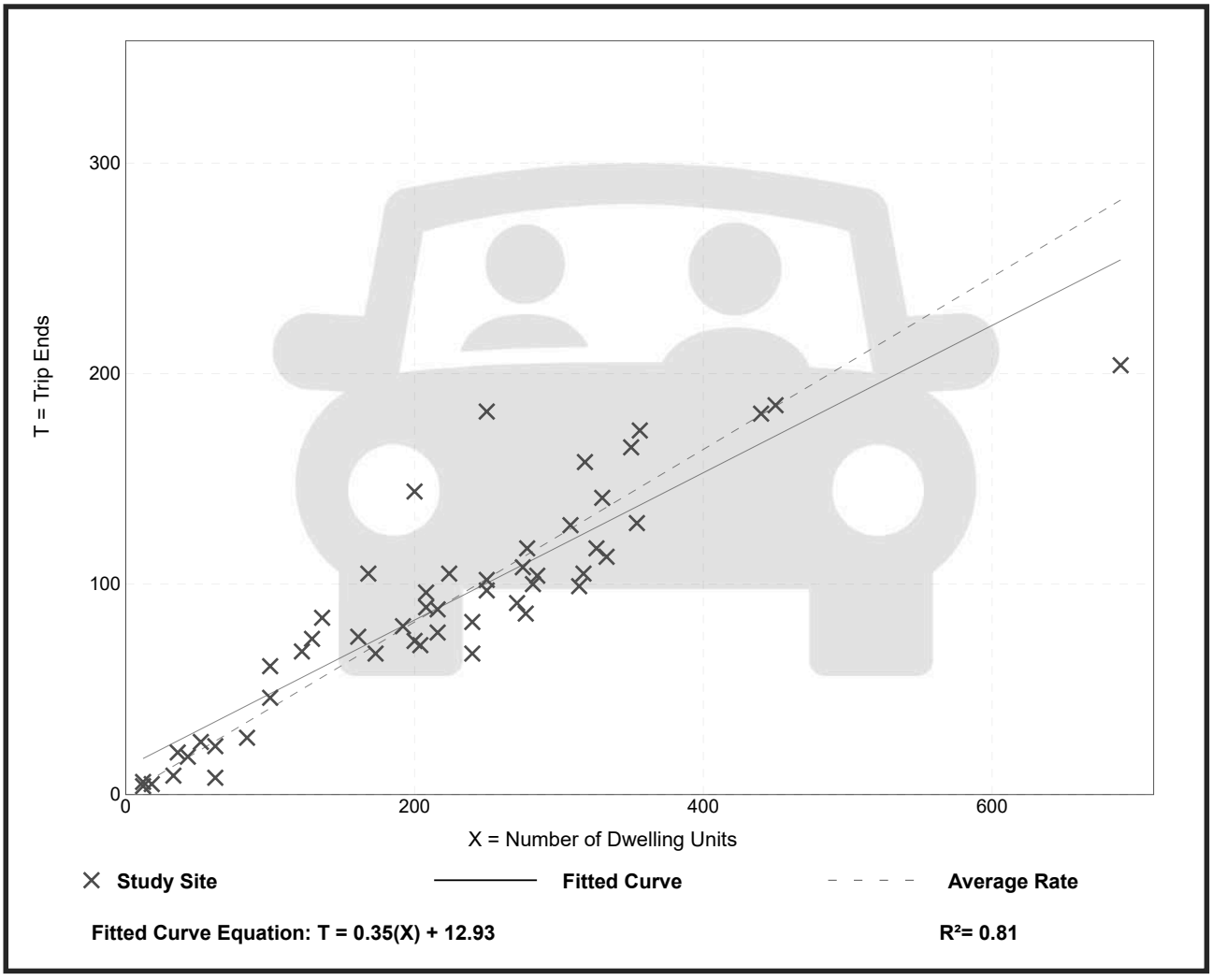
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 51
Avg. Num. of Dwelling Units: 219
Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.41	0.13 - 0.73	0.10

Data Plot and Equation



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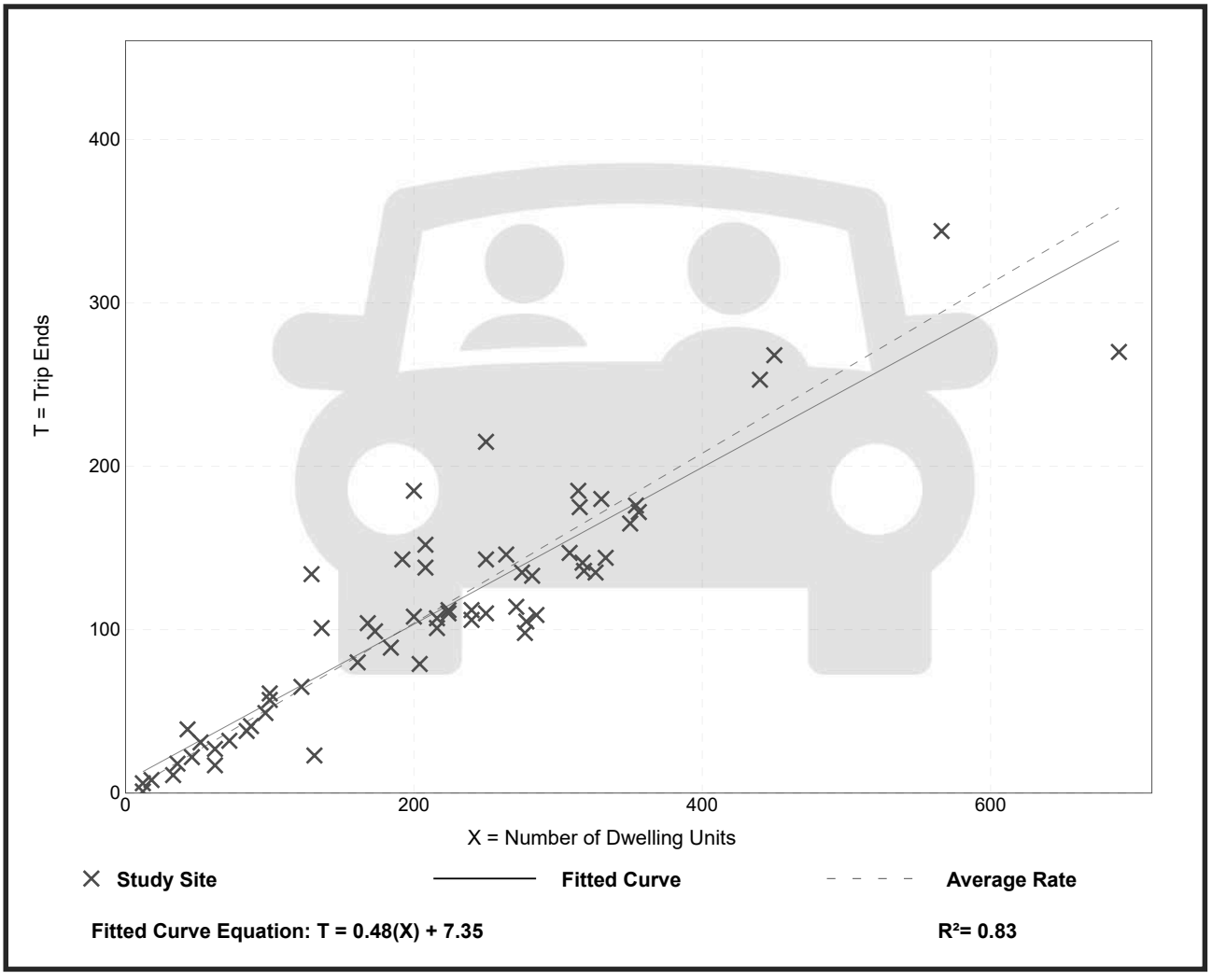
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	61
Avg. Num. of Dwelling Units:	215
Directional Distribution:	62% entering, 38% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.52	0.08 - 1.04	0.13

Data Plot and Equation



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PM Peak Hour Forecast Intersection Volumes

Annual Growth Rate: 2 %
# of Years to Horizon: 3
2028

AM Peak Hour

1. NW 11th Ave & NW 149th St

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
Baseline	23	0	8	11	110	10	21	3	9	6	102	22
Project Trips	8	0	17	5	0	0	0	0	0	0	0	3
Pipeline	1	0	2	1	0	0	0	0	0	0	0	0
Without	25	0	10	13	117	11	22	3	10	6	108	23
With	33	0	27	18	117	11	22	3	10	6	108	26

2. NW 11th Ave & NW 164th St

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
Baseline	0	24	6	9	0	2	4	22	0	0	0	0
Project Trips	0	5	0	0	0	1	2	15	0	0	0	0
Pipeline	0	2	0	0	0	0	0	4	0	0	0	0
Without	0	27	6	10	0	2	4	27	0	0	0	0
With	0	32	6	10	0	3	6	42	0	0	0	0

3. NW 11th Ave & NW 179th St

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
Baseline	8	10	29	10	59	95	54	11	4	10	109	11
Project Trips	0	0	0	0	0	4	13	0	2	1	0	0
Pipeline	0	0	5	5	6	4	4	1	1	0	5	0
Without	8	11	36	16	69	105	61	13	5	11	121	12
With	8	11	36	16	69	109	74	13	7	12	121	12

4. NE 139th St & NE 10th Ave

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
Baseline	105	128	272	154	470	15	23	73	10	11	298	74
Project Trips	0	2	15	4	0	0	0	1	0	0	0	0
Pipeline	18	0	54	59	5	0	0	9	0	0	5	24
Without	129	136	343	222	504	16	24	86	11	12	321	103
With	129	138	358	226	504	16	24	87	11	12	321	103

5. NW Bliss Rd & NW Seward Rd

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
Baseline	0	119	29	18	1	170	337	102	1	1	0	0
Project Trips	0	0	1	2	0	4	1	0	0	0	0	0
Pipeline	0	0	1	1	0	5	8	0	0	0	0	0
Without	0	126	32	20	1	185	366	108	1	1	0	0
With	0	126	33	22	1	189	367	108	1	1	0	0

6. NW 11th Ave & Access

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
Baseline	0	26	0	0	0	0	0	26	0	0	0	0
Project Trips	0	0	6	17	0	25	8	0	0	0	0	0
Pipeline	0	2	0	0	0	0	0	4	0	0	0	0
Without	0	30	0	0	0	0	0	32	0	0	0	0
With	0	30	6	17	0	25	8	32	0	0	0	0

PM Peak Hour

1. NW 11th Ave & NW 149th St

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
Baseline	19	2	20	38	91	19	18	1	1	8	104	37
Project Trips	5	0	11	17	0	0	0	0	0	0	0	8
Pipeline	0	0	2	1	0	0	0	0	0	0	0	1
Without	20	2	23	41	97	20	19	1	1	8	110	40
With	25	2	34	58	97	20	19	1	1	8	110	48

2. NW 11th Ave & NW 164th St

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
Baseline	0	47	12	27	0	3	9	54	0	0	0	0
Project Trips	0	14	0	0	0	2	1	9	0	0	0	0
Pipeline	0	5	0	0	0	0	1	2	0	0	0	0
Without	0	55	13	29	0	3	11	59	0	0	0	0
With	0	69	13	29	0	5	12	68	0	0	0	0

3. NW 11th Ave & NW 179th St

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
Baseline	12	30	14	40	122	47	72	35	16	11	125	15
Project Trips	0	0	0	0	0	12	8	0	1	2	0	0
Pipeline	0	1	2	2	3	4	3	0	0	1	3	0
Without	13	33	17	44	132	54	79	37	17	13	136	16
With	13	33	17	44	132	66	87	37	18	15	136	16

4. NE 139th St & NE 10th Ave

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
Baseline	155	191	400	291	503	50	84	145	17	23	463	190
Project Trips	0	1	10	15	0	0	0	2	0	0	0	0
Pipeline	25	0	68	68	2	0	0	11	0	0	2	27
Without	189	203	492	377	536	53	89	165	18	24	493	229
With	189	204	502	392	536	53	89	167	18	24	493	229

5. NW Bliss Rd & NW Seward Rd

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
Baseline	0	140	33	36	0	312	274	173	0	1	0	0
Project Trips	0	0	2	1	0	3	4	0	0	0	0	0
Pipeline	0	0	1	1	0	8	9	0	0	0	0	0
Without	0	149	36	39	0	339	300	184	0	1	0	0
With	0	149	38	40	0	342	304	184	0	1	0	0

6. NW 11th Ave & Access

	SBR	SBT	SBL	WBR	WBT	WBL	NBR	NBT	NBL	EBR	EBT	EBL
Baseline	0	50	0	0	0	0	0	63	0	0	0	0
Project Trips	0	0	16	10	0	16	25	0	0	0	0	0
Pipeline	0	5	0	0	0	0	0	3	0	0	0	0
Without	0	58	0	0	0	0	0	70	0	0	0	0
With	0	58	16	10	0	16	25	70	0	0	0	0

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	102	6	10	110	11	9	3	21	8	0	23
Future Vol, veh/h	22	102	6	10	110	11	9	3	21	8	0	23
Conflicting Peds, #/hr	2	0	5	5	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	4	4	4	5	5	5	0	0	0
Mvmt Flow	25	115	7	11	124	12	10	3	24	9	0	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	138	0	0	126	0	0	318	333	123	320	330	132
Stage 1	-	-	-	-	-	-	172	172	-	154	154	-
Stage 2	-	-	-	-	-	-	146	160	-	166	176	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.15	6.55	6.25	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.545	4.045	3.345	3.5	4	3.3
Pot Cap-1 Maneuver	1446	-	-	1448	-	-	628	582	920	637	592	923
Stage 1	-	-	-	-	-	-	822	750	-	853	774	-
Stage 2	-	-	-	-	-	-	850	759	-	841	757	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1443	-	-	1441	-	-	592	563	916	599	573	921
Mov Cap-2 Maneuver	-	-	-	-	-	-	592	563	-	599	573	-
Stage 1	-	-	-	-	-	-	803	733	-	844	766	-
Stage 2	-	-	-	-	-	-	819	752	-	801	740	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.28	0.57	9.99	9.65
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	759	301	-	-	135	-	-	809
HCM Lane V/C Ratio	0.049	0.017	-	-	0.008	-	-	0.043
HCM Ctrl Dly (s/v)	10	7.5	0	-	7.5	0	-	9.7
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	9	22	4	6	24
Future Vol, veh/h	2	9	22	4	6	24
Conflicting Peds, #/hr	1	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	83	83	83	83	83	83
Heavy Vehicles, %	0	0	7	7	10	10
Mvmt Flow	2	11	27	5	7	29

