From: Jeffrey Delapena
To: "Heidi Pozzo"
Cc: Oliver Orjiako; Jose Alvarez
Subject: RE: Comp Plan Index: 29th Ave Subdivision
Date: Monday, September 14, 2026 8:23:00 AM

Hello Heidi,

Thank you for providing these comments and attachments. Confirming these have 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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-----Original Message-----
From: Heidi Pozzo <hcpheidi@yahoo.com>
Sent: Saturday, September 12, 2026 4:58 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 Index: 29th Ave Subdivision

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.

Dear Jeff,

I've just uploaded to the link you provided the traffic study for the 29th Ave Subdivision aka Four Creeks South for inclusion in the Comp Plan Index of Record.

Thank you,

Heidi

14. Traffic Study

Transportation Impact Analysis

NE 29th Avenue Subdivision

Clark County, Washington

June 2022

Prepared For:
HSR Development
500 E Broadway Suite #120
Vancouver, WA 98660

Prepared By:
Kittelson & Associates, Inc.
851 SW 6th Avenue, Suite 600
Portland, OR 97204
(503) 228-5230

Project Manager: Kristine Connolly, PE
Project Principal: Chris Brehmer, PE

Project # 27393



Chris Brehmer
Digitally signed by Chris Brehmer
DN: CN=Chris Brehmer, O=Kittelson and Associates, C=US
Date: 2022.06.30 06:50:41-07'00'

KITTELSON & ASSOCIATES

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1 EXECUTIVE SUMMARY

HSR Development is proposing a residential development with up to 86 residential lots (herein referred to as "NE 29th Avenue Subdivision") to be located at 18216 NE 29th Avenue. This report documents the methodology and findings of the transportation impact analysis prepared for the development.

Findings

- All study intersection operations currently satisfy the applicable Clark County and Washington State Department of Transportation (WSDOT) standards.
- All study intersection operations continue to satisfy applicable County and WSDOT standards under 2025 background conditions, provided that County- and WSDOT-planned roadway improvement projects are implemented.
- The proposed residential development is estimated to generate approximately 812 daily trips, including 60 trips during the weekday AM peak hour and 81 weekday PM peak trips. These estimates do not reflect a reduction for the existing home located on-site.
- Consistent with existing and background conditions, the 2025 total traffic conditions intersection operations are expected to satisfy the Clark County and WSDOT standards.
- The WSDOT volume-based criteria for providing a northbound left-turn or southbound right-turn lane on NE 29th Avenue at the NE 182nd Street (site access) are not satisfied under either weekday AM or PM total traffic conditions upon full build-out.
- Review of adopted Clark County capacity thresholds for corridor segments identified five corridor segments that are projected to operate with V/C ratios greater than 0.90 prior to site development and to continue to do so upon site build-out. No additional corridors exceed the adopted V/C threshold as a result of the proposed site development. Of the five corridor segments exceeding the threshold prior to site development:
    - The projected background V/C ratio of 1.05 for the eastbound segment of NE 179th Street between the I-5 Northbound ramp terminal and the future NE 12th Avenue increases to 1.06 with the proposed site development. Nineteen (19) weekday PM peak hour trips are projected to be added to the segment eastbound with site development. The final design of this road segment has not been defined as of the time this report was prepared. Addition of a separate eastbound auxiliary lane would result in a link V/C ratio of 0.71.
    - Nineteen (19) site generated trips are projected to be added eastbound along NE 179th Street between NE 12th Avenue and NE 15th Avenue during the weekday PM peak hour. The PM peak hour site trips represent 1.1% of the projected total volumes and the projected 0.92 V/C threshold under background traffic increases to 0.93 after site development.

- No site trips are projected to be added northbound along NE 15th Avenue between NE 199th Street and NE 179th Street, therefore the projected V/C ratio remains at 0.91.

- No site trips are projected to be added northbound and southbound along NE 72nd Avenue between NE 199th Street and NE 179th Street, therefore the projected V/C ratios remain between 0.91 and 0.93.

- Five northbound and four southbound trips are projected to be added on NE 72nd Avenue between NE 179th Street and NE 159th Street. These represent less than 1% of project total volumes and the projected northbound 1.09 V/C threshold under background traffic increases to 1.10, while the south 1.12 V/C increases to 1.13.

- The regionally significant study intersections on these corridors are anticipated to operate at an acceptable LOS. Therefore, the over-capacity V/C ratios do not represent a roadway deficiency, rather corridor mobility facilitated with acceptable intersection LOS. A more detailed operational analysis should be performed before the County makes any major design, reconstruction or investment decisions for these corridors.

Recommendations

- Intersection sight distance should be provided on-site per Clark County Code design requirements. Landscaping, above ground utilities, and signing should be located and maintained in a manner that preserves adequate intersection sight distance per Clark County Code requirements.

- Subject to Clark County Public Works direction, striping of an interim two-way left-turn lane on NE 29th Street at NE 182nd Street serving the site should be considered for implementation with site development within the NE 29th Avenue site frontage improvement area.

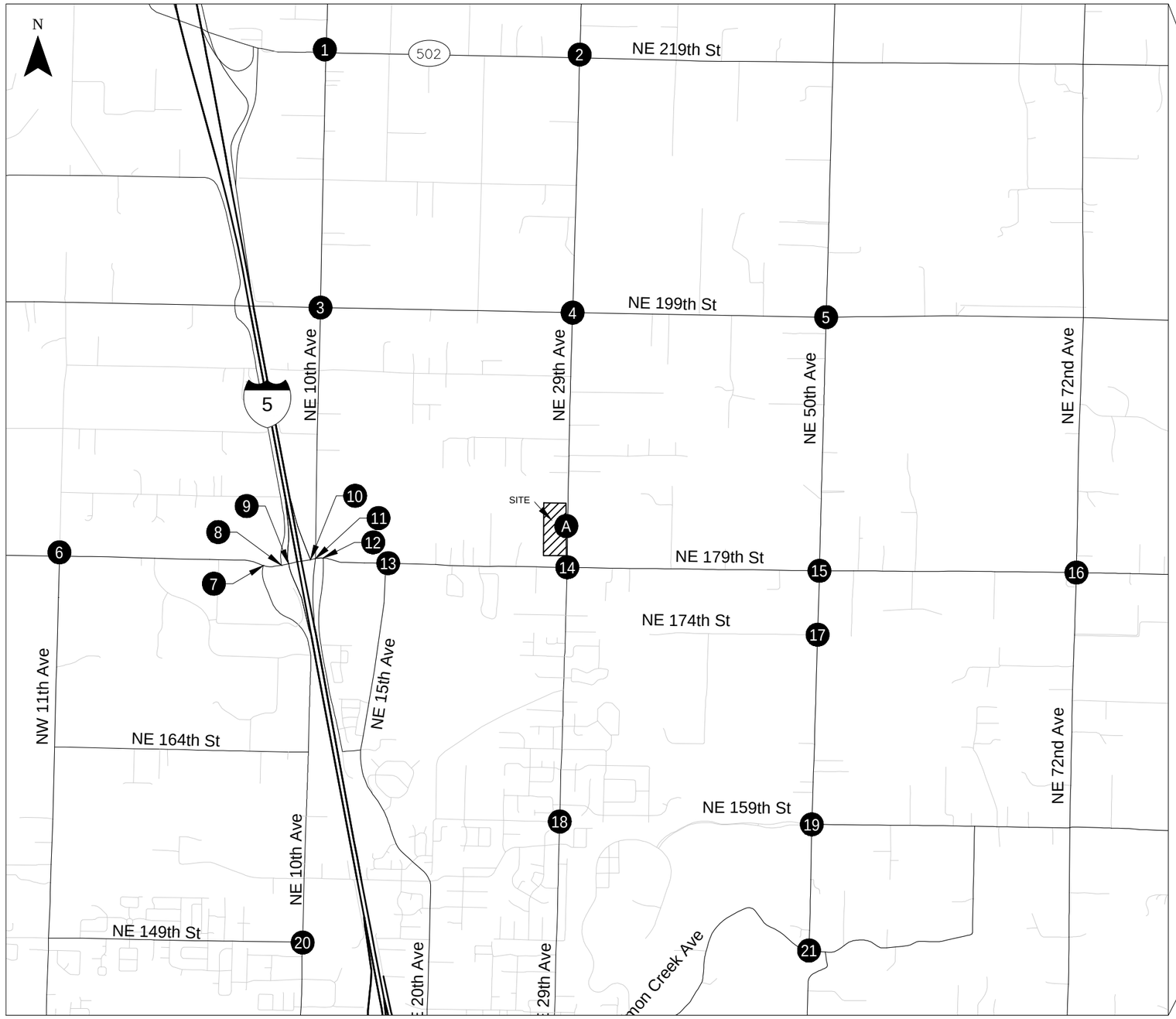
The methodology assumptions and pertinent findings are documented herein.

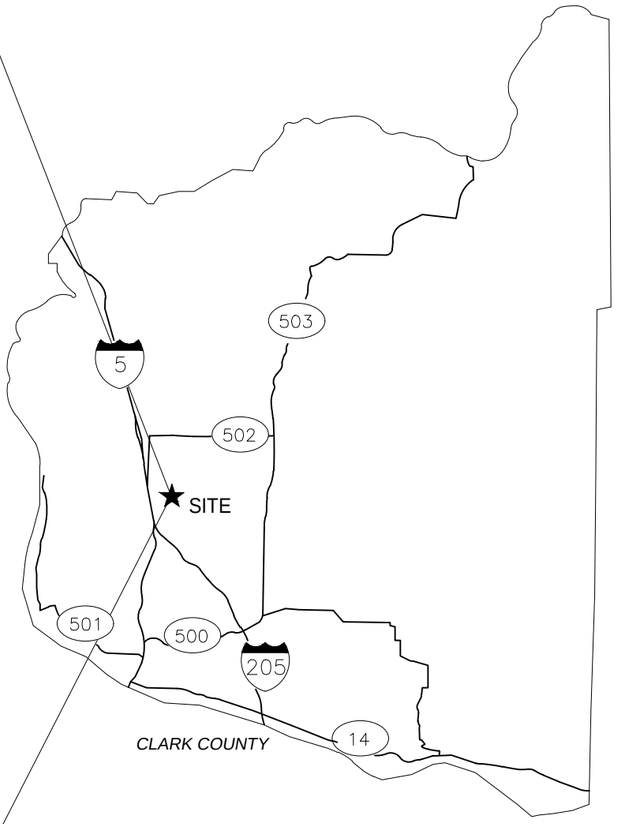
2 INTRODUCTION

The Applicant, HSR Development, is proposing to develop up to 86 residential lots at 18216 NE 29th Avenue as shown in Figure 1.

The conceptual plan for the development is illustrated in Figure 2 and encompasses approximately 14.76 acres of land located on NE 29th Avenue with access approximately 900 feet north of NE 179th Street.

Completion and occupancy of all homes is anticipated by 2025.





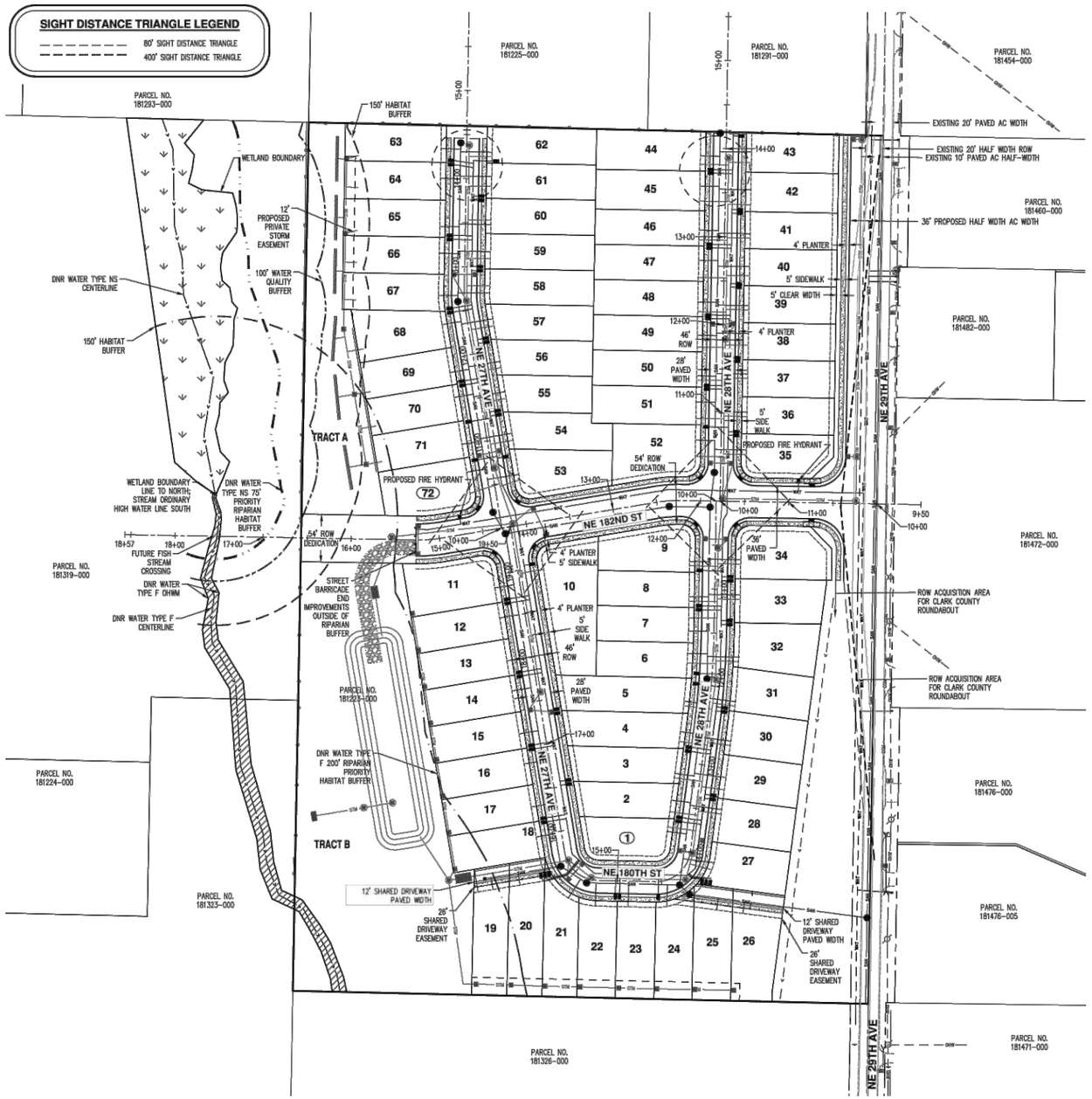
##- Study Intersections

Site Vicinity Map
Clark County, Washington

Figure
1

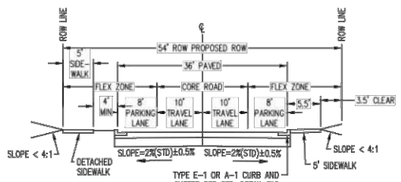
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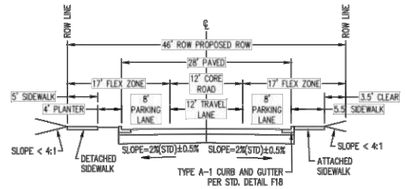


GENERAL NOTES

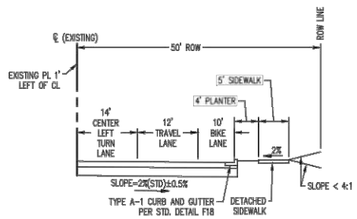
1. PROPOSED DEVELOPMENT TO BE SERVED WITH PUBLIC SANITARY SEWER PROVIDED BY CLARK REGIONAL WASTEWATER DISTRICT. SEE SHEET P5.3 FOR OFF-SITE SEWER IMPROVEMENTS.
2. PROPOSED DEVELOPMENT TO BE SERVED WITH PUBLIC WATER BY CLARK PUBLIC UTILITIES.
3. FIRE HYDRANT LOCATIONS ARE PROPOSED AS SHOWN.
4. A WATER CONNECTION IS PROPOSED TO THE CLARK PUBLIC UTILITIES WATER SYSTEM AT THE EXISTING 8" WATER LINE AT NE 29TH AVENUE.
5. LOTS 19-20 & 25-26 HAVE A 20' WIDE PRIVATE SHARED ACCESS EASEMENT WITH A MINIMUM 12' WIDE PAVED SECTION.
6. NE 29TH AVE TO FOLLOW STANDARD DETAIL M-4CB DRAWING 3 FOR THE HALF WIDTH ROW IMPROVEMENT.
7. ALL LOTS WILL BE SERVED BY CPU WATER.
8. SEE SHEET P5.1 FOR NE 29TH AVE FRONTAGE IMPROVEMENTS AND ADJACENT DRIVEWAY SPACING.



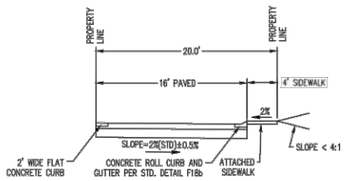
URBAN NEIGHBORHOOD CIRCULATOR CROSS SECTION
[CLARK COUNTY STANDARD DRAWING #12]
N.T.S.
(NE 182ND ST)



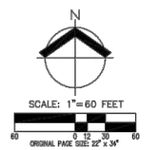
URBAN LOCAL RESIDENTIAL ACCESS CROSS SECTION
[CLARK COUNTY STANDARD DRAWING #13]
N.T.S.
(NE 27TH AVE, NE 28TH AVE, NE 180TH AVE)



URBAN MINOR ARTERIAL (M-4CD) [HALF-STREET CONSTRUCTION]
[CLARK COUNTY STANDARD DRAWING #3]
N.T.S.
(NE 29TH AVE)



SHARED DRIVEWAY
N.T.S.
(LOTS 19-20 & 25-26)



AKS ENGINEERING & FORESTRY, LLC
9600 NE 126TH AVE, STE 2520
VANCOUVER, WA 98682
360.882.0419
WWW.AKS-ENG.COM

ENGINEERING · SURVEYING · NATURAL RESOURCES
FORESTRY · PLANNING · LANDSCAPE ARCHITECTURE

PRELIMINARY STREET, SANITARY SEWER, AND WATER PLAN
NE 29TH AVE SUBDIVISION
HSR CAPITAL PARTNERS, LLC
CLARK COUNTY, WA

PRELIMINARY NOT FOR CONSTRUCTION

JOB NUMBER:	8941
DATE:	06/15/2022
DESIGNED BY:	BDH/TJW
DRAWN BY:	DMP
CHECKED BY:	BDH

P5.0

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AKS DRAWING FILE: 8941 PS.DWG | LAYOUT: P5.0

Provided by AKS Engineering & Forestry, LLC, Dated: June 15, 2022.

Proposed Site Plan
Clark County, Washington

Figure
2

KITTELSON & ASSOCIATES

3 SCOPE OF THE REPORT & ANALYSIS METHODOLOGY

This analysis identifies transportation-related impacts associated with the proposed NE 29th Avenue Subdivision and was prepared in accordance with Clark County's transportation impact analysis requirements. The study scope and overall study area for this project were selected based on a review of the local transportation system and Clark County Code (CCC) Section 40.350.020, Transportation Concurrency Management. The following transportation issues are addressed:

- Existing land use and transportation system conditions within the site vicinity;
- Existing traffic conditions during the weekday AM and PM peak hours;
- Planned developments and transportation improvements in the study area;
- Forecast year 2025 background traffic conditions (prior to development) during the weekday AM and PM peak hours;
- Trip generation and distribution estimates for the proposed development;
- Forecast year 2025 total traffic conditions (with build-out and occupancy of the development) during the weekday AM and PM peak hours;
- Recommended mitigation measures.

3.1 STUDY INTERSECTIONS

The study intersections are listed below and are identified numerically, corresponding with the analysis figures in this report (note that some of the existing study intersections are consolidated or closed in the future conditions analysis):

1. NE 10th Avenue/NE 219th Street
2. NE 29th Avenue/NE 219th Street
3. NE 10th Avenue/NE 199th Street
4. NE 29th Avenue/NE 199th Street
5. NE 50th Avenue/NE 199th Street
6. NW 11th Avenue/NE 179th Street
7. NE Delfel Road South/NE 179th Street
8. NE Delfel Road North/NE 179th Street[1]
9. I-5 Southbound Ramps/NE 179th Street
10. I-5 Northbound On-ramp/NE 179th Street[1]
11. I-5 Northbound Off-ramp-NE 10thAvenue/NE 179th Street
12. NE Union Road/NE 179th Street[1]
13. NE 15th Avenue/NE 179th Street
14. NE 29th Avenue/NE 179th Street
15. NE 50th Avenue/NE 179th Street
16. NE 72nd Avenue/NE 179th Street
17. NE 50th Avenue/NE 174th Street
18. NE 29th Avenue/NE 159th Street
19. NE 50th Avenue/NE 159th Street (WSU)
20. NE 10th Avenue/NE 149th Street
21. NE 50th Avenue/NE Salmon Creek Avenue

A. Proposed Site Access (NE 182nd Street)/NE 29th Avenue

[1] The intersection will be closed in the future and was assessed only under existing conditions.

3.2 ANALYSIS METHODOLOGY

3.2.1 Performance Measures

Level-of-service analyses described in this report were performed in accordance with the procedures stated in the *Highway Capacity Manual 6th Edition* (HCM 6th Edition, Reference 1) and the *2000 Highway Capacity Manual* (HCM 2000, Reference 2) using Synchro 10 and Sidra 8 software. Synchro 10 is unable to implement the HCM 6th Edition methodology at signalized intersections with custom or non-NEMA phasing, unique ring barrier structures, pedestrian split times that exceed maximum split times, or U-turns. Due to these limitations, the signalized intersections on NE 219th Street at NE 10th Avenue (Intersection #1) and at NE 29th Avenue (Intersection #2) as well as on NE 179th Street at the I-5 Southbound Ramps (Intersection #9), I-5 Northbound Off-ramp/NE 10th Avenue (Intersection #11), and NE 15th Avenue (Intersection #13), were analyzed using the HCM 2000 methodology in Synchro. All unsignalized intersections were analyzed using the HCM 6th Edition methodology, except for the I-5 Northbound On-ramp/NE 179th Street (Intersection #10) under existing conditions. HCM 2000 methodology was used for this intersection in Synchro. All roundabouts were analyzed using the Sidra Standard Roundabout Capacity Model in Sidra in accordance with the WSDOT Sidra Policy Settings (Reference 3).

All intersection level-of-service analyses used the peak 15-minute flow rate that occurred during the weekday AM and PM peak hours. Using the peak 15-minute flow rate provides analyses that are based on a reasonable worst-case scenario.

3.2.2 Performance Standards

Clark County Operating Standards

CCC Section 40.350.020.G defines the County's performance standards for roadway segments as well as signalized and unsignalized intersections.

Roadway Segments

Per CCC Section 40.350.020.G.1.a: *"The maximum volume to capacity ratio for each roadway segment shall not exceed nine-tenths (0.9), when measured independently for each direction of travel…the capacity [of the roadway] shall be based on the factors described in Table 40.350.020-1, Roadway Capacities."*

Signalized Intersections

Per CCC Section 40.350.020.G.1.b: *"Individual movements at each signalized intersection of regional significance in the unincorporated county shall not exceed an average of two (2) cycle lengths or two hundred forty (240) seconds of delay (whichever is less)."*

Unsignalized Intersections

Per CCC Section 40.350.020.G.1.c: *"All unsignalized intersections of regional significance in the unincorporated county shall achieve Level of Service (LOS) E standards or better (if warrants are not met). If warrants are met, unsignalized intersections of regional significance shall achieve LOS D standards or better. Intersection control or mitigation of unsignalized intersections shall be at the discretion of the Public Works Director and shall not obligate the county to meet this LOS standard. However, proposed developments shall not be required to mitigate their impacts in order to obtain a concurrency approval unless:*

(1) The proposed development adds at least five (5) peak hour trips to a failing intersection approach; and

(2) The worst movement on the failing approach is worsened by the proposed development. In determining whether the movement is worsened, the Public Works Director shall consider trip volume, delay, and any other relevant factors."

Level of service analyses for signalized and all-way stop controlled intersections in this report are based on the average control delay per vehicle entering the intersection. For two-way stop-controlled intersections, level of service is based on the intersection's ability to accommodate the most difficult, or critical, movement as overall intersection level of service is not defined by the *Highway Capacity Manual 6th Edition*.

WSDOT Operating Standards

The two signalized intersections along NE 219th Street (Intersection #1 & 2) and the I-5 ramp terminal intersections on NE 179th Street are operated and maintained by the Washington State Department of Transportation (WSDOT). WSDOT provides a table of LOS standards for state highways of statewide significance (HSS) based on Revised Code of Washington (RCW) 47.06.140(2). Regional transportation planning organizations (RTPOs) and WSDOT jointly develop and establish LOS standards for regionally significant state highways based on RCW 47.80.030(1)(c). Table 1 presents the WSDOT standards for state facilities in Clark County.

Table 1: WSDOT Level of Service Standards for Washington State Highways

Regional Organization/County	LOS for Non-HHS[1]		LOS for HSS[1]	
	Urban	Rural	Urban	Rural
(RTC) Southwest Washington Regional Transportation Council – MA/MP/RTPO	E	C	D	C

[1] HHS=Highway of Statewide Significance

Per WSDOT direction, LOS D is the standard used for the I-5 ramp terminals at NW 179th Street because this area is designated "urban" and I-5 has an HSS designation. NW 219th Street is classified as a Non-HSS facility and has both urban and rural segments in the vicinity of the study area per the State Functional Classification (STFC). From NE 10th Avenue (Milepoint-MP-2.05) to MP 3.56 the facility is classified as urban. From MP 3.56 to Battle Ground the classification is rural. The two WSDOT intersections along NE 219th Street are located within the urban edge along a non-HHS designation

highway and a LOS E standard therefore applies. Based on these classifications, Table 2 summarizes the WSDOT operating standards for intersections addressed in this study.

Table 2: WSDOT Level of Service Standards for Study Intersections

Intersection	Level of Service Standard
NE 10th Avenue/NE 219th Street (Intersection #1)	E
NE 29th Avenue/NE 219th Street (Intersection #2)	E
NE 179th Street/I-5 Southbound Ramp (Intersection #9)	D
NE 179th Street/I-5 Northbound Ramp (intersection #10 & 11 – future)	D

Note that the future traffic conditions analysis of the I-5 ramp terminals at NE 179th Street presented in this report assumes construction of modern roundabouts. For analysis purposes, it was assumed that WSDOT will require the overall roundabout LOS to be D or better and that each approach lane group should operate at a volume-to-capacity (V/C) ratio less than 0.90. The LOS D standard was also assumed to apply at the planned future roundabouts at NE Delfel Road South/N 179th Street (Intersection #7), NE 15th Avenue/NE 179th Street intersection (Intersection #13), NE 29th Avenue/NE 179th Street intersection (Intersection #14), and NE 50th Avenue/NE 179th Street intersection (Intersection #15).

3.2.3 Queuing Analyses

Queuing analyses presented in this report for unsignalized and signalized intersections were projected using Synchro and Sidra[2] software.

3.2.4 Turn Lane Needs

Turn lane requirement evaluations were based on turn lane criteria contained in the *WSDOT Design Manual* (Reference 4).

[2] Sidra was used for all roundabout analyses and at NE 10th Avenue/NE 149th Street (Intersection #20)

4 EXISTING CONDITIONS

The existing conditions analysis identifies the site conditions and the current operational and geometric characteristics of roadways within the study area. The purpose of this section is to provide a basis for comparison to future conditions.

4.1 SITE CONDITIONS AND ADJACENT LAND USES

The proposed development site is approximately 14.76 acres in total on parcel 181223000. The parcel comprising the site is zoned R1-6 and its current use includes a single-family home on the north portion of the parcel.

The properties surrounding the site are generally developed with low-density single-family housing or are vacant.

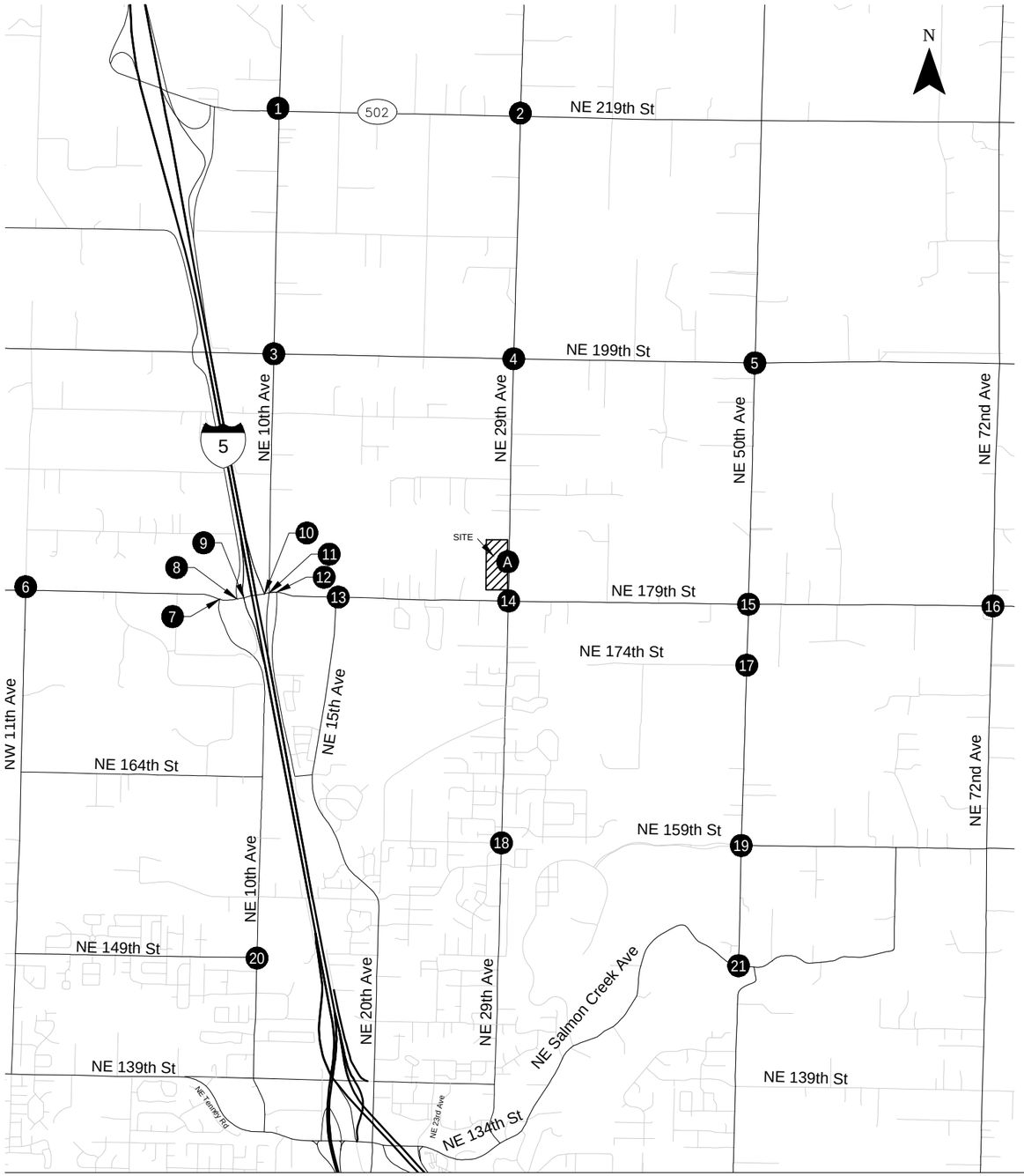
4.2 TRANSPORTATION FACILITIES

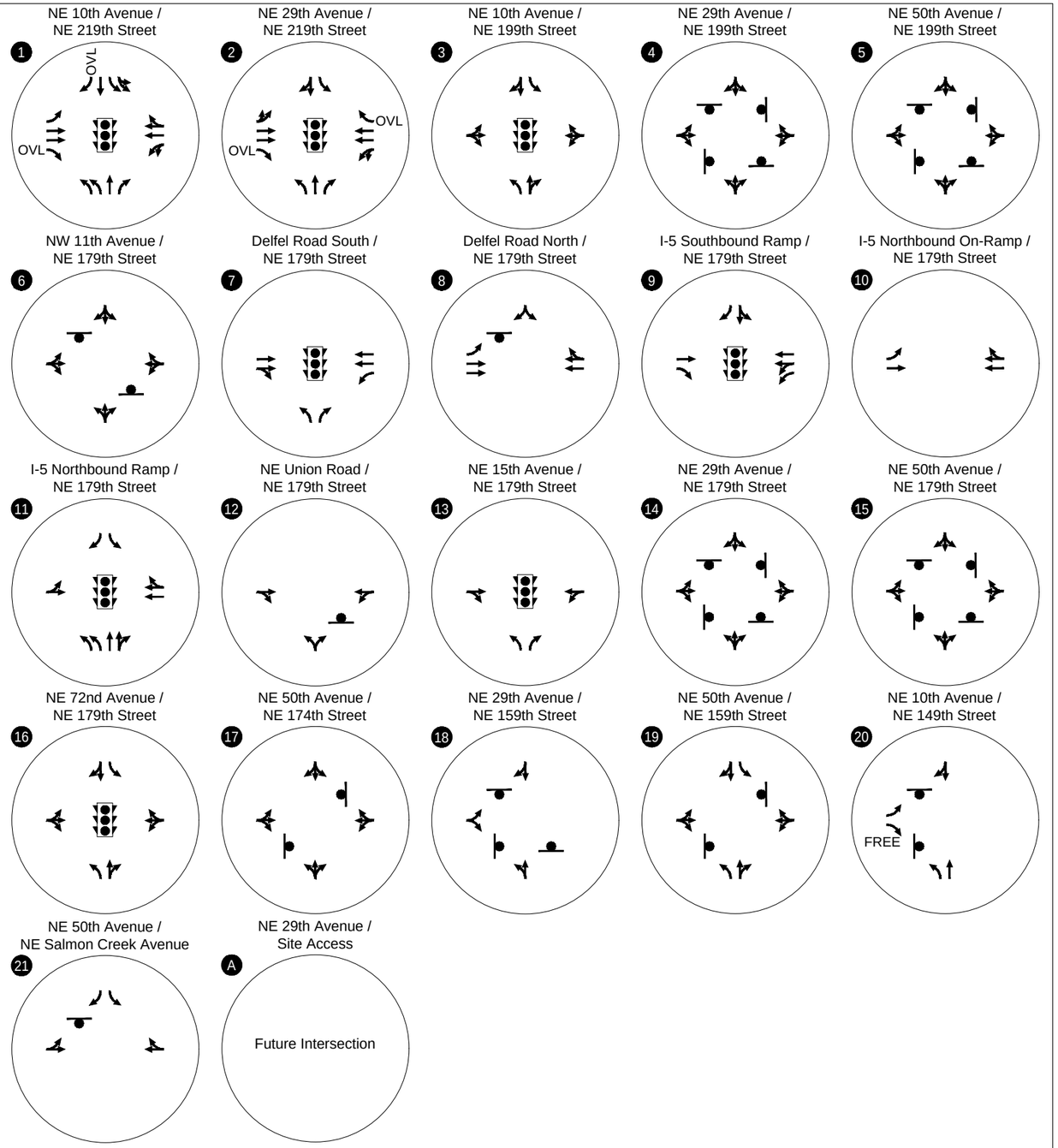
Table 3 provides a summary of transportation facilities (including pedestrian and bicycle facilities) in the site vicinity and Figure 3 illustrates the existing lane configurations and traffic control devices at the study intersections.

Table 3: Existing Transportation Facilities

Roadway	Classification[1]	Cross Section	Speed Limit (mph)	Sidewalks?	Bicycle Lanes?	On-Street Parking?
NE 219th Street	State Route	4-lane	50	No	No	No
NE 199th Street	Urban Minor Arterial	2-lane	40	No	No	No
NE 179th Street	Urban Principal Arterial	2-5-lane[2]	40	No	Partial[3]	No
NE 174th Street	Urban Collector	2-lane	25	No	No	No
NE 15th Avenue	Urban Minor Arterial	2-lane	40	Yes	Yes	No
NE 10th Avenue (east of I-5)	Urban Minor Arterial	2-lane	50	No	Yes	No
NE Delfel Road (north)	Urban Collector	2-lane	35	No	No	No
NE Delfel Road (south)	Urban Collector	2-3-lane	35	Yes	Yes	No
NE Salmon Creek Avenue	Urban Minor Arterial	2-lane	40	No	No	No
NE 159th Street	Urban Collector	2-lane	40	Partial[4]	No	No
NE 149th Street	Urban Collector	2-lane	35	Yes[5]	Yes[5]	No
NE 50th Avenue	Urban Minor Arterial	2-lane	40	No	No	No
NE 29th Avenue	Urban Minor Arterial	2-lane	40[6]	Partial[7]	No	No
NE 72nd Avenue	Urban Principal Arterial	2-lane	50	No	No	No
NW 11th Avenue	Urban Minor Arterial	2-lane	45	No	No	No

[1] Based on the *Clark County Arterial Atlas* (Reference 5)
[2] NE 179th Avenue is constructed with two lanes east of NE Union Road today.
[3] Striped and designated bicycle lanes are provided along portions of NE 179th Street west of Interstate 5.
[4] Sidewalk provided on the north side of the road between NE 25th Avenue and NE 29th Avenue. No sidewalks are provided between NE 50th Avenue and WSU Entrance Road.
[5] Sidewalk and bicycle lanes provided along the southern portion of 149th Street.
[6] Posted speed of 35mph south of NE 179th Street.
[7] Sidewalk provided on the west side of the road between NE 134th Street and NE 136th Street. No sidewalks are provided between NE 136th Street and the ManorCare Driveway. Between the ManorCare driveway and NE 139th Street, a sidewalk is provided on the west side of the street.





OVL - TRAFFIC SIGNAL OVERLAP

- STOP SIGN

- TRAFFIC SIGNAL

Existing Lane Configurations and Traffic Control Devices
Clark County, Washington

Figure 3

KITTELSON & ASSOCIATES

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4.2.1 Transit Facilities

There is no existing C-Tran fixed-route public transit service currently provided within ¼ mile walking distance of the proposed development site. The nearest park and ride facility is located to the south at the Salmon Creek Park & Ride (situated west of I-5 and south of NE 139th Street). The closest fixed-route bus route stops are near the NE 20th Avenue/NE 139th Street intersection to the south.

4.2.2 Traffic Volumes

Turning movement counts were conducted at the study intersections on a mid-week day during the weekday morning peak hour (7:00 to 9:00 AM) and evening peak hour (4:00 to 6:00 PM) periods when local schools were in session (May and September of 2019, and March of 2020[3]). *The traffic count sheets are included in Appendix "A".* Given impacts to travel patterns due to the COVID-19 pandemic at the time of data collection, the turning movement counts were adjusted to reflect proxy conditions for use in assessing existing intersection operations. Previously collected counts from May and September of 2019 were available for all the intersections except the NE 29th Avenue/NE 159th Street intersection (Intersection #18). A 1.26% annual growth rate was applied to these prior counts in accordance with Clark County guidance to reflect 2022 conditions.

4.2.3 Level-of-Service Analysis

Figure 4 and Figure 5 summarize the level-of-service and delay analysis results for the study intersections under existing traffic conditions during the weekday AM and weekday PM peak hours, respectively. The results indicate that all the study intersections currently operate acceptably during both analysis periods.

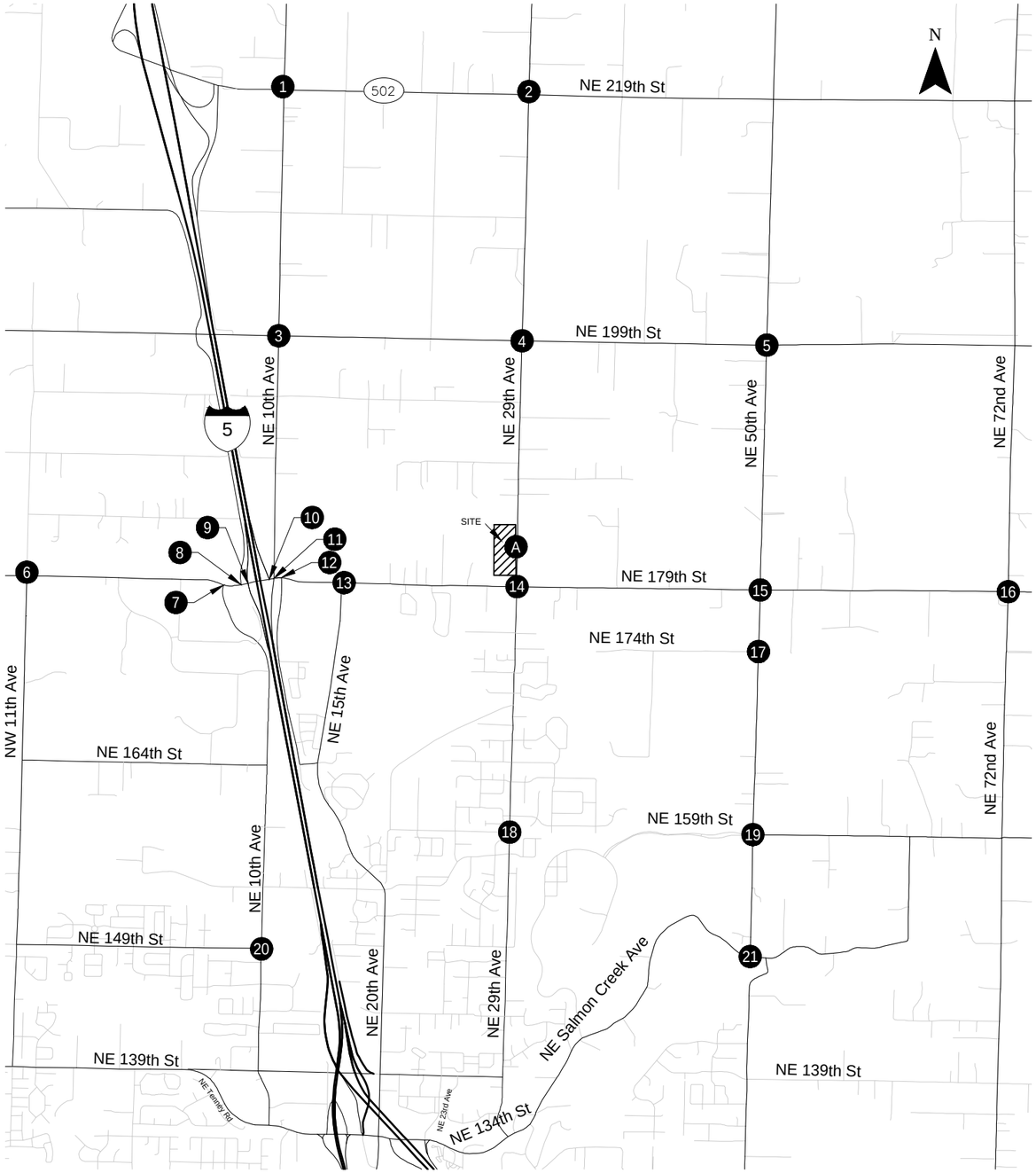
Appendix "B" includes the existing conditions level-of-service worksheets.

4.2.4 Concurrency Corridor Volume-to-Capacity (V/C) Ratios

Existing traffic volumes were compared with adopted Clark County capacity thresholds for corridor segments to assess compliance with concurrency requirements. One roadway segment was identified as exceeding Clark County's standards (i.e., V/C ratio of less than 0.90). The northbound and southbound volumes on NE 72nd Avenue between NE 179th Street and NE 159th Street are projected to result in V/C ratios between 0.94 and 0.99.

A tabular V/C ratio summary by corridor segment is included in Appendix "C".

[3] The counts were collected on March 5, 2020 at NE 29th Avenue/NE 159th Street (Intersection #18). Based on a review of the data, no significant changes in traffic volumes were apparent when compared with nearby 2019 traffic volumes. Schools where still open at the time of the counts and no adjustments were made to account for changes in travel patterns related to COVID-19.



NE 10th Avenue / NE 219th Street
1★
176 50 56 0
84 462 30
LOS=C Del=22.1
84 776 35 4
30 43 33

NE 29th Avenue / NE 219th Street
2★
73 4 4
11 26 550 11
LOS=B Del=16.5
4 783 43 1
24 38 38

NE 10th Avenue / NE 199th Street
3
79 62 15
48 46 27
LOS=B Del=15.8
20 54 102
110 50 75

NE 29th Avenue / NE 199th Street
4
27 59 19
46 92 4
LOS=A Del=9.8
25 120 47
13 44 27

NE 50th Avenue / NE 199th Street
5
9 62 38
4 138 15
LOS=A Del=9.7
13 144 49
16 21 17

NW 11th Avenue / NE 179th Street
6
7 12 28
4 104 1
CM=SB LOS=B Del=11.6
17 78 27
1 11 20

Delfel Road South / NE 179th Street
7
194 3
LOS=A Del=5.7
107 80
2 54

Delfel Road North / NE 179th Street
8
9 262
6 267
CM=SB LOS=C Del=19.3
81 210

I-5 Southbound Ramp / NE 179th Street
9★
97 63
137 391
LOS=C Del=21.3
194 337

I-5 Northbound On-Ramp / NE 179th Street
10★
89 141
CM=EB LOS=A Del=9.5
80 531

I-5 Northbound Ramp / NE 179th Street
11★
166 53
8 133
LOS=C Del=22.6
47 324
121 154 100

NE Union Road / NE 179th Street
12
250 35
CM=NB LOS=B Del=13.4
328 5
43 32

NE 15th Avenue / NE 179th Street
13★
162 120
LOS=A Del=6.6
245 55
88 45

NE 29th Avenue / NE 179th Street
14
49 47 9
25 130 26
LOS=B Del=10.2
5 172 43
42 46 33

NE 50th Avenue / NE 179th Street
15
28 102 8
11 122 50
LOS=A Del=9.5
12 120 27
44 40 11

NE 72nd Avenue / NE 179th Street
16
29 641 10
7 79 60
LOS=B Del=16.1
7 90 91
27 275 51

NE 50th Avenue / NE 174th Street
17
18 175 10
7 0 20
CM=EB LOS=B Del=10.2
0 0 0
3 90 0

NE 29th Avenue / NE 159th Street
18
28 211
10 9
LOS=A Del=9.0
6 78

NE 50th Avenue / NE 159th Street
19
10 177 25
3 9 4
CM=WB LOS=B Del=12.0
22 10 42
5 119 19

NE 10th Avenue / NE 149th Street
20□
6 60
22 322
CM=SBT LOS=B Del=13.4
64 50

NE 50th Avenue / NE Salmon Creek Avenue
21
153 68
98 48
CM=SB LOS=B Del=12.0
53 50

NE 29th Avenue / Site Access
A
Future Intersection

CM = CRITICAL MOVEMENT (TWSC/ROUNDABOUT)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC/ROUNDABOUT) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/AWSC/ROUNDABOUT) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWSC = TWO-WAY STOP CONTROL
AWSC = ALL-WAY STOP CONTROL

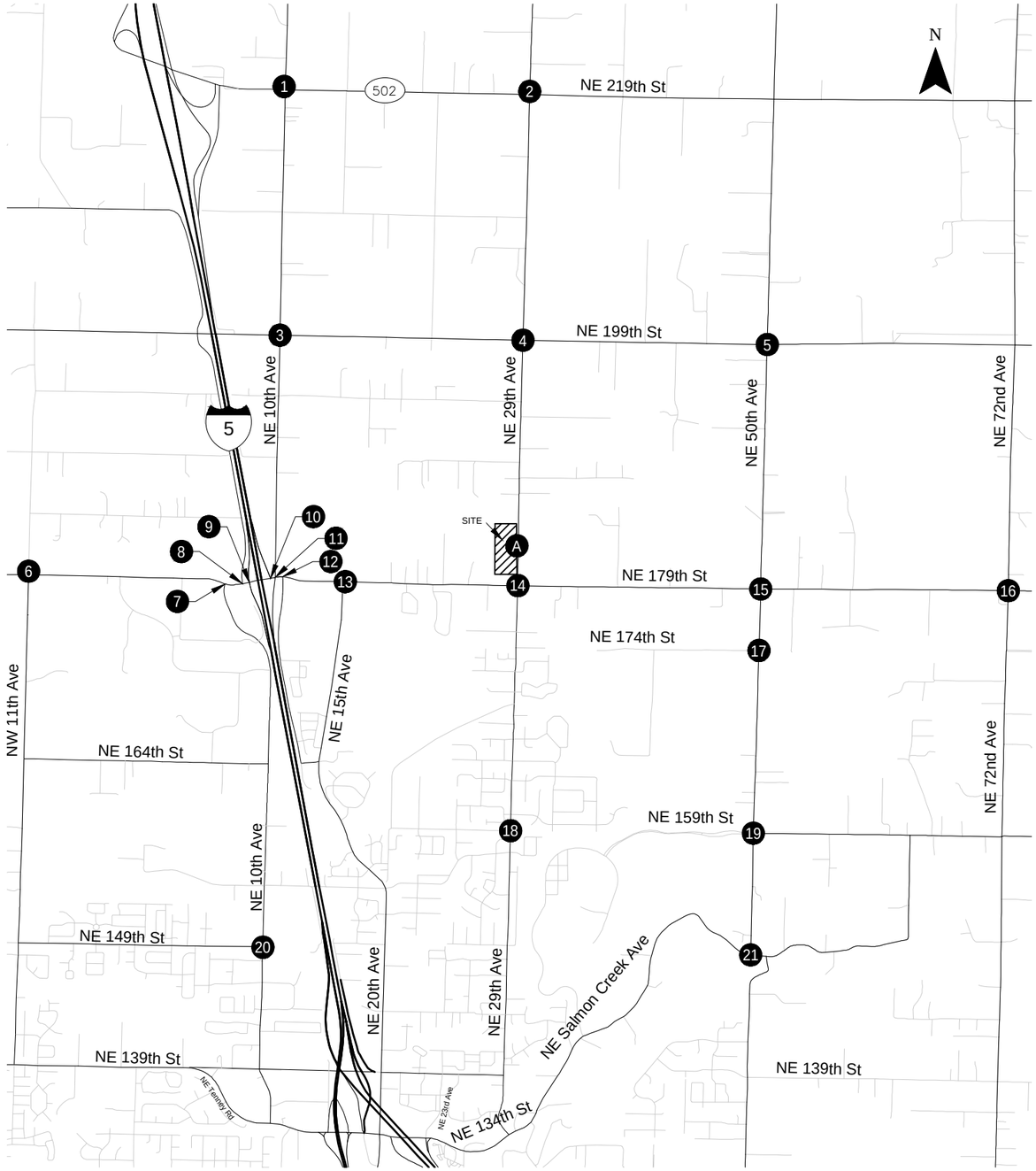
□ Analyzed with Sidra
★ Analyzed using HCM 2000 Procedures

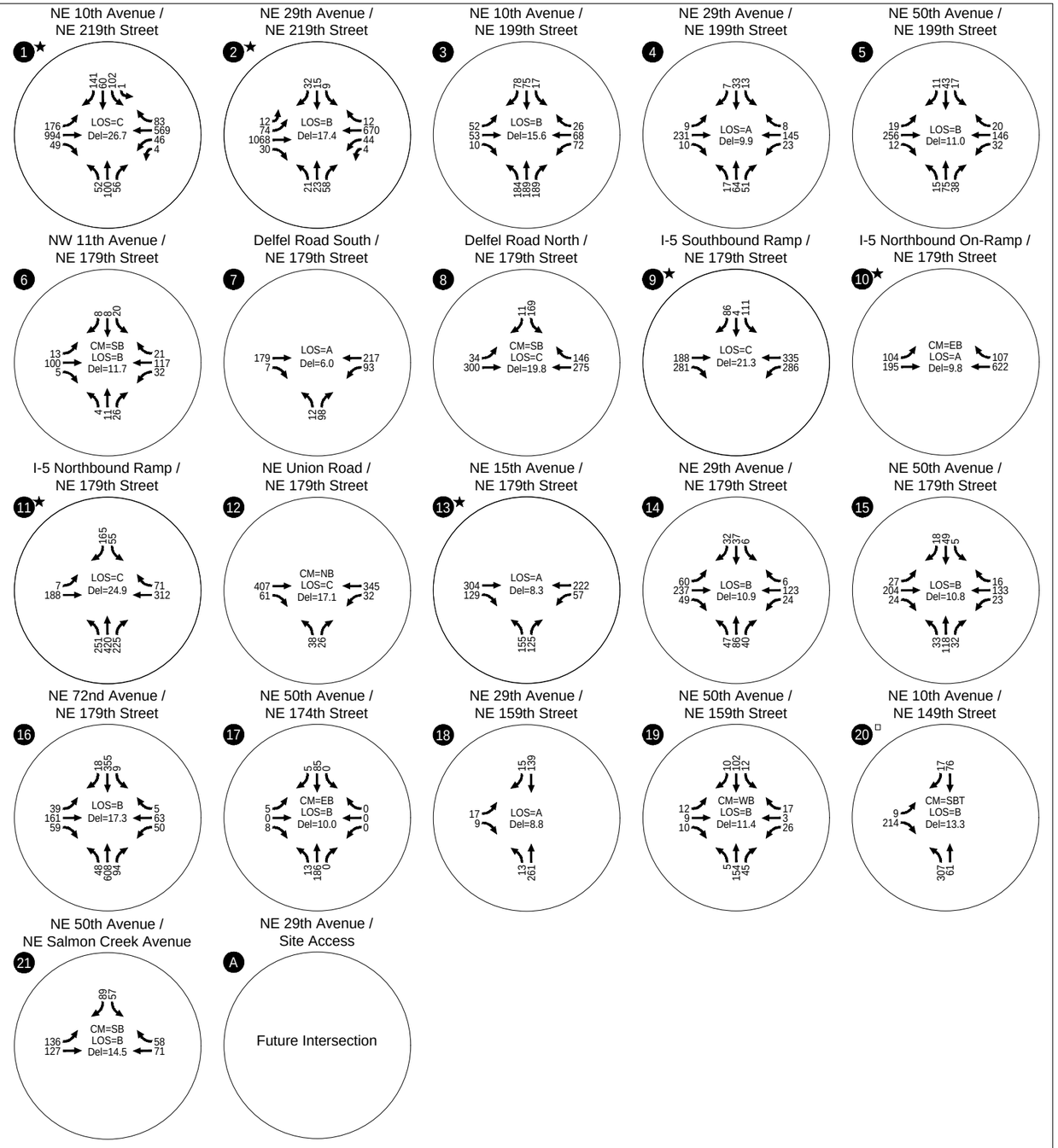
Existing Traffic Conditions, Weekday AM Peak Hour
Clark County, Washington

Figure 4

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LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC/ROUNDABOUT) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
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V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWSC = TWO-WAY STOP CONTROL
AWSC = ALL-WAY STOP CONTROL

□ Analyzed with Sidra
★ Analyzed using HCM 2000 Procedures

Existing Traffic Conditions, Weekday PM Peak Hour
Clark County, Washington

Figure 5

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4.3 TRAFFIC SAFETY

The crash histories of the study intersections and the segment of site frontage along NE 29th Avenue were reviewed in an effort to identify potential intersection safety issues. Crash records were obtained from WSDOT and are summarized in Table 4. The data is for the five-year period from January 1, 2015 through December 31, 2019. *All crash data are provided in Appendix "D" of this report*.

Table 4: Study Intersection Crash History (January 1, 2015 through December 31, 2019)

Study Intersection		Crash Type							Severity			Total	Crash Rate (Crashes/MEV[2])
ID	Location	Angle	Turn	Rear-End	Side Swipe	Fixed Object	Ped/ Bike	Non-collision	PDO[1]	Injury	Fatal		
1	NE 10th Ave/ NE 219th Street	4	4	8	0	0	0	0	7	9	0	16	0.37
2	NE 29th Ave/ NE 219th Street	3	0	0	0	0	0	1	2	2	0	4	0.11
3	NE 10th Ave/ NE 199th Street	1	3	1	0	0	0	0	3	2	0	5	0.28
4	NE 29th Ave/ NE 199th Street	12	0	0	0	0	0	0	3	9	0	12	1.11
5	NE 50th Ave/ NE 199th Street	2	0	0	0	1	0	0	3	0	0	3	0.25
6	NW 11th Ave/ NE 179th Street	11	1	0	0	0	1	0	2	11	0	13	2.02
7	NE Delfel Rd (South)/ NE 179th St	0	0	0	0	0	0	0	0	0	0	0	0.00
8	NE Delfel Rd (North)/ NE 179th Street	1	0	0	0	0	0	0	1	0	0	1	0.06
9	I-5 SB Ramp Terminal/ NE 179th St	0	0	0	2	0	0	0	1	1	0	2	0.09
10	I-5 NB On-Ramp/ NE 179th St	0	2	0	0	0	0	0	0	2	0	2	0.11
11	I-5 NB Off-Ramp/ NE 179th St	2	0	0	0	0	0	0	0	2	0	2	0.07
12	NE Union Rd/ NE 179th St	0	0	1	0	0	0	0	1	0	0	1	0.06
13	NE 15th Ave/ NE 179th Street	0	5	1	0	0	0	0	3	3	0	6	0.34
14	NE 29th Ave/ NE 179th St	10	0	0	0	0	0	0	5	5	0	10	0.76
15	NE 50th Ave/ NE 179th St	2	0	0	0	1	0	0	2	1	0	3	0.25
16	NE 72nd Ave/ NE 179th St	2	3	3	1	0	0	0	4	5	0	9	0.34
17	NE 50th Ave/ NE 174th St	1	0	0	0	0	0	0	1	0	0	1	0.19
18	NE 29th Ave/ NE 159th St	0	0	1	0	0	0	0	0	1	0	1	0.12
19	NE 50th Ave/ NE 159th St	2	0	0	0	0	0	0	0	2	0	2	0.28
20	NE 10th Ave/ NE 149th St	0	0	0	0	1	0	0	1	0	0	1	0.08
21	NE Salmon Creek Ave/ NE 50th Ave	0	0	0	0	0	0	0	0	0	0	0	0.00
-	NE 29th Ave between 179th and 199th	0	0	0	0	1	0	0	0	1	0	1	-

[1]Property Damage Only
[2]Million Entering Vehicles – average daily traffic volumes used in the calculations were estimated using weekday PM peak hour total entering volumes at the intersections.

The crashes summarized in the table above are intersection or intersection related crashes, except for the segment along NE 29th Avenue between NE 179th Street and NE 199th Street.

In reviewing the crash data, the following observations are offered for context.

- Crash patterns at the NE 29th Avenue/NE 199th Street intersection indicate a relatively high number of angle (12) and injury (9) crashes. The majority of these crashes involved vehicles traveling eastbound and southbound through the intersection. The intersection was converted from two-way stop control to all-way stop control in mid-2018. Only a single property damage crash was recorded at the intersection during the second half of 2018 and no crashes were recorded over the course of 2019. Given the reduction in crashes since traffic control changes were implemented by the County in 2018, no safety-based mitigations were identified through the crash data review.

- The majority (5) of crashes reported at the NW 11th Avenue/NW 179th Street involved northbound and eastbound vehicle angle collisions. Based on field observations, both the northbound and southbound approaches have limited sight distance. All-way stop control will be implemented by others to address the existing sight distance limitations as required by a condition of land use development approval.

- NE 29th Avenue site frontage: In May 2017 on a clear wet day, a motorist crashed into a fixed object (mailbox), while travelling southwards along NE 29th Avenue. The driver was reported to be under the influence of alcohol.

No safety-based mitigation measures were identified for the study intersections in conjunction with the proposed site development based on the review of the crash data.

5 TRANSPORTATION IMPACT ANALYSIS

The transportation impact analysis identifies how the study area's transportation system will operate upon build-out of the proposed development. Future year 2025 traffic conditions were analyzed for the three-year County concurrency planning horizon. The impact of traffic generated by the development during typical weekday AM and PM peak hours was examined as follows:

- Planned developments and transportation improvements in the site vicinity were identified and reviewed;
- Year 2025 background traffic conditions were forecast and analyzed;
- Site-generated trips were estimated for the development;
- A trip distribution pattern was developed for the site;
- Peak hour site-generated trips were added to the study intersections; and
- Forecast year 2025 total traffic conditions (with full build-out and occupancy of the development) were analyzed at the study intersections.

5.1 YEAR 2025 BACKGROUND TRAFFIC

The background traffic analysis identifies how the study area's transportation system will operate in the year 2025 prior to construction of the proposed development. This analysis also includes traffic attributed to planned developments within the study area and general growth in the region, but does not include traffic from the NE 29th Avenue Subdivision.

5.1.1 Planned Developments

The year 2025 traffic volumes were projected accounting for trips associated with the following in-process developments (*refer to Appendix "E" for further documentation of the in-process developments*):

- Washington State University Master Plan;
- Vancouver Clinic Salmon Creek Phase 2;
- Mountain Estates Cluster Subdivision;
- Whipple Creek Village Subdivision;
- Killian/Three Creeks Master Plan, including
    - Phase 1 NE 179th Street Commercial Center;
    - Phase 2 NE 179th Street Commercial Center;
    - Three Creeks North.
- Woodbrook (formally Mill Creek Planned Unit Development)

- M&H Subdivision (residential subdivision at 3801 NE 174th Street);
- North Haven (residential subdivision at 807 NW 179th Street);
- Peterson Machinery (equipment rental business at 16924 NE 10th Avenue);
- NE 179th Street Apartments – West (residential subdivision at 1932 NE 179th Street);
- NE 179th Street Apartments – East (residential subdivision at 2112 NE 179th Street);
- Summit Body & Equipment (truck manufacturing and sales at 16616 NE 10th Avenue);
- Trails at Whipple Creek (residential subdivision located on the northwest corner of the NW 11th Avenue/NW 164th Street intersection;
- DSHS NE 50th Clark County Behavioral Health (on the northeast corner of NE 50th Avenue/ NE 159th Street);
- Majestic Industrial Centre (industrial trade and storage facility located along NE 10th Avenue); and,
- Martin's Meadow Subdivision (residential subdivision located along NW 149th Street).

5.1.2 Planned Transportation Improvements

Development of the NE 29th Avenue Subdivision (and all property within the area formerly designated Urban Holdings) is predicated on several planned transportation improvements involving the NE 179th Street corridor between Delfel Road and NE 50th Avenue. Clark County determined these improvements are reasonably funded as part of the lifting of the Urban Holdings designation but has not yet fully detailed and designed the roadway improvements. The following intersection mitigations are assumed based on the County's roadway improvement list, the 179th Street Access Management and Circulation Plan and the *Clark County Arterial Atlas* (Reference 5) designation of the respective roadways. Determination of the final mitigations to be implemented at each location will be made by Clark County.

- Widening of NE 179th Street to provide two eastbound and two westbound travel lanes from the I-5 northbound interchange ramp east through the NE 15th Avenue intersection;
- Relocation of the Delfel Road North approach to align with Delfel Road South at NE 179th Street, including the construction of a new multilane roundabout to replace the existing Delfel Road South traffic signal;
- Construction of a new multi-lane roundabout on NE 179th Street at NE 15th Avenue (replacing existing traffic signal);
- Construction of NE 15th Avenue north of NE 179th Street linking the new roundabout and NE 10th Avenue (allowing for termination of the existing NE 10th Avenue connection to NE 179th Street at the I-5 northbound ramp);

- Termination of Union Road at NE 179th Street through provision of alternative access for properties along Union Road south of NE 179th Street;

- Construction of multilane roundabouts at the NE 29th Avenue/NE 179th Street and NE 50th Avenue/NE 179th Street intersections; and.