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	73	29	0	0	31	0
Stage 1	29	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.2	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.29	-
Pot Cap-1 Maneuver	935	1052	-	-	1531	-
Stage 1	999	-	-	-	-	-
Stage 2	983	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	930	1052	-	-	1531	-
Mov Cap-2 Maneuver	930	-	-	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	978	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.55	0	1.47
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1027	360	-
HCM Lane V/C Ratio	-	-	0.013	0.005	-
HCM Ctrl Dly (s/v)	-	-	8.6	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	109	10	95	59	10	4	11	54	29	10	8
Future Vol, veh/h	11	109	10	95	59	10	4	11	54	29	10	8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	5	5	5	10	10	10	4	4	4	10	10	10
Mvmt Flow	13	124	11	108	67	11	5	13	61	33	11	9
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, s/veh	8.5	9.1	7.8	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	8%	58%	62%
Vol Thru, %	16%	84%	36%	21%
Vol Right, %	78%	8%	6%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	69	130	164	47
LT Vol	4	11	95	29
Through Vol	11	109	59	10
RT Vol	54	10	10	8
Lane Flow Rate	78	148	186	53
Geometry Grp	1	1	1	1
Degree of Util (X)	0.095	0.184	0.239	0.074
Departure Headway (Hd)	4.358	4.477	4.621	4.964
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	823	802	777	722
Service Time	2.384	2.501	2.645	2.992
HCM Lane V/C Ratio	0.095	0.185	0.239	0.073
HCM Control Delay, s/veh	7.8	8.5	9.1	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.7	0.9	0.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	298	11	15	470	154	10	73	23	272	128	105
Future Volume (veh/h)	74	298	11	15	470	154	10	73	23	272	128	105
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1841	1841	1841	1826	1826	1826	1796	1796	1796	1826	1826	1826
Adj Flow Rate, veh/h	83	335	12	17	528	173	11	82	26	306	144	118
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	5	5	5	7	7	7	5	5	5
Cap, veh/h	122	1019	36	37	859	382	24	381	322	475	314	257
Arrive On Green	0.07	0.30	0.30	0.02	0.25	0.25	0.01	0.21	0.21	0.14	0.34	0.34
Sat Flow, veh/h	1753	3444	123	1739	3469	1541	1711	1796	1518	3374	927	760
Grp Volume(v), veh/h	83	170	177	17	528	173	11	82	26	306	0	262
Grp Sat Flow(s),veh/h/ln	1753	1749	1818	1739	1735	1541	1711	1796	1518	1687	0	1688
Q Serve(g_s), s	2.2	3.7	3.7	0.5	6.5	4.6	0.3	1.8	0.7	4.2	0.0	5.9
Cycle Q Clear(g_c), s	2.2	3.7	3.7	0.5	6.5	4.6	0.3	1.8	0.7	4.2	0.0	5.9
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	122	517	538	37	859	382	24	381	322	475	0	571
V/C Ratio(X)	0.68	0.33	0.33	0.46	0.61	0.45	0.45	0.22	0.08	0.64	0.00	0.46
Avail Cap(c_a), veh/h	507	686	713	574	1504	668	565	816	689	1184	0	801
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00
Uniform Delay (d), s/veh	22.0	13.3	13.3	23.4	16.2	15.5	23.7	15.8	15.3	19.7	0.0	12.5
Incr Delay (d2), s/veh	6.6	0.4	0.4	8.8	0.7	0.8	12.6	0.3	0.1	1.5	0.0	0.6
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	1.0	1.2	1.3	0.3	2.3	1.5	0.2	0.7	0.2	1.5	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.6	13.7	13.7	32.3	16.9	16.3	36.3	16.0	15.4	21.1	0.0	13.1
LnGrp LOS	C	B	B	C	B	B	D	B	B	C		B
Approach Vol, veh/h		430			718			119			568	
Approach Delay, s/veh		16.5			17.1			17.8			17.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	20.4	7.4	16.0	10.8	14.3	5.0	18.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	23.0	14.0	21.0	17.0	22.0	16.0	19.0
Max Q Clear Time (g_c+I1), s	2.3	7.9	4.2	8.5	6.2	3.8	2.5	5.7
Green Ext Time (p_c), s	0.0	1.3	0.1	3.3	0.8	0.4	0.0	1.5

Intersection Summary	
HCM 7th Control Delay, s/veh	17.1
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↰	↱		↔	
Traffic Vol, veh/h	0	0	1	170	1	18	1	102	337	29	119	0
Future Vol, veh/h	0	0	1	170	1	18	1	102	337	29	119	0
Conflicting Peds, #/hr	0	0	0	2	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Yield	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	6	2	6	2	2	2	3	3	3
Mvmt Flow	0	0	1	205	1	22	1	123	406	35	143	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	339	339	145	341	339	123	143	0	0	123	0	0
Stage 1	213	213	-	125	125	-	-	-	-	-	-	-
Stage 2	126	125	-	215	213	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.16	6.52	6.26	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.16	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.16	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.554	4.018	3.354	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	619	586	907	606	583	917	1439	-	-	1458	-	-
Stage 1	794	730	-	869	792	-	-	-	-	-	-	-
Stage 2	883	796	-	778	726	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	586	570	905	587	567	917	1439	-	-	1458	-	-
Mov Cap-2 Maneuver	586	570	-	587	567	-	-	-	-	-	-	-
Stage 1	773	711	-	868	791	-	-	-	-	-	-	-
Stage 2	860	795	-	755	707	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	8.98	14.42	0.02	1.48
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	17	-	-	905	608	353	-	-
HCM Lane V/C Ratio	0.001	-	-	0.001	0.374	0.024	-	-
HCM Ctrl Dly (s/v)	7.5	0	-	9	14.4	7.5	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	1.7	0.1	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	37	104	8	19	91	38	1	1	18	20	2	19
Future Vol, veh/h	37	104	8	19	91	38	1	1	18	20	2	19
Conflicting Peds, #/hr	0	0	6	6	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	2	2	7	7	7	8	8	8
Mvmt Flow	41	116	9	21	101	42	1	1	20	22	2	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	143	0	0	130	0	0	353	394	126	363	377	122
Stage 1	-	-	-	-	-	-	208	208	-	164	164	-
Stage 2	-	-	-	-	-	-	144	186	-	198	213	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.17	6.57	6.27	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.57	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.57	-	6.18	5.58	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.563	4.063	3.363	3.572	4.072	3.372
Pot Cap-1 Maneuver	1452	-	-	1455	-	-	593	535	911	582	545	913
Stage 1	-	-	-	-	-	-	782	720	-	824	751	-
Stage 2	-	-	-	-	-	-	847	737	-	790	715	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1452	-	-	1447	-	-	547	507	906	542	517	913
Mov Cap-2 Maneuver	-	-	-	-	-	-	547	507	-	542	517	-
Stage 1	-	-	-	-	-	-	754	694	-	811	739	-
Stage 2	-	-	-	-	-	-	811	725	-	748	690	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.88	0.97	9.38	10.8
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	845	441	-	-	218	-	-	666
HCM Lane V/C Ratio	0.026	0.028	-	-	0.015	-	-	0.068
HCM Ctrl Dly (s/v)	9.4	7.6	0	-	7.5	0	-	10.8
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	27	54	9	12	47
Future Vol, veh/h	3	27	54	9	12	47
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	91	91	91	91	91	91
Heavy Vehicles, %	0	0	4	4	3	3
Mvmt Flow	3	30	59	10	13	52

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	142	64	0	0	69	0
Stage 1	64	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.13	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.227	-
Pot Cap-1 Maneuver	855	1006	-	-	1525	-
Stage 1	964	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	848	1006	-	-	1525	-
Mov Cap-2 Maneuver	848	-	-	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	942	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.77	0	1.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	987	366	-
HCM Lane V/C Ratio	-	-	0.033	0.009	-
HCM Ctrl Dly (s/v)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	125	11	47	122	40	16	35	72	14	30	12
Future Vol, veh/h	15	125	11	47	122	40	16	35	72	14	30	12
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, %	2	2	2	3	3	3	2	2	2	0	0	0
Mvmt Flow	16	134	12	51	131	43	17	38	77	15	32	13
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, s/veh	8.9	9.3	8.5	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	10%	22%	25%
Vol Thru, %	28%	83%	58%	54%
Vol Right, %	59%	7%	19%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	123	151	209	56
LT Vol	16	15	47	14
Through Vol	35	125	122	30
RT Vol	72	11	40	12
Lane Flow Rate	132	162	225	60
Geometry Grp	1	1	1	1
Degree of Util (X)	0.168	0.208	0.282	0.082
Departure Headway (Hd)	4.576	4.621	4.525	4.88
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	782	774	793	732
Service Time	2.616	2.66	2.56	2.926
HCM Lane V/C Ratio	0.169	0.209	0.284	0.082
HCM Control Delay, s/veh	8.5	8.9	9.3	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.8	1.2	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	463	23	50	503	291	17	145	84	400	191	155
Future Volume (veh/h)	190	463	23	50	503	291	17	145	84	400	191	155
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.99	1.00		0.98
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	1885	1885	1885	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	196	477	24	52	519	300	18	149	87	412	197	160
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	2	2	2	1	1	1
Cap, veh/h	246	1280	64	83	991	430	38	329	275	567	302	245
Arrive On Green	0.14	0.37	0.37	0.05	0.28	0.28	0.02	0.18	0.18	0.16	0.32	0.32
Sat Flow, veh/h	1795	3470	174	1781	3554	1543	1781	1870	1566	3483	952	773
Grp Volume(v), veh/h	196	246	255	52	519	300	18	149	87	412	0	357
Grp Sat Flow(s),veh/h/ln	1795	1791	1853	1781	1777	1543	1781	1870	1566	1742	0	1725
Q Serve(g_s), s	6.9	6.5	6.6	1.9	8.0	11.3	0.7	4.6	3.2	7.3	0.0	11.6
Cycle Q Clear(g_c), s	6.9	6.5	6.6	1.9	8.0	11.3	0.7	4.6	3.2	7.3	0.0	11.6
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	246	661	684	83	991	430	38	329	275	567	0	547
V/C Ratio(X)	0.80	0.37	0.37	0.62	0.52	0.70	0.47	0.45	0.32	0.73	0.00	0.65
Avail Cap(c_a), veh/h	441	661	684	902	2237	971	684	632	529	1337	0	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00
Uniform Delay (d), s/veh	27.2	15.0	15.0	30.5	19.8	21.0	31.5	24.0	23.4	25.9	0.0	19.1
Incr Delay (d2), s/veh	5.9	0.3	0.3	7.4	0.4	2.1	8.9	1.0	0.7	1.8	0.0	2.4
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	3.2	2.4	2.5	0.9	3.1	3.9	0.4	2.0	1.1	3.0	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.1	15.4	15.4	37.9	20.3	23.1	40.4	25.0	24.1	27.7	0.0	21.5
LnGrp LOS	C	B	B	D	C	C	D	C	C	C		C
Approach Vol, veh/h		697			871			254			769	
Approach Delay, s/veh		20.4			22.3			25.8			24.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	24.7	12.9	22.2	14.6	15.5	7.0	28.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	25.0	22.0	16.0	41.0	25.0	22.0	33.0	24.0
Max Q Clear Time (g_c+I1), s	2.7	13.6	8.9	13.3	9.3	6.6	3.9	8.6
Green Ext Time (p_c), s	0.0	1.4	0.3	4.8	1.3	0.9	0.1	2.5

Intersection Summary	
HCM 7th Control Delay, s/veh	22.9
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↗		↕	
Traffic Vol, veh/h	0	0	0	312	0	36	0	173	274	33	140	0
Future Vol, veh/h	0	0	0	312	0	36	0	173	274	33	140	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Yield	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	0	0	0	322	0	37	0	178	282	34	144	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	391	391	144	391	391	178	144	0	0	178	0	0
Stage 1	212	212	-	178	178	-	-	-	-	-	-	-
Stage 2	178	178	-	212	212	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	572	548	908	570	546	867	1444	-	-	1404	-	-
Stage 1	794	730	-	826	754	-	-	-	-	-	-	-
Stage 2	828	755	-	792	729	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	533	533	908	555	532	867	1444	-	-	1404	-	-
Mov Cap-2 Maneuver	533	533	-	555	532	-	-	-	-	-	-	-
Stage 1	773	711	-	826	754	-	-	-	-	-	-	-
Stage 2	793	755	-	771	709	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	20.96	0	1.46
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1444	-	-	-	577	343	-	-
HCM Lane V/C Ratio	-	-	-	-	0.622	0.024	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	21	7.6	0	-
HCM Lane LOS	A	-	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	4.3	0.1	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	108	6	11	117	13	10	3	22	10	0	25
Future Vol, veh/h	23	108	6	11	117	13	10	3	22	10	0	25
Conflicting Peds, #/hr	2	0	5	5	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	4	4	4	5	5	5	0	0	0
Mvmt Flow	26	121	7	12	131	15	11	3	25	11	0	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	148	0	0	133	0	0	338	354	130	340	350	141
Stage 1	-	-	-	-	-	-	181	181	-	165	165	-
Stage 2	-	-	-	-	-	-	156	173	-	175	185	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.15	6.55	6.25	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.545	4.045	3.345	3.5	4	3.3
Pot Cap-1 Maneuver	1434	-	-	1439	-	-	611	566	912	618	577	912
Stage 1	-	-	-	-	-	-	813	744	-	841	765	-
Stage 2	-	-	-	-	-	-	839	750	-	832	751	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1431	-	-	1433	-	-	572	546	908	579	557	911
Mov Cap-2 Maneuver	-	-	-	-	-	-	572	546	-	579	557	-
Stage 1	-	-	-	-	-	-	794	726	-	832	757	-
Stage 2	-	-	-	-	-	-	806	742	-	790	733	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.27	0.59	10.13	9.84
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	741	299	-	-	138	-	-	783
HCM Lane V/C Ratio	0.053	0.018	-	-	0.009	-	-	0.05
HCM Ctrl Dly (s/v)	10.1	7.6	0	-	7.5	0	-	9.8
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	10	27	4	6	27
Future Vol, veh/h	2	10	27	4	6	27
Conflicting Peds, #/hr	1	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	83	83	83	83	83	83
Heavy Vehicles, %	0	0	7	7	10	10
Mvmt Flow	2	12	33	5	7	33