- WSDOT plans to improve the I-5/NE 179th Street interchange ramp terminals and/or fully reconstruct the interchange. Currently design is expected to begin in 2023 and construction is projected to begin in 2027, though specific improvement plans are still being refined. For the purpose of this study, it is assumed that the WSDOT roundabout concept at the terminals (dated March 8, 2019) will be constructed, which includes multilane roundabouts at both terminals and the realignment of Delfel Road North to north approach of the existing Delfel Road South/NE 179th Street intersection (*refer to Appendix "E"*).

In addition to the public-agency delivered projects listed above, this study assumes implementation of all-way stop control at the NW 11th Avenue/NW 179th Street intersection (Intersection #6) in conjunction with the proposed North Haven development as required by a condition of their development review approval.

Figure 6 shows the assumed lane configurations and traffic control devices at the study intersections under the future traffic conditions.

5.1.3 Traffic Volumes

Year 2025 future traffic volumes were developed for both weekday AM and PM peak hour conditions by increasing the year 2022 existing "proxy" traffic volumes using a two percent annual growth rate and then adding the in-process trips.

5.1.4 Level-of-Service Analysis

Figure 7 and Figure 8 summarize the year 2025 background traffic operations analysis results at the study intersections for the weekday AM and weekday PM peak hours, respectively. The analyses assume the future planned improvements as shown in Figure 6 are constructed. The results indicate that all of the study intersections will operate acceptably during both analysis periods.

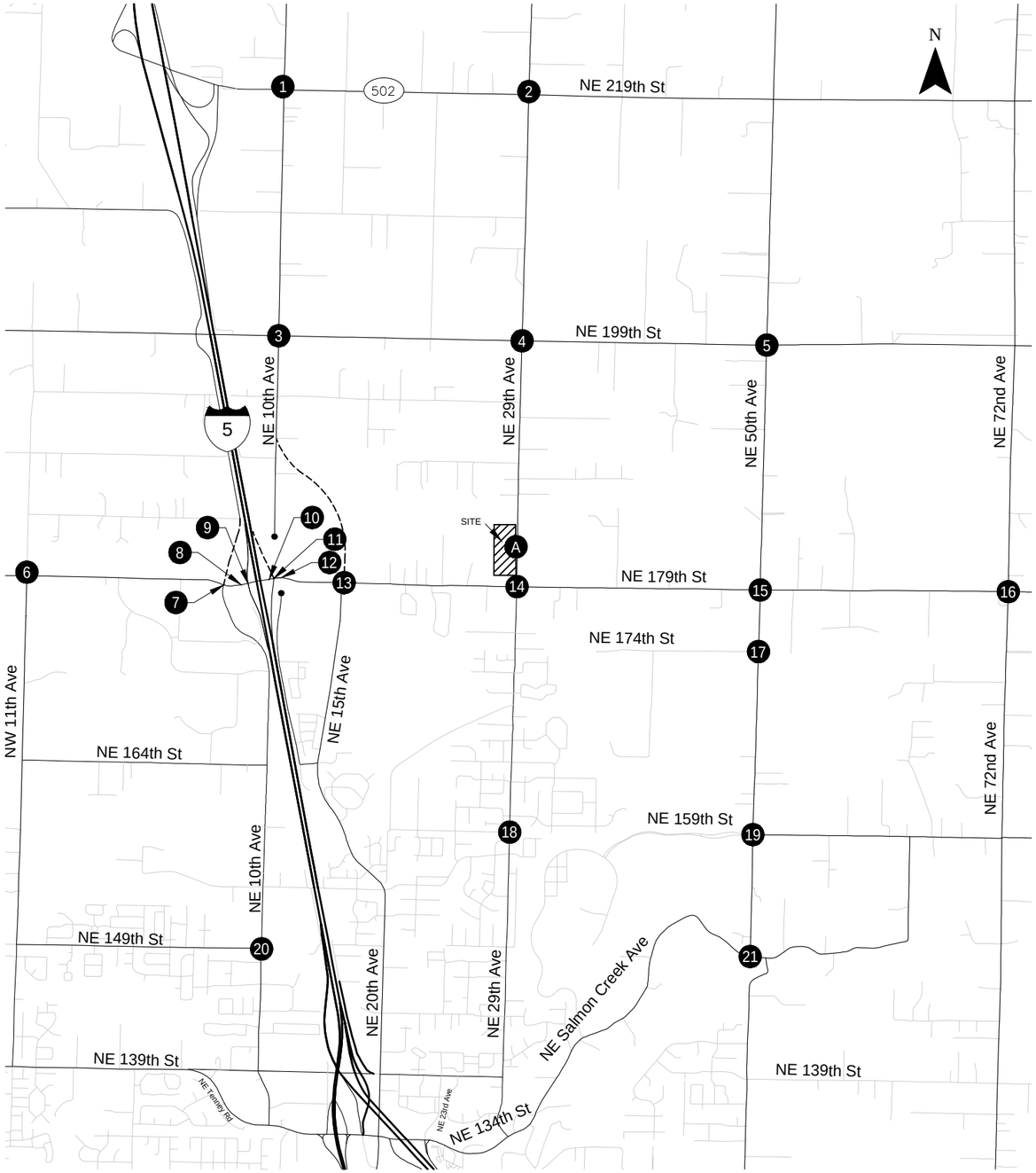
Appendix "F" contains the year 2025 background traffic level-of-service worksheets.

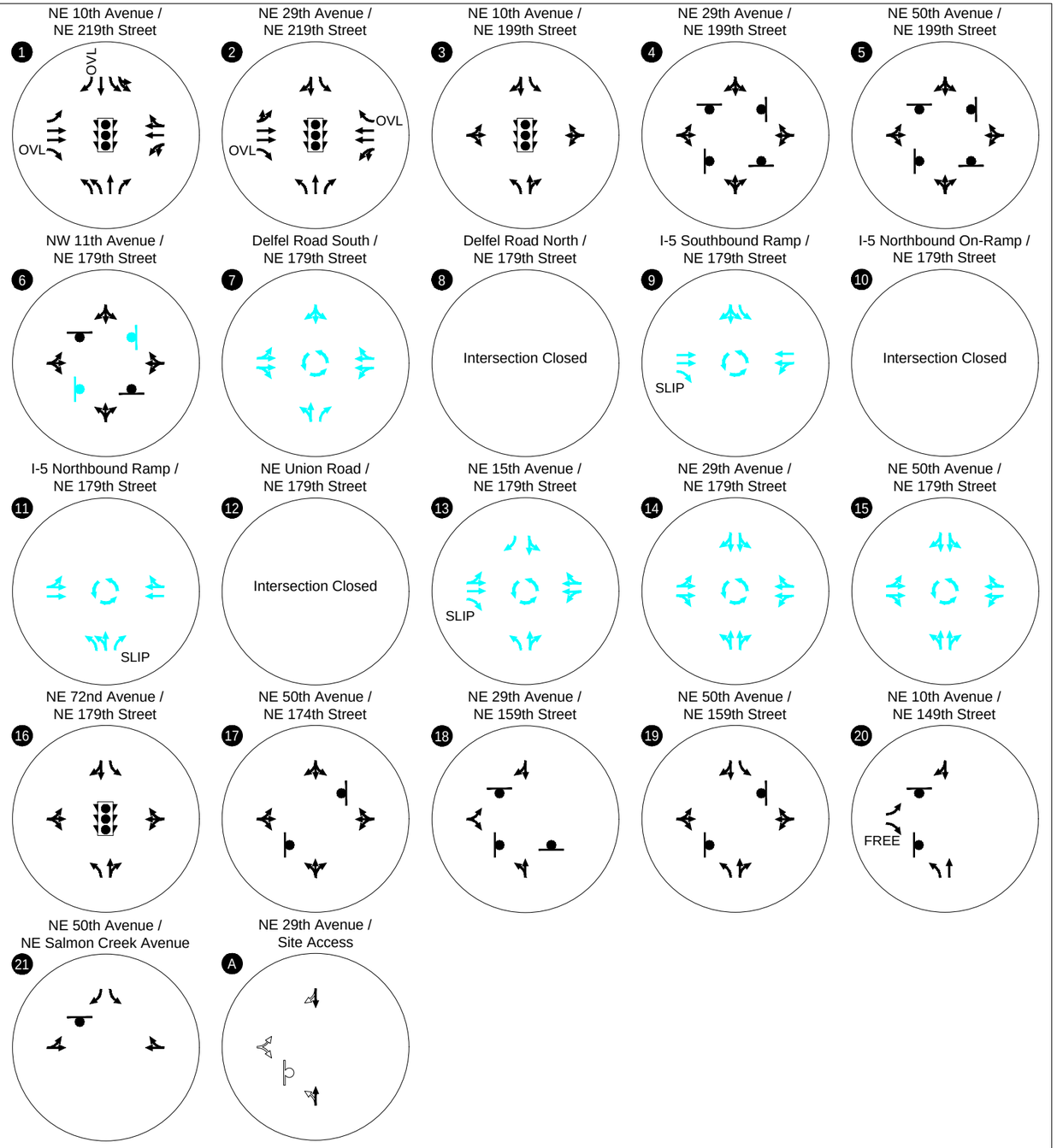
5.1.5 Concurrency Corridor V/C Ratios

Background traffic volumes were compared with adopted Clark County capacity thresholds for corridor segments to assess compliance with concurrency requirements. *A summary of the V/C ratio analysis by road segment is included in Appendix "C".*

Five roadway segments were identified as having V/C ratios exceeding 0.90:

- The eastbound segment of NE 179th Street between the I-5 Northbound ramp terminal and the future NE 12th Avenue has a projected V/C ratio of 1.05 during the weekday PM peak hour assuming two through travel lanes departing the assumed northbound ramp terminal roundabout. The final design of this road segment has not been defined as of the time this report was prepared. Addition of an eastbound auxiliary lane on NE 179th Street would result in a link V/C ratio of 0.70.
- The eastbound segment of NE 179th Street between NE 12th Avenue and NE 15th Avenue has a projected V/C ratio of 0.92.
- The northbound segment of NE 15th Avenue between NE 199th Street and NE 179th Street has a projected V/C ratio of 0.91.
- Northbound and southbound volumes on NE 72nd Avenue between NE 199th Street and NE 179th Street are projected to result in V/C ratios between 0.91 and 0.93.
- Northbound and southbound volumes on NE 72nd Avenue between NE 179th Street and NE 159th Street are projected to result in V/C ratios between 1.09 and 1.12.





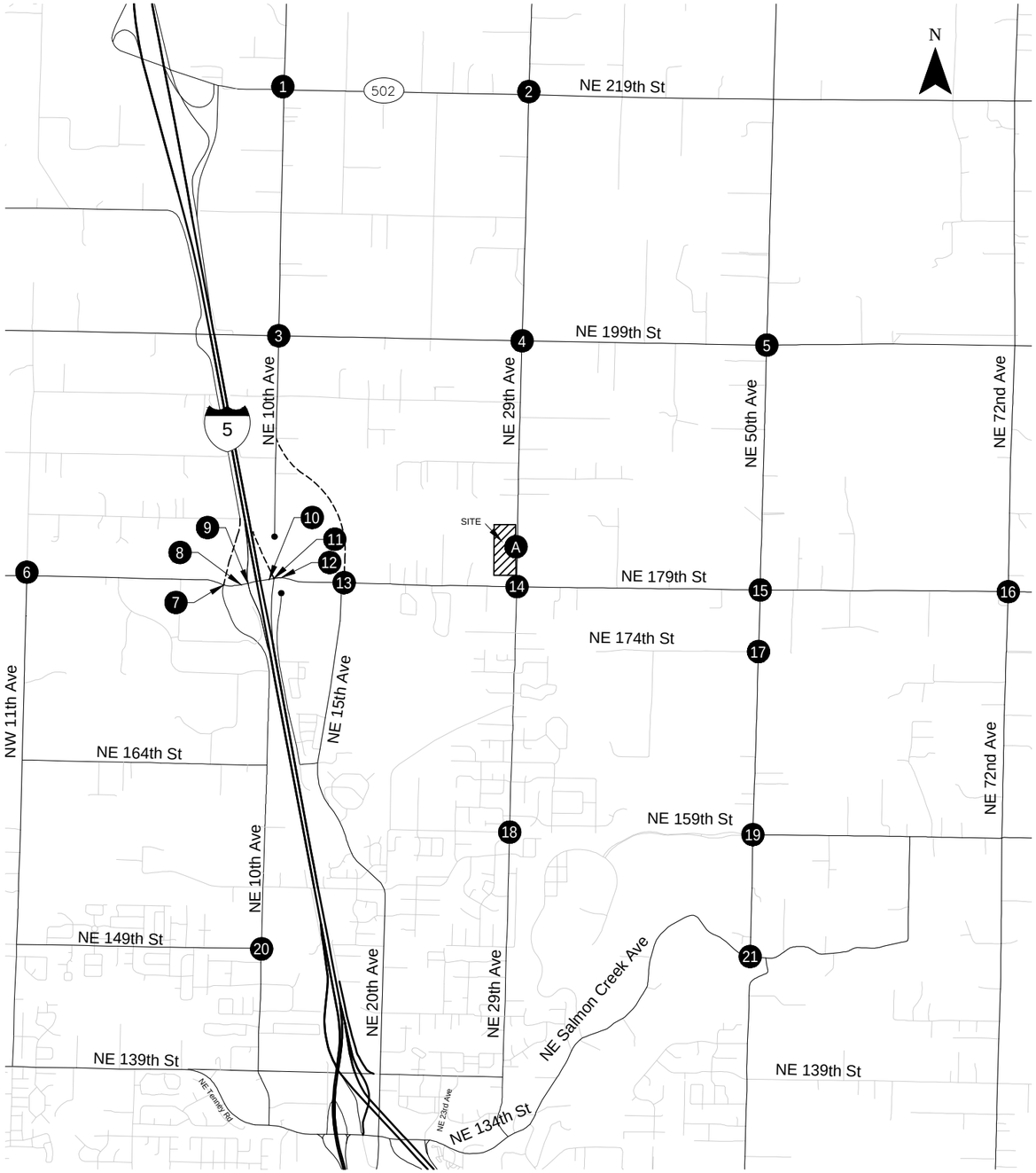
OVL - TRAFFIC SIGNAL OVERLAP
- STOP SIGN
- TRAFFIC SIGNAL
- ROUNDABOUT
- EXISTING
- ASSUMED FUTURE IMPROVEMENT
- MOVEMENT/IMPROVEMENT ADDED WITH DEVELOPMENT

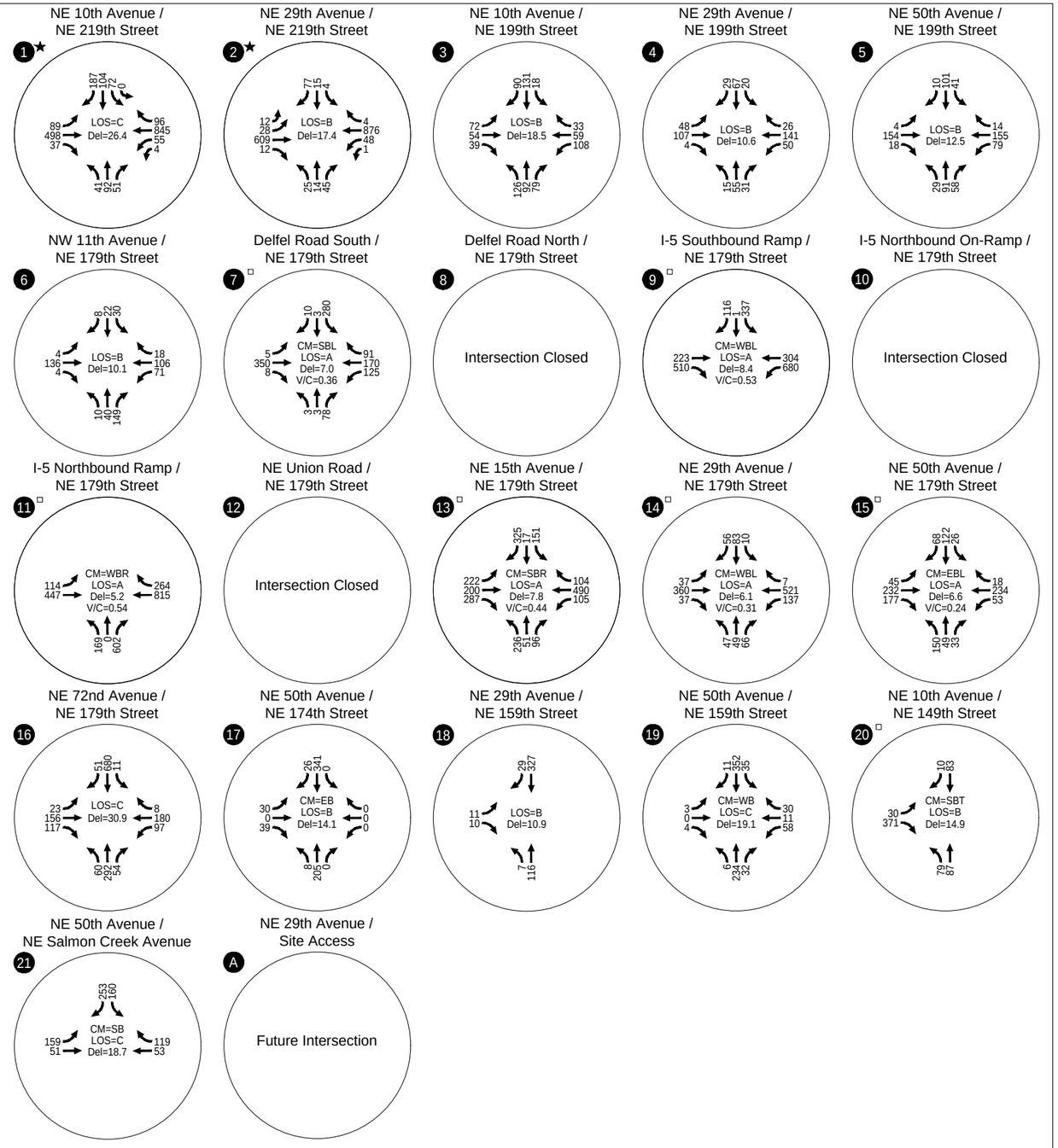
Assumed 2025 Lane Configurations and Traffic Control Devices
Clark County, Washington

Figure 6

KITTELSON & ASSOCIATES

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CM = CRITICAL MOVEMENT (TWSC/ROUNDABOUT)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC/ROUNDABOUT) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
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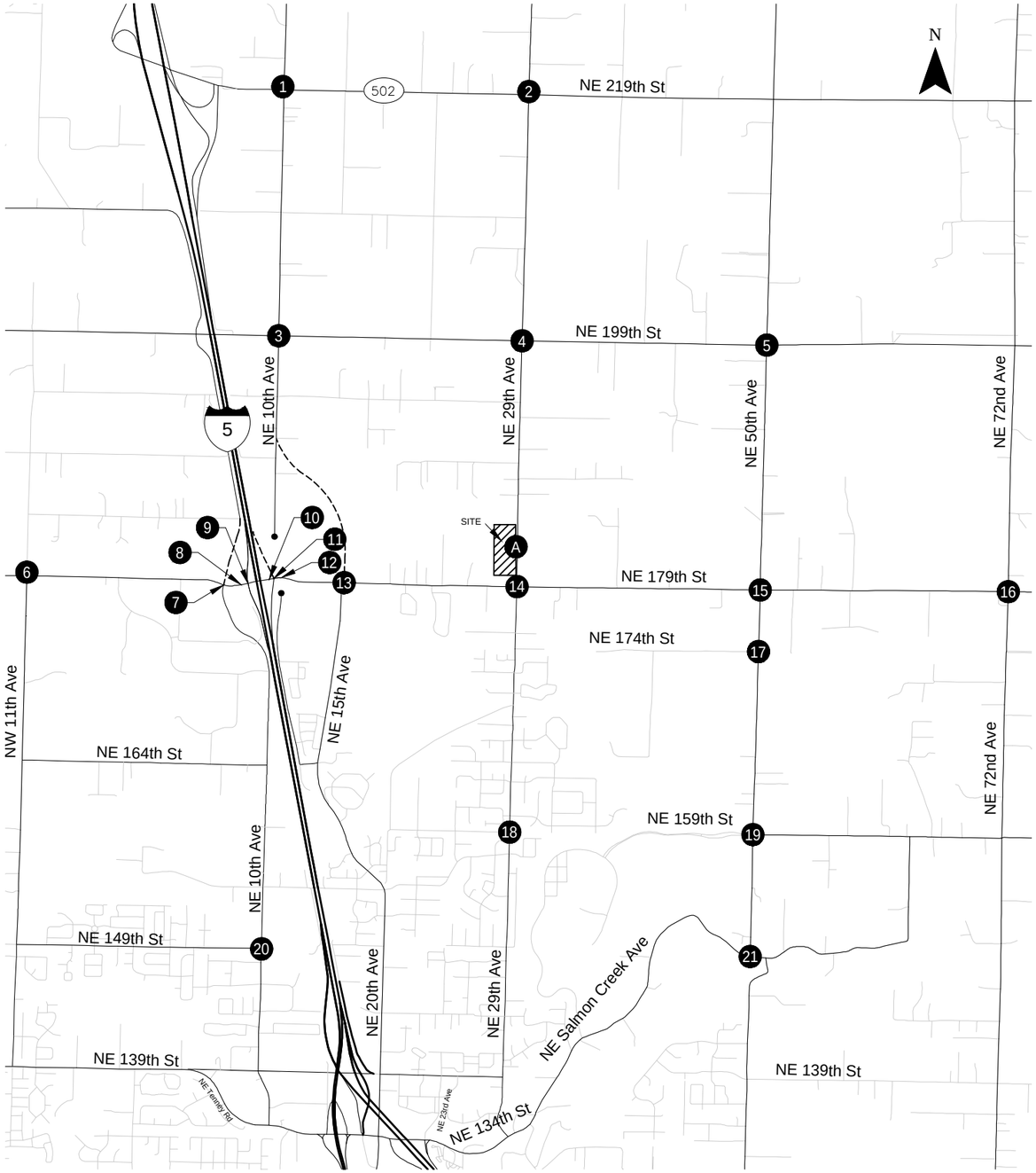
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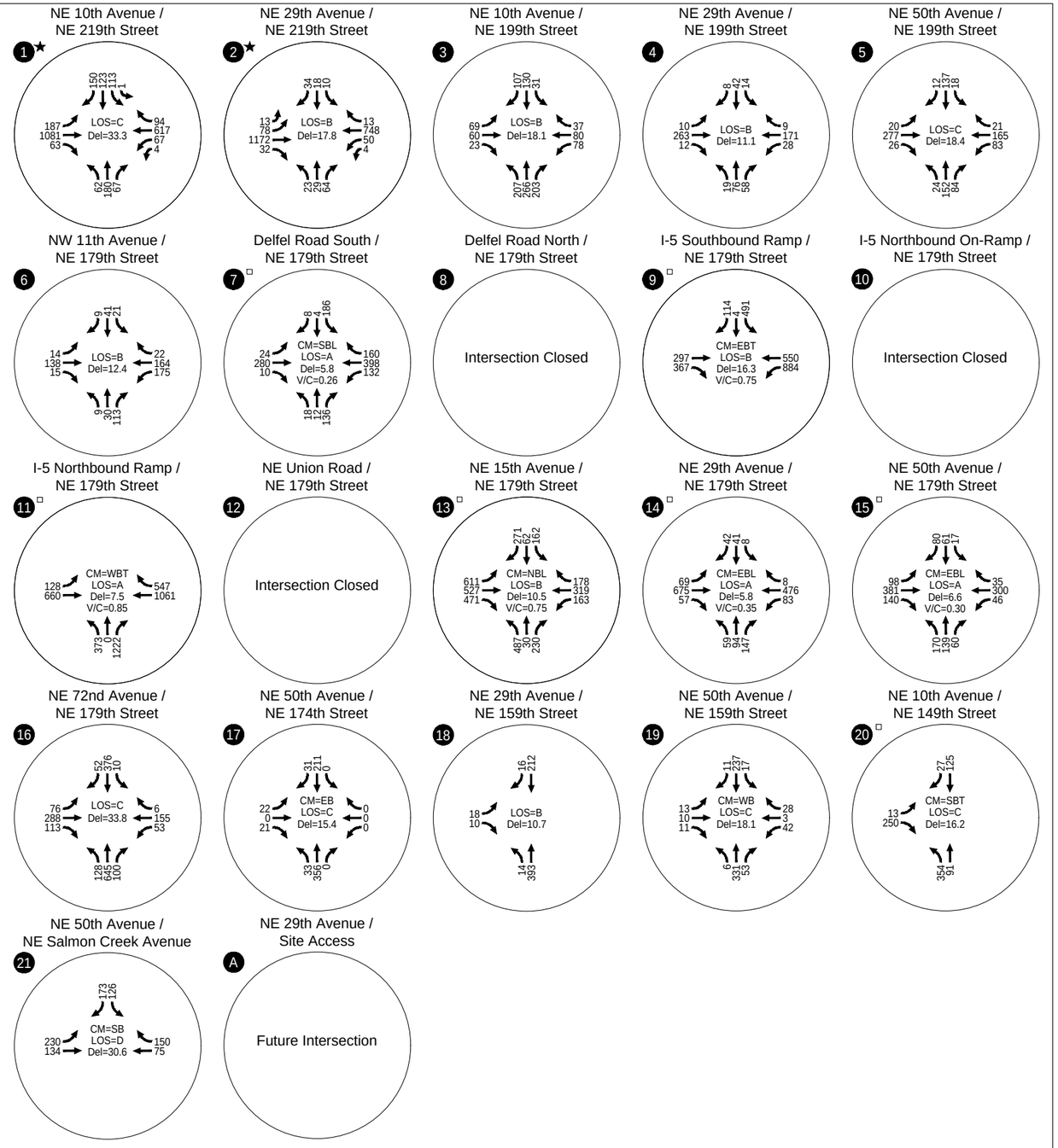
2025 Background Traffic Conditions, Weekday AM Peak Hour
Clark County, Washington

Figure 7

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CM = CRITICAL MOVEMENT (TWSC/ROUNDABOUT)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC/ROUNDABOUT) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
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V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWSC = TWO-WAY STOP CONTROL
AWSC = ALL-WAY STOP CONTROL

□ Analyzed with Sidra
★ Analyzed using HCM 2000 Procedures

2025 Background Traffic Conditions, Weekday PM Peak Hour
Clark County, Washington

Figure 8

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5.2 PROPOSED DEVELOPMENT

The NE 29th Avenue Subdivision totals approximately 14.76 gross acres. The proposed development includes up to 86 single family homes. Access to the development is expected to occur via a roadway connection to NE 29th Avenue (NE 182nd Street) and distribute further onto the public roadway network at NE 29th Avenue/NE 179th Street (Intersection #14) and NE 29th Avenue/NE 199th Street (Intersection #4).

5.2.1 Trip Generation

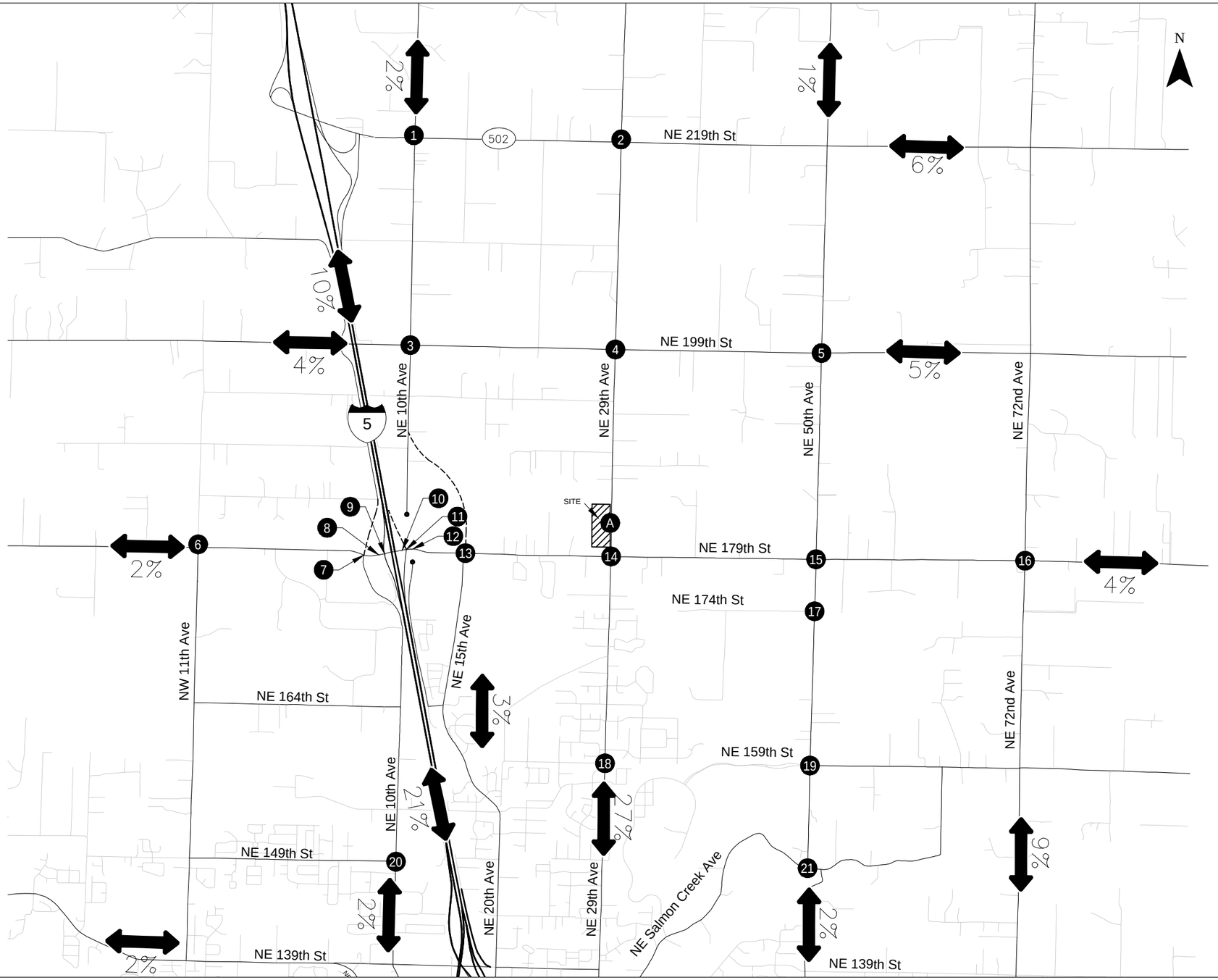
Table 5 provides a trip generation estimate for the development based on the average trip rates provided in the standard reference, *Trip Generation Manual, 11th Edition*, published by the Institute of Transportation Engineers (ITE, Reference 6). Note that the trip estimate in Table 5 does not reflect a reduction for the existing home on the project site. No existing site trips were subtracted from the study intersections to account for the removal of this existing home, ensuring a conservative analysis. Credit for the existing home should be provided for Traffic Impact Fee Assessment purposes per standard County practice.

Table 5: Trip Generation Estimate

Land Use	ITE Code	Size	Weekday Daily	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Single Family Detached Homes	210	86 units	811	60	15	45	81	51	30

5.2.2 Trip Distribution

The site trip distribution pattern was developed considering a select zone assignment prepared by the Southwest Washington Regional Transportation Council for Transportation Analysis Zone 547 (prepared for a nearby residential development) and considering the development location, major trip attractors in the area, as well as regional travel patterns. Figure 9 illustrates the trip distribution pattern while Figure 10 and Figure 11 show the weekday AM and PM peak hour trip assignment.

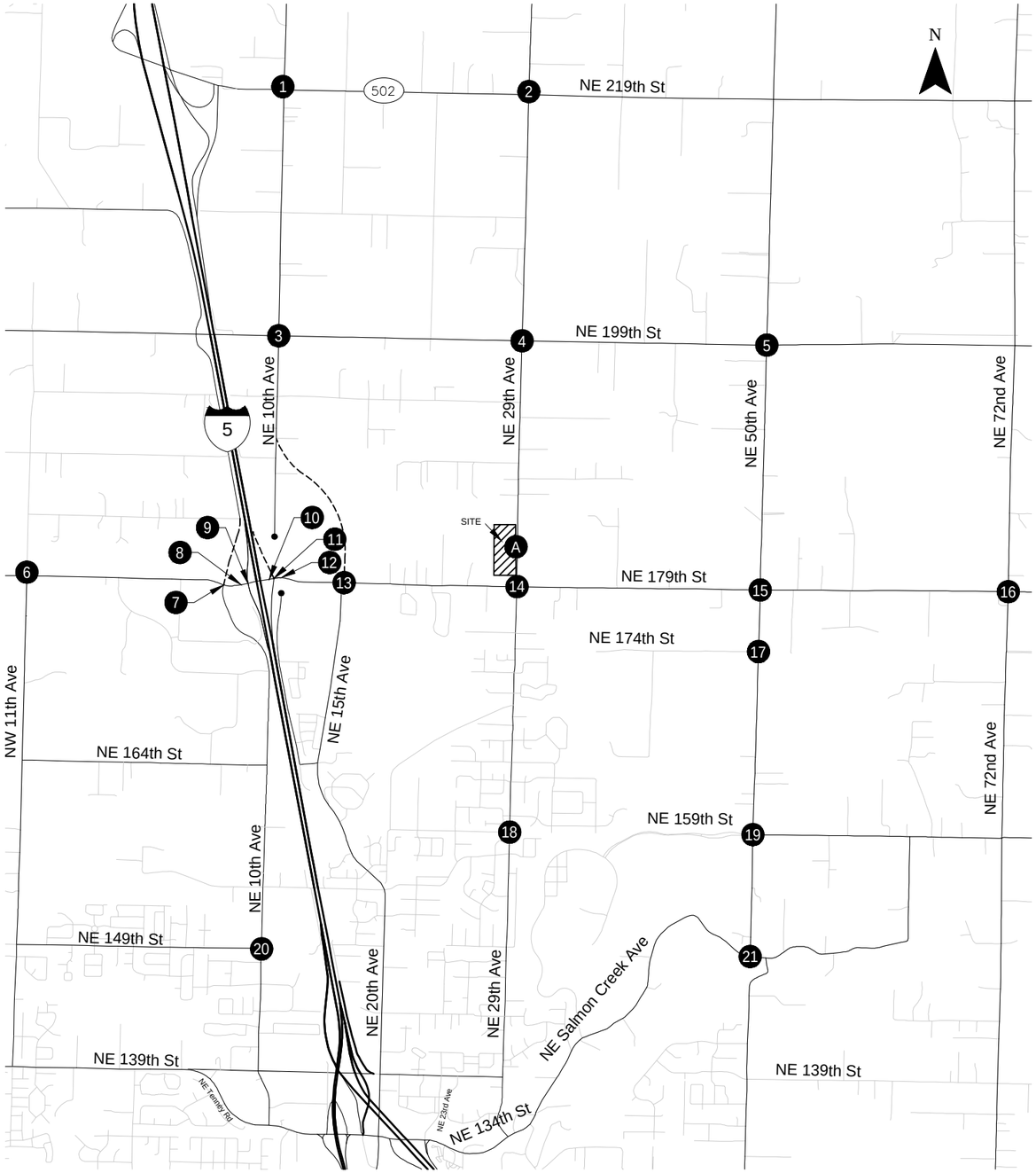


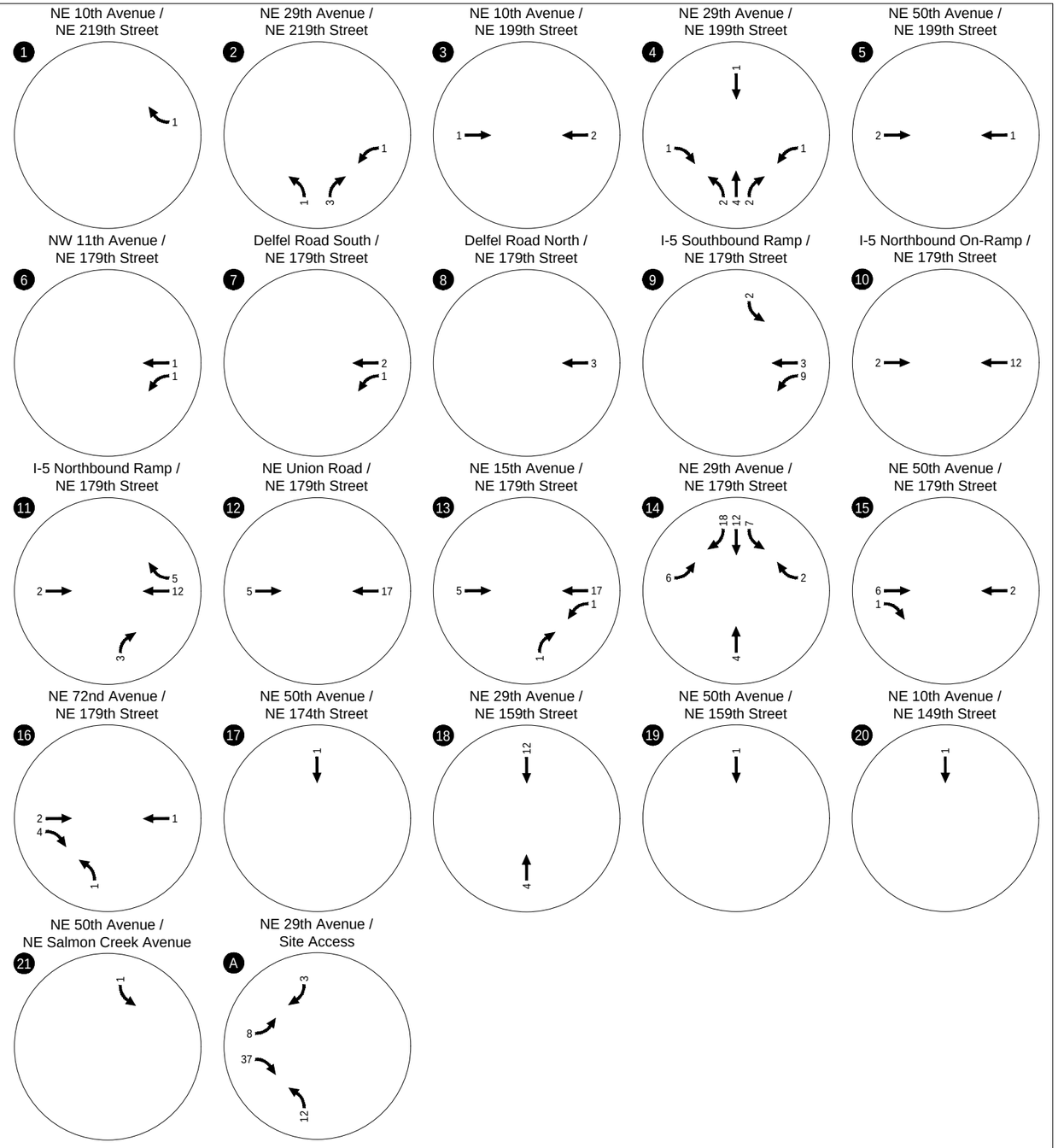
Estimated Trip Distribution Pattern
Clark County, Washington

Figure
9

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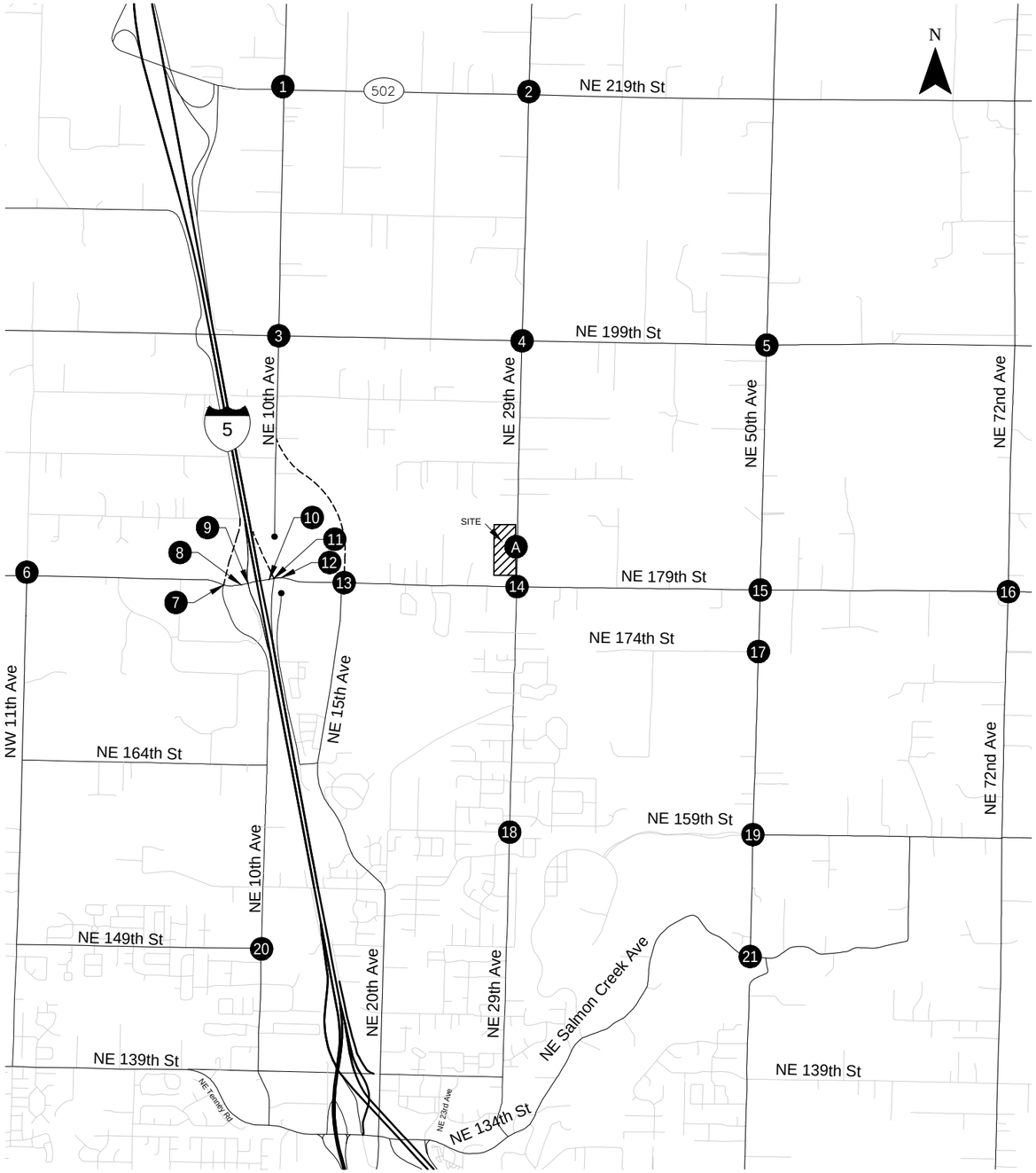


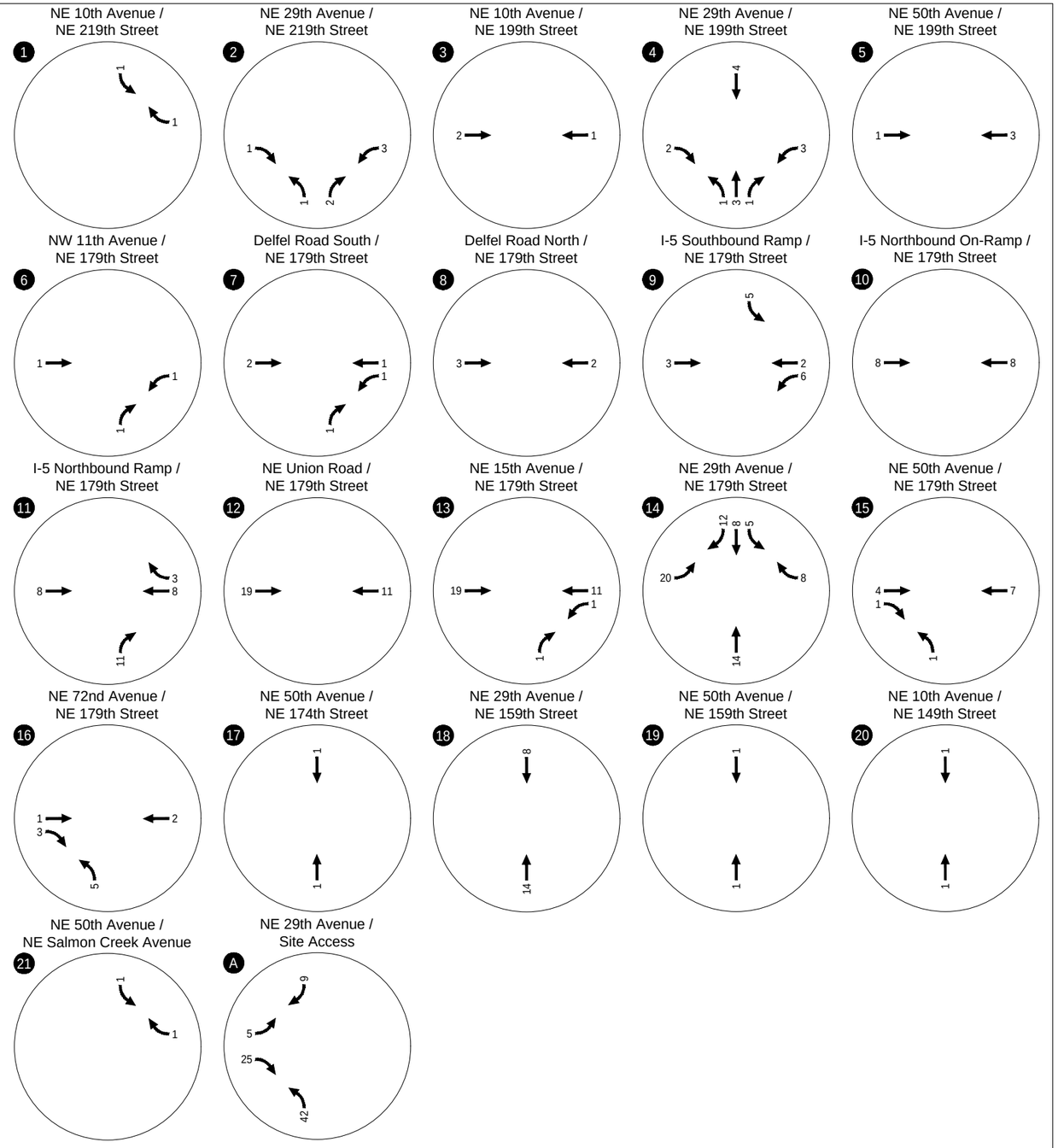
Estimated Weekday AM Peak Hour Trip Assignment
Clark County, Washington

Figure
10

KITTELSON & ASSOCIATES

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Estimated Weekday PM Peak Hour Trip Assignment
Clark County, Washington

Figure 11

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5.3 2025 TOTAL TRAFFIC CONDITIONS

The year 2025 total traffic analysis forecasts how the study intersections will operate with the addition of traffic associated with site buildout.

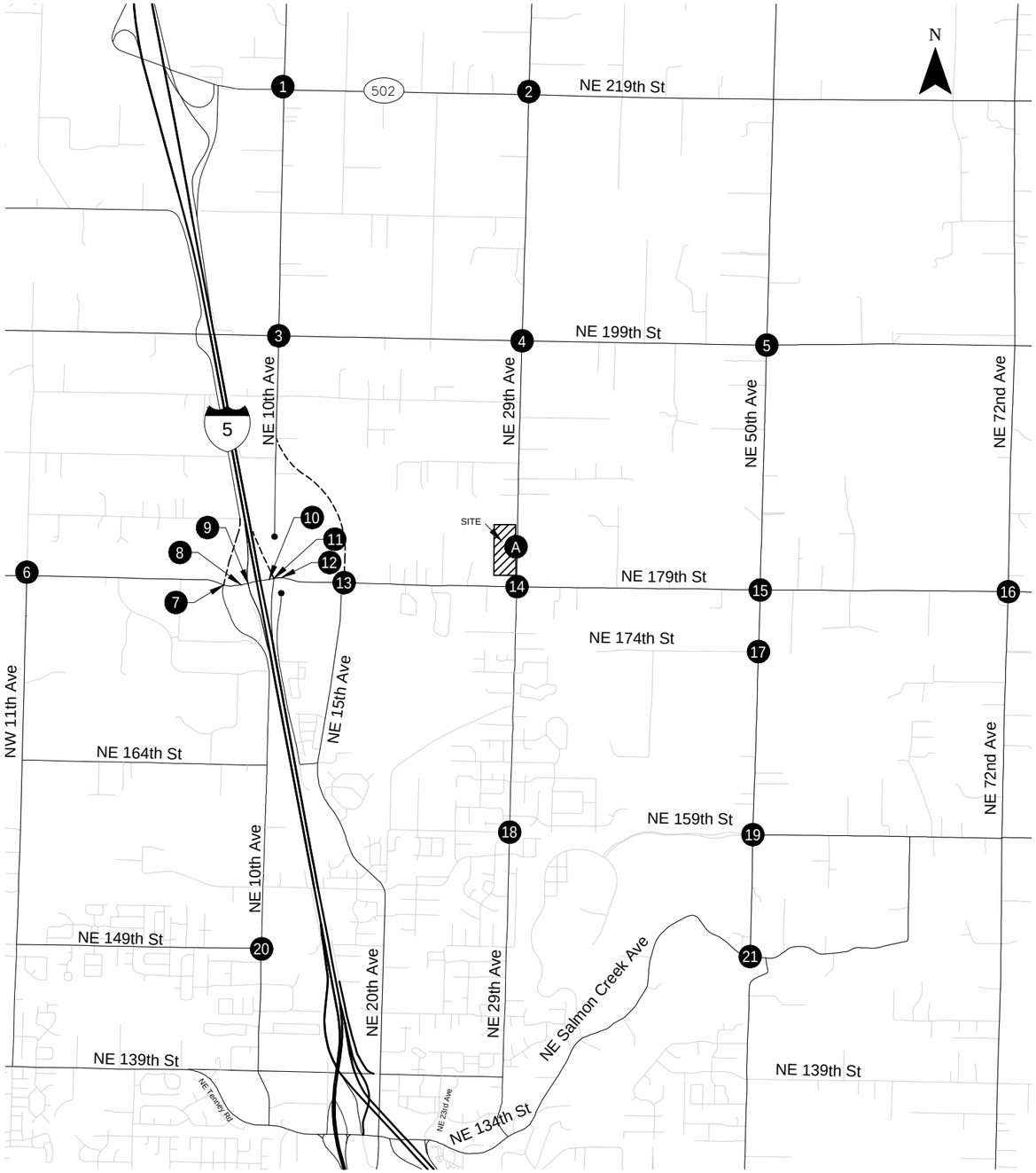
5.3.1 Traffic Volumes

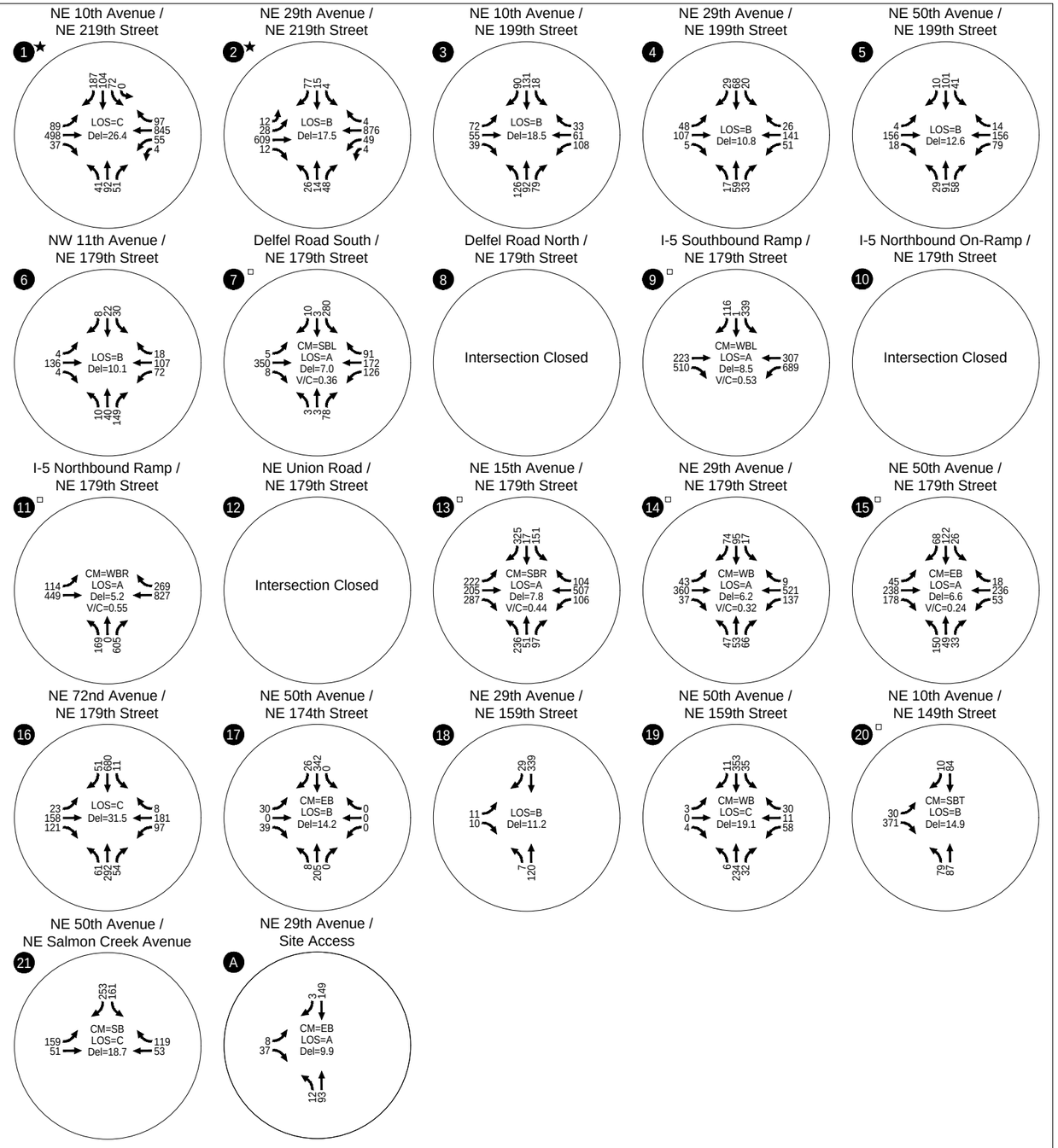
The year 2025 background traffic volumes for the weekday AM and PM peak hour analysis in Figure 7 and Figure 8 were added to the site-generated traffic in Figure 10 and Figure 11 to arrive at the total traffic volumes shown in Figure 12 and Figure 13.

5.3.2 Level-of-Service Analysis

Figure 12 and Figure 13 summarize the year 2025 total traffic operations analysis results at the study intersections assuming the future planned improvements shown in Figure 6 are constructed. The analysis finds that all of the study intersections will operate acceptably.

Appendix "G" contains the Year 2025 total traffic intersection operations worksheets.





CM = CRITICAL MOVEMENT (TWSC/ROUNDABOUT)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC/ROUNDABOUT) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/AWSC/ROUNDABOUT) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWSC = TWO-WAY STOP CONTROL
AWSC = ALL-WAY STOP CONTROL

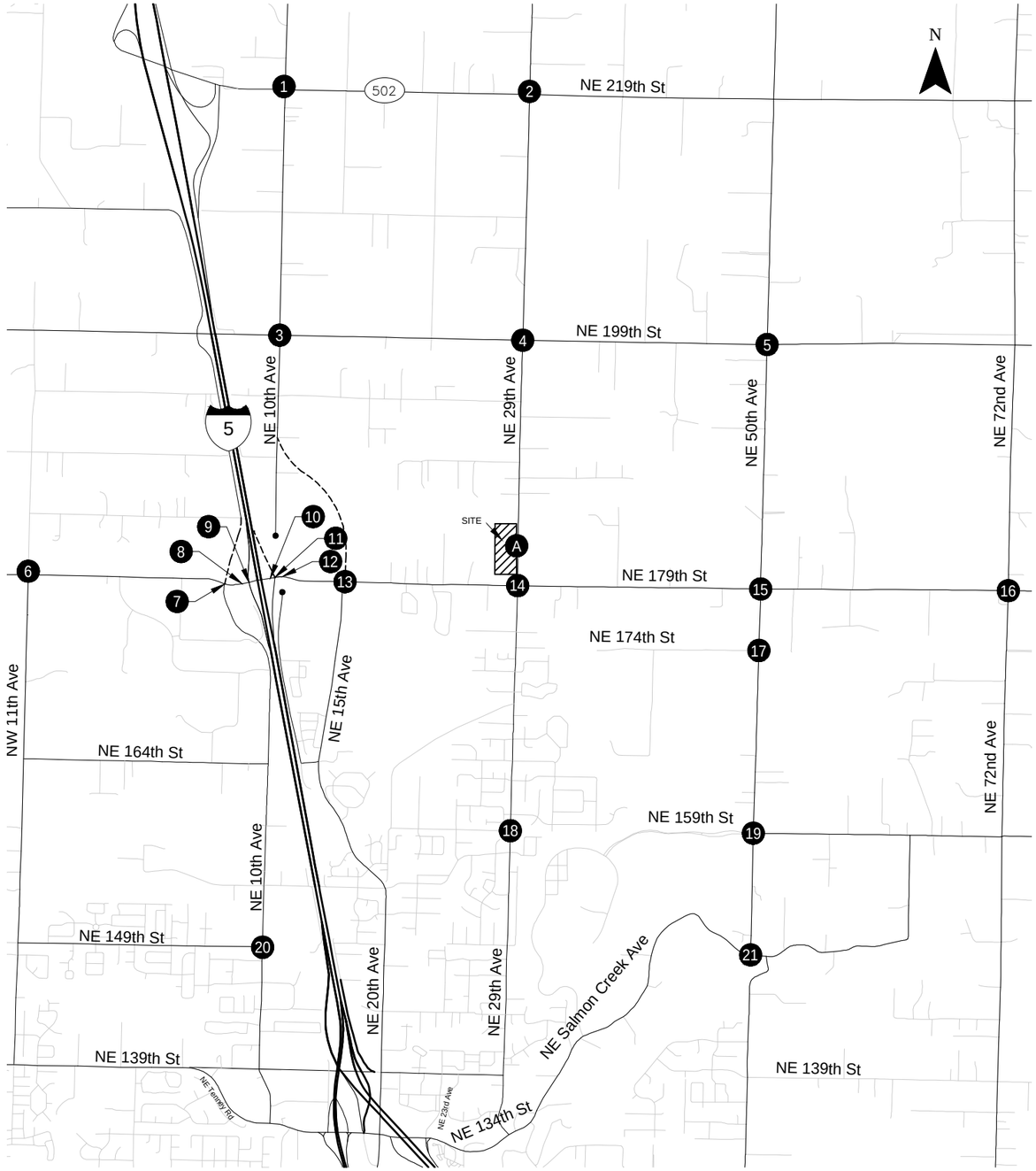
□ Analyzed with Sidra
★ Analyzed using HCM 2000 Procedures

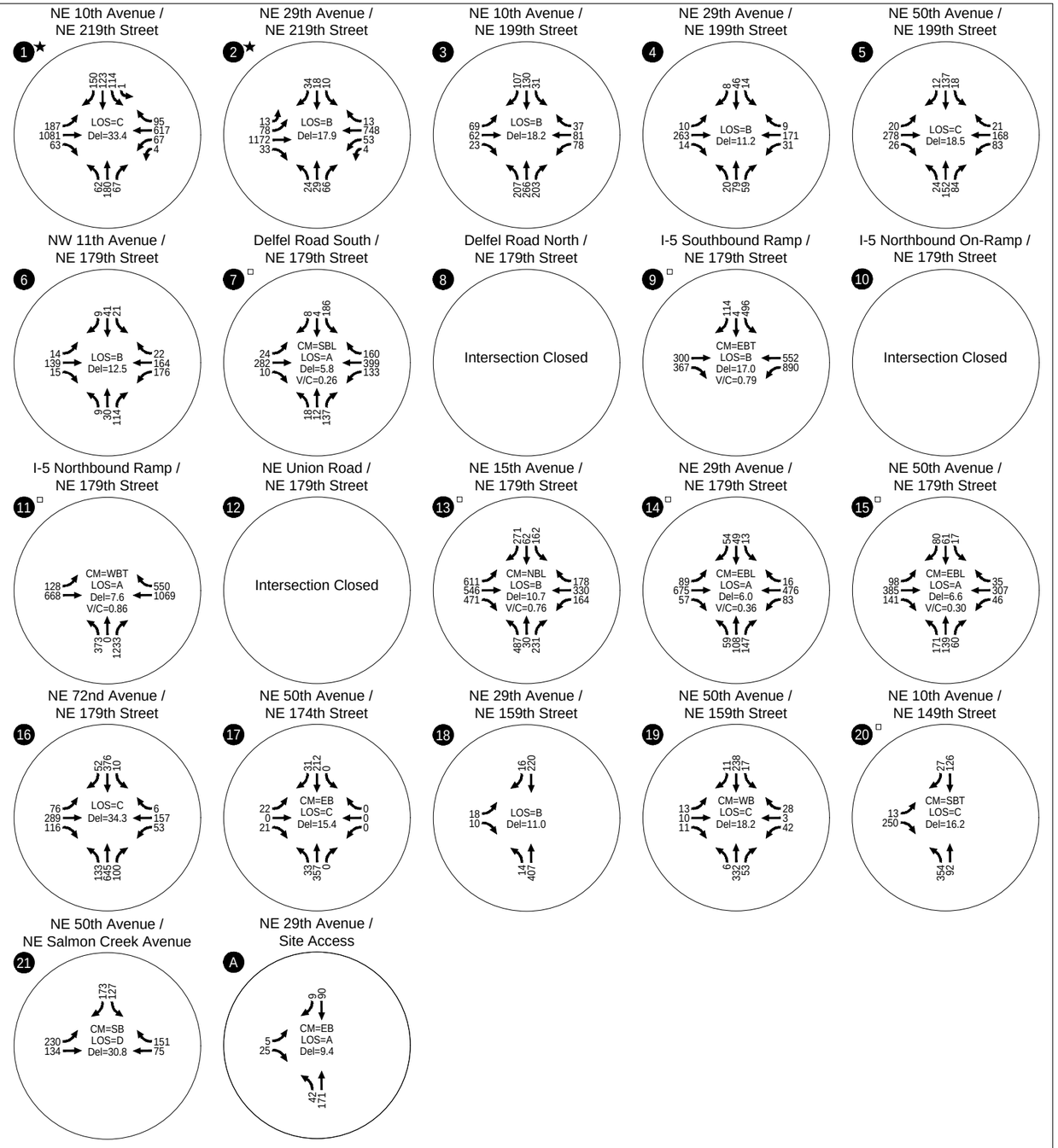
2025 Total Traffic Conditions, Weekday AM Peak Hour
Clark County, Washington

Figure 12

KITTELSON & ASSOCIATES

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CM = CRITICAL MOVEMENT (TWSC/ROUNDABOUT)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC/ROUNDABOUT) / CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/AWSC/ROUNDABOUT) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWSC = TWO-WAY STOP CONTROL
AWSC = ALL-WAY STOP CONTROL

□ Analyzed with Sidra
★ Analyzed using HCM 2000 Procedures

2025 Total Traffic Conditions, Weekday PM Peak Hour
Clark County, Washington

Figure 13

KITTELSON & ASSOCIATES

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5.3.3 Concurrency Corridor V/C Ratios

Total traffic volumes were compared with adopted Clark County capacity thresholds for corridor segments by road segment as documented in Appendix "C". Consistent with background traffic conditions, the five corridors identified to operate with V/C ratios greater than 0.90 prior to site development continue to do so upon site build-out. No additional corridors exceed the V/C threshold as a result of the proposed site development. Of the five corridor segments exceeding the threshold prior to site development:

- The projected background V/C ratio of 1.05 for the eastbound segment of NE 179th Street between the I-5 Northbound ramp terminal and the future NE 12th Avenue increases to 1.06 with the proposed site development. Nineteen (19) weekday PM peak hour trips are projected to be added to the segment eastbound with site development. As previously noted, the final design of this road segment has not been defined as of the time this report was prepared. Addition of a separate eastbound auxiliary lane would result in a link V/C ratio of 0.71.
- Nineteen (19) site generated trips are projected to be added eastbound along NE 179th Street between NE 12th Avenue and NE 15th Avenue during the weekday PM peak hour. The PM peak hour site trips represent 1.1% of the projected total volumes and the projected 0.92 V/C threshold under background traffic increases to 0.93 after site development.
- No site trips are projected to be added northbound along NE 15th Avenue between NE 199th Street and NE 179th Street, therefore the projected V/C ratio remains at 0.91.
- No site trips are projected to be added northbound and southbound along NE 72nd Avenue between NE 199th Street and NE 179th Street, therefore the projected V/C ratios remain between 0.91 and 0.93.
- Five northbound (under weekday PM peak hour) and four southbound (under weekday AM peak hour) trips are projected to be added on NE 72nd Avenue between NE 179th Street and NE 159th Street. These represent less than 1% of project total volumes and the projected northbound 1.09 V/C threshold under background traffic increases to 1.10, while the south 1.12 V/C increases to 1.13.