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	83	35	0	0	37	0
Stage 1	35	-	-	-	-	-
Stage 2	48	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.2	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.29	-
Pot Cap-1 Maneuver	924	1044	-	-	1523	-
Stage 1	993	-	-	-	-	-
Stage 2	980	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	918	1044	-	-	1523	-
Mov Cap-2 Maneuver	918	-	-	-	-	-
Stage 1	993	-	-	-	-	-
Stage 2	974	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.58	0	1.34
HCM LOS	A		

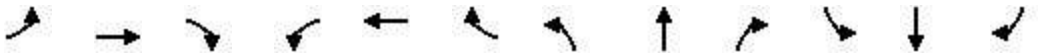
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1021	327	-
HCM Lane V/C Ratio	-	-	0.014	0.005	-
HCM Ctrl Dly (s/v)	-	-	8.6	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	121	11	105	69	16	5	13	61	36	11	8
Future Vol, veh/h	12	121	11	105	69	16	5	13	61	36	11	8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	5	5	5	10	10	10	4	4	4	10	10	10
Mvmt Flow	14	138	13	119	78	18	6	15	69	41	13	9
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, s/veh	8.8	9.5	8.1	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	8%	55%	65%
Vol Thru, %	16%	84%	36%	20%
Vol Right, %	77%	8%	8%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	144	190	55
LT Vol	5	12	105	36
Through Vol	13	121	69	11
RT Vol	61	11	16	8
Lane Flow Rate	90	164	216	63
Geometry Grp	1	1	1	1
Degree of Util (X)	0.112	0.208	0.281	0.089
Departure Headway (Hd)	4.491	4.571	4.68	5.116
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	796	784	766	699
Service Time	2.53	2.605	2.712	3.157
HCM Lane V/C Ratio	0.113	0.209	0.282	0.09
HCM Control Delay, s/veh	8.1	8.8	9.5	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.8	1.2	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	321	12	16	504	222	11	86	24	343	136	129
Future Volume (veh/h)	103	321	12	16	504	222	11	86	24	343	136	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1841	1841	1841	1826	1826	1826	1796	1796	1796	1826	1826	1826
Adj Flow Rate, veh/h	116	361	13	18	566	249	12	97	27	385	153	145
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	5	5	5	7	7	7	5	5	5
Cap, veh/h	151	1094	39	38	879	390	26	351	296	550	295	280
Arrive On Green	0.09	0.32	0.32	0.02	0.25	0.25	0.02	0.20	0.20	0.16	0.34	0.34
Sat Flow, veh/h	1753	3443	124	1739	3469	1541	1711	1796	1518	3374	861	816
Grp Volume(v), veh/h	116	183	191	18	566	249	12	97	27	385	0	298
Grp Sat Flow(s),veh/h/ln	1753	1749	1818	1739	1735	1541	1711	1796	1518	1687	0	1677
Q Serve(g_s), s	3.4	4.2	4.2	0.5	7.7	7.6	0.4	2.4	0.8	5.7	0.0	7.5
Cycle Q Clear(g_c), s	3.4	4.2	4.2	0.5	7.7	7.6	0.4	2.4	0.8	5.7	0.0	7.5
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.49
Lane Grp Cap(c), veh/h	151	555	577	38	879	390	26	351	296	550	0	575
V/C Ratio(X)	0.77	0.33	0.33	0.47	0.64	0.64	0.46	0.28	0.09	0.70	0.00	0.52
Avail Cap(c_a), veh/h	463	627	652	525	1375	611	517	746	630	1083	0	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00
Uniform Delay (d), s/veh	23.7	13.8	13.8	25.6	17.6	17.6	25.9	18.1	17.5	20.9	0.0	13.9
Incr Delay (d2), s/veh	7.8	0.3	0.3	8.8	0.8	1.7	12.0	0.4	0.1	1.6	0.0	0.7
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	1.6	1.5	1.5	0.3	2.8	2.5	0.2	0.9	0.3	2.1	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.5	14.1	14.1	34.4	18.4	19.4	37.9	18.6	17.6	22.6	0.0	14.6
LnGrp LOS	C	B	B	C	B	B	D	B	B	C		B
Approach Vol, veh/h		490			833			136			683	
Approach Delay, s/veh		18.2			19.1			20.1			19.1	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	22.2	8.6	17.4	12.6	14.3	5.2	20.8
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	23.0	14.0	21.0	17.0	22.0	16.0	19.0
Max Q Clear Time (g_c+I1), s	2.4	9.5	5.4	9.7	7.7	4.4	2.5	6.2
Green Ext Time (p_c), s	0.0	1.4	0.2	3.5	1.0	0.5	0.0	1.7

Intersection Summary	
HCM 7th Control Delay, s/veh	18.9
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	1	185	1	20	1	108	366	32	126	0
Future Vol, veh/h	0	0	1	185	1	20	1	108	366	32	126	0
Conflicting Peds, #/hr	0	0	0	2	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Yield	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	6	6	6	2	2	2	3	3	3
Mvmt Flow	0	0	1	223	1	24	1	130	441	39	152	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	362	361	154	363	361	130	152	0	0	130	0	0
Stage 1	229	229	-	133	133	-	-	-	-	-	-	-
Stage 2	133	133	-	231	229	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.16	6.56	6.26	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.554	4.054	3.354	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	597	569	897	585	559	909	1429	-	-	1449	-	-
Stage 1	778	718	-	861	779	-	-	-	-	-	-	-
Stage 2	875	790	-	763	707	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	563	552	896	566	542	909	1429	-	-	1449	-	-
Mov Cap-2 Maneuver	563	552	-	566	542	-	-	-	-	-	-	-
Stage 1	756	698	-	860	778	-	-	-	-	-	-	-
Stage 2	849	789	-	738	687	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	9.02	15.55	0.02	1.53
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	17	-	-	896	587	365	-	-
HCM Lane V/C Ratio	0.001	-	-	0.001	0.423	0.027	-	-
HCM Ctrl Dly (s/v)	7.5	0	-	9	15.6	7.6	0	-
HCM Lane LOS	A	A	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	2.1	0.1	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	110	8	20	97	41	1	1	19	23	2	20
Future Vol, veh/h	40	110	8	20	97	41	1	1	19	23	2	20
Conflicting Peds, #/hr	0	0	6	6	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	2	2	7	7	7	8	8	8
Mvmt Flow	44	122	9	22	108	46	1	1	21	26	2	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	153	0	0	137	0	0	375	419	133	387	401	131
Stage 1	-	-	-	-	-	-	222	222	-	175	175	-
Stage 2	-	-	-	-	-	-	153	198	-	212	226	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.17	6.57	6.27	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.57	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.57	-	6.18	5.58	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.563	4.063	3.363	3.572	4.072	3.372
Pot Cap-1 Maneuver	1440	-	-	1447	-	-	573	517	903	561	528	903
Stage 1	-	-	-	-	-	-	770	711	-	813	743	-
Stage 2	-	-	-	-	-	-	837	728	-	777	706	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1440	-	-	1439	-	-	526	489	898	520	499	903
Mov Cap-2 Maneuver	-	-	-	-	-	-	526	489	-	520	499	-
Stage 1	-	-	-	-	-	-	740	683	-	799	730	-
Stage 2	-	-	-	-	-	-	800	716	-	732	678	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.92	0.95	9.43	11.11
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	837	450	-	-	215	-	-	639
HCM Lane V/C Ratio	0.028	0.031	-	-	0.015	-	-	0.078
HCM Ctrl Dly (s/v)	9.4	7.6	0	-	7.5	0	-	11.1
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	29	59	11	13	55
Future Vol, veh/h	3	29	59	11	13	55
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	91	91	91	91	91	91
Heavy Vehicles, %	0	0	4	4	3	3
Mvmt Flow	3	32	65	12	14	60

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	160	71	0	0	77	0
Stage 1	71	-	-	-	-	-
Stage 2	89	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.13	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.227	-
Pot Cap-1 Maneuver	836	997	-	-	1515	-
Stage 1	957	-	-	-	-	-
Stage 2	940	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	828	997	-	-	1515	-
Mov Cap-2 Maneuver	828	-	-	-	-	-
Stage 1	957	-	-	-	-	-
Stage 2	930	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.82	0	1.41
HCM LOS	A		

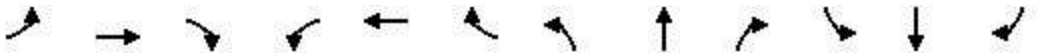
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	978	344	-
HCM Lane V/C Ratio	-	-	0.036	0.009	-
HCM Ctrl Dly (s/v)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	136	13	54	132	44	17	37	79	17	33	13
Future Vol, veh/h	16	136	13	54	132	44	17	37	79	17	33	13
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, %	2	2	2	3	3	3	2	2	2	0	0	0
Mvmt Flow	17	146	14	58	142	47	18	40	85	18	35	14
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, s/veh	9.2	9.8	8.8	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	10%	23%	27%
Vol Thru, %	28%	82%	57%	52%
Vol Right, %	59%	8%	19%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	133	165	230	63
LT Vol	17	16	54	17
Through Vol	37	136	132	33
RT Vol	79	13	44	13
Lane Flow Rate	143	177	247	68
Geometry Grp	1	1	1	1
Degree of Util (X)	0.186	0.232	0.316	0.094
Departure Headway (Hd)	4.676	4.7	4.598	5.002
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	764	761	779	712
Service Time	2.731	2.75	2.645	3.065
HCM Lane V/C Ratio	0.187	0.233	0.317	0.096
HCM Control Delay, s/veh	8.8	9.2	9.8	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.9	1.4	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	229	493	24	53	536	377	18	165	89	492	203	189
Future Volume (veh/h)	229	493	24	53	536	377	18	165	89	492	203	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.99	1.00		0.98
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	1885	1885	1885	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	236	508	25	55	553	389	19	170	92	507	209	195
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	2	2	2	1	1	1
Cap, veh/h	278	1489	73	78	1130	491	38	273	228	636	272	254
Arrive On Green	0.15	0.43	0.43	0.04	0.32	0.32	0.02	0.15	0.15	0.18	0.31	0.31
Sat Flow, veh/h	1795	3474	171	1781	3554	1544	1781	1870	1562	3483	886	827
Grp Volume(v), veh/h	236	261	272	55	553	389	19	170	92	507	0	404
Grp Sat Flow(s),veh/h/ln	1795	1791	1854	1781	1777	1544	1781	1870	1562	1742	0	1713
Q Serve(g_s), s	10.3	7.9	7.9	2.5	10.1	18.5	0.8	6.9	4.3	11.2	0.0	17.2
Cycle Q Clear(g_c), s	10.3	7.9	7.9	2.5	10.1	18.5	0.8	6.9	4.3	11.2	0.0	17.2
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	278	768	795	78	1130	491	38	273	228	636	0	526
V/C Ratio(X)	0.85	0.34	0.34	0.70	0.49	0.79	0.50	0.62	0.40	0.80	0.00	0.77
Avail Cap(c_a), veh/h	357	768	795	730	1809	786	553	511	427	1081	0	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00
Uniform Delay (d), s/veh	33.1	15.4	15.4	38.0	22.2	25.1	39.0	32.3	31.2	31.5	0.0	25.3
Incr Delay (d2), s/veh	14.2	0.3	0.3	10.9	0.3	2.9	9.6	2.3	1.1	2.3	0.0	6.7
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	5.4	3.0	3.1	1.3	4.0	6.7	0.5	3.2	1.6	4.7	0.0	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.3	15.7	15.7	48.9	22.5	28.0	48.6	34.6	32.3	33.8	0.0	32.0
LnGrp LOS	D	B	B	D	C	C	D	C	C	C		C
Approach Vol, veh/h		769			997			281			911	
Approach Delay, s/veh		25.4			26.1			34.8			33.0	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.7	28.7	16.5	29.6	18.7	15.8	7.5	38.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	25.0	22.0	16.0	41.0	25.0	22.0	33.0	24.0
Max Q Clear Time (g_c+I1), s	2.8	19.2	12.3	20.5	13.2	8.9	4.5	9.9
Green Ext Time (p_c), s	0.0	0.7	0.2	5.1	1.5	0.9	0.1	2.6