Three roadway segments do not exceed a V/C of 1.00, meaning there is still capacity on the roadway, despite finding the ratio exceeds County standards.

The regionally significant study intersections on these corridors are anticipated to operate at an acceptable LOS. Therefore, the over-capacity V/C ratios do not represent a roadway deficiency, rather corridor mobility facilitated with acceptable intersection LOS. A more detailed operational analysis should be performed before the County makes any major design, reconstruction or investment decisions for these corridors.

5.3.4 Queuing Analysis

Projected 95th-percentile queues were obtained for the proposed new site roadway connection to NE 29th Avenue (Intersection A) from Synchro. The 95th-percentile queues on the stop controlled eastbound approach to NE 29th Avenue are projected to be one vehicle length or less and can be accommodated within the storage available on-site. The projected 95th-percentile queues for the northbound left-turn are also projected to be one vehicle length or less. *Appendix "G" contains the year 2025 total traffic queuing worksheets.*

5.3.5 NE 182nd Street/NE 29th Avenue Intersection Turn Lane Needs

The need for turn lanes on NE 29th Avenue was evaluated at the new roadway connection providing site access (Intersection A – NE 182nd Street/NE 29th Avenue) utilizing the turn lane guidelines presented in the *WSDOT Design Manual* (Reference 4). Note that NE 29th Avenue is not a WSDOT facility and the turn lane guidelines were assessed for informational purposes.

The projected 2025 weekday build-out traffic volumes and turning movements at the intersection do not satisfy the minimum WSDOT volume threshold for providing a northbound left-turn lane or southbound right-turn lane under either the weekday AM or weekday PM peak hour conditions upon full build-out of the site. *Appendix "H" contains the WSDOT turn lane guideline exhibits.*

While a separate left-turn lane is not required on NE 29th Avenue per the WSDOT criteria, it appears that the half-street frontage improvement required of the site development results in sufficient width for an interim three-lane roadway at NE 182nd Street. Subject to Clark County Public Works direction, striping of an interim two-way left-turn lane on NE 29th Street at NE 182nd Street serving the site should be considered for implementation with site development given the NE 29th Avenue designation in the Arterial Atlas (Urban Minor Arterial, M-4cb) and the presence of other nearby access points along the road segment.

5.3.6 Intersection Sight Distance

The civil engineering plans prepared for the development by AKS Engineering & Forestry document driveway and street sight distance compliance with Clark County standards.

Intersection sight distance should be provided at the public street site intersection with NE 29th Avenue and the internal site intersections per CCC requirements. Landscaping, above ground utilities, and signing should be located and maintained in a manner that preserves adequate intersection sight distance per CCC.

6 FINDINGS AND RECOMMENDATIONS

Based on the results of the transportation impact analysis, the proposed NE 29th Avenue Subdivision can be developed while maintaining acceptable operations at the study intersections with the recommended mitigation measures in place. No capacity-based transportation mitigation needs were identified to support site development. The analysis developed the following findings and recommendations.

6.1 FINDINGS

- All study intersection operations currently satisfy the applicable Clark County and Washington State Department of Transportation (WSDOT) standards.
- All study intersection operations continue to satisfy applicable County and WSDOT standards under 2025 background conditions, provided that County- and WSDOT-planned roadway improvement projects are implemented.
- The proposed residential development is estimated to generate approximately 812 daily trips, including 60 trips during the weekday AM peak hour and 81 weekday PM peak trips. These estimates do not reflect a reduction for the existing home located on-site.
- Consistent with existing and background conditions, the 2025 total traffic conditions intersection operations are expected to satisfy the Clark County and WSDOT standards.
- The WSDOT volume-based criteria for providing a northbound left-turn or southbound right-turn lane on NE 29th Avenue at the NE 182nd Street (site access) are not satisfied under either weekday AM or PM total traffic conditions upon full build-out.
- Review of adopted Clark County capacity thresholds for corridor segments identified five corridor segments that are projected to operate with V/C ratios greater than 0.90 prior to site development and to continue to do so upon site build-out. No additional corridors exceed the adopted V/C threshold as a result of the proposed site development. Of the five corridor segments exceeding the threshold prior to site development:
    - The projected background V/C ratio of 1.05 for the eastbound segment of NE 179th Street between the I-5 Northbound ramp terminal and the future NE 12th Avenue increases to 1.06 with the proposed site development. Nineteen (19) weekday PM peak hour trips are projected to be added to the segment eastbound with site development. The final design of this road segment has not been defined as of the time this report was prepared. Addition of a separate eastbound auxiliary lane would result in a link V/C ratio of 0.71.
    - Nineteen (19) site generated trips are projected to be added eastbound along NE 179th Street between NE 12th Avenue and NE 15th Avenue during the weekday PM peak hour. The PM peak hour site trips represent 1.1% of the projected total

volumes and the projected 0.92 V/C threshold under background traffic increases to 0.93 after site development.

- No site trips are projected to be added northbound along NE 15th Avenue between NE 199th Street and NE 179th Street, therefore the projected V/C ratio remains at 0.91.

- No site trips are projected to be added northbound and southbound along NE 72nd Avenue between NE 199th Street and NE 179th Street, therefore the projected V/C ratios remain between 0.91 and 0.93.

- Five northbound and four southbound trips are projected to be added on NE 72nd Avenue between NE 179th Street and NE 159th Street. These represent less than 1% of project total volumes and the projected northbound 1.09 V/C threshold under background traffic increases to 1.10, while the south 1.12 V/C increases to 1.13.

- The regionally significant study intersections on these corridors are anticipated to operate at an acceptable LOS. Therefore, the over-capacity V/C ratios do not represent a roadway deficiency, rather corridor mobility facilitated with acceptable intersection LOS. A more detailed operational analysis should be performed before the County makes any major design, reconstruction or investment decisions for these corridors.

6.2 RECOMMENDATIONS

- Intersection sight distance should be provided on-site per Clark County Code design requirements. Landscaping, above ground utilities, and signing should be located and maintained in a manner that preserves adequate intersection sight distance per Clark County Code requirements.

- Subject to Clark County Public Works direction, striping of an interim two-way left-turn lane on NE 29th Street at NE 182nd Street serving the site should be considered for implementation with site development within the NE 29th Avenue site frontage improvement area.

7 REFERENCES

1. Transportation Research Board. *Highway Capacity Manual 6th Edition*. 2015.
2. Transportation Research Board. *2000 Highway Capacity Manual*. 2000.
3. Washington State Department of Transportation. *WSDOT Sidra Policy Settings*. October 2019.
4. Washington State Department of Transportation. *Design Manual*. M22-01.20. September 2021.
5. Clark County. *Clark County Arterial Atlas*.
6. Institute of Transportation Engineers. *Trip Generation Manual, 11th Edition*. 2021.

8 APPENDIX

Appendix A: Traffic Counts

Appendix B: Existing Traffic Conditions Operations Worksheets

Appendix C: Concurrency Corridor V/C Ratios

Appendix D: Crash Data

Appendix E: In-Process Developments and Planned Transportation Improvements

Appendix F: 2025 Background Traffic Conditions Worksheets

Appendix G: 2025 Total Traffic Conditions Worksheets

Appendix H: Turn Lane Evaluation Worksheets

Appendix A Traffic Counts

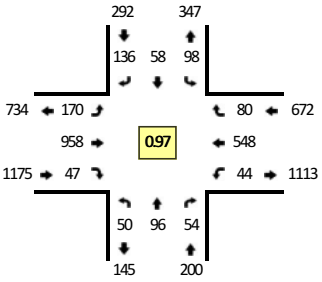
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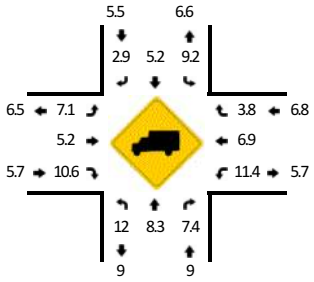
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CITY/STATE: Duluth, WA

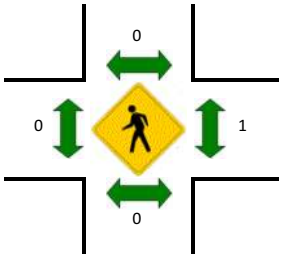
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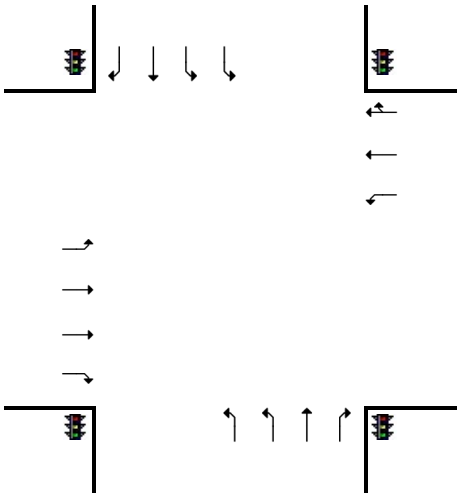
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Peak 15-Min: 4:10 PM -- 4:25 PM

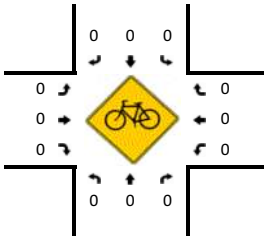


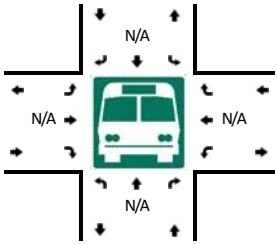


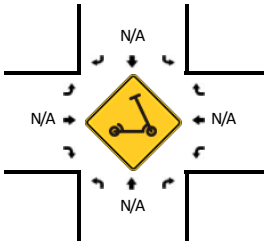
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	NE 10th Ave (Northbound)				NE 10th Ave (Southbound)				NE 219th St (Eastbound)				NE 219th 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	11	4	0	10	3	15	0	7	61	5	0	1	38	4	0	159	
4:05 PM	2	9	4	0	5	7	19	0	16	83	1	0	2	44	9	1	202	
4:10 PM	4	5	9	0	7	8	12	0	17	77	1	0	5	52	5	0	202	
4:15 PM	5	10	4	0	10	7	15	0	13	75	5	0	3	44	8	0	199	
4:20 PM	5	1	4	0	7	7	6	1	21	93	4	0	3	47	4	0	203	
4:25 PM	6	7	8	0	9	1	17	0	16	73	4	0	3	42	6	0	192	
4:30 PM	4	8	3	0	9	4	8	0	12	82	4	0	1	43	5	1	184	
4:35 PM	5	11	4	0	11	2	20	0	16	60	3	0	7	38	7	1	185	
4:40 PM	3	12	3	0	6	2	9	0	18	98	4	0	3	62	8	0	228	
4:45 PM	1	10	6	0	13	5	14	0	13	71	5	0	2	34	6	1	181	
4:50 PM	7	7	1	0	4	9	5	0	16	63	4	0	5	46	8	0	175	
4:55 PM	8	9	4	0	11	3	6	0	5	95	7	0	3	53	6	0	210	2320
5:00 PM	0	7	4	0	5	3	5	0	7	88	5	0	3	43	8	0	178	2339
5:05 PM	7	6	7	0	8	14	5	0	11	70	0	0	4	50	6	0	188	2325
5:10 PM	1	7	9	0	5	3	6	0	13	99	1	0	2	45	6	0	197	2320
5:15 PM	2	11	8	0	10	9	6	0	20	85	1	0	3	39	8	1	203	2324
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5:55 PM	2	7	3	0	4	2	8	0	7	65	4	0	2	28	9	0	141	2219

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	56	64	68	0	96	88	132	4	204	980	40	0	44	572	68	0	2416
Heavy Trucks	4	4	4		16	8	4		4	68	4		4	36	8		164
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

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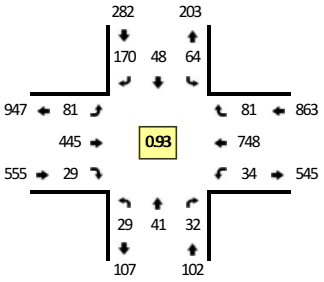
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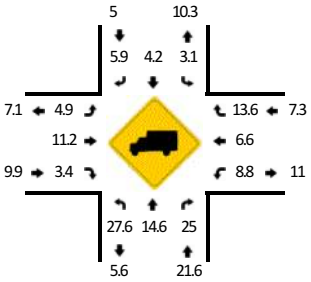
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CITY/STATE: Duluth, WA

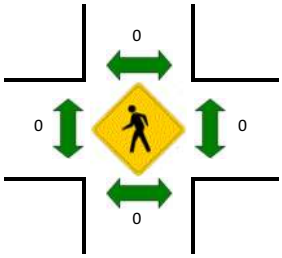
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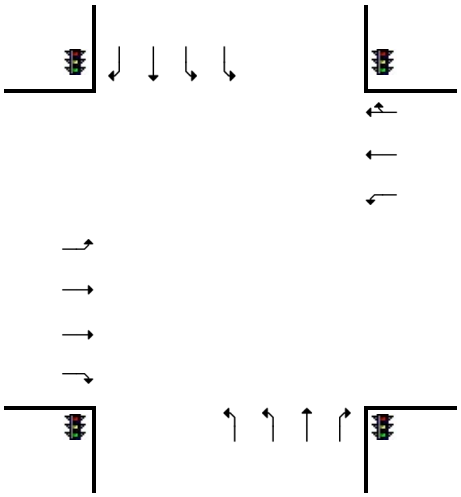
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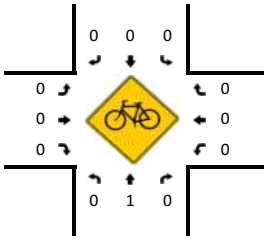


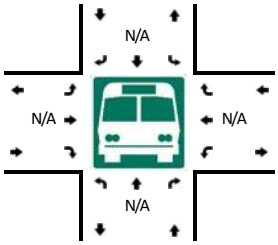


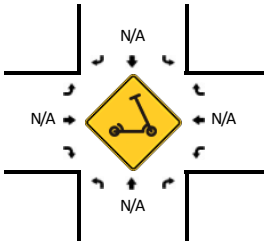












5-Min Count Period Beginning At	NE 10th Ave (Northbound)				NE 10th Ave (Southbound)				NE 219th St (Eastbound)				NE 219th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	3	0	0	4	2	16	0	6	26	2	0	2	62	1	0	128	
7:05 AM	4	2	3	0	6	4	11	0	6	18	2	0	3	51	2	0	112	
7:10 AM	4	1	2	0	3	2	12	0	11	33	2	0	4	65	2	0	141	
7:15 AM	1	0	4	0	3	2	15	0	9	39	3	0	2	78	7	0	163	
7:20 AM	4	2	4	0	8	2	16	0	9	51	4	0	1	52	16	0	169	
7:25 AM	6	8	2	0	2	3	10	0	10	37	5	0	2	61	7	0	153	
7:30 AM	0	3	3	0	5	3	12	0	6	34	2	0	4	75	9	2	158	
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8:40 AM	3	3	4	0	8	6	7	0	9	44	7	0	4	47	3	0	145	1509
8:45 AM	4	1	1	0	7	8	10	0	9	22	4	0	6	35	1	0	108	1471
8:50 AM	5	5	2	0	2	5	11	0	15	36	8	0	2	45	5	0	141	1452
8:55 AM	9	6	4	0	2	4	8	0	2	26	4	0	3	40	3	0	111	1417

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	44	40	40	0	52	28	164	0	112	508	48	0	20	764	120	0	1940
Heavy Trucks	16	12	8		4	0	0		4	60	4		4	40	12		164
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

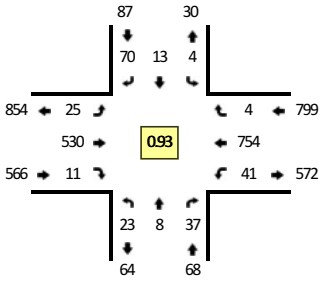
Report generated on 3/12/2020 12:46 PM

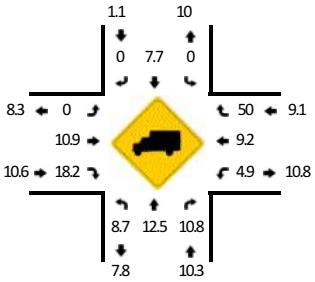
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

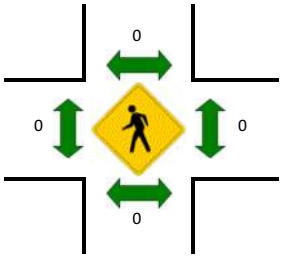
LOCATION: NE 29th Ave -- NE 219th St | **QC JOB #:** 15202707
CITY/STATE: Duluth, WA | **DATE:** Thu, Sep 5 2019

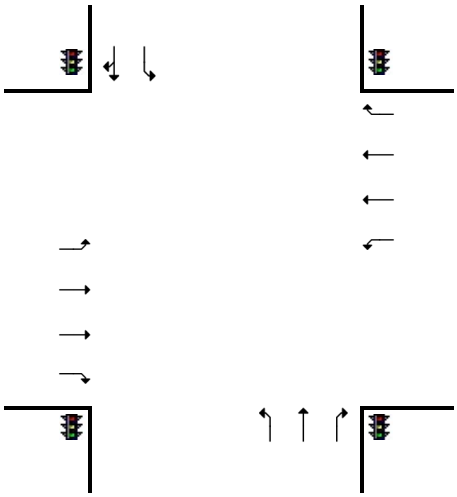
Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

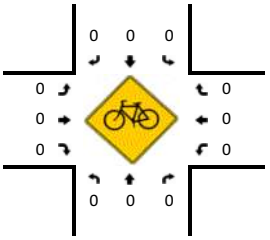


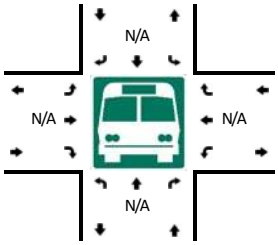


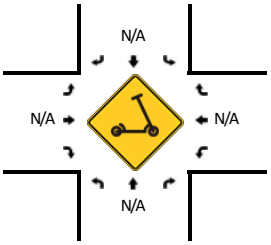
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	NE 29th Ave (Northbound)				NE 29th Ave (Southbound)				NE 219th St (Eastbound)				NE 219th 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	1	0	0	0	4	0	1	33	1	0	4	60	0	0	104	
7:05 AM	1	1	0	0	0	3	4	0	1	18	2	0	0	63	0	0	93	
7:10 AM	1	0	2	0	0	1	7	0	0	32	2	0	2	58	0	0	105	
7:15 AM	13	0	7	0	0	1	5	0	1	50	4	0	2	72	1	0	156	
7:20 AM	4	0	4	0	0	1	1	0	1	58	0	0	3	55	1	0	128	
7:25 AM	1	0	4	0	1	1	8	0	2	42	1	0	2	63	0	0	125	
7:30 AM	0	0	2	0	1	1	10	0	1	40	1	2	2	79	0	0	139	
7:35 AM	1	0	4	0	0	3	4	0	1	44	1	1	5	69	1	0	134	
7:40 AM	2	1	4	0	0	0	8	0	1	57	1	2	3	54	1	0	134	
7:45 AM	1	2	3	0	1	0	10	0	2	40	0	0	8	75	0	0	142	
7:50 AM	0	0	0	0	0	1	2	0	3	44	0	1	2	59	0	1	113	
7:55 AM	0	1	2	0	1	0	6	0	3	46	0	1	4	58	0	0	122	1495
8:00 AM	0	2	2	0	0	3	8	0	1	39	0	0	3	49	0	0	107	1498
8:05 AM	0	2	3	0	0	1	1	0	2	38	1	0	4	63	0	0	115	1520
8:10 AM	1	1	4	0	1	2	7	0	1	22	3	1	3	43	0	0	89	1504
8:15 AM	1	1	1	0	1	0	4	0	2	34	0	1	8	57	1	0	111	1459
8:20 AM	0	0	3	0	1	2	3	0	0	22	0	1	6	34	1	0	73	1404
8:25 AM	0	1	5	0	1	0	5	0	0	43	0	0	4	60	3	0	122	1401
8:30 AM	0	2	0	0	0	1	5	0	0	39	0	0	5	35	1	0	88	1350
8:35 AM	0	2	4	0	0	0	4	0	0	38	0	0	0	33	1	0	82	1298
8:40 AM	2	0	0	0	1	2	2	0	0	45	2	1	3	57	1	1	117	1281
8:45 AM	1	1	3	0	1	1	4	0	1	40	2	0	4	39	0	0	97	1236
8:50 AM	0	0	2	0	0	4	5	0	0	31	0	0	3	47	0	0	92	1215
8:55 AM	0	0	2	0	0	1	1	0	1	42	1	0	1	37	0	0	86	1179

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	44	0	4	12	88	0	16	564	8	12	64	792	8	0	1640
Heavy Trucks	4	0	4		0	0	0		0	68	4		0	44	0		124
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

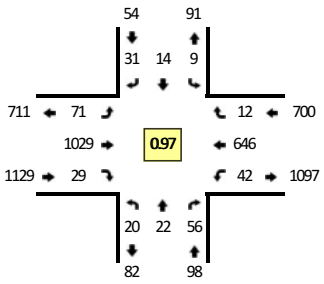
Comments:

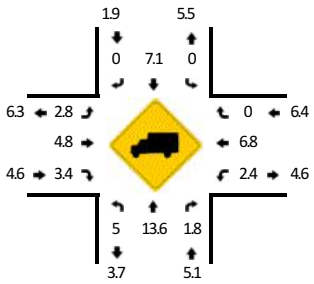
Report generated on 3/12/2020 12:46 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

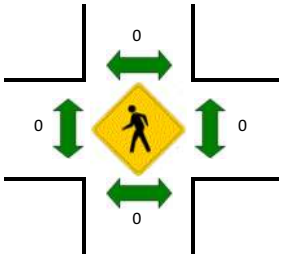
LOCATION: NE 29th Ave -- NE 219th St | **QC JOB #:** 15202708
CITY/STATE: Duluth, WA | **DATE:** Thu, Sep 5 2019

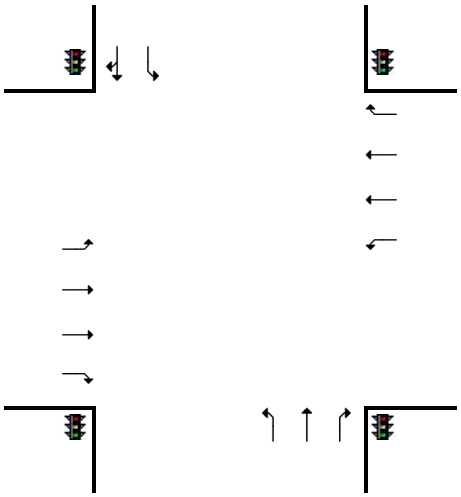
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

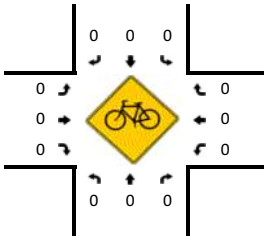


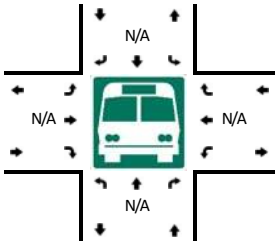


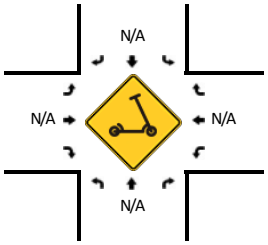
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	NE 29th Ave (Northbound)				NE 29th Ave (Southbound)				NE 219th St (Eastbound)				NE 219th 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	2	1	0	1	1	3	0	2	76	3	3	1	33	0	0	127	
4:05 PM	0	1	0	0	1	1	2	0	3	75	3	1	2	61	0	2	152	
4:10 PM	1	2	5	0	1	0	2	0	3	73	1	0	2	52	0	0	142	
4:15 PM	0	0	5	0	0	1	1	0	2	101	5	2	1	54	1	0	173	
4:20 PM	4	0	4	0	0	3	3	0	8	85	3	0	5	37	1	0	153	
4:25 PM	1	2	2	0	1	0	5	0	6	66	0	1	0	50	0	1	135	
4:30 PM	0	2	5	0	0	0	4	0	4	93	1	1	1	46	1	0	158	
4:35 PM	0	4	4	0	0	1	3	0	2	103	0	3	1	62	1	0	184	
4:40 PM	2	1	6	0	0	1	4	0	6	79	2	0	5	45	2	0	153	
4:45 PM	2	2	6	0	1	1	5	0	6	87	2	1	1	51	1	0	166	
4:50 PM	0	2	4	0	2	2	3	0	4	76	2	0	3	53	2	0	153	
4:55 PM	1	2	6	0	0	0	3	0	5	67	6	1	6	50	1	1	149	1845
5:00 PM	1	1	3	0	1	2	1	0	5	100	2	2	4	51	0	0	173	1891
5:05 PM	2	1	5	0	0	2	2	0	4	87	3	1	7	68	2	0	184	1923
5:10 PM	2	1	3	0	0	2	1	0	6	86	4	0	3	40	0	1	149	1930
5:15 PM	3	2	3	0	1	1	1	0	5	90	4	1	2	45	1	0	159	1916
5:20 PM	6	3	4	0	1	1	1	0	3	75	3	4	3	69	0	1	174	1937
5:25 PM	1	1	7	0	3	1	3	0	7	86	0	0	3	66	1	0	179	1981
5:30 PM	0	1	2	0	0	0	5	0	2	92	0	2	1	48	0	0	153	1976
5:35 PM	4	1	5	0	0	1	4	0	8	92	3	0	3	57	1	0	179	1971
5:40 PM	0	0	4	0	1	0	4	0	5	71	2	1	4	51	0	0	143	1961
5:45 PM	1	1	1	0	1	0	1	0	5	88	0	1	4	54	1	0	158	1953
5:50 PM	2	3	0	0	1	0	2	0	5	79	0	0	4	36	2	0	134	1934
5:55 PM	1	0	3	0	1	1	2	0	1	71	0	2	3	46	0	1	132	1917

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	40	24	56	0	20	12	20	0	60	1004	28	20	32	720	8	4	2048
Heavy Trucks	0	4	0		0	0	0		0	40	0		4	36	0		84
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 3/12/2020 12:46 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

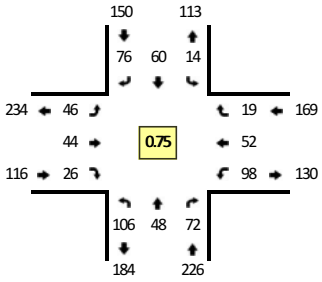
Type of peak hour being reported: Intersection Peak

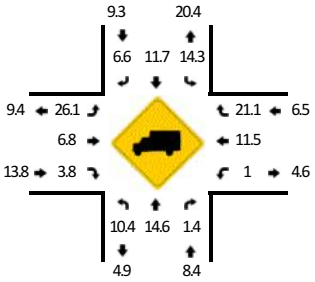
Method for determining peak hour: Total Entering Volume

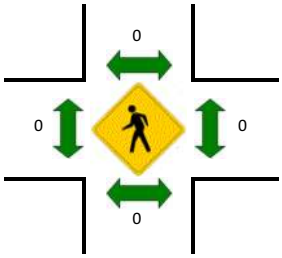
LOCATION: 10. NE 10th Ave -- NE 199th St
CITY/STATE: Clark, WA

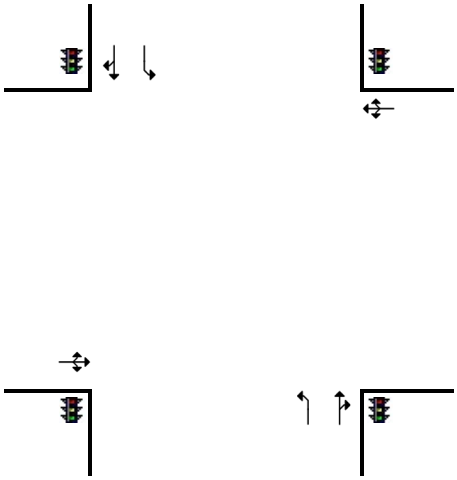
QC JOB #: 14982931
DATE: Thu, May 16 2019

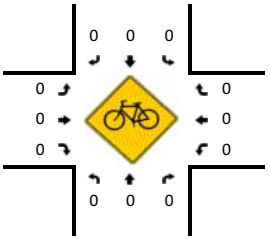
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

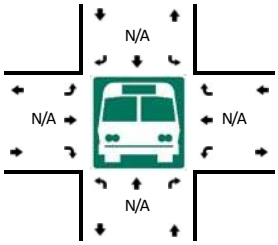


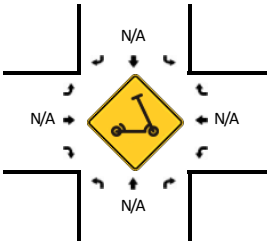












5-Min Count Period Beginning At	10. NE 10th Ave (Northbound)				10. NE 10th Ave (Southbound)				NE 199th St (Eastbound)				NE 199th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	1	3	0	1	8	1	0	0	1	1	0	9	1	2	0	33	
7:05 AM	7	1	0	0	0	3	2	0	5	1	1	0	10	2	1	0	33	
7:10 AM	3	3	3	0	2	5	0	0	0	0	1	0	9	0	1	0	27	
7:15 AM	8	5	8	0	3	3	7	0	3	3	1	0	7	0	3	0	51	
7:20 AM	10	5	6	0	2	6	2	0	1	3	0	0	6	5	3	0	49	
7:25 AM	12	2	5	0	1	5	2	0	3	2	2	0	4	2	1	0	41	
7:30 AM	4	4	6	0	0	5	1	0	3	4	2	0	9	5	1	0	44	
7:35 AM	2	5	5	0	1	9	3	0	1	4	2	0	4	4	2	0	42	
7:40 AM	13	3	4	0	1	7	3	0	1	5	3	0	10	4	1	0	55	
7:45 AM	8	6	3	0	1	8	1	0	4	3	1	0	12	5	1	0	53	
7:50 AM	11	5	8	0	2	6	3	0	0	6	0	0	12	11	1	0	65	
7:55 AM	8	3	5	0	1	3	4	0	3	4	2	0	4	4	0	0	41	534
8:00 AM	4	6	6	0	2	4	2	0	3	1	1	0	5	2	2	0	38	539
8:05 AM	6	2	9	0	1	2	4	0	1	6	2	0	4	1	1	0	39	545
8:10 AM	8	1	13	0	1	6	3	0	2	4	2	0	15	6	2	0	63	581
8:15 AM	10	5	6	0	0	4	3	0	1	6	0	0	7	4	0	0	46	576
8:20 AM	8	5	10	0	0	9	7	0	1	6	1	0	11	1	1	0	60	587
8:25 AM	4	4	4	0	3	5	5	0	2	5	1	0	11	4	0	0	48	594
8:30 AM	5	2	3	0	0	2	7	0	6	4	1	0	8	2	1	0	41	591
8:35 AM	10	4	4	0	2	4	2	0	1	0	2	0	10	3	2	0	44	593
8:40 AM	11	6	4	0	3	6	14	0	1	1	3	0	7	4	3	0	63	601
8:45 AM	18	5	8	0	1	4	11	0	6	3	3	0	9	5	5	0	78	626
8:50 AM	13	1	1	0	0	11	12	0	11	2	4	0	6	13	2	0	76	637
8:55 AM	9	7	4	0	1	3	6	0	11	6	6	0	5	7	0	0	65	661