Intersection Summary	
HCM 7th Control Delay, s/veh	28.9
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	339	0	39	0	184	300	36	148	0
Future Vol, veh/h	0	0	0	339	0	39	0	184	300	36	148	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Yield	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	0	0	0	349	0	40	0	190	309	37	153	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	416	416	153	416	416	190	153	0	0	190	0	0
Stage 1	227	227	-	190	190	-	-	-	-	-	-	-
Stage 2	190	190	-	227	227	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	550	530	899	548	528	855	1434	-	-	1390	-	-
Stage 1	780	720	-	814	745	-	-	-	-	-	-	-
Stage 2	817	747	-	778	718	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	509	515	899	532	513	855	1434	-	-	1390	-	-
Mov Cap-2 Maneuver	509	515	-	532	513	-	-	-	-	-	-	-
Stage 1	758	699	-	814	745	-	-	-	-	-	-	-
Stage 2	778	747	-	755	697	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	25.46	0	1.5
HCM LOS	A	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1434	-	-	-	554	352	-	-
HCM Lane V/C Ratio	-	-	-	-	0.704	0.027	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	25.5	7.7	0	-
HCM Lane LOS	A	-	-	A	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	5.6	0.1	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	26	108	6	11	117	18	10	3	22	27	0	33
Future Vol, veh/h	26	108	6	11	117	18	10	3	22	27	0	33
Conflicting Peds, #/hr	2	0	5	5	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	4	4	4	5	5	5	0	0	0
Mvmt Flow	29	121	7	12	131	20	11	3	25	30	0	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	154	0	0	133	0	0	344	367	130	350	360	144
Stage 1	-	-	-	-	-	-	188	188	-	168	168	-
Stage 2	-	-	-	-	-	-	156	178	-	181	192	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.15	6.55	6.25	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.15	5.55	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.15	5.55	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.545	4.045	3.345	3.5	4	3.3
Pot Cap-1 Maneuver	1427	-	-	1439	-	-	604	557	912	609	570	909
Stage 1	-	-	-	-	-	-	807	739	-	838	763	-
Stage 2	-	-	-	-	-	-	839	746	-	825	746	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1424	-	-	1433	-	-	559	536	908	569	549	907
Mov Cap-2 Maneuver	-	-	-	-	-	-	559	536	-	569	549	-
Stage 1	-	-	-	-	-	-	785	719	-	829	754	-
Stage 2	-	-	-	-	-	-	797	738	-	781	726	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	1.41	0.57	10.19	10.55
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	733	331	-	-	132	-	-	716
HCM Lane V/C Ratio	0.054	0.021	-	-	0.009	-	-	0.094
HCM Ctrl Dly (s/v)	10.2	7.6	0	-	7.5	0	-	10.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	10	42	6	6	32
Future Vol, veh/h	3	10	42	6	6	32
Conflicting Peds, #/hr	1	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	83	83	83	83	83	83
Heavy Vehicles, %	0	0	7	7	10	10
Mvmt Flow	4	12	51	7	7	39

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	108	54	0	0	58	0
Stage 1	54	-	-	-	-	-
Stage 2	54	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.2	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.29	-
Pot Cap-1 Maneuver	894	1019	-	-	1497	-
Stage 1	973	-	-	-	-	-
Stage 2	974	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	889	1019	-	-	1497	-
Mov Cap-2 Maneuver	889	-	-	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	968	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.71	0	1.17
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	985	284	-
HCM Lane V/C Ratio	-	-	0.016	0.005	-
HCM Ctrl Dly (s/v)	-	-	8.7	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	121	12	109	69	16	7	13	74	36	11	8
Future Vol, veh/h	12	121	12	109	69	16	7	13	74	36	11	8
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	5	5	5	10	10	10	4	4	4	10	10	10
Mvmt Flow	14	138	14	124	78	18	8	15	84	41	13	9
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, s/veh	8.9	9.7	8.2	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	8%	56%	65%
Vol Thru, %	14%	83%	36%	20%
Vol Right, %	79%	8%	8%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	94	145	194	55
LT Vol	7	12	109	36
Through Vol	13	121	69	11
RT Vol	74	12	16	8
Lane Flow Rate	107	165	220	63
Geometry Grp	1	1	1	1
Degree of Util (X)	0.134	0.211	0.289	0.09
Departure Headway (Hd)	4.503	4.615	4.725	5.157
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	794	776	758	693
Service Time	2.545	2.655	2.764	3.202
HCM Lane V/C Ratio	0.135	0.213	0.29	0.091
HCM Control Delay, s/veh	8.2	8.9	9.7	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.8	1.2	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	321	12	16	504	226	11	87	24	358	138	129
Future Volume (veh/h)	103	321	12	16	504	226	11	87	24	358	138	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
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	1841	1841	1841	1826	1826	1826	1796	1796	1796	1826	1826	1826
Adj Flow Rate, veh/h	116	361	13	18	566	254	12	98	27	402	155	145
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	5	5	5	7	7	7	5	5	5
Cap, veh/h	151	1094	39	38	879	391	26	347	293	567	300	281
Arrive On Green	0.09	0.32	0.32	0.02	0.25	0.25	0.02	0.19	0.19	0.17	0.35	0.35
Sat Flow, veh/h	1753	3443	124	1739	3469	1541	1711	1796	1518	3374	867	811
Grp Volume(v), veh/h	116	183	191	18	566	254	12	98	27	402	0	300
Grp Sat Flow(s),veh/h/ln	1753	1749	1818	1739	1735	1541	1711	1796	1518	1687	0	1678
Q Serve(g_s), s	3.5	4.3	4.3	0.5	7.8	7.9	0.4	2.5	0.8	6.0	0.0	7.6
Cycle Q Clear(g_c), s	3.5	4.3	4.3	0.5	7.8	7.9	0.4	2.5	0.8	6.0	0.0	7.6
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	151	556	578	38	879	391	26	347	293	567	0	581
V/C Ratio(X)	0.77	0.33	0.33	0.47	0.64	0.65	0.46	0.28	0.09	0.71	0.00	0.52
Avail Cap(c_a), veh/h	458	621	645	520	1361	605	511	738	624	1071	0	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00
Uniform Delay (d), s/veh	23.9	13.9	13.9	25.9	17.8	17.9	26.1	18.4	17.7	21.0	0.0	13.9
Incr Delay (d2), s/veh	7.8	0.3	0.3	8.8	0.8	1.8	12.1	0.4	0.1	1.7	0.0	0.7
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	1.6	1.5	1.6	0.3	2.8	0.2	0.2	1.0	0.3	2.2	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	31.8	14.3	14.2	34.7	18.6	19.7	38.2	18.9	17.9	22.7	0.0	14.7
LnGrp LOS	C	B	B	C	B	B	D	B	B	C		B
Approach Vol, veh/h		490			838			137			702	
Approach Delay, s/veh		18.4			19.3			20.4			19.3	
Approach LOS		B			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.8	22.5	8.6	17.6	13.0	14.3	5.2	21.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	23.0	14.0	21.0	17.0	22.0	16.0	19.0
Max Q Clear Time (g_c+I1), s	2.4	9.6	5.5	9.9	8.0	4.5	2.5	6.3
Green Ext Time (p_c), s	0.0	1.4	0.2	3.5	1.0	0.5	0.0	1.7

Intersection Summary	
HCM 7th Control Delay, s/veh	19.1
HCM 7th LOS	B

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	0	0	1	189	1	22	1	108	367	33	126	0
Future Vol, veh/h	0	0	1	189	1	22	1	108	367	33	126	0
Conflicting Peds, #/hr	0	0	0	2	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Yield	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	0	0	0	6	6	6	2	2	2	3	3	3
Mvmt Flow	0	0	1	228	1	27	1	130	442	40	152	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	364	364	154	366	364	130	152	0	0	130	0	0
Stage 1	231	231	-	133	133	-	-	-	-	-	-	-
Stage 2	133	133	-	233	231	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.16	6.56	6.26	4.12	-	-	4.13	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.554	4.054	3.354	2.218	-	-	2.227	-	-
Pot Cap-1 Maneuver	595	567	897	583	558	909	1429	-	-	1449	-	-
Stage 1	776	717	-	861	779	-	-	-	-	-	-	-
Stage 2	875	790	-	761	706	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	559	550	896	563	540	909	1429	-	-	1449	-	-
Mov Cap-2 Maneuver	559	550	-	563	540	-	-	-	-	-	-	-
Stage 1	753	695	-	860	778	-	-	-	-	-	-	-
Stage 2	847	789	-	736	685	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	9.02	15.81	0.02	1.57
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	17	-	-	896	586	374	-	-
HCM Lane V/C Ratio	0.001	-	-	0.001	0.436	0.027	-	-
HCM Ctrl Dly (s/v)	7.5	0	-	9	15.8	7.6	0	-
HCM Lane LOS	A	A	-	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	2.2	0.1	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	17	32	8	6	30
Future Vol, veh/h	25	17	32	8	6	30
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, %	0	0	2	2	2	2
Mvmt Flow	27	18	35	9	7	33

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	85	39	0	0	43	0
Stage 1	39	-	-	-	-	-
Stage 2	46	-	-	-	-	-
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	922	1038	-	-	1565	-
Stage 1	989	-	-	-	-	-
Stage 2	982	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	918	1038	-	-	1565	-
Mov Cap-2 Maneuver	918	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	978	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.92	0	1.22
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	963	300	-
HCM Lane V/C Ratio	-	-	0.047	0.004	-
HCM Ctrl Dly (s/v)	-	-	8.9	7.3	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	48	110	8	20	97	58	1	1	19	34	2	25
Future Vol, veh/h	48	110	8	20	97	58	1	1	19	34	2	25
Conflicting Peds, #/hr	0	0	6	6	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	2	2	7	7	7	8	8	8
Mvmt Flow	53	122	9	22	108	64	1	1	21	38	2	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	172	0	0	137	0	0	393	456	133	414	428	140
Stage 1	-	-	-	-	-	-	239	239	-	184	184	-
Stage 2	-	-	-	-	-	-	153	217	-	229	244	-
Critical Hdwy	4.1	-	-	4.12	-	-	7.17	6.57	6.27	7.18	6.58	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.17	5.57	-	6.18	5.58	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.17	5.57	-	6.18	5.58	-
Follow-up Hdwy	2.2	-	-	2.218	-	-	3.563	4.063	3.363	3.572	4.072	3.372
Pot Cap-1 Maneuver	1417	-	-	1447	-	-	558	493	903	538	510	892
Stage 1	-	-	-	-	-	-	753	698	-	804	736	-
Stage 2	-	-	-	-	-	-	837	714	-	760	693	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1417	-	-	1439	-	-	504	462	898	494	478	892
Mov Cap-2 Maneuver	-	-	-	-	-	-	504	462	-	494	478	-
Stage 1	-	-	-	-	-	-	718	666	-	790	723	-
Stage 2	-	-	-	-	-	-	795	702	-	711	661	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.21	0.86	9.46	11.71
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	830	514	-	-	191	-	-	604
HCM Lane V/C Ratio	0.028	0.038	-	-	0.015	-	-	0.112
HCM Ctrl Dly (s/v)	9.5	7.6	0	-	7.5	0	-	11.7
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	29	68	12	13	69
Future Vol, veh/h	5	29	68	12	13	69
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	91	91	91	91	91	91
Heavy Vehicles, %	0	0	4	4	3	3
Mvmt Flow	5	32	75	13	14	76

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	186	81	0	0	88	0
Stage 1	81	-	-	-	-	-
Stage 2	104	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.13	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.227	-
Pot Cap-1 Maneuver	808	984	-	-	1502	-
Stage 1	947	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	800	984	-	-	1502	-
Mov Cap-2 Maneuver	800	-	-	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	916	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	8.94	0	1.18
HCM LOS	A		

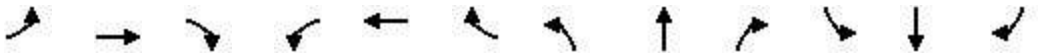
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	952	285	-
HCM Lane V/C Ratio	-	-	0.039	0.01	-
HCM Ctrl Dly (s/v)	-	-	8.9	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	136	15	66	132	44	18	37	87	17	33	13
Future Vol, veh/h	16	136	15	66	132	44	18	37	87	17	33	13
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, %	2	2	2	3	3	3	2	2	2	0	0	0
Mvmt Flow	17	146	16	71	142	47	19	40	94	18	35	14
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, s/veh	9.3	10	8.9	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	10%	27%	27%
Vol Thru, %	26%	81%	55%	52%
Vol Right, %	61%	9%	18%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	142	167	242	63
LT Vol	18	16	66	17
Through Vol	37	136	132	33
RT Vol	87	15	44	13
Lane Flow Rate	153	180	260	68
Geometry Grp	1	1	1	1
Degree of Util (X)	0.2	0.236	0.335	0.095
Departure Headway (Hd)	4.707	4.737	4.641	5.058
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	759	754	770	703
Service Time	2.763	2.792	2.693	3.125
HCM Lane V/C Ratio	0.202	0.239	0.338	0.097
HCM Control Delay, s/veh	8.9	9.3	10	8.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.9	1.5	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	229	493	24	53	536	392	18	167	89	502	204	189
Future Volume (veh/h)	229	493	24	53	536	392	18	167	89	502	204	189
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width 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
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		0.99	1.00		0.98
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	1885	1885	1885	1870	1870	1870	1870	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	236	508	25	55	553	404	19	172	92	518	210	195
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	2	2	2	1	1	1
Cap, veh/h	277	1512	74	77	1153	501	38	269	225	643	273	253
Arrive On Green	0.15	0.44	0.44	0.04	0.32	0.32	0.02	0.14	0.14	0.18	0.31	0.31
Sat Flow, veh/h	1795	3474	171	1781	3554	1544	1781	1870	1562	3483	889	825
Grp Volume(v), veh/h	236	261	272	55	553	404	19	172	92	518	0	405
Grp Sat Flow(s),veh/h/ln	1795	1791	1854	1781	1777	1544	1781	1870	1562	1742	0	1714
Q Serve(g_s), s	10.6	8.0	8.0	2.5	10.3	19.8	0.9	7.2	4.4	11.8	0.0	17.8
Cycle Q Clear(g_c), s	10.6	8.0	8.0	2.5	10.3	19.8	0.9	7.2	4.4	11.8	0.0	17.8
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	277	779	807	77	1153	501	38	269	225	643	0	526
V/C Ratio(X)	0.85	0.34	0.34	0.71	0.48	0.81	0.50	0.64	0.41	0.81	0.00	0.77
Avail Cap(c_a), veh/h	346	779	807	709	1757	764	537	496	414	1050	0	526
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	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	0.00	1.00
Uniform Delay (d), s/veh	34.2	15.5	15.5	39.2	22.4	25.6	40.1	33.5	32.3	32.4	0.0	26.1
Incr Delay (d2), s/veh	15.3	0.3	0.2	11.5	0.3	3.7	9.8	2.5	1.2	2.4	0.0	6.8
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	5.6	3.1	3.2	1.3	4.1	7.3	0.5	3.3	1.7	5.0	0.0	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.5	15.7	15.7	50.6	22.7	29.4	49.9	36.0	33.5	34.8	0.0	32.9
LnGrp LOS	D	B	B	D	C	C	D	D	C	C		C
Approach Vol, veh/h		769			1012			283			923	
Approach Delay, s/veh		26.1			26.9			36.1			34.0	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.8	29.5	16.8	30.9	19.3	15.9	7.6	40.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	25.0	22.0	16.0	41.0	25.0	22.0	33.0	24.0
Max Q Clear Time (g_c+I1), s	2.9	19.8	12.6	21.8	13.8	9.2	4.5	10.0
Green Ext Time (p_c), s	0.0	0.6	0.2	5.1	1.5	0.9	0.1	2.6