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	160	52	52	0	8	72	116	0	112	44	52	0	80	100	28	0	876
Heavy Trucks	12	4	0		0	8	4		36	4	0		4	8	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 11/27/2019 11:08 AM

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

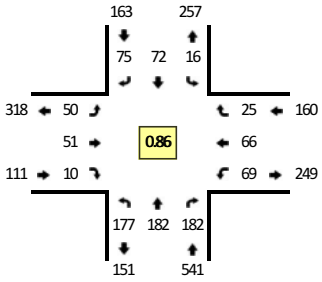
Type of peak hour being reported: Intersection Peak

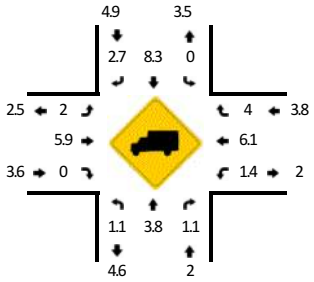
Method for determining peak hour: Total Entering Volume

LOCATION: 10. NE 10th Ave -- NE 199th St
CITY/STATE: Clark, WA

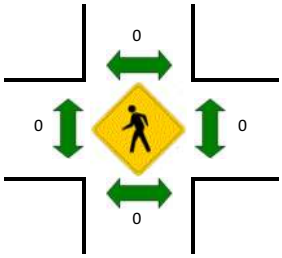
QC JOB #: 14982932
DATE: Thu, May 16 2019

Peak-Hour: 4:50 PM -- 5:50 PM
Peak 15-Min: 5:25 PM -- 5:40 PM

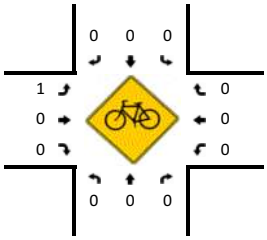


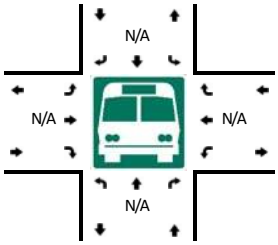


Quality Counts
DATA THAT DRIVES COMMUNITIES

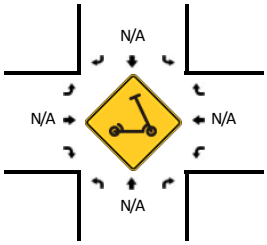












5-Min Count Period Beginning At	10. NE 10th Ave (Northbound)				10. NE 10th Ave (Southbound)				NE 199th St (Eastbound)				NE 199th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	17	11	15	0	1	5	2	0	4	5	2	0	5	1	3	0	71	
4:05 PM	8	12	12	0	3	9	1	0	2	3	3	0	6	4	0	0	63	
4:10 PM	9	8	16	0	0	3	4	0	5	4	0	0	6	5	1	0	61	
4:15 PM	10	13	11	0	1	12	5	0	5	4	0	0	4	8	2	0	75	
4:20 PM	11	12	12	0	2	5	5	0	1	4	1	0	4	7	2	0	66	
4:25 PM	8	16	17	0	1	4	1	0	4	5	1	0	3	3	1	0	64	
4:30 PM	9	8	11	0	3	8	7	0	5	3	0	0	3	2	3	0	62	
4:35 PM	12	11	15	0	0	6	4	0	3	3	2	0	8	3	2	0	69	
4:40 PM	10	9	10	0	2	8	6	0	9	4	2	0	4	0	2	0	66	
4:45 PM	15	15	18	0	2	3	3	0	3	2	0	0	7	5	4	0	77	
4:50 PM	21	15	11	0	2	6	5	0	7	8	0	0	6	6	2	0	89	
4:55 PM	14	11	15	0	0	4	8	0	6	3	0	0	6	3	0	0	70	833
5:00 PM	16	11	11	0	0	2	8	0	1	4	0	0	2	7	5	0	67	829
5:05 PM	14	18	13	0	2	8	2	0	4	5	3	0	4	3	1	0	77	843
5:10 PM	14	8	19	0	1	10	7	0	5	7	0	0	8	3	1	0	83	865
5:15 PM	15	11	15	0	1	5	4	0	5	2	1	0	9	5	1	0	74	864
5:20 PM	18	12	12	0	1	6	5	0	6	3	0	0	3	6	3	0	75	873
5:25 PM	14	25	14	0	0	11	5	0	3	4	0	0	6	6	2	0	90	899
5:30 PM	18	19	18	0	1	5	8	0	6	5	1	0	5	3	1	0	90	927
5:35 PM	14	21	16	0	3	7	9	0	4	1	2	0	8	11	6	0	102	960
5:40 PM	11	11	20	0	1	4	7	0	0	5	2	0	5	10	3	0	79	973
5:45 PM	8	20	18	0	4	4	7	0	3	4	1	0	7	3	0	0	79	975
5:50 PM	11	21	9	0	2	5	6	0	5	5	1	0	4	5	2	0	76	962
5:55 PM	11	21	12	0	1	6	3	0	6	5	1	0	5	4	1	0	76	968

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	184	260	192	0	16	92	88	0	52	40	12	0	76	80	36	0	1128
Heavy Trucks	0	4	0		0	8	0		0	0	0		0	4	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:

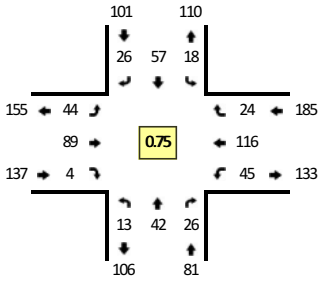
Report generated on 11/27/2019 11:08 AM

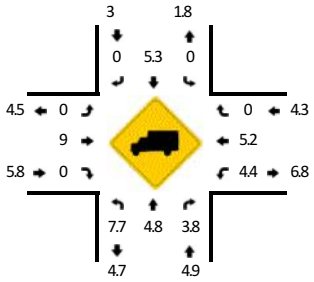
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

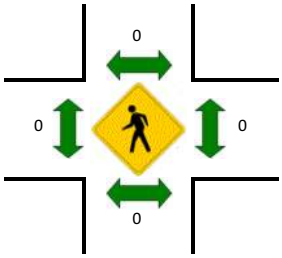
LOCATION: 11. NE 29th Ave -- NE 199th St | **QC JOB #:** 14982933
CITY/STATE: Clark, WA | **DATE:** Thu, May 16 2019

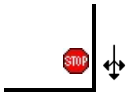
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 8:10 AM -- 8:25 AM

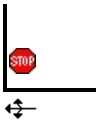


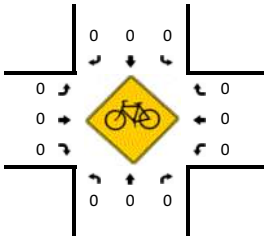


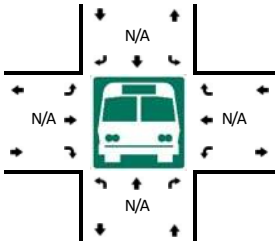
Quality Counts
DATA THAT DRIVES COMMUNITIES

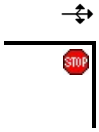


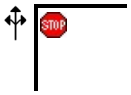


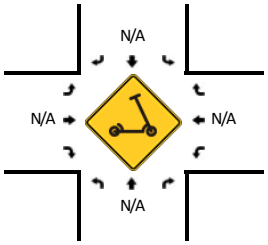












5-Min Count Period Beginning At	11. NE 29th Ave (Northbound)				11. NE 29th Ave (Southbound)				NE 199th St (Eastbound)				NE 199th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	0	0	0	2	0	0	0	6	0	0	5	11	0	0	25	
7:05 AM	0	0	0	0	0	4	0	0	0	1	0	0	1	10	0	0	16	
7:10 AM	0	2	3	0	2	4	1	0	0	3	1	0	2	12	1	0	31	
7:15 AM	1	1	0	0	1	3	1	0	1	7	1	0	3	7	0	0	26	
7:20 AM	1	3	4	0	1	7	2	0	1	11	0	0	2	7	0	0	39	
7:25 AM	1	1	4	0	0	3	0	0	2	4	1	0	4	8	0	0	28	
7:30 AM	2	1	2	0	1	6	1	0	2	9	0	0	1	9	0	0	34	
7:35 AM	1	4	7	0	2	4	0	0	0	8	0	0	0	9	1	0	36	
7:40 AM	2	2	3	0	0	3	1	0	1	10	0	0	2	13	0	0	37	
7:45 AM	3	3	5	0	1	6	0	0	1	6	0	0	4	19	0	0	48	
7:50 AM	4	4	1	0	0	5	0	0	2	13	0	0	7	11	2	0	49	
7:55 AM	0	6	2	0	0	1	1	0	1	10	0	0	2	7	2	0	32	401
8:00 AM	0	2	0	0	0	5	0	0	3	3	1	0	1	4	2	0	21	397
8:05 AM	0	1	5	0	4	5	0	0	2	10	0	0	4	10	3	0	44	425
8:10 AM	1	4	3	0	1	8	4	0	14	9	0	0	6	13	8	0	71	465
8:15 AM	0	4	1	0	2	6	8	0	8	4	2	0	0	9	3	0	47	486
8:20 AM	2	5	2	0	4	7	4	0	7	6	0	0	4	7	1	0	49	496
8:25 AM	0	2	0	0	4	5	2	0	3	5	1	0	2	9	2	0	35	503
8:30 AM	0	4	1	0	0	3	2	0	3	10	0	0	6	5	0	0	34	503
8:35 AM	1	4	3	0	2	4	5	0	0	6	0	0	3	7	1	0	36	503
8:40 AM	2	3	3	0	0	2	0	0	0	7	0	0	6	15	0	0	38	504
8:45 AM	3	2	2	1	1	9	0	0	0	7	0	0	3	11	0	0	39	495
8:50 AM	3	1	0	0	0	5	0	0	1	7	1	0	4	10	1	0	33	479
8:55 AM	2	4	1	0	0	4	1	0	0	7	0	0	1	9	0	0	29	476

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	52	24	0	28	84	64	0	116	76	8	0	40	116	48	0	668
Heavy Trucks	4	4	0		0	0	0		0	8	0		0	4	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 11/27/2019 11:08 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

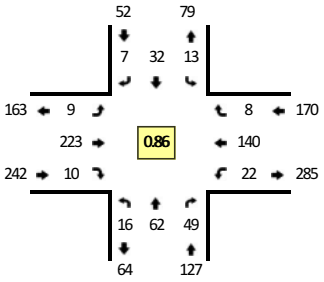
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

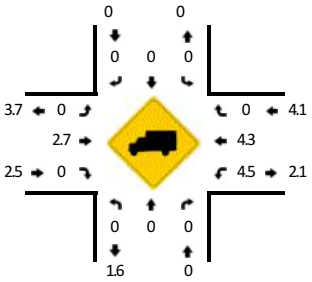
LOCATION: 11. NE 29th Ave -- NE 199th St
CITY/STATE: Clark, WA

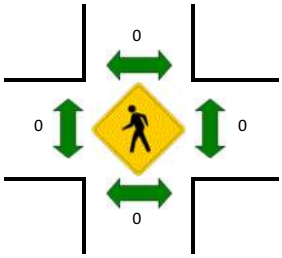
QC JOB #: 14982934
DATE: Thu, May 16 2019

Peak-Hour: 4:50 PM -- 5:50 PM
Peak 15-Min: 5:30 PM -- 5:45 PM

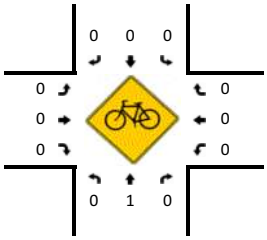


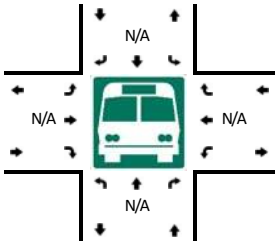




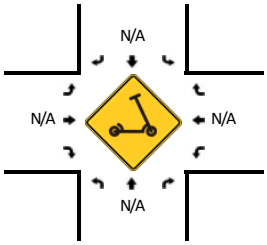












5-Min Count Period Beginning At	11. NE 29th Ave (Northbound)				11. NE 29th Ave (Southbound)				NE 199th St (Eastbound)				NE 199th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	3	2	0	2	6	0	0	1	14	1	0	0	8	2	0	41	
4:05 PM	1	4	1	0	0	1	0	0	0	18	1	0	3	7	1	0	37	
4:10 PM	1	9	5	0	0	1	0	0	0	20	1	0	1	12	1	0	51	
4:15 PM	1	1	5	0	1	2	1	0	3	16	0	0	3	11	1	0	45	
4:20 PM	3	7	4	0	1	1	3	0	1	14	1	0	1	9	2	0	47	
4:25 PM	0	8	4	0	2	3	0	0	1	14	1	0	0	7	1	0	41	
4:30 PM	0	4	3	0	0	4	0	0	1	17	0	0	3	11	0	0	43	
4:35 PM	0	3	1	0	0	2	1	0	0	15	1	0	2	10	1	0	36	
4:40 PM	2	4	6	0	1	2	1	0	0	17	0	0	4	8	2	0	47	
4:45 PM	2	5	2	0	1	2	0	0	0	18	0	0	1	8	1	0	40	
4:50 PM	1	2	3	0	2	4	0	0	1	19	0	0	2	14	2	0	50	
4:55 PM	1	7	4	0	0	2	1	0	0	18	0	0	1	10	0	0	44	522
5:00 PM	1	6	4	0	0	1	0	0	1	13	1	0	2	8	1	0	38	519
5:05 PM	0	5	2	0	2	6	0	0	0	14	3	0	1	8	0	0	41	523
5:10 PM	0	7	7	0	1	3	1	0	0	24	1	0	2	9	0	0	55	527
5:15 PM	2	8	2	0	3	3	0	0	1	21	0	0	3	15	1	0	59	541
5:20 PM	0	3	6	0	0	2	2	0	1	16	0	0	1	12	0	0	43	537
5:25 PM	2	3	3	0	2	0	1	0	3	12	2	0	1	8	0	0	37	533
5:30 PM	4	4	4	0	0	2	2	0	1	19	0	0	3	13	1	0	53	543
5:35 PM	1	5	3	0	0	4	0	0	1	23	0	0	3	17	2	0	59	566
5:40 PM	3	7	7	0	1	3	0	0	0	22	0	0	2	15	0	0	60	579
5:45 PM	1	5	4	0	2	2	0	0	0	22	3	0	1	11	1	0	52	591
5:50 PM	0	1	2	0	1	4	0	0	1	18	1	0	5	3	1	0	37	578
5:55 PM	1	5	4	0	0	2	2	0	1	17	0	0	1	8	2	0	43	577

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	32	64	56	0	4	36	8	0	8	256	0	0	32	180	12	0	688
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	8	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 11/27/2019 11:08 AM

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

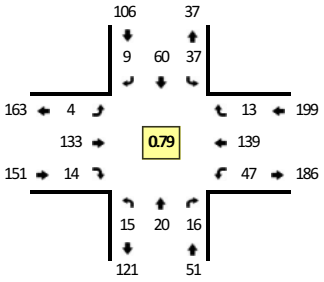
Type of peak hour being reported: Intersection Peak

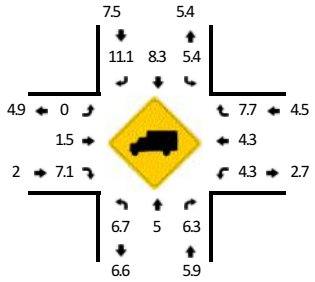
Method for determining peak hour: Total Entering Volume

LOCATION: 12. NE 50th Ave -- NE 199th St
CITY/STATE: Clark, WA

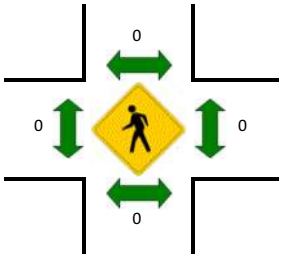
QC JOB #: 14982935
DATE: Thu, May 16 2019

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

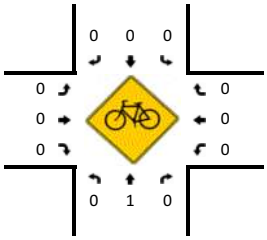


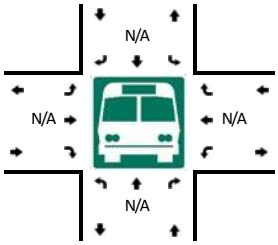


Quality Counts
DATA THAT DRIVES COMMUNITIES

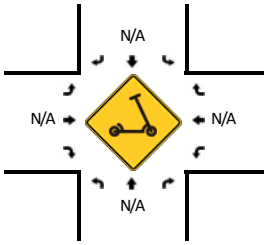












5-Min Count Period Beginning At	12. NE 50th Ave (Northbound)				12. NE 50th Ave (Southbound)				NE 199th St (Eastbound)				NE 199th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	2	0	0	0	2	0	0	0	5	0	0	2	13	0	0	24	
7:05 AM	1	2	3	0	2	6	0	0	0	2	0	0	5	10	1	0	32	
7:10 AM	1	1	1	0	0	3	1	0	0	6	1	0	1	9	0	0	24	
7:15 AM	0	3	3	0	4	4	1	0	0	6	1	0	3	7	1	0	33	
7:20 AM	0	2	0	0	5	6	0	0	1	14	0	0	2	6	4	0	40	
7:25 AM	0	2	1	0	3	6	1	0	0	7	1	0	4	13	1	0	39	
7:30 AM	1	2	0	0	4	4	1	0	0	10	2	0	1	5	0	0	30	
7:35 AM	0	1	1	0	4	1	0	0	1	20	3	0	6	11	2	0	50	
7:40 AM	1	4	2	0	4	6	1	0	1	12	0	0	5	14	0	0	50	
7:45 AM	1	1	4	0	9	9	1	0	0	14	1	0	4	15	2	0	61	
7:50 AM	2	1	3	0	0	5	0	0	0	9	1	0	5	14	1	0	41	
7:55 AM	0	1	0	0	3	8	1	0	0	9	3	0	3	11	2	0	41	465
8:00 AM	0	1	1	0	0	7	1	0	0	6	0	0	4	9	0	0	29	470
8:05 AM	5	0	1	0	1	4	0	0	0	8	1	0	6	17	0	0	43	481
8:10 AM	5	2	0	0	0	0	2	0	1	18	1	0	4	17	0	0	50	507
8:15 AM	0	3	1	0	0	1	0	0	1	3	1	0	1	14	0	0	25	499
8:20 AM	1	3	1	0	2	4	1	0	0	12	2	0	5	6	1	0	38	497
8:25 AM	0	2	1	0	0	6	1	0	0	7	0	0	1	10	2	0	30	488
8:30 AM	3	2	3	0	2	1	0	0	1	6	1	0	5	9	2	0	35	493
8:35 AM	1	3	2	0	3	8	0	0	0	11	1	0	4	14	0	0	47	490
8:40 AM	1	4	1	0	4	5	0	0	3	7	0	0	4	16	1	0	46	486
8:45 AM	1	2	0	0	1	6	3	0	2	11	0	0	2	13	1	0	42	467
8:50 AM	0	0	1	0	2	7	0	0	0	8	0	0	3	11	0	0	32	458
8:55 AM	0	0	3	0	1	2	1	0	0	4	4	0	3	8	2	0	28	445

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	24	28	0	68	64	8	0	8	184	16	0	60	160	16	0	644
Heavy Trucks	0	0	4		4	8	0		0	0	0		0	4	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:

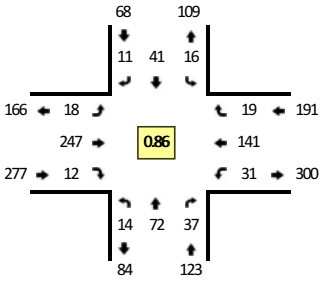
Report generated on 11/27/2019 11:08 AM

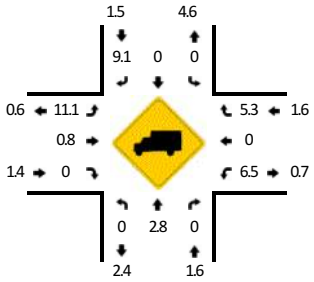
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

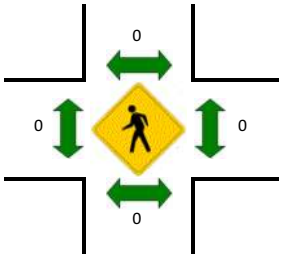
LOCATION: 12. NE 50th Ave -- NE 199th St | **QC JOB #:** 14982936
CITY/STATE: Clark, WA | **DATE:** Thu, May 16 2019

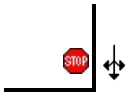
Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

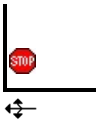


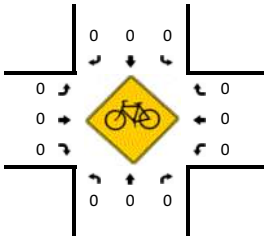


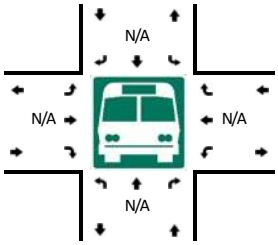
Quality Counts
DATA THAT DRIVES COMMUNITIES

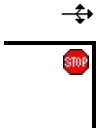


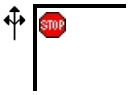


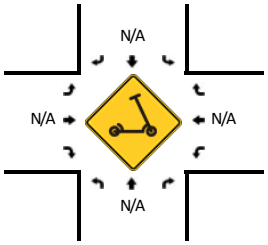












5-Min Count Period Beginning At	12. NE 50th Ave (Northbound)				12. NE 50th Ave (Southbound)				NE 199th St (Eastbound)				NE 199th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	0	5	0	3	0	1	0	0	20	0	0	1	10	2	0	43	
4:05 PM	1	8	7	0	4	5	0	0	3	14	2	0	0	9	2	0	55	
4:10 PM	2	3	5	0	0	6	0	0	0	18	1	0	3	14	2	0	54	
4:15 PM	2	6	3	0	0	2	1	0	1	19	0	0	3	10	0	0	47	
4:20 PM	2	6	2	0	0	0	1	0	3	16	1	0	3	9	2	0	45	
4:25 PM	1	10	3	0	1	4	0	0	0	17	1	0	1	8	1	0	47	
4:30 PM	1	7	4	0	2	4	0	0	1	20	1	0	0	13	2	0	55	
4:35 PM	2	1	2	0	3	2	0	0	1	12	0	0	4	10	2	0	39	
4:40 PM	2	4	2	0	0	2	1	0	1	24	2	0	5	14	0	0	57	
4:45 PM	0	8	4	0	3	4	2	0	1	19	0	0	3	15	4	0	63	
4:50 PM	1	1	1	0	2	2	1	0	1	21	1	0	2	5	1	0	39	
4:55 PM	1	8	4	0	0	0	2	0	1	19	1	0	2	11	2	0	51	595
5:00 PM	0	3	3	0	3	5	0	0	1	17	1	0	2	14	0	0	49	601
5:05 PM	0	3	3	0	2	5	2	0	0	15	1	0	4	7	1	0	43	589
5:10 PM	2	13	4	0	2	4	1	0	2	22	1	0	6	15	1	0	73	608
5:15 PM	2	5	6	0	3	6	2	0	3	25	2	0	1	10	2	0	67	628
5:20 PM	1	5	3	0	0	2	0	0	2	24	0	0	3	9	3	0	52	635
5:25 PM	0	11	1	0	2	4	0	0	1	14	1	0	5	12	5	0	56	644
5:30 PM	2	4	0	0	1	3	1	0	3	22	0	0	4	20	0	0	60	649
5:35 PM	2	7	3	0	1	2	1	0	1	20	0	0	0	8	0	0	45	655
5:40 PM	1	1	3	0	1	5	1	0	0	23	2	0	1	17	1	0	56	654
5:45 PM	1	4	3	0	0	4	1	0	3	25	2	0	1	11	3	0	58	649
5:50 PM	2	8	4	0	1	1	0	0	1	21	1	0	2	7	1	0	49	659
5:55 PM	2	3	7	0	0	2	0	0	2	11	1	0	1	10	2	0	41	649

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	20	92	52	0	20	48	12	0	28	284	12	0	40	136	24	0	768
Heavy Trucks	0	0	0		0	0	4		4	8	0		8	0	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 11/27/2019 11:08 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

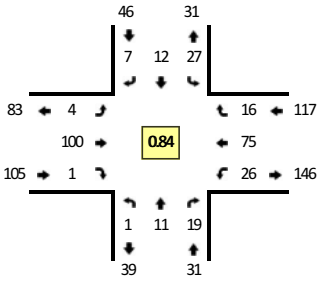
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

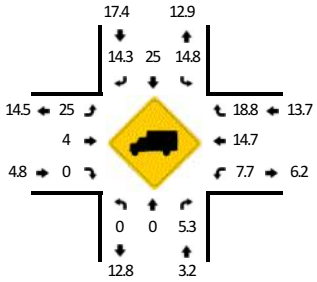
LOCATION: 1. NW 11th Ave -- NW 179th St
CITY/STATE: Clark, WA

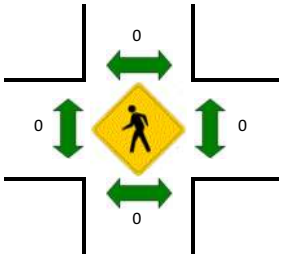
QC JOB #: 14982810
DATE: Thu, May 16 2019

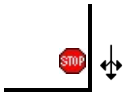
Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

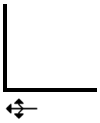


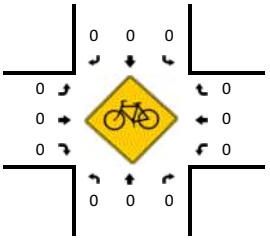
Quality Counts
DATA THAT DRIVES COMMUNITIES

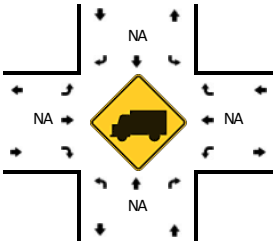


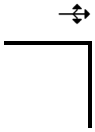


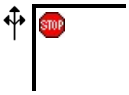


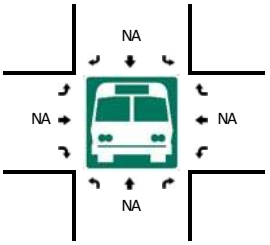












5-Min Count Period Beginning At	1. NW 11th Ave (Northbound)				1. NW 11th Ave (Southbound)				NW 179th St (Eastbound)				NW 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	4	0	4	1	0	0	0	6	0	0	0	2	0	0	17	
7:05 AM	0	2	3	0	1	0	0	0	0	10	1	0	1	5	0	0	23	
7:10 AM	0	1	3	0	1	1	0	0	0	11	0	0	3	2	1	0	23	
7:15 AM	0	1	2	0	2	0	0	0	0	13	0	0	1	2	3	0	24	
7:20 AM	0	1	6	0	2	0	0	0	0	3	0	0	2	6	1	0	21	
7:25 AM	0	0	1	0	2	2	0	0	0	13	0	0	1	3	0	0	22	
7:30 AM	0	0	2	0	4	1	1	0	1	9	0	0	2	2	0	0	22	
7:35 AM	0	0	1	0	4	0	0	0	0	13	0	0	0	8	1	0	27	
7:40 AM	0	2	2	0	2	0	0	0	0	8	0	0	0	4	2	0	20	
7:45 AM	0	2	3	0	1	0	1	0	0	10	1	0	5	6	1	0	30	
7:50 AM	0	0	0	0	6	1	1	0	1	3	0	0	5	7	2	0	26	
7:55 AM	0	1	1	0	2	3	1	0	0	10	0	0	3	10	2	0	33	288
8:00 AM	0	0	3	0	0	1	1	0	0	5	0	0	3	4	1	0	18	289
8:05 AM	0	2	1	0	0	0	2	0	0	10	0	0	1	6	0	0	22	288
8:10 AM	0	1	2	0	3	1	0	0	0	6	0	0	1	4	0	0	18	283
8:15 AM	1	2	1	0	5	2	0	0	1	12	0	0	1	7	3	0	35	294
8:20 AM	0	1	1	0	1	1	1	0	2	3	0	0	1	6	1	0	18	291
8:25 AM	0	0	1	0	1	2	0	0	0	13	0	0	2	5	1	0	25	294
8:30 AM	0	0	3	0	2	1	0	0	0	7	0	0	4	8	2	0	27	299
8:35 AM	0	0	1	0	1	0	0	0	0	12	0	0	2	0	0	0	16	288
8:40 AM	1	0	0	0	3	0	0	0	0	7	0	0	1	8	0	0	20	288
8:45 AM	0	0	3	0	0	0	0	0	1	7	1	0	0	5	1	0	18	276
8:50 AM	0	2	2	0	1	0	0	0	1	11	0	0	2	4	1	0	24	274
8:55 AM	0	0	1	0	1	2	0	0	0	8	0	0	0	7	0	0	19	260

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	12	16	0	36	16	12	0	4	92	4	0	52	92	20	0	356
Heavy Trucks	0	0	0		12	8	0		4	4	0		4	20	0		52
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 9/12/2019 3:20 PM

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

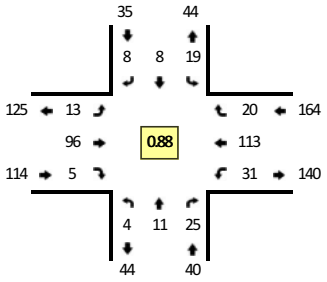
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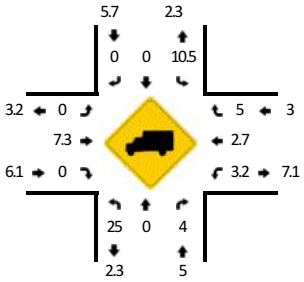
Method for determining peak hour: Total Entering Volume

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

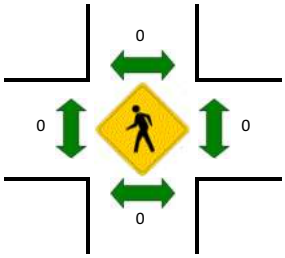
QC JOB #: 14982811
DATE: Thu, May 16 2019

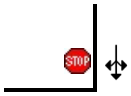
Peak-Hour: 4:20 PM -- 5:20 PM
Peak 15-Min: 4:20 PM -- 4:35 PM

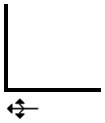


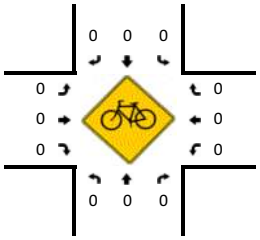


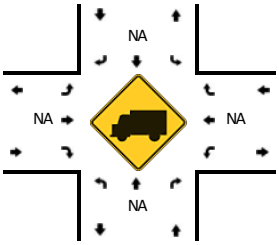
Quality Counts
DATA THAT DRIVES COMMUNITIES

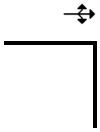


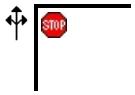


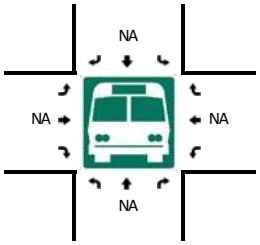












5-Min Count Period Beginning At	1. NW 11th Ave (Northbound)				1. NW 11th Ave (Southbound)				NW 179th St (Eastbound)				NW 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	2	1	0	0	0	4	1	0	1	10	2	0	21	
4:05 PM	0	1	1	0	2	2	0	0	0	8	0	0	1	7	3	1	26	
4:10 PM	2	0	2	0	3	1	0	0	0	4	0	0	1	9	0	0	22	
4:15 PM	0	2	1	0	1	0	1	0	0	9	0	0	2	6	0	0	22	
4:20 PM	0	1	2	0	6	1	0	0	0	12	0	0	1	8	5	0	36	
4:25 PM	0	3	1	0	2	2	0	0	1	10	0	0	1	7	3	0	30	
4:30 PM	0	0	2	0	0	0	1	0	2	9	1	0	4	13	2	0	34	
4:35 PM	0	0	2	0	0	1	1	0	2	6	0	0	2	10	0	0	24	
4:40 PM	1	1	4	0	0	1	1	0	2	8	0	0	1	12	0	0	31	
4:45 PM	0	2	5	0	2	0	1	0	2	4	1	0	1	9	1	0	28	
4:50 PM	0	1	2	0	1	0	0	0	3	8	1	0	6	9	1	0	32	
4:55 PM	0	1	2	0	2	1	1	0	0	8	0	0	2	8	2	0	27	333
5:00 PM	1	0	0	0	1	1	0	0	0	8	0	0	2	8	2	0	23	335
5:05 PM	2	0	1	0	1	1	0	0	0	10	0	0	6	10	0	0	31	340
5:10 PM	0	0	0	0	3	0	2	0	0	7	2	0	2	9	3	0	28	346
5:15 PM	0	2	4	0	1	0	1	0	1	6	0	0	3	10	1	0	29	353
5:20 PM	1	2	2	0	0	0	0	0	1	8	0	0	2	11	3	0	30	347
5:25 PM	0	0	1	0	1	2	0	0	0	5	0	0	5	11	3	0	28	345
5:30 PM	1	1	1	0	1	0	0	0	0	12	0	0	1	9	4	0	30	341
5:35 PM	0	0	1	0	2	0	0	0	5	6	0	0	2	11	2	0	29	346
5:40 PM	0	0	0	0	1	3	0	0	1	7	1	0	2	8	3	0	26	341
5:45 PM	0	3	0	0	1	3	0	0	0	6	1	0	4	8	2	0	28	341
5:50 PM	0	2	4	0	1	1	0	0	1	4	0	0	4	5	0	0	22	331
5:55 PM	0	0	0	0	1	0	1	0	2	12	0	0	2	8	1	0	27	331

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	20	0	32	12	4	0	12	124	4	0	24	112	40	0	400
Heavy Trucks	0	0	4		8	0	0		0	16	0		0	4	0		32
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 9/12/2019 3:20 PM

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

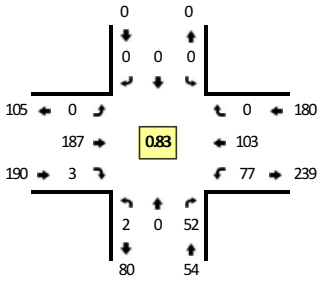
Type of peak hour being reported: Intersection Peak

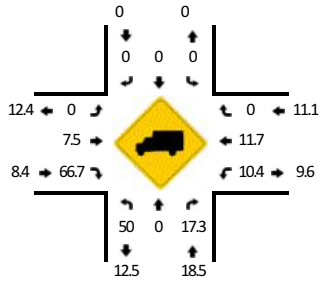
Method for determining peak hour: Total Entering Volume

LOCATION: 3. NE Delfel Rd S -- NE 179th St
CITY/STATE: Clark, WA

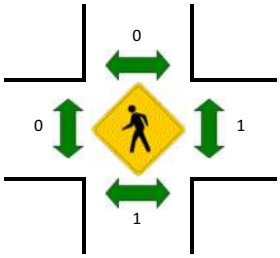
QC JOB #: 14982814
DATE: Thu, May 16 2019

Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

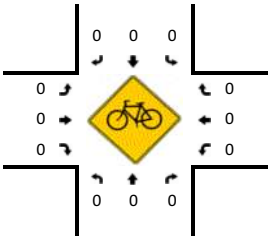


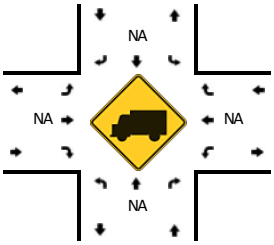


Quality Counts
DATA THAT DRIVES COMMUNITIES

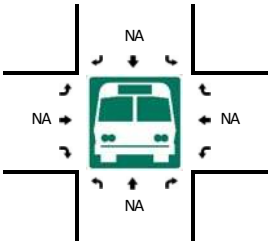












5-Min Count Period Beginning At	3. NE Delfel Rd S (Northbound)				3. NE Delfel Rd S (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	0	2	0	0	0	0	0	0	18	0	0	11	4	0	0	36	
7:05 AM	0	0	6	0	0	0	0	0	0	12	0	0	2	4	0	0	24	
7:10 AM	0	0	3	0	0	0	0	0	0	14	1	0	7	7	0	0	32	
7:15 AM	0	0	2	0	0	0	0	0	0	19	0	0	9	11	0	0	41	
7:20 AM	0	0	4	0	0	0	0	0	0	12	1	0	4	4	0	0	25	
7:25 AM	0	0	4	0	0	0	0	0	0	14	0	0	4	6	0	0	28	
7:30 AM	0	0	6	0	0	0	0	0	0	21	1	0	4	5	0	0	37	
7:35 AM	1	0	4	0	0	0	0	0	0	21	0	0	7	7	0	0	40	
7:40 AM	0	0	6	0	0	0	0	0	0	15	0	0	5	7	0	0	33	
7:45 AM	0	0	6	0	0	0	0	0	0	12	0	0	7	12	0	0	37	
7:50 AM	0	0	2	0	0	0	0	0	0	13	0	0	10	18	0	0	43	
7:55 AM	0	0	7	0	0	0	0	0	0	16	0	0	7	18	0	0	48	424
8:00 AM	1	0	5	0	0	0	0	0	0	9	1	0	4	6	0	0	26	414
8:05 AM	0	0	2	0	0	0	0	0	0	13	0	0	4	9	0	0	28	418
8:10 AM	0	0	8	0	0	0	0	0	0	9	1	0	2	7	0	0	27	413
8:15 AM	0	0	3	0	0	0	0	0	0	13	1	0	5	11	0	0	33	405
8:20 AM	0	0	4	0	0	0	0	0	0	11	0	0	4	8	0	0	27	407
8:25 AM	0	0	2	0	0	0	0	0	0	16	0	0	7	14	0	0	39	418
8:30 AM	0	0	3	0	0	0	0	0	0	11	0	0	5	15	0	0	34	415
8:35 AM	0	0	7	0	0	0	0	0	0	18	1	0	5	7	0	0	38	413
8:40 AM	0	0	5	0	0	0	0	0	0	10	2	0	2	9	0	0	28	408
8:45 AM	0	0	3	0	0	0	0	0	0	12	0	0	5	7	0	0	27	398
8:50 AM	0	0	2	0	0	0	0	0	0	15	1	0	5	8	0	0	31	386
8:55 AM	0	0	1	0	0	0	0	0	0	11	0	0	6	10	0	0	28	366

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	60	0	0	0	0	0	0	164	0	0	96	192	0	0	512
Heavy Trucks	0	0	8		0	0	0		0	24	0		12	24	0		68
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 9/12/2019 3:20 PM

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

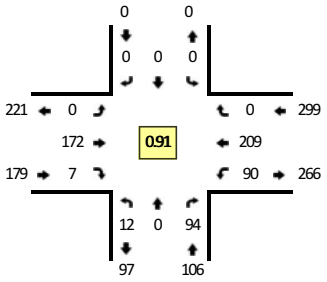
Type of peak hour being reported: Intersection Peak

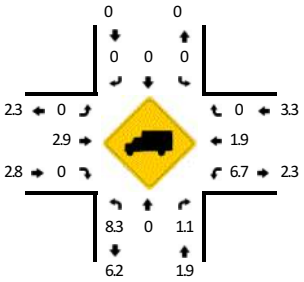
Method for determining peak hour: Total Entering Volume

LOCATION: 3. NE Delfel Rd S -- NE 179th St
CITY/STATE: Clark, WA

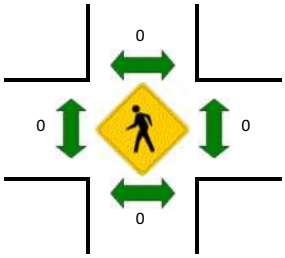
QC JOB #: 14982815
DATE: Wed, May 15 2019

Peak-Hour: 4:55 PM -- 5:55 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

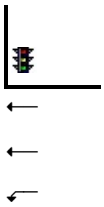


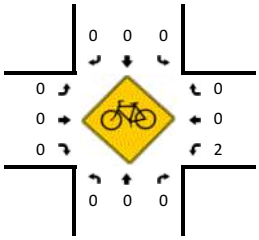


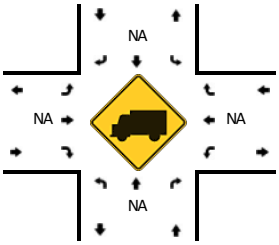
Quality Counts
DATA THAT DRIVES COMMUNITIES

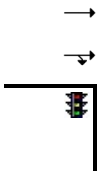


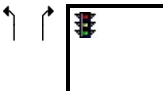


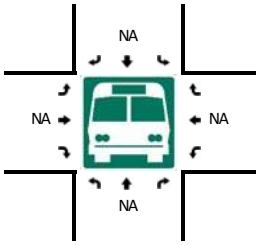












5-Min Count Period Beginning At	3. NE Delfel Rd S (Northbound)				3. NE Delfel Rd S (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	9	0	0	0	0	0	0	14	1	0	5	20	0	0	49	
4:05 PM	0	0	14	0	0	0	0	0	0	16	0	0	3	22	0	0	55	
4:10 PM	2	0	3	0	0	0	0	0	0	13	1	0	5	15	0	0	39	
4:15 PM	0	0	7	0	0	0	0	0	0	11	0	0	4	20	0	0	42	
4:20 PM	0	0	5	0	0	0	0	0	0	8	0	0	9	21	0	0	43	
4:25 PM	2	0	5	0	0	0	0	0	0	9	0	0	7	20	0	0	43	
4:30 PM	0	0	13	0	0	0	0	0	0	23	1	0	6	16	0	0	59	
4:35 PM	2	0	8	0	0	0	0	0	0	12	0	0	4	12	0	0	38	
4:40 PM	1	0	7	0	0	0	0	0	0	19	1	0	3	8	0	0	39	
4:45 PM	0	0	7	0	0	0	0	0	0	18	1	0	8	17	0	0	51	
4:50 PM	1	0	6	0	0	0	0	0	0	11	0	0	8	15	0	0	41	
4:55 PM	0	0	7	0	0	0	0	0	0	11	3	0	5	15	0	0	41	540
5:00 PM	0	0	5	0	0	0	0	0	0	20	0	0	6	15	0	0	46	537
5:05 PM	0	0	12	0	0	0	0	0	0	22	0	0	8	18	0	0	60	542
5:10 PM	1	0	7	0	0	0	0	0	0	19	1	0	2	17	0	0	47	550
5:15 PM	2	0	6	0	0	0	0	0	0	19	0	0	5	21	0	0	53	561
5:20 PM	1	0	13	0	0	0	0	0	0	11	1	0	8	16	0	0	50	568
5:25 PM	0	0	9	0	0	0	0	0	0	9	1	0	8	16	0	0	43	568
5:30 PM	3	0	7	0	0	0	0	0	0	22	0	0	13	18	0	0	63	572
5:35 PM	2	0	5	0	0	0	0	0	0	15	0	0	8	11	0	0	41	575
5:40 PM	0	0	10	0	0	0	0	0	0	5	1	0	7	17	0	0	40	576
5:45 PM	1	0	7	0	0	0	0	0	0	8	0	0	9	25	0	0	50	575
5:50 PM	2	0	6	0	0	0	0	0	0	11	0	0	11	20	0	0	50	584
5:55 PM	0	0	8	0	0	0	0	0	0	8	0	0	1	20	0	0	37	580

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	0	100	0	0	0	0	0	0	240	4	0	60	224	0	0	640
Heavy Trucks	4	0	4		0	0	0		0	4	0		16	12	0		40
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 9/12/2019 3:20 PM

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

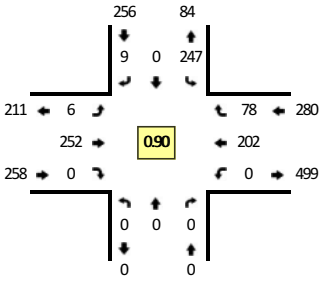
Type of peak hour being reported: User-Defined

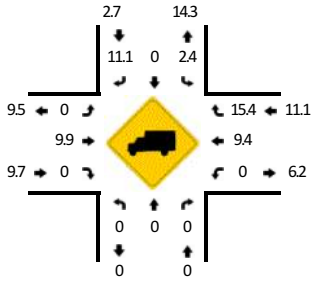
Method for determining peak hour: Total Entering Volume

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

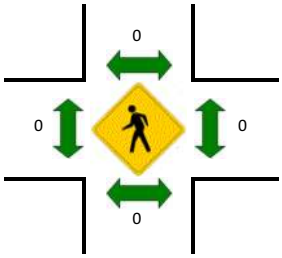
QC JOB #: 15065101
DATE: Thu, Sep 5 2019

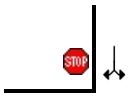
Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:20 AM -- 7:35 AM

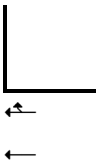


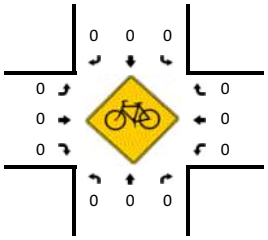


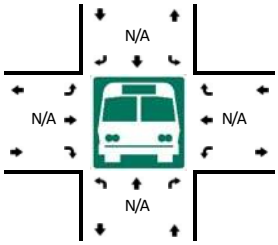
Quality Counts
DATA THAT DRIVES COMMUNITIES

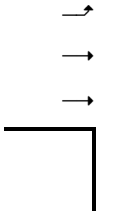




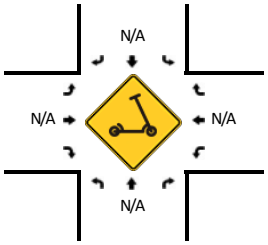












5-Min Count Period Beginning At	NE Delfel Rd (north) (Northbound)				NE Delfel Rd (north) (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	15	0	0	0	1	13	0	0	0	14	5	0	48	
7:05 AM	0	0	0	0	15	0	1	0	0	27	0	0	0	16	6	0	65	
7:10 AM	0	0	0	0	12	0	0	0	2	25	0	0	0	18	8	0	65	
7:15 AM	0	0	0	0	18	0	1	0	0	20	0	0	0	18	6	0	63	
7:20 AM	0	0	0	0	20	0	0	0	0	25	0	0	0	15	9	0	69	
7:25 AM	0	0	0	0	17	0	1	0	0	22	0	0	0	19	14	0	73	
7:30 AM	0	0	0	0	24	0	0	0	0	32	0	0	0	17	6	0	79	
7:35 AM	0	0	0	0	20	0	0	0	2	22	0	0	0	13	8	0	65	
7:40 AM	0	0	0	0	13	0	1	0	0	20	0	0	0	17	3	0	54	
7:45 AM	0	0	0	0	11	0	4	0	1	23	0	0	0	19	11	0	69	
7:50 AM	0	0	0	0	33	0	0	0	0	13	0	0	0	13	2	0	61	
7:55 AM	0	0	0	0	22	0	0	0	0	17	0	0	0	22	5	0	66	777
8:00 AM	0	0	0	0	36	0	1	0	1	17	0	0	0	14	2	0	71	800
8:05 AM	0	0	0	0	21	0	1	0	0	16	0	0	0	17	4	0	59	794
8:10 AM	0	0	0	0	13	0	0	0	0	21	0	0	0	16	7	0	57	786
8:15 AM	0	0	0	0	14	0	3	0	2	22	0	0	0	16	6	0	63	786
8:20 AM	0	0	0	0	13	0	2	0	0	11	0	0	0	16	7	0	49	766
8:25 AM	0	0	0	0	14	0	1	0	0	14	0	0	0	7	7	0	43	736
8:30 AM	0	0	0	0	13	0	0	0	1	25	0	0	0	11	7	0	57	714
8:35 AM	0	0	0	0	12	0	3	0	0	26	0	0	0	10	1	0	52	701
8:40 AM	0	0	0	0	16	0	0	0	2	17	0	0	0	10	3	0	48	695
8:45 AM	0	0	0	0	17	0	1	0	1	21	0	0	0	19	7	0	66	692
8:50 AM	0	0	0	0	25	0	2	0	2	8	0	0	0	18	10	0	65	696
8:55 AM	0	0	0	0	23	0	3	0	4	23	0	0	0	14	10	0	77	707

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	244	0	4	0	0	316	0	0	0	204	116	0	884
Heavy Trucks	0	0	0		12	0	0		0	28	0		0	32	12		84
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 12/10/2019 9:38 AM

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

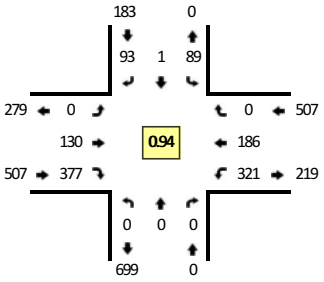
Type of peak hour being reported: User-Defined

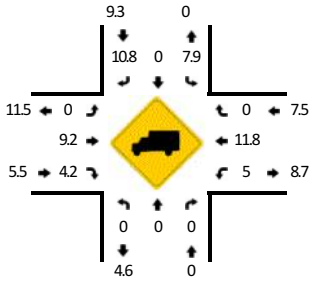
Method for determining peak hour: Total Entering Volume

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

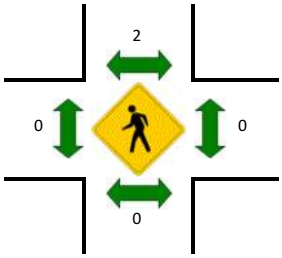
QC JOB #: 15065102
DATE: Thu, Sep 5 2019

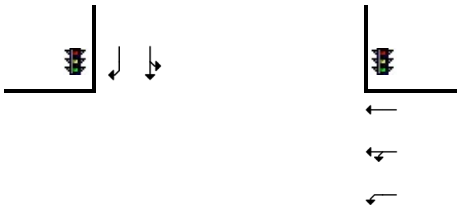
Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:25 AM -- 7:40 AM

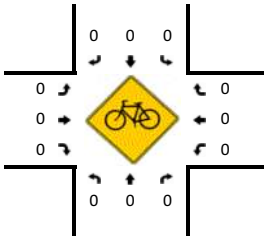


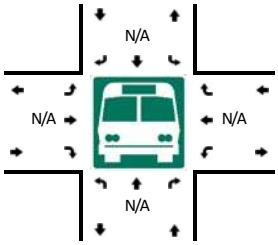


Quality Counts
DATA THAT DRIVES COMMUNITIES

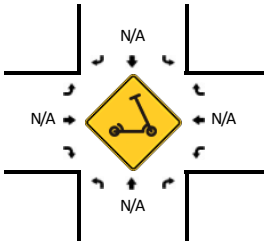












5-Min Count Period Beginning At	I-5 SB Ramps (Northbound)				I-5 SB Ramps (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	4	0	8	0	0	12	19	0	23	12	0	0	78	
7:05 AM	0	0	0	0	3	0	6	0	0	15	28	0	20	17	0	0	89	
7:10 AM	0	0	0	0	7	0	7	0	0	8	32	0	24	18	0	0	96	
7:15 AM	0	0	0	0	9	0	10	0	0	10	31	0	26	15	0	0	101	
7:20 AM	0	0	0	0	6	0	6	0	0	12	31	0	31	18	0	0	104	
7:25 AM	0	0	0	0	9	0	14	0	0	13	26	0	28	17	0	0	107	
7:30 AM	0	0	0	0	4	0	8	0	0	14	43	0	21	16	0	0	106	
7:35 AM	0	0	0	0	11	0	6	0	0	9	34	0	32	14	0	0	106	
7:40 AM	0	0	0	0	7	0	7	0	0	7	25	0	31	14	0	0	91	
7:45 AM	0	0	0	0	12	0	7	0	0	14	24	0	37	22	0	0	116	
7:50 AM	0	0	0	0	6	0	7	0	0	8	37	0	23	9	0	0	90	
7:55 AM	0	0	0	0	8	0	12	0	0	15	25	0	18	13	0	0	91	1175
8:00 AM	0	0	0	0	5	1	7	0	0	8	44	0	27	9	0	0	101	1198
8:05 AM	0	0	0	0	5	0	2	0	0	12	25	0	23	21	0	0	88	1197
8:10 AM	0	0	0	0	11	1	6	0	0	4	29	0	28	16	0	0	95	1196
8:15 AM	0	0	0	0	12	0	4	0	0	11	26	0	10	16	0	0	79	1174
8:20 AM	0	0	0	0	5	0	8	0	0	8	16	0	26	15	0	0	78	1148
8:25 AM	0	0	0	0	12	0	2	0	0	7	21	0	27	11	0	0	80	1121
8:30 AM	0	0	0	0	5	0	6	0	0	14	22	0	21	11	0	0	79	1094
8:35 AM	0	0	0	0	3	0	2	0	0	12	26	0	19	10	0	0	72	1060
8:40 AM	0	0	0	0	10	0	2	0	0	7	25	0	37	11	0	0	92	1061
8:45 AM	0	0	0	0	8	0	6	0	0	10	27	0	33	18	0	0	102	1047
8:50 AM	0	0	0	0	8	0	7	0	0	7	28	0	30	22	0	0	102	1059
8:55 AM	0	0	0	0	9	0	7	0	0	13	32	0	25	15	0	0	101	1069

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	96	0	112	0	0	144	412	0	324	188	0	0	1276
Heavy Trucks	0	0	0		12	0	16		0	8	16		16	24	0		92
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 12/10/2019 9:38 AM

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

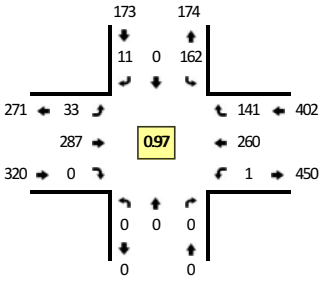
Type of peak hour being reported: User-Defined

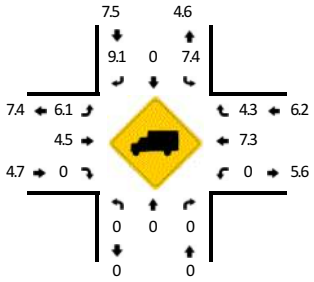
Method for determining peak hour: Total Entering Volume

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

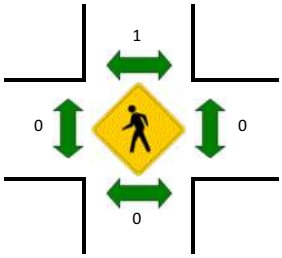
QC JOB #: 15065201
DATE: Thu, Sep 5 2019

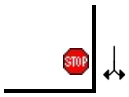
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:15 PM -- 4:30 PM

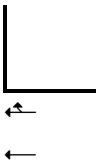


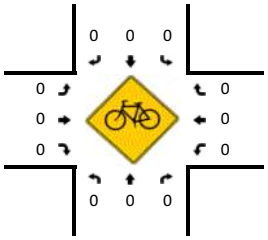


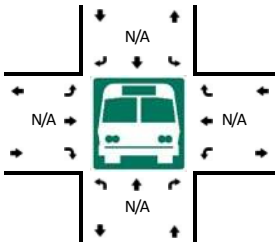
Quality Counts
DATA THAT DRIVES COMMUNITIES

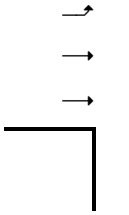




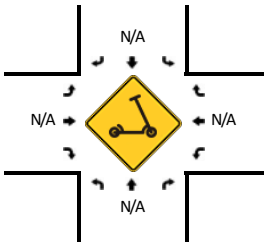












5-Min Count Period Beginning At	NE Delfel Rd (north) (Northbound)				NE Delfel Rd (north) (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	13	0	1	0	3	26	0	0	0	26	10	0	79	
4:05 PM	0	0	0	0	20	0	2	0	4	18	0	0	0	16	6	0	66	
4:10 PM	0	0	0	0	13	0	3	0	1	24	0	0	0	30	18	0	89	
4:15 PM	0	0	0	0	17	0	2	0	2	20	0	0	0	27	13	0	81	
4:20 PM	0	0	0	0	9	0	1	0	2	25	0	0	0	18	15	0	70	
4:25 PM	0	0	0	0	14	0	0	0	2	31	0	0	0	19	14	0	80	
4:30 PM	0	0	0	0	14	0	1	0	2	17	0	0	0	27	11	0	72	
4:35 PM	0	0	0	0	14	0	1	0	3	26	0	0	0	15	14	1	74	
4:40 PM	0	0	0	0	9	0	1	0	4	28	0	0	0	23	8	0	73	
4:45 PM	0	0	0	0	14	0	0	0	3	28	0	0	0	24	11	0	80	
4:50 PM	0	0	0	0	8	0	1	0	1	28	0	0	0	24	6	0	68	
4:55 PM	0	0	0	0	14	0	0	0	0	17	0	0	0	21	18	0	70	902
5:00 PM	0	0	0	0	14	0	1	0	3	30	0	0	0	17	14	0	79	902
5:05 PM	0	0	0	0	14	0	1	0	10	19	0	0	0	25	9	0	78	914
5:10 PM	0	0	0	0	21	0	2	0	1	18	0	0	0	20	8	0	70	895
5:15 PM	0	0	0	0	14	0	0	0	0	19	0	0	0	23	12	0	68	882
5:20 PM	0	0	0	0	14	0	0	0	0	13	0	0	0	20	11	0	58	870
5:25 PM	0	0	0	0	23	0	1	0	0	13	0	0	0	22	8	0	67	857
5:30 PM	0	0	0	0	15	0	1	0	2	15	0	0	0	24	5	0	62	847
5:35 PM	0	0	0	0	15	0	1	0	2	16	0	0	0	34	7	0	75	848
5:40 PM	0	0	0	0	21	0	0	0	0	15	0	0	0	19	8	0	63	838
5:45 PM	0	0	0	0	17	0	1	0	0	12	0	0	0	37	11	0	78	836
5:50 PM	0	0	0	0	15	0	1	0	1	25	0	0	0	15	9	0	66	834
5:55 PM	0	0	0	0	5	0	1	0	2	11	0	0	0	25	9	0	53	817

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	160	0	12	0	24	304	0	0	0	256	168	0	924
Heavy Trucks	0	0	0		28	0	4		0	20	0		0	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 12/10/2019 9:37 AM

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

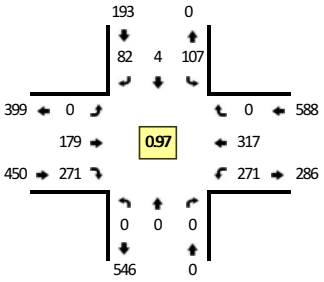
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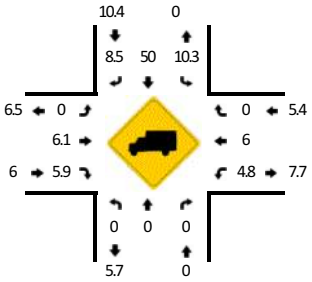
Method for determining peak hour: Total Entering Volume

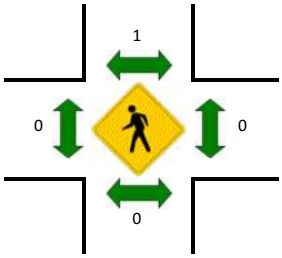
LOCATION: I-5 SB Ramps -- NE 179th St
CITY/STATE: Clark, WA

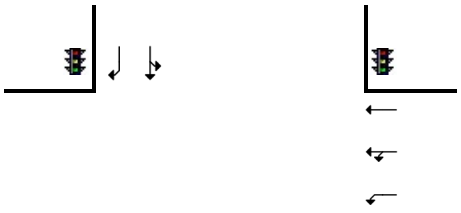
QC JOB #: 15065202
DATE: Thu, Sep 5 2019

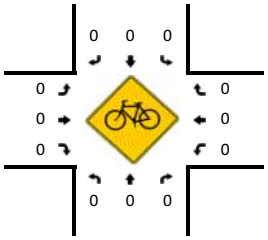
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:15 PM -- 4:30 PM

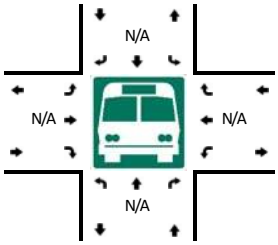




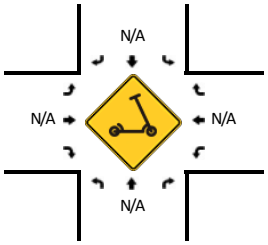












5-Min Count Period Beginning At	I-5 SB Ramps (Northbound)				I-5 SB Ramps (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	15	0	3	0	0	11	28	0	9	32	0	0	98	
4:05 PM	0	0	0	0	11	0	5	0	0	14	24	0	21	20	0	0	95	
4:10 PM	0	0	0	0	3	0	11	0	0	15	22	0	23	36	0	0	110	
4:15 PM	0	0	0	0	11	0	5	0	0	14	22	0	25	35	0	0	112	
4:20 PM	0	0	0	0	7	0	5	0	0	20	13	0	23	27	0	0	95	
4:25 PM	0	0	0	0	9	0	6	0	0	20	28	0	21	27	0	0	111	
4:30 PM	0	0	0	0	9	0	11	0	0	9	22	0	20	27	0	0	98	
4:35 PM	0	0	0	0	7	0	4	0	0	13	27	0	23	25	0	0	99	
4:40 PM	0	0	0	0	5	0	5	0	0	12	23	0	29	27	0	0	101	
4:45 PM	0	0	0	0	9	2	8	0	0	19	23	0	20	26	0	0	107	
4:50 PM	0	0	0	0	13	0	9	0	0	14	20	0	21	21	0	0	98	
4:55 PM	0	0	0	0	7	1	10	0	0	15	19	0	11	31	0	0	94	1218
5:00 PM	0	0	0	0	9	0	8	0	0	18	26	0	14	23	0	0	98	1218
5:05 PM	0	0	0	0	11	0	5	0	0	15	17	0	35	28	0	0	111	1234
5:10 PM	0	0	0	0	10	1	6	0	0	10	31	0	29	20	0	0	107	1231
5:15 PM	0	0	0	0	7	0	4	0	0	11	22	0	27	32	0	0	103	1222
5:20 PM	0	0	0	0	13	0	7	0	0	8	20	0	27	26	0	0	101	1228
5:25 PM	0	0	0	0	8	1	5	0	0	10	25	0	15	25	0	0	89	1206
5:30 PM	0	0	0	0	9	0	13	0	0	13	18	0	20	16	0	0	89	1197
5:35 PM	0	0	0	0	5	0	11	0	0	8	23	0	19	30	0	0	96	1194
5:40 PM	0	0	0	0	9	0	10	0	0	12	26	0	24	20	0	0	101	1194
5:45 PM	0	0	0	0	7	0	17	0	0	6	22	0	16	28	0	0	96	1183
5:50 PM	0	0	0	0	10	0	4	0	0	11	27	0	22	19	0	0	93	1178
5:55 PM	0	0	0	0	8	0	8	0	0	7	10	0	25	25	0	0	83	1167