Intersection Summary	
HCM 7th Control Delay, s/veh	29.7
HCM 7th LOS	C

Intersection	
Int Delay, s/veh	9.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↰	↗		↕	
Traffic Vol, veh/h	0	0	0	342	0	40	0	184	304	38	149	0
Future Vol, veh/h	0	0	0	342	0	40	0	184	304	38	149	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Yield	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	1	1	1	1	1	1	1	1	1
Mvmt Flow	0	0	0	353	0	41	0	190	313	39	154	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	422	422	154	422	422	190	154	0	0	190	0	0
Stage 1	232	232	-	190	190	-	-	-	-	-	-	-
Stage 2	190	190	-	232	232	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.11	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.209	-	-	2.209	-	-
Pot Cap-1 Maneuver	546	526	898	544	525	855	1433	-	-	1390	-	-
Stage 1	776	716	-	814	745	-	-	-	-	-	-	-
Stage 2	817	747	-	773	714	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	503	510	898	527	509	855	1433	-	-	1390	-	-
Mov Cap-2 Maneuver	503	510	-	527	509	-	-	-	-	-	-	-
Stage 1	752	694	-	814	745	-	-	-	-	-	-	-
Stage 2	777	747	-	749	692	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0	26.41	0	1.56
HCM LOS	A	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1433	-	-	-	549	366	-	-
HCM Lane V/C Ratio	-	-	-	-	0.717	0.028	-	-
HCM Ctrl Dly (s/v)	0	-	-	0	26.4	7.7	0	-
HCM Lane LOS	A	-	-	A	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	5.8	0.1	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	10	70	25	16	58
Future Vol, veh/h	16	10	70	25	16	58
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, %	0	0	2	2	2	2
Mvmt Flow	17	11	76	27	17	63

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	188	90	0	0	103	0
Stage 1	90	-	-	-	-	-
Stage 2	98	-	-	-	-	-
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	806	974	-	-	1489	-
Stage 1	939	-	-	-	-	-
Stage 2	931	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	796	974	-	-	1489	-
Mov Cap-2 Maneuver	796	-	-	-	-	-
Stage 1	939	-	-	-	-	-
Stage 2	920	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	9.35	0	1.61
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	856	389	-
HCM Lane V/C Ratio	-	-	0.033	0.012	-
HCM Ctrl Dly (s/v)	-	-	9.3	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

SALMON CREEK APARTMENTS
EASEMENT EXHIBIT

1 inch = 40 feet.

SITE ADDRESS
16001 NW 11TH AVENUE
RIDGEFIELD, WA 98642

PARCELS
182200000
182212000

DEVELOPER/APPLICANT
D&S WEST LLC
1911 – 65TH AVENUE WEST
TACOMA, WA 98466
(253) 460–3000
jennifer@vaughnbay.net

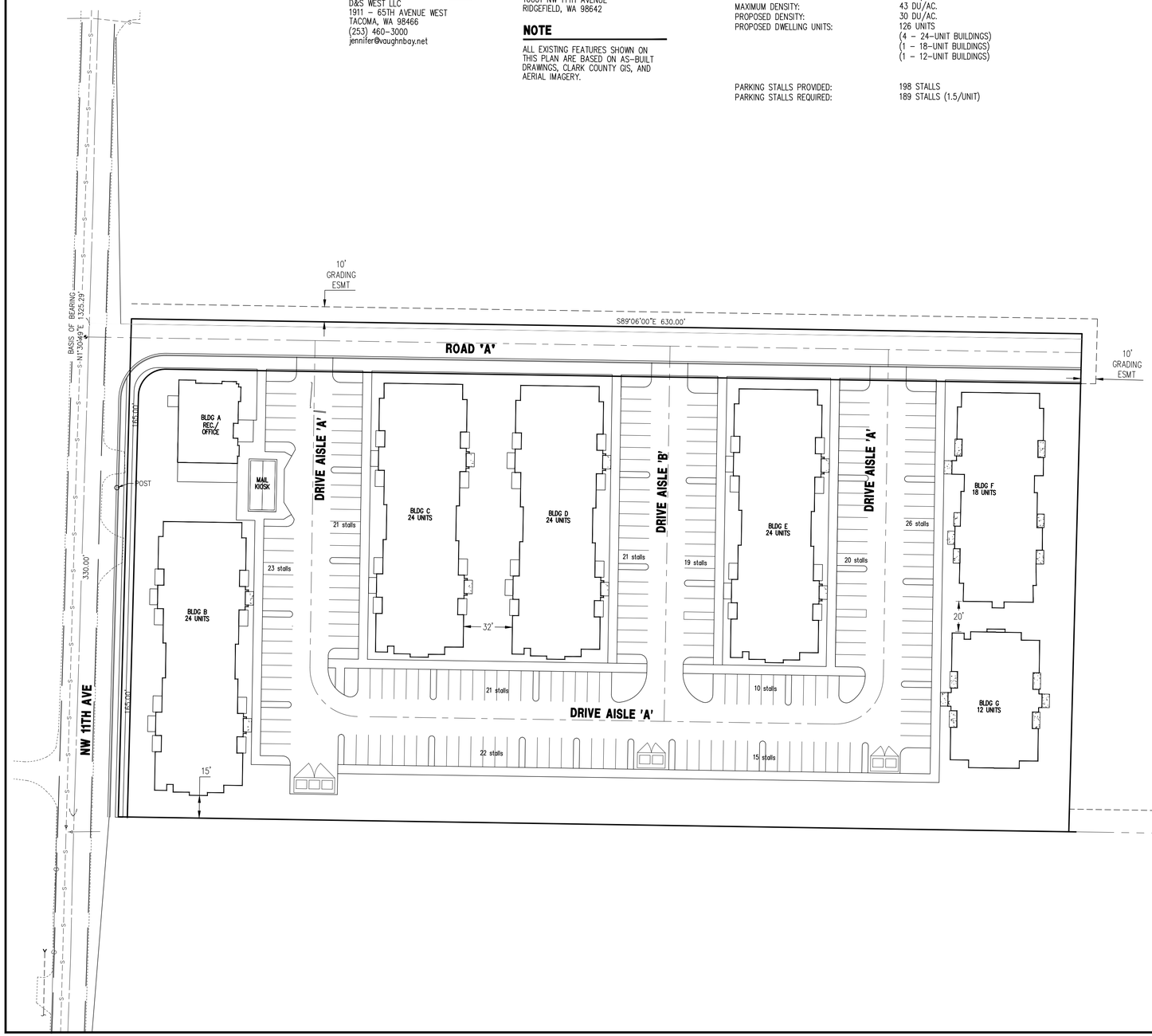
ENGINEER/CONTACT
C.E.S. NW INC
429 – 29TH STREET NE, SUITE D
PUYALLUP, WA 98372
(253) 848–4282
dbabineau@cesnwinc.com

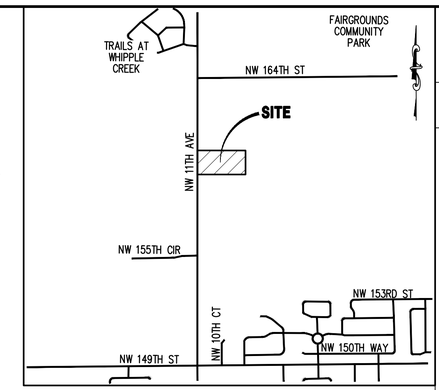
PROPERTY OWNER
JOHNNIE L. EVERITT
16001 NW 11TH AVENUE
RIDGEFIELD, WA 98642

NOTE
ALL EXISTING FEATURES SHOWN ON THIS PLAN ARE BASED ON AS–BUILT DRAWINGS, CLARK COUNTY GIS, AND AERIAL IMAGERY.

STATISTICS

PROJECT GROSS SITE AREA:	±211,200 SF (4.85 AC)
RIGHT–OF–WAY DEDICATION:	28,634 SF (0.66 AC)
NET SITE AREA:	182,566 SF (4.19 AC)
EXISTING SITE USE:	SINGLE FAMILY HOME
JURISDICTION:	CLARK COUNTY
ZONING DESIGNATION:	MIXED USE (MX)
MINIMUM DENSITY:	12 DU/AC.
MAXIMUM DENSITY:	43 DU/AC.
PROPOSED DENSITY:	30 DU/AC.
PROPOSED DWELLING UNITS:	126 UNITS (4 – 24–UNIT BUILDINGS) (1 – 18–UNIT BUILDINGS) (1 – 12–UNIT BUILDINGS)
PARKING STALLS PROVIDED:	198 STALLS
PARKING STALLS REQUIRED:	189 STALLS (1.5/UNIT)





VICINITY MAP
NOT TO SCALE

LEGEND

EXISTING	DESCRIPTION	PROPOSED
⊕	MONUMENT	⊕
	MONUMENT LINE	
	PROPERTY LINE	
	RIGHT OF WAY LINE	
	EASEMENT LINE	
	BUILDING SETBACK LINE	
X X	WIRE FENCE	X X
	CURB & GUTTER	
	EDGE OF PAVEMENT	
300	CONTOURS	300
	STREET SIGN	
□	STORM DRAIN CATCH BASIN	
Ⓓ	STORM DRAIN MANHOLE	
○	STORM DRAIN CLEANOUT	
SD	STORM DRAIN LINE	SD
RD	ROOF DRAIN LINE	RD
Ⓢ	SANITARY SEWER MANHOLE	●
○	SANITARY SEWER CLEANOUT	•
S	SANITARY SEWER LINE	S
SS	SANITARY SEWER STUB	SS
	FIRE HYDRANT	
	WATER VALVE	
W	WATER METER	
	THRUST BLOCKING	
W	WATER MAIN	W
	LUMINAIRE	
	POWER/UTILITY POLE	
P	POWER LINE	
G	GAS MAIN	
	MAIL BOX	
	ASPHALT CONCRETE	
	CEMENT CONCRETE	

DANIEL PAUL SMITH
STATE OF WASHINGTON
47023
REGISTERED
PROFESSIONAL ENGINEER

C.E.S. NW INC.
CIVIL ENGINEERING & SURVEYING
5210 – 12TH STREET EAST
FIFE, WA 98424
Bus: (253) 922–1532
Fax: (253) 922–1904
ceservices@cesnwinc.com

No.	Revision	Int.	Date:

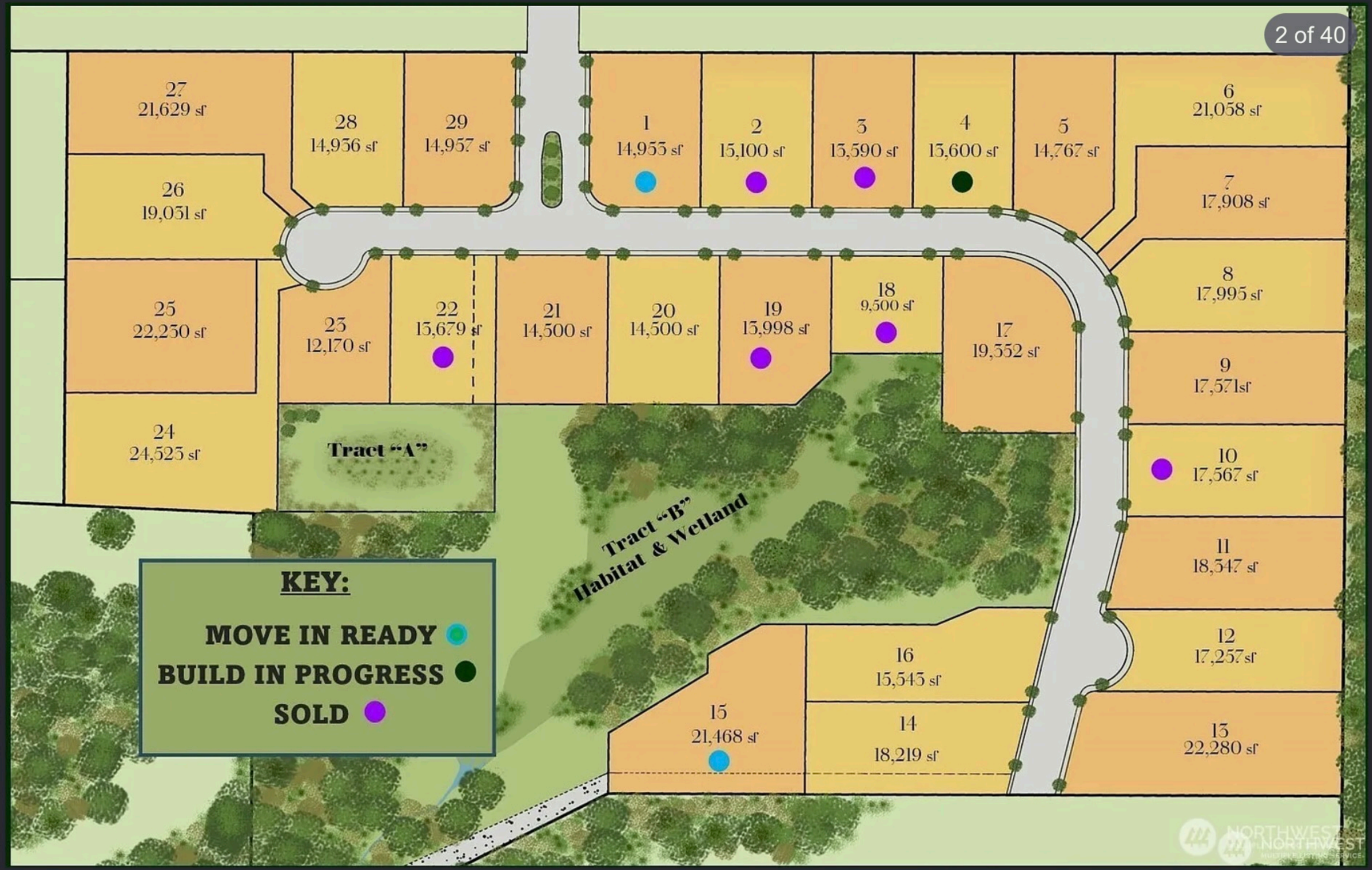
Project: **SALMON CREEK APARTMENTS**
126-UNIT EASEMENT EXHIBIT

Client: **VAUGHN BAY CONSTRUCTION**
1911 65TH AVE W. TACOMA, WA 98466
(253) 460-3000

Designed: DAB
Drawn: DAB
Checked: CAD

Scale: 1"=40'
Date: 09/29/2025
Job No.: 24251

Sheet No.:
EX1
1 of 1 Sheets


27
21,629 sf
28
14,936 sf
29
14,957 sf
1
14,953 sf
2
15,100 sf
3
13,590 sf
4
13,600 sf
5
14,767 sf
6
21,058 sf
26
19,031 sf
7
17,908 sf
25
22,230 sf
23
12,170 sf
22
13,679 sf
21
14,500 sf
20
14,500 sf
19
13,998 sf
18
9,500 sf
17
19,352 sf
8
17,995 sf
9
17,571sf
24
24,523 sf
Tract "A"
Tract "B"
Habitat & Wetland
10
17,567 sf
11
18,347 sf
12
17,257sf
16
15,543 sf
15
21,468 sf
14
18,219 sf
13
22,280 sf
KEY:
MOVE IN READY
BUILD IN PROGRESS
SOLD



Real Estate & Homes For Sale

32 results

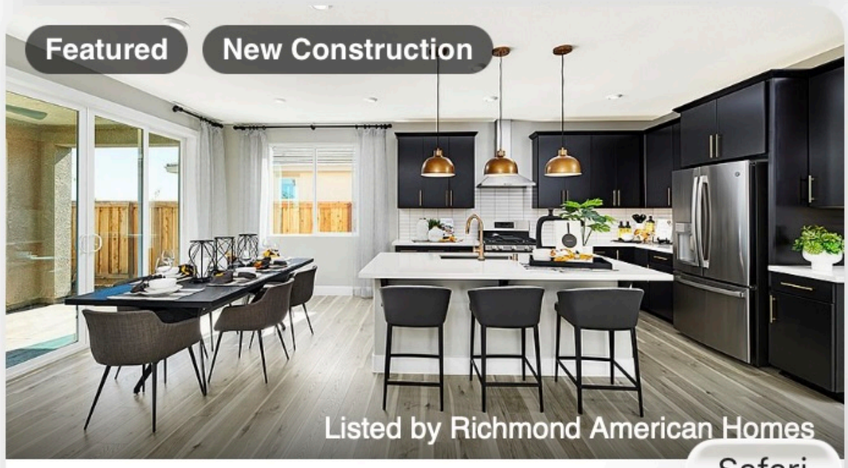


$1,005,000

6 bds | **3** ba | **3,990** sqft | Active

3604 NE 174th St, Vancouver, WA 98686

METANA REALTY SERVICES

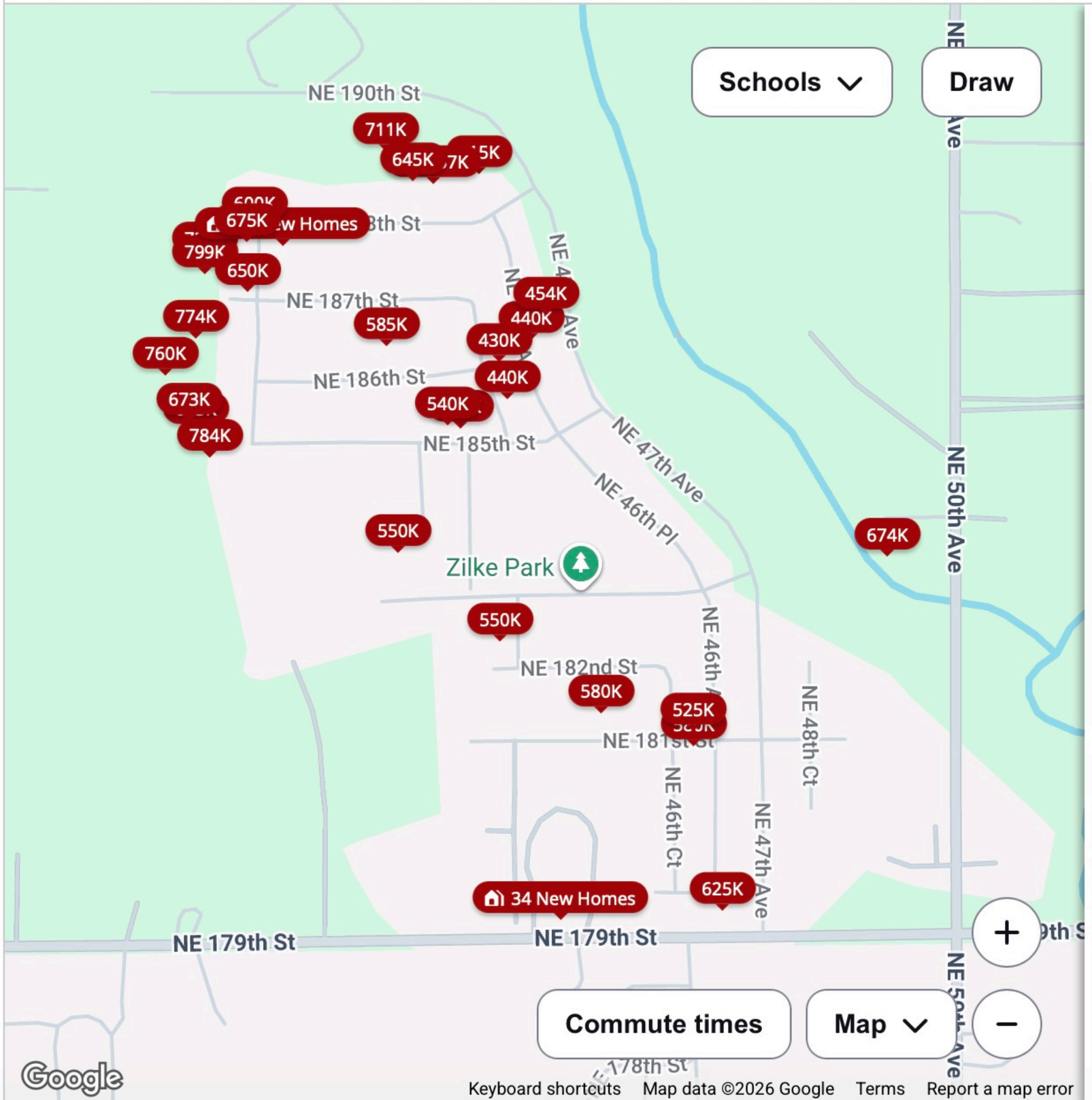


Safari

$634,990+

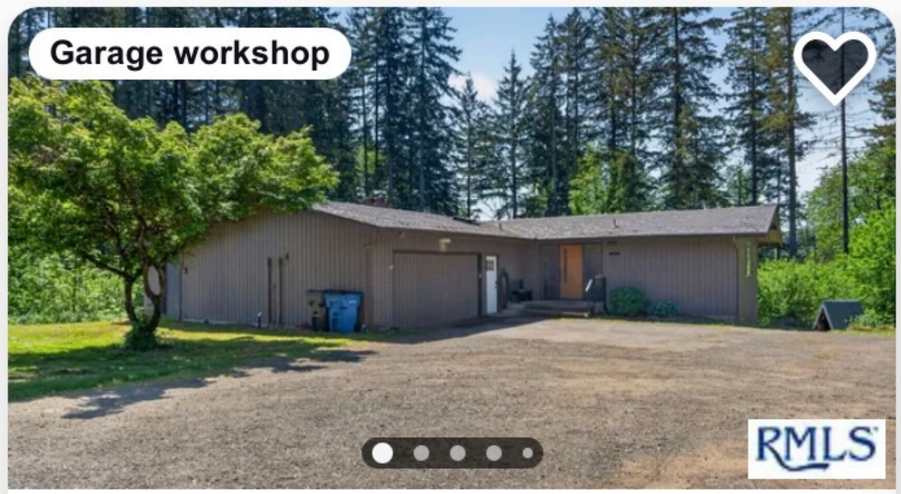
Address, neighborhood, city, ZIP

For sale | Price | Beds & baths | Property type



Real Estate & Homes For Sale

52 results

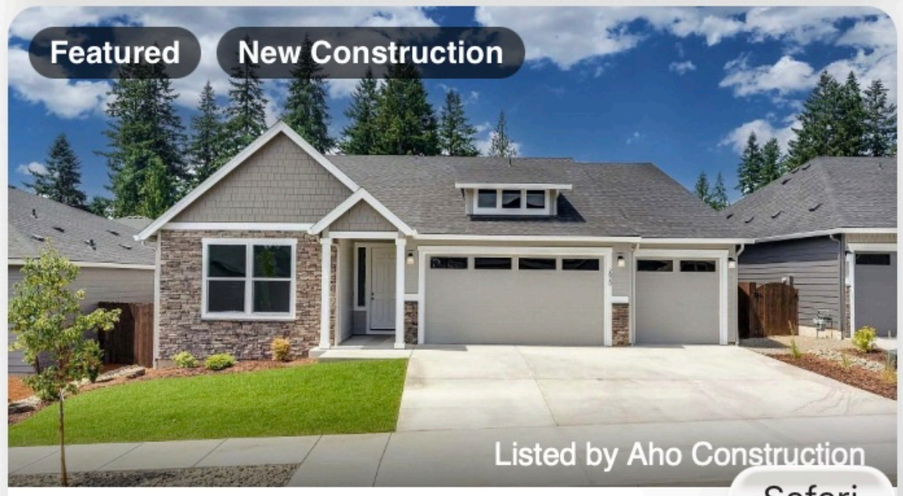


$674,000

5 bds | **3** ba | **2,496** sqft | Active

18316 NE 50th Ave, Vancouver, WA 98686

KELLER WILLIAMS REALTY PROFESSIONALS



Safari

$564,400+

Without funding from the Legislature, 48-bed Mount Vista-area mental health facility won't open

Two years of construction on 48-bed Brockmann campus had been set to end next month; 'warm closure' planned



By Becca Robbins, The Columbian

Published: May 23, 2025, 6:10am

Share



The Washington State Department of Social and Health Services' Brockmann facility stands in the Mount Vista area nearing completion, as seen Wednesday morning. Officials said the facility will no longer open in the fall as planned after the state Legislature did not include operational funding for the campus in its two-year budget.

(Amanda Cowan/The Columbian) Photo Gallery

Listen to this Article

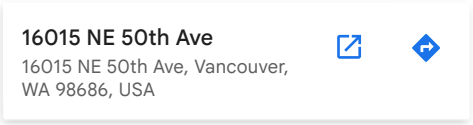
Instaread

A nearly completed residential mental health treatment facility in the Mount Vista area that was slated to open in the fall will stand largely empty after the state Legislature did not budget funding to operate it.

Two years of construction on the 48-bed Brockmann campus, 16015 N.E. 50th Ave., was scheduled to be completed next month near the Washington State University Vancouver and Vancouver iTech Preparatory campuses. The three-building complex was slated to open one 16-bed wing at a time.

Officials said the added capacity would help improve behavioral health services across the state and alleviate a backlog of people waiting to receive treatment at other facilities like Western State Hospital. It was a part of the Department of Social and Health Services' strategy to move civil commitment patients out of the hospital to community facilities like the Brockmann campus.

“Transitioning these patients out of the state hospital may affect county jails, where some inmates are waiting for inpatient competency restoration services ordered by a court,” spokeswoman Cynthia Shipley wrote in an email to The Columbian. “Like the Behavioral Health Treatment Center at Maple Lane Campus, the Brockmann campus will offer inpatient psychiatric care in a community setting that better meets its residents’ needs. This initiative supports our goal of shifting away from a centralized care model and turning state hospitals into more forensic-focused facilities.”



Tip: you can interact with this map using your cursor (or two fingers on touch screens). Map

Clark County Superior Court administrators were poised to ask the county council on May 20 to fund additional court staff who would’ve been needed to oversee the cases assigned to the Brockmann facility. The campus’ 48 beds would’ve doubled the court’s workload, according to a staff report.

Instead, Department of Social and Health Services officials said the agency will be unable to operate the facility “for the foreseeable future,” without the funding the Legislature did not include in its $78 billion, two-year budget. Shipley said the funding cut was not something the department had proposed, and she said she couldn’t speak to why the Legislature did not include it in the budget, which was signed May 20 by Gov. Bob Ferguson.

The lack of funding means the Department of Social and Health Services is unable to hire clinical staff or accept patients. But the Legislature provided enough dollars for a “warm closure” of the brand-new facility, meaning the department will have a small number of staffers on site to maintain the facility, along with security systems.

Upon learning of the lack of funding May 19, Superior Court administrators pulled their staffing request from the next day’s council meeting.

The Legislature’s budget sought to balance a $16 billion deficit. Shipley said the funding cut saved the state $73.9 million that would’ve paid for Brockmann’s opening.



DRIVING DIRECTIONS

- On I-5, take 179th Street Exit.
- West on 179th St.
- Left on NW 11th Ave.
- Left on NW 176th St.
- Right to NW 10th Pl.
- Left onto 174th St.
- Right onto NW 9th Ave.
- Left onto NW 173rd Cir.

INTERACTIVE

Up to 8 Week Free!*

SOUTH RIDGE

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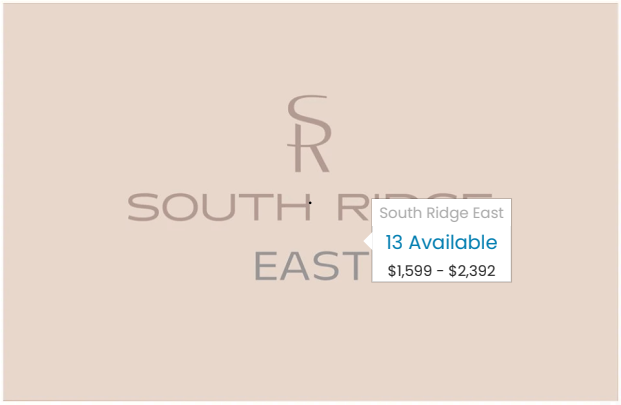
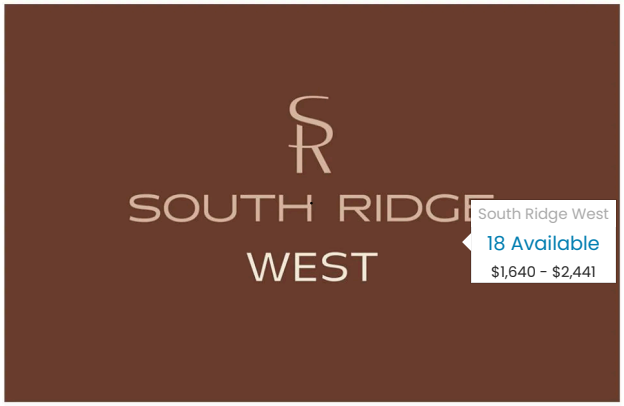
Bedrooms

More Filters

31 apartments found.





Get in Touch

South Ridge East

2112 NE 179th Street
Ridgefield, WA 98642

(360) 718-7778

South Ridge West

1920 NE 179th St
Ridgefield, WA 98642

(971) 399-0224

SOCIAL MEDIA

OFFICE HOURS

Monday: 9 AM - 6 PM
Tuesday: 9 AM - 6 PM
Wednesday: 9 AM - 6 PM
Thursday: 9 AM - 6 PM
Friday: 9 AM - 6 PM
Saturday: 9 AM - 6 PM
Sunday: Closed



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MT VISTA LOGISTICS

583,318 SF Class A industrial building for lease or for sale

PROJECT UPDATE
NOW UNDER CONSTRUCTION

17009 -16713 NE 50th Ave | Vancouver, WA



DEVELOPED BY

PANATTONI®

MTVISTALOGISTICS.COM

EXCLUSIVELY LEASED BY

Kidder Mathews



583,318 SF
TOTAL SQUARE FEET

Q2 2026
DELIVERY

Class A
OFFICE

Business Park
ZONING

ABOUT THE PROJECT

Mt Vista Logisitics offers prospective tenants a unique opportunity to maximize square footage under one roof.

As the Portland Metro industrial market continues to grow, so does the Vancouver submarket. This new Class-A development will offer strategically located distribution space, with superior clear heights, loading capabilities, and abundant trailer parking.

BUILDING HIGHLIGHTS

583,318 SF BUILDING

CLASS A OFFICE

LOADING DOORS INCLUDE
108 DH & 4 GL

40' CLEAR HEIGHT

385 PARKING STALLS AND
177 TRAILER STALLS

2026 DELIVERY

33 ACRES
OF LAND

CONCRETE TILT CONSTRUCTION
WITH REINFORCED SLAB

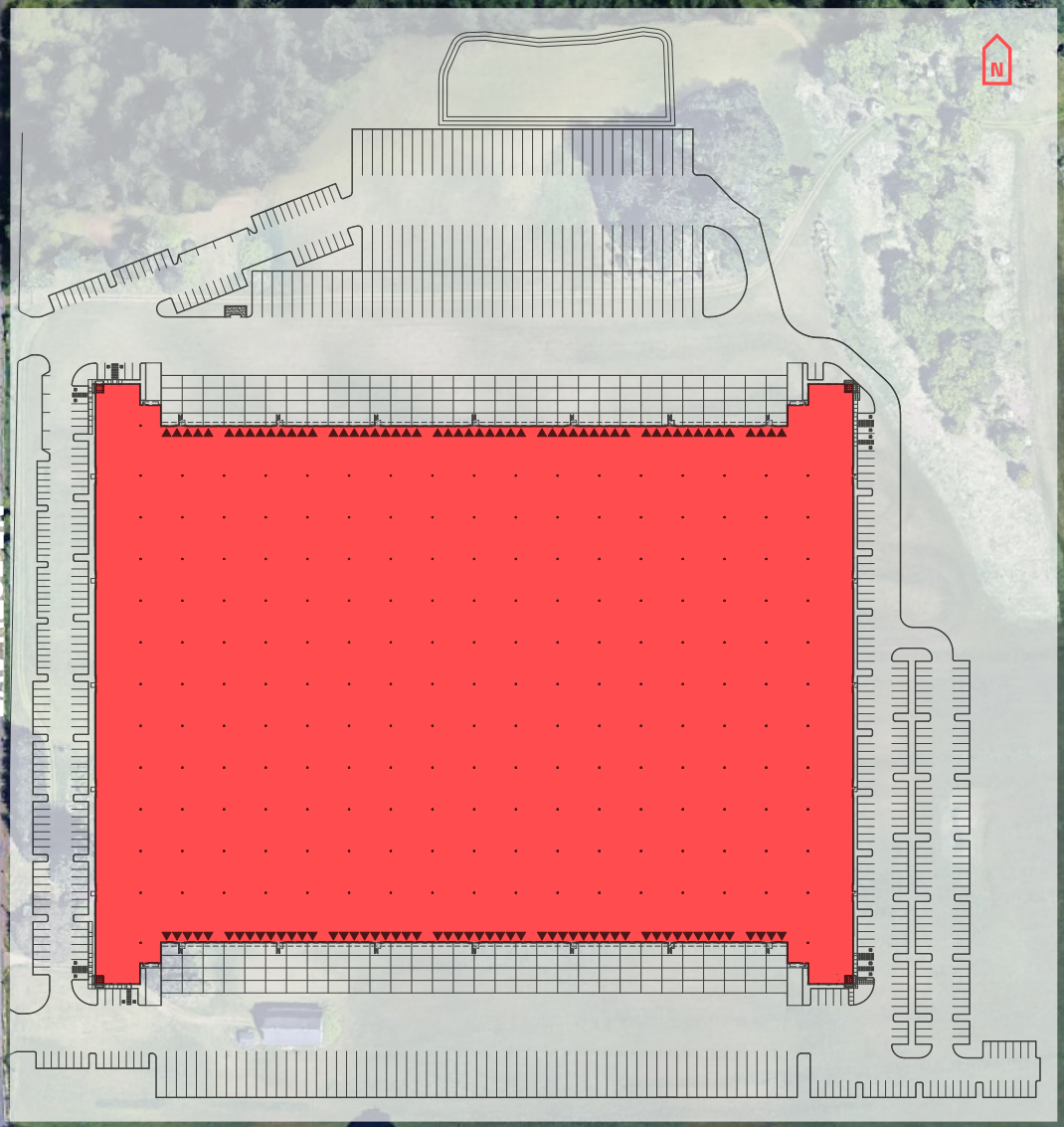
3,000 AMPS OF POWER

ESFR FIRE PROTECTION

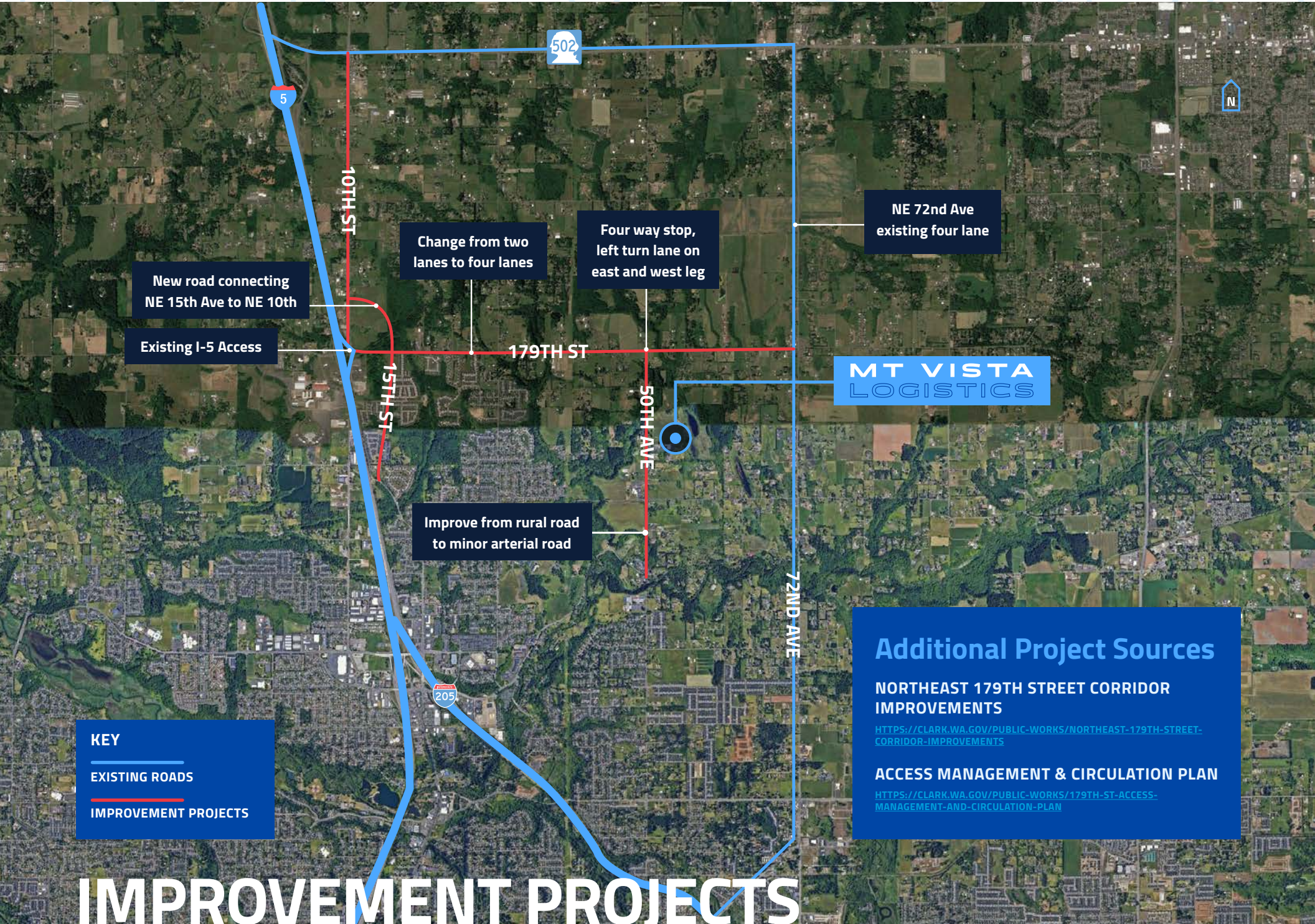
BUSINESS PARK ZONING

CALL FOR SALE PRICE
& LEASE RATES

SITE PLAN



Building Size	583,318 SF
Dock Doors	108 dock high
Grade Doors	4 grade level
Clear Height	40’
Office Area	BTS
Truck Courts	130’
Fire System	ESFR
Column Spacing	50’ x 50’ 60’ speed bay
Electric	3,000 amps
Auto Parking	385 spaces
Trailer Parking	177 stalls



IMPROVEMENT PROJECTS

Additional Project Sources

NORTHEAST 179TH STREET CORRIDOR IMPROVEMENTS

HTTPS://CLARK.WA.GOV/PUBLIC-WORKS/NORTHEAST-179TH-STREET-CORRIDOR-IMPROVEMENTS

ACCESS MANAGEMENT & CIRCULATION PLAN

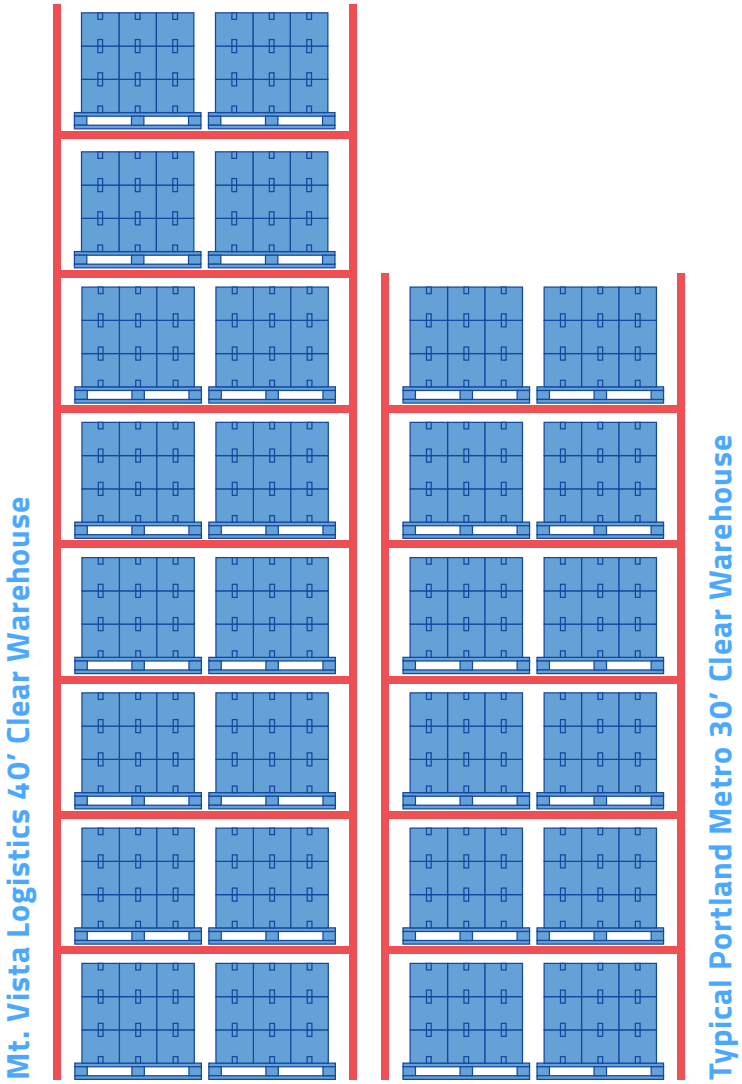
HTTPS://CLARK.WA.GOV/PUBLIC-WORKS/179TH-ST-ACCESS-MANAGEMENT-AND-CIRCULATION-PLAN

MT VISTA

NEARBY RETAILERS



COMBATING RISING RENTS



Take advantage of cubic footage at Mt Vista Logistics

INCREASE PALLET POSITION BY 33%

REDUCE YOUR LEASE FOOTPRINT BY AT LEAST 20%

SAVE 25% ON YOUR BASE RENT, AND EVEN MORE WHEN YOU CONSIDER NNN

	TYPICAL PORTLAND METRO	MT VISTA LOGISTICS
SF	100,000 SF	75,000 SF
Clear Height	30'	40'
Cubic Footage	3,000,000	3,000,000
Pallet Height	6	8
Estimated Base Rent	Base Rent @ $1.00* = $100,000/month + OP EX (NNN) @ $0.26* = $26,000/month	Base Rent @ $1.00* = $75,000/month + OP EX (NNN) @ $0.26* = $19,500 /month
Rent per Mo	$126,000	$94,500
5-Year Commitment	$8,189,480	$6,142,110

*Estimated rental rate/call for quote

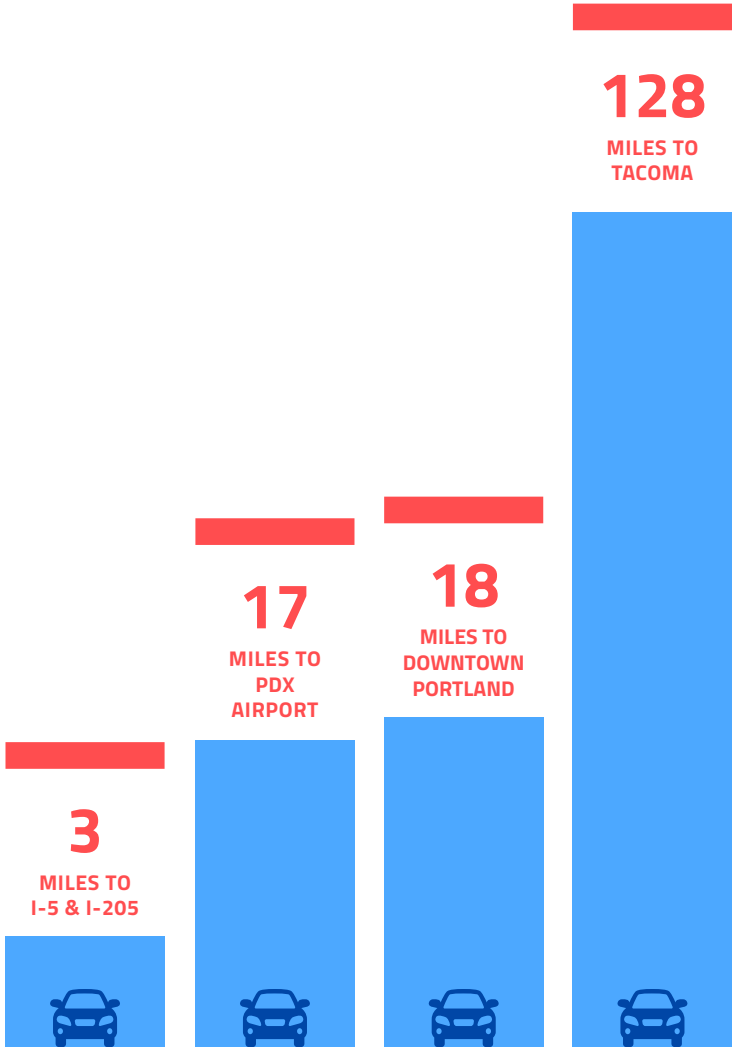
Potential Savings at Mt Vista Logistics

$31,500
INITIAL MONTHLY SAVINGS

$2,047,370 (25%)
TOTAL 5-YEAR COMMITMENT SAVINGS

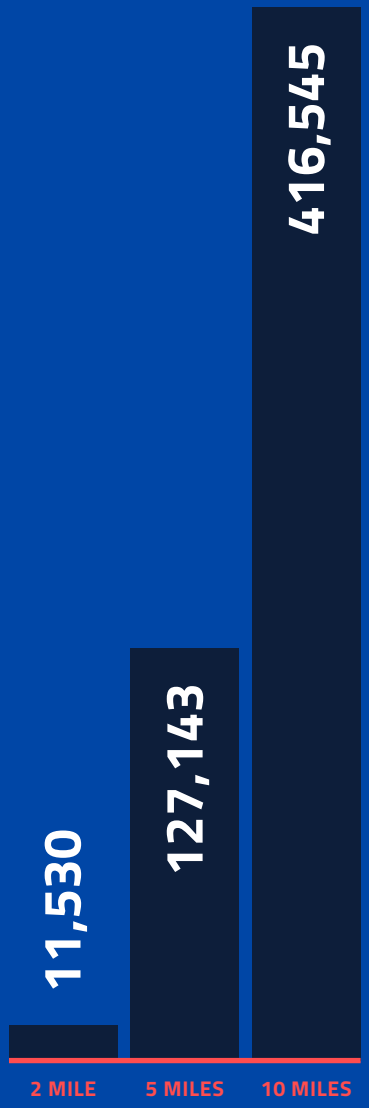


COMPLETELY CONNECTED

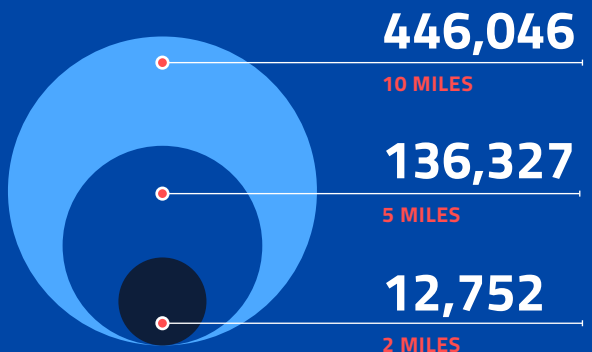


LABOR STATISTICS

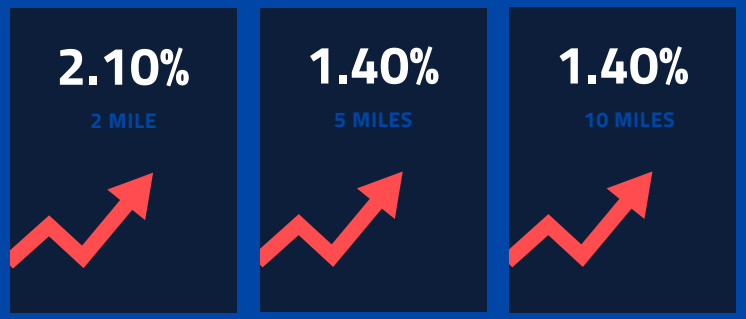
Estimated Population 2023



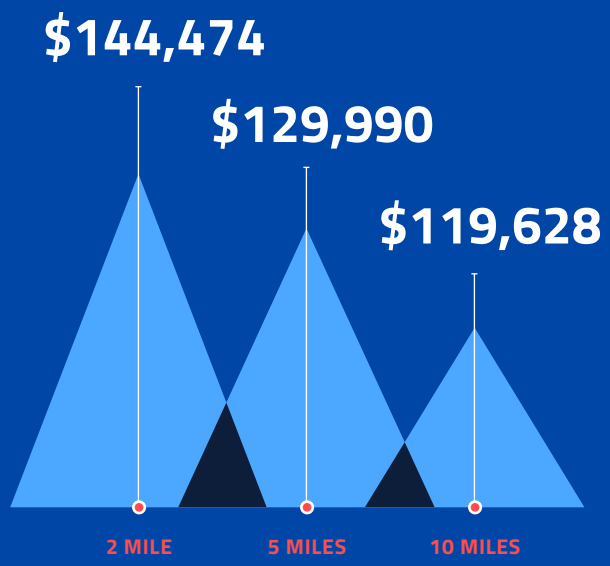
Population Forecast 2028



Population Growth 2023-2028



Average Household Income 2023



Estimated Employees 2023



Source: Applied Geographic Solutions 4/2023, TIGER Geography - RFULL9

MT VISTA LOGISTICS



For leasing information contact

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zach.francis@kidder.com

KARLA HANSEN
503.721.2727
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CHRIS DOWHANIUK
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chris.dowhaniuk@kidder.com

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PANATTONI®

EXCLUSIVELY LEASED BY

Kidder Mathews

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Features

Clear Height	**40′**
Column Spacing	**50′ x 50′**
Drive In Bays	**4**
Exterior Dock Doors	**108**
Standard	**385**

Mt. Vista Logistics | 16713-17009 NE 50th Ave

583,278 SF of 4-Star Industrial Space Available in Vancouver, WA 98686

Space	Size	Term	Rate	Use	Out	Available
583,278 SF	Negotiable	Upon Request	Industrial	Spec Suite		Jul 01, 202

As the Portland Metro industrial market continues to grow, so does the Vancouver submarket. This new Class-A development will offer strategically located distribution space, with superior clear heights, loading capabilities, and abundant trailer parking.

- 4 Drive Ins
- 100 Loading Docks
- Space is in Excellent Condition

Mt Vista Logistics_Flyer

Call

Message

Contacts



Zach Francis



Karla Hansen



Chris

Distribution Facility Facts

Building Size	**583,278 SF**
Lot Size	**100.56 AC**
Year Built	**2026**
Construction	**Reinforced Concrete**
Truck Court	**130’**
Sprinkler System	**ESFR**

Power Supply	**Amps: 3,000**
Zoning	**BP - Business Park**

Attachments

Mt Vista Logistics_Flyer ↓

Map



Somewhat walkable
20/100

Exceptionally drivable
100/100

Somewhat bikeable
30/100

Source: Local Logic®

Listing ID: 25415325 **Date on Market:** 4/6/2022 **Last Updated:** 6/10/2026

Address: 16713-17009 NE 50th Ave, Vancouver, WA 98686

The **Pleasant Valley Vancouver Industrial Property** at 16713-17009 NE 50th Ave, **Vancouver**, WA **98686** is currently available. Contact Kidder Mathews for more information.

INDUSTRIAL PROPERTIES IN NEARBY NEIGHBORHOODS

Downtown Vancouver Industrial Spaces

Orchards Area Industrial Spaces

Walnut Grove Industrial Spaces

Fircrest Industrial Spaces

Northeast Hazel Dell Industrial Spaces

Pleasant Valley Vancouver Industrial Spaces

Fisher's Village-Orchards Area Industrial Spaces

Vancouver Waterfront Industrial Spaces

Brush Prairie Industrial Spaces

Hudson's Bay Industrial Spaces

Fruit Valley Industrial Spaces

Meadow Homes Industrial Spaces

Ogden Industrial Spaces

Northeast Hazel Dell-Starcrest Industrial Spaces

Columbia Way Industrial Spaces

NEARBY LISTINGS

9611 NE 117th Ave, Vancouver WA

12607 NE 115th Ave, Vancouver WA

11413 NE 126th St, Vancouver WA

7206 NE 37th Ave, Vancouver WA

12323 NE 99th St, Vancouver WA

11419 NE 126th, Vancouver WA

11406 NE 126th St, Vancouver WA

1311 SE Grace Ave, Battle Ground WA

8100 NE St Johns Rd, Vancouver WA

15805 NE Caples Rd, Brush Prairie WA

15301 10th ave, Vancouver WA

1205 SE Grace Ave, Battle Ground WA

12104 NE 95th St, Vancouver WA

9213 NE 72nd Ave, Vancouver WA

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