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	108	0	64	0	0	216	252	0	276	356	0	0	1272
Heavy Trucks	0	0	0		16	0	4		0	20	28		8	12	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 12/10/2019 9:37 AM

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

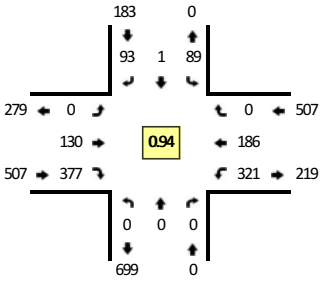
Type of peak hour being reported: User-Defined

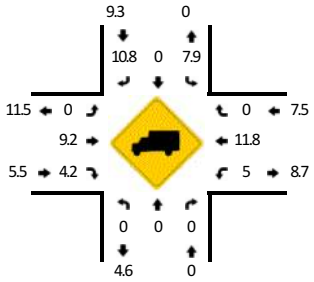
Method for determining peak hour: Total Entering Volume

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

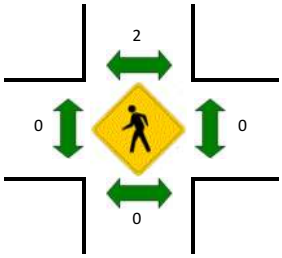
QC JOB #: 15065102
DATE: Thu, Sep 5 2019

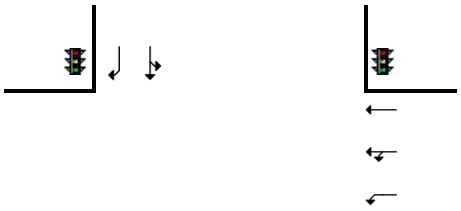
Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:25 AM -- 7:40 AM

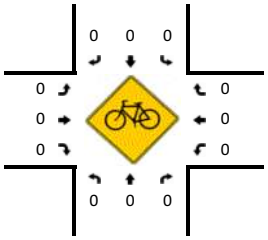


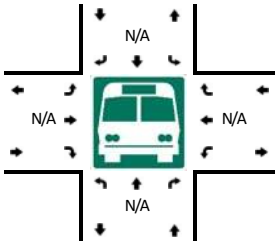


Quality Counts
DATA THAT DRIVES COMMUNITIES

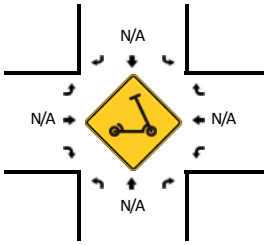












5-Min Count Period Beginning At	I-5 SB Ramps (Northbound)				I-5 SB Ramps (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	4	0	8	0	0	12	19	0	23	12	0	0	78	
7:05 AM	0	0	0	0	3	0	6	0	0	15	28	0	20	17	0	0	89	
7:10 AM	0	0	0	0	7	0	7	0	0	8	32	0	24	18	0	0	96	
7:15 AM	0	0	0	0	9	0	10	0	0	10	31	0	26	15	0	0	101	
7:20 AM	0	0	0	0	6	0	6	0	0	12	31	0	31	18	0	0	104	
7:25 AM	0	0	0	0	9	0	14	0	0	13	26	0	28	17	0	0	107	
7:30 AM	0	0	0	0	4	0	8	0	0	14	43	0	21	16	0	0	106	
7:35 AM	0	0	0	0	11	0	6	0	0	9	34	0	32	14	0	0	106	
7:40 AM	0	0	0	0	7	0	7	0	0	7	25	0	31	14	0	0	91	
7:45 AM	0	0	0	0	12	0	7	0	0	14	24	0	37	22	0	0	116	
7:50 AM	0	0	0	0	6	0	7	0	0	8	37	0	23	9	0	0	90	
7:55 AM	0	0	0	0	8	0	12	0	0	15	25	0	18	13	0	0	91	1175
8:00 AM	0	0	0	0	5	1	7	0	0	8	44	0	27	9	0	0	101	1198
8:05 AM	0	0	0	0	5	0	2	0	0	12	25	0	23	21	0	0	88	1197
8:10 AM	0	0	0	0	11	1	6	0	0	4	29	0	28	16	0	0	95	1196
8:15 AM	0	0	0	0	12	0	4	0	0	11	26	0	10	16	0	0	79	1174
8:20 AM	0	0	0	0	5	0	8	0	0	8	16	0	26	15	0	0	78	1148
8:25 AM	0	0	0	0	12	0	2	0	0	7	21	0	27	11	0	0	80	1121
8:30 AM	0	0	0	0	5	0	6	0	0	14	22	0	21	11	0	0	79	1094
8:35 AM	0	0	0	0	3	0	2	0	0	12	26	0	19	10	0	0	72	1060
8:40 AM	0	0	0	0	10	0	2	0	0	7	25	0	37	11	0	0	92	1061
8:45 AM	0	0	0	0	8	0	6	0	0	10	27	0	33	18	0	0	102	1047
8:50 AM	0	0	0	0	8	0	7	0	0	7	28	0	30	22	0	0	102	1059
8:55 AM	0	0	0	0	9	0	7	0	0	13	32	0	25	15	0	0	101	1069

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	96	0	112	0	0	144	412	0	324	188	0	0	1276
Heavy Trucks	0	0	0		12	0	16		0	8	16		16	24	0		92
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 12/10/2019 9:38 AM

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

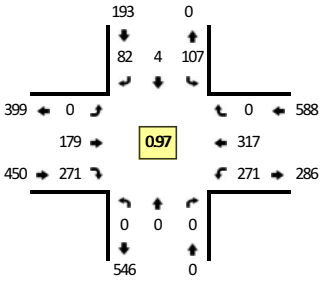
Type of peak hour being reported: User-Defined

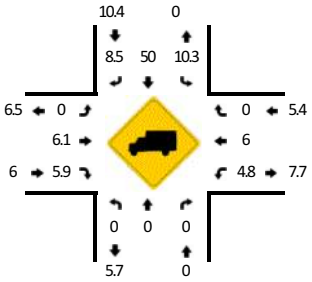
Method for determining peak hour: Total Entering Volume

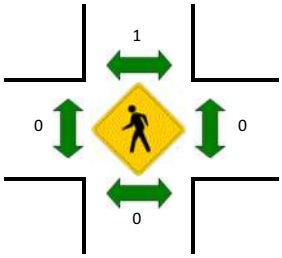
LOCATION: I-5 SB Ramps -- NE 179th St
CITY/STATE: Clark, WA

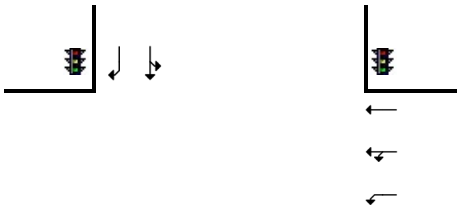
QC JOB #: 15065202
DATE: Thu, Sep 5 2019

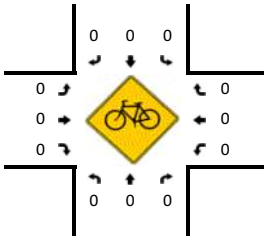
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:15 PM -- 4:30 PM

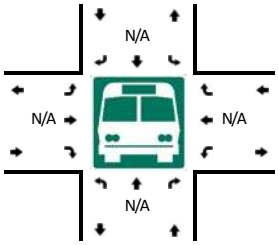




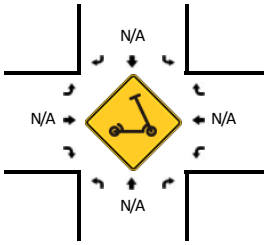












5-Min Count Period Beginning At	I-5 SB Ramps (Northbound)				I-5 SB Ramps (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	15	0	3	0	0	11	28	0	9	32	0	0	98	
4:05 PM	0	0	0	0	11	0	5	0	0	14	24	0	21	20	0	0	95	
4:10 PM	0	0	0	0	3	0	11	0	0	15	22	0	23	36	0	0	110	
4:15 PM	0	0	0	0	11	0	5	0	0	14	22	0	25	35	0	0	112	
4:20 PM	0	0	0	0	7	0	5	0	0	20	13	0	23	27	0	0	95	
4:25 PM	0	0	0	0	9	0	6	0	0	20	28	0	21	27	0	0	111	
4:30 PM	0	0	0	0	9	0	11	0	0	9	22	0	20	27	0	0	98	
4:35 PM	0	0	0	0	7	0	4	0	0	13	27	0	23	25	0	0	99	
4:40 PM	0	0	0	0	5	0	5	0	0	12	23	0	29	27	0	0	101	
4:45 PM	0	0	0	0	9	2	8	0	0	19	23	0	20	26	0	0	107	
4:50 PM	0	0	0	0	13	0	9	0	0	14	20	0	21	21	0	0	98	
4:55 PM	0	0	0	0	7	1	10	0	0	15	19	0	11	31	0	0	94	1218
5:00 PM	0	0	0	0	9	0	8	0	0	18	26	0	14	23	0	0	98	1218
5:05 PM	0	0	0	0	11	0	5	0	0	15	17	0	35	28	0	0	111	1234
5:10 PM	0	0	0	0	10	1	6	0	0	10	31	0	29	20	0	0	107	1231
5:15 PM	0	0	0	0	7	0	4	0	0	11	22	0	27	32	0	0	103	1222
5:20 PM	0	0	0	0	13	0	7	0	0	8	20	0	27	26	0	0	101	1228
5:25 PM	0	0	0	0	8	1	5	0	0	10	25	0	15	25	0	0	89	1206
5:30 PM	0	0	0	0	9	0	13	0	0	13	18	0	20	16	0	0	89	1197
5:35 PM	0	0	0	0	5	0	11	0	0	8	23	0	19	30	0	0	96	1194
5:40 PM	0	0	0	0	9	0	10	0	0	12	26	0	24	20	0	0	101	1194
5:45 PM	0	0	0	0	7	0	17	0	0	6	22	0	16	28	0	0	96	1183
5:50 PM	0	0	0	0	10	0	4	0	0	11	27	0	22	19	0	0	93	1178
5:55 PM	0	0	0	0	8	0	8	0	0	7	10	0	25	25	0	0	83	1167

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	108	0	64	0	0	216	252	0	276	356	0	0	1272
Heavy Trucks	0	0	0		16	0	4		0	20	28		8	12	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 12/10/2019 9:37 AM

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

Location: I-5 NB Ramps -- NE 179th St
Date: 2019/09/05
Site Code: 15065106

	NE 10th Ave Southbound					NE 179th St Westbound					I-5 NB Off Ramp Northbound					NE 179th St Eastbound					I-5 NB On Ramp Southeastbound				
Start Time	Right to I-5 NB On Ramp	Right	Thru	Left	U-Turn	Right	Right to I-5 NB On Ramp	Thru	Left	U-Turn	Right	Thru	Left to I-5 NB On Ramp	Left	U-Turn	Right	Thru	Left	Left to I-5 NB On Ramp	U-Turn	Right to NE 179th St	To I-5 NB Off Ramp	Left to NE 179th St	Left to NE 10th Ave	U-Turn
07:00 AM	0	13	0	2	0	2	3	16	0	0	10	8	0	7	0	0	8	2	8	0	0	0	0	0	0
07:05 AM	0	8	0	3	0	1	10	21	0	0	2	8	0	12	0	0	6	1	6	0	0	0	0	0	0
07:10 AM	0	13	0	6	0	4	7	12	0	0	6	10	0	12	0	0	8	2	8	0	0	0	0	0	0
07:15 AM	0	13	0	2	0	1	9	24	0	0	8	11	0	11	0	0	12	0	6	0	0	0	0	0	0
07:20 AM	0	12	0	2	0	7	5	20	0	0	6	22	0	10	0	0	7	1	11	0	0	0	0	0	0
07:25 AM	0	12	0	2	0	0	3	24	0	0	6	12	0	14	0	0	9	1	11	0	0	0	0	0	0
07:30 AM	0	7	0	6	0	7	7	27	0	0	8	18	0	10	0	0	11	1	7	0	0	0	0	0	0
07:35 AM	0	9	0	3	0	4	7	27	0	0	13	15	0	5	0	0	16	0	5	0	0	0	0	0	0
07:40 AM	1	24	0	4	0	7	4	17	0	0	10	13	0	9	0	0	7	0	6	0	0	0	0	0	0
07:45 AM	0	16	0	3	0	7	9	26	0	0	3	9	0	13	0	0	18	0	8	0	0	0	0	0	0
07:50 AM	0	12	0	9	0	4	6	17	0	0	7	10	0	3	0	0	7	0	7	0	0	0	0	0	0
07:55 AM	0	11	0	6	0	3	5	16	0	0	10	10	0	6	0	0	13	0	10	0	0	0	0	0	0
08:00 AM	0	16	0	5	0	0	6	12	0	0	12	9	1	7	0	0	10	1	3	0	0	0	0	0	0
08:05 AM	0	14	0	3	0	1	8	14	0	0	7	9	0	16	0	0	10	2	4	0	0	0	0	0	0
08:10 AM	0	9	0	4	0	1	6	24	0	0	8	4	0	8	0	0	12	1	4	0	0	0	0	0	0
08:15 AM	0	6	0	2	0	2	11	12	0	0	11	6	0	10	0	0	16	1	4	0	0	0	0	0	0
08:20 AM	0	17	0	2	0	0	5	18	0	0	10	15	0	9	0	0	13	0	2	0	0	0	0	0	0
08:25 AM	0	11	0	3	0	1	4	15	0	0	8	14	0	9	0	0	11	1	5	0	0	0	0	0	0
08:30 AM	0	5	0	2	0	5	8	18	0	0	1	12	1	11	0	0	14	1	5	0	0	0	0	0	0
08:35 AM	0	6	0	0	0	2	6	14	0	0	6	24	0	8	0	0	9	0	7	0	0	0	0	0	0
08:40 AM	0	17	0	4	0	5	9	27	0	0	9	12	0	6	0	0	13	0	2	0	0	0	0	0	0
08:45 AM	0	10	0	2	0	9	13	25	0	0	8	23	0	14	0	0	13	1	6	0	0	0	0	0	0
08:50 AM	0	14	0	6	0	9	7	26	0	0	4	20	0	13	0	0	13	0	4	0	0	0	0	0	0
08:55 AM	0	15	0	6	0	7	5	17	0	0	6	6	0	6	0	0	14	1	6	0	0	0	0	0	0
Total	**1**	**290**	**0**	**87**	**0**	**89**	**163**	**469**	**0**	**0**	**179**	**300**	**2**	**229**	**0**	**0**	**270**	**17**	**145**	**0**	**0**	**0**	**0**	**0**	**0**

Peak Hour: 7:10 AM - 8:10 AM
Peak 15: 7:35 AM - 7:50 AM
PHF: 0.90

Note: All Vehicles

Location: I-5 NB Ramps -- NE 179th St
Date: 2019/09/05
Site Code: 15065106

	NE 10th Ave Southbound					NE 179th St Westbound					I-5 NB Off Ramp Northbound					NE 179th St Eastbound					I-5 NB On Ramp Southeastbound				
Start Time	Right to I-5 NB On Ramp	Right	Thru	Left	U-Turn	Right	Right to I-5 NB On Ramp	Thru	Left	U-Turn	Right	Thru	Left to I-5 NB On Ramp	Left	U-Turn	Right	Thru	Left	Left to I-5 NB On Ramp	U-Turn	Right to NE 179th St	To I-5 NB Off Ramp	Left to NE 179th St	Left to NE 10th Ave	U-Turn
07:00 AM	0	13	0	1	0	1	3	14	0	0	10	7	0	7	0	0	7	2	8	0	0	0	0	0	0
07:05 AM	0	8	0	3	0	1	6	20	0	0	2	8	0	11	0	0	4	1	5	0	0	0	0	0	0
07:10 AM	0	13	0	5	0	2	7	12	0	0	6	9	0	12	0	0	7	2	8	0	0	0	0	0	0
07:15 AM	0	13	0	2	0	1	9	23	0	0	7	10	0	9	0	0	12	0	6	0	0	0	0	0	0
07:20 AM	0	12	0	1	0	5	4	20	0	0	6	22	0	7	0	0	6	1	9	0	0	0	0	0	0
07:25 AM	0	9	0	1	0	0	3	24	0	0	5	11	0	13	0	0	7	1	11	0	0	0	0	0	0
07:30 AM	0	7	0	6	0	6	7	26	0	0	8	17	0	8	0	0	11	1	7	0	0	0	0	0	0
07:35 AM	0	8	0	3	0	4	7	26	0	0	12	15	0	5	0	0	15	0	4	0	0	0	0	0	0
07:40 AM	0	22	0	4	0	6	4	15	0	0	10	11	0	7	0	0	7	0	5	0	0	0	0	0	0
07:45 AM	0	16	0	3	0	6	8	24	0	0	3	8	0	11	0	0	15	0	8	0	0	0	0	0	0
07:50 AM	0	12	0	9	0	4	6	17	0	0	6	10	0	3	0	0	7	0	6	0	0	0	0	0	0
07:55 AM	0	8	0	5	0	3	5	15	0	0	9	9	0	6	0	0	12	0	8	0	0	0	0	0	0
08:00 AM	0	13	0	4	0	0	6	11	0	0	11	8	0	7	0	0	9	1	2	0	0	0	0	0	0
08:05 AM	0	13	0	2	0	1	7	12	0	0	7	9	0	15	0	0	10	2	4	0	0	0	0	0	0
08:10 AM	0	9	0	4	0	0	6	24	0	0	8	4	0	6	0	0	11	1	4	0	0	0	0	0	0
08:15 AM	0	5	0	2	0	1	10	12	0	0	10	6	0	8	0	0	14	1	4	0	0	0	0	0	0
08:20 AM	0	16	0	2	0	0	3	16	0	0	10	13	0	8	0	0	12	0	1	0	0	0	0	0	0
08:25 AM	0	10	0	2	0	1	4	15	0	0	7	12	0	9	0	0	11	1	5	0	0	0	0	0	0
08:30 AM	0	5	0	2	0	4	8	18	0	0	1	12	0	10	0	0	13	1	3	0	0	0	0	0	0
08:35 AM	0	6	0	0	0	1	6	14	0	0	5	23	0	7	0	0	9	0	6	0	0	0	0	0	0
08:40 AM	0	17	0	4	0	4	6	25	0	0	9	12	0	6	0	0	12	0	2	0	0	0	0	0	0
08:45 AM	0	9	0	2	0	8	13	21	0	0	8	18	0	13	0	0	13	1	6	0	0	0	0	0	0
08:50 AM	0	13	0	5	0	8	6	23	0	0	4	17	0	11	0	0	12	0	4	0	0	0	0	0	0
08:55 AM	0	15	0	6	0	7	5	15	0	0	6	6	0	6	0	0	14	1	3	0	0	0	0	0	0
Total	**0**	**272**	**0**	**78**	**0**	**74**	**149**	**442**	**0**	**0**	**170**	**277**	**0**	**205**	**0**	**0**	**250**	**17**	**129**	**0**	**0**	**0**	**0**	**0**	**0**

Note: Passenger Vehilces

Quality Counts
DATA THAT DRIVES COMMUNITIES

Location: I-5 NB Ramps -- NE 179th St
Date: 2019/09/05
Site Code: 15065106

	NE 10th Ave Southbound					NE 179th St Westbound					I-5 NB Off Ramp Northbound					NE 179th St Eastbound					I-5 NB On Ramp Southeastbound				
Start Time	Right to I-5 NB On Ramp	Right	Thru	Left		Right	Right to I-5 NB On Ramp	Thru	Left		Right	Thru	Left to I-5 NB On Ramp	Left		Right	Thru	Left	Left to I-5 NB On Ramp		Right to NE 179th St	To I-5 NB Off Ramp	Left to NE 179th St	Left to NE 10th Ave	
07:00 AM	0	0	0	1		1	0	2	0		0	1	0	0		0	1	0	0		0	0	0	0	
07:05 AM	0	0	0	0		0	4	1	0		0	0	0	1		0	2	0	1		0	0	0	0	
07:10 AM	0	0	0	1		2	0	0	0		0	1	0	0		0	1	0	0		0	0	0	0	
07:15 AM	0	0	0	0		0	0	1	0		1	1	0	2		0	0	0	0		0	0	0	0	
07:20 AM	0	0	0	1		2	1	0	0		0	0	0	3		0	1	0	2		0	0	0	0	
07:25 AM	0	3	0	1		0	0	0	0		1	1	0	1		0	2	0	0		0	0	0	0	
07:30 AM	0	0	0	0		1	0	1	0		0	1	0	2		0	0	0	0		0	0	0	0	
07:35 AM	0	1	0	0		0	0	1	0		1	0	0	0		0	1	0	1		0	0	0	0	
07:40 AM	1	2	0	0		1	0	2	0		0	2	0	2		0	0	0	1		0	0	0	0	
07:45 AM	0	0	0	0		1	1	2	0		0	1	0	2		0	3	0	0		0	0	0	0	
07:50 AM	0	0	0	0		0	0	0	0		1	0	0	0		0	0	0	1		0	0	0	0	
07:55 AM	0	3	0	1		0	0	1	0		1	1	0	0		0	1	0	2		0	0	0	0	
08:00 AM	0	3	0	1		0	0	1	0		1	1	1	0		0	1	0	1		0	0	0	0	
08:05 AM	0	1	0	1		0	1	2	0		0	0	0	1		0	0	0	0		0	0	0	0	
08:10 AM	0	0	0	0		1	0	0	0		0	0	0	2		0	1	0	0		0	0	0	0	
08:15 AM	0	1	0	0		1	1	0	0		1	0	0	2		0	2	0	0		0	0	0	0	
08:20 AM	0	1	0	0		0	2	2	0		0	2	0	1		0	1	0	1		0	0	0	0	
08:25 AM	0	1	0	1		0	0	0	0		1	2	0	0		0	0	0	0		0	0	0	0	
08:30 AM	0	0	0	0		1	0	0	0		0	0	1	1		0	1	0	2		0	0	0	0	
08:35 AM	0	0	0	0		1	0	0	0		1	1	0	1		0	0	0	1		0	0	0	0	
08:40 AM	0	0	0	0		1	3	2	0		0	0	0	0		0	1	0	0		0	0	0	0	
08:45 AM	0	1	0	0		1	0	4	0		0	5	0	1		0	0	0	0		0	0	0	0	
08:50 AM	0	1	0	1		1	1	3	0		0	3	0	2		0	1	0	0		0	0	0	0	
08:55 AM	0	0	0	0		0	0	2	0		0	0	0	0		0	0	0	3		0	0	0	0	
Total	**1**	**18**	**0**	**9**		**15**	**14**	**27**	**0**		**9**	**23**	**2**	**24**		**0**	**20**	**0**	**16**		**0**	**0**	**0**	**0**	

Note: Heavy Vehicles

Quality Counts
DATA THAT DRIVES COMMUNITIES

Location: I-5 NB Ramps -- NE 179th St
Date: 2019/09/05
Site Code: 15065106

	NE 10th Ave Southbound					NE 179th St Westbound					I-5 NB Off Ramp Northbound					NE 179th St Eastbound					I-5 NB On Ramp Southeastbound				
Start Time	Right to I-5 NB On Ramp	Right	Thru	Left	Peds	Right	Right to I-5 NB On Ramp	Thru	Left	Peds	Right	Thru	Left to I-5 NB On Ramp	Left	Peds	Right	Thru	Left	Left to I-5 NB On Ramp	Peds	Right to NE 179th St	To I-5 NB Off Ramp	Left to NE 179th St	Left to NE 10th Ave	Peds
07:00 AM	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
07:05 AM	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
07:10 AM	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
07:15 AM	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
07:20 AM	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
07:25 AM	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
07:30 AM	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
07:35 AM	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
07:40 AM	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
07:45 AM	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
07:50 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:55 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	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
08:05 AM	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
08:10 AM	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
08:15 AM	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
08:20 AM	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
08:25 AM	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
08:30 AM	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
08:35 AM	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
08:40 AM	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
08:45 AM	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
08:50 AM	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
08:55 AM	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
Total	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**

Note: Bike, Peds

Quality Counts
DATA THAT DRIVES COMMUNITIES

Location: I-5 NB Ramps -- NE 179th St
Date: 2019/09/05
Site Code: 15065206

	NE 10th Ave Southbound					NE 179th St Westbound					I-5 NB Off Ramp Northbound					NE 179th St Eastbound					I-5 NB On Ramp Southeastbound				
Start Time	Right to I-5 NB On Ramp	Right	Thru	Left	U-Turn	Right	Right to I-5 NB On Ramp	Thru	Left	U-Turn	Right	Thru	Left to I-5 NB On Ramp	Left	U-Turn	Right	Thru	Left	Left to I-5 NB On Ramp	U-Turn	Right to NE 179th St	To I-5 NB Off Ramp	Left to NE 179th St	Left to NE 10th Ave	U-Turn
04:00 PM	0	10	0	5	0	6	6	13	0	0	17	35	0	16	0	0	18	2	3	0	0	0	0	0	0
04:05 PM	0	12	0	6	0	2	5	17	0	0	20	30	0	14	0	0	16	3	9	0	0	0	0	0	0
04:10 PM	0	8	0	4	0	3	6	16	0	0	15	30	2	33	0	0	7	1	9	0	0	0	0	0	0
04:15 PM	0	22	0	5	0	4	8	11	0	0	13	29	0	26	0	0	17	0	8	0	0	0	0	0	0
04:20 PM	0	16	0	7	0	4	12	19	0	0	15	30	0	25	0	0	16	0	8	0	0	0	0	0	0
04:25 PM	0	7	0	6	0	7	7	17	0	0	17	29	0	23	0	0	16	0	14	0	0	0	0	0	0
04:30 PM	0	15	0	2	0	9	5	17	0	0	21	27	0	12	0	0	12	0	9	0	0	0	0	0	0
04:35 PM	0	9	0	2	0	6	13	20	0	0	19	28	0	19	0	0	16	1	3	0	0	0	0	0	0
04:40 PM	0	16	0	6	0	8	9	20	0	0	19	32	0	19	0	0	9	0	8	0	0	0	0	0	0
04:45 PM	0	11	0	3	0	5	9	15	0	0	15	43	0	24	0	0	16	3	9	0	0	0	0	0	0
04:50 PM	0	14	0	1	0	3	4	12	0	0	16	27	0	12	0	0	16	1	7	0	0	0	0	0	0
04:55 PM	0	12	0	9	0	5	9	10	0	0	19	46	0	24	0	0	15	1	9	0	0	0	0	0	0
05:00 PM	0	6	0	2	0	4	9	18	0	0	19	38	0	17	0	0	8	1	12	0	0	0	0	0	0
05:05 PM	0	14	0	7	0	6	11	21	0	0	16	31	0	23	0	0	20	0	8	0	0	0	0	0	0
05:10 PM	0	17	0	3	0	7	7	18	0	0	28	45	0	18	0	0	20	0	5	0	0	0	0	0	0
05:15 PM	0	13	0	1	0	4	5	28	0	0	28	38	0	15	0	0	10	0	6	0	0	0	0	0	0
05:20 PM	0	16	0	2	0	7	11	17	0	0	16	38	0	19	0	0	19	0	3	0	0	0	0	0	0
05:25 PM	0	14	0	4	0	5	10	7	0	0	15	43	0	17	0	0	14	0	4	0	0	0	0	0	0
05:30 PM	0	10	0	2	0	9	5	20	0	0	16	30	0	15	0	0	10	0	9	0	0	0	0	0	0
05:35 PM	0	4	0	0	0	5	4	11	0	0	20	39	0	22	0	0	9	0	6	0	0	0	0	0	0
05:40 PM	0	13	0	3	0	5	9	16	0	0	17	33	0	18	0	0	14	0	8	0	0	0	0	0	0
05:45 PM	0	10	0	3	0	7	8	13	0	0	17	33	0	20	0	0	8	0	3	0	0	0	0	0	0
05:50 PM	0	12	0	3	0	7	7	19	0	0	16	28	0	12	0	0	15	1	5	0	0	0	0	0	0
05:55 PM	0	13	0	0	0	5	10	17	0	0	13	29	0	16	0	0	13	0	4	0	0	0	0	0	0
Total	**0**	**294**	**0**	**86**	**0**	**133**	**189**	**392**	**0**	**0**	**427**	**811**	**2**	**459**	**0**	**0**	**334**	**14**	**169**	**0**	**0**	**0**	**0**	**0**	**0**

Peak Hour: 4:15 PM - 5:15 PM - Interchange System Peak
Peak 15: 5:00 PM - 5:15 PM
PHF: 0.94

Note: All Vehicles

Quality Counts
DATA THAT DRIVES COMMUNITIES

Location: I-5 NB Ramps -- NE 179th St
Date: 2019/09/05
Site Code: 15065206

	NE 10th Ave Southbound					NE 179th St Westbound					I-5 NB Off Ramp Northbound					NE 179th St Eastbound					I-5 NB On Ramp Southeastbound				
Start Time	Right to I-5 NB On Ramp	Right	Thru	Left	U-Turn	Right	Right to I-5 NB On Ramp	Thru	Left	U-Turn	Right	Thru	Left to I-5 NB On Ramp	Left	U-Turn	Right	Thru	Left	Left to I-5 NB On Ramp	U-Turn	Right to NE 179th St	To I-5 NB Off Ramp	Left to NE 179th St	Left to NE 10th Ave	U-Turn
04:00 PM	0	9	0	5	0	6	6	13	0	0	17	31	0	14	0	0	17	2	3	0	0	0	0	0	0
04:05 PM	0	11	0	5	0	2	5	17	0	0	20	29	0	13	0	0	16	3	9	0	0	0	0	0	0
04:10 PM	0	7	0	4	0	3	6	15	0	0	13	29	2	30	0	0	7	1	9	0	0	0	0	0	0
04:15 PM	0	21	0	5	0	3	8	10	0	0	13	29	0	26	0	0	15	0	7	0	0	0	0	0	0
04:20 PM	0	15	0	7	0	3	11	19	0	0	15	27	0	24	0	0	16	0	6	0	0	0	0	0	0
04:25 PM	0	7	0	6	0	7	7	17	0	0	17	28	0	23	0	0	12	0	14	0	0	0	0	0	0
04:30 PM	0	15	0	2	0	8	4	17	0	0	21	24	0	11	0	0	12	0	8	0	0	0	0	0	0
04:35 PM	0	9	0	1	0	6	13	20	0	0	19	26	0	19	0	0	16	1	3	0	0	0	0	0	0
04:40 PM	0	14	0	6	0	7	9	20	0	0	19	30	0	15	0	0	9	0	8	0	0	0	0	0	0
04:45 PM	0	11	0	3	0	4	9	15	0	0	13	41	0	23	0	0	14	3	9	0	0	0	0	0	0
04:50 PM	0	12	0	1	0	3	4	12	0	0	14	27	0	11	0	0	15	1	7	0	0	0	0	0	0
04:55 PM	0	12	0	9	0	5	9	9	0	0	19	44	0	23	0	0	11	1	9	0	0	0	0	0	0
05:00 PM	0	6	0	2	0	4	9	18	0	0	19	36	0	16	0	0	8	1	12	0	0	0	0	0	0
05:05 PM	0	13	0	7	0	5	11	19	0	0	16	31	0	21	0	0	18	0	8	0	0	0	0	0	0
05:10 PM	0	16	0	3	0	7	7	17	0	0	27	44	0	17	0	0	18	0	5	0	0	0	0	0	0
05:15 PM	0	13	0	1	0	3	5	28	0	0	28	36	0	15	0	0	10	0	5	0	0	0	0	0	0
05:20 PM	0	13	0	2	0	7	11	17	0	0	16	36	0	18	0	0	17	0	3	0	0	0	0	0	0
05:25 PM	0	14	0	4	0	5	10	7	0	0	15	42	0	17	0	0	14	0	4	0	0	0	0	0	0
05:30 PM	0	10	0	2	0	8	5	19	0	0	15	26	0	14	0	0	10	0	8	0	0	0	0	0	0
05:35 PM	0	3	0	0	0	5	4	10	0	0	20	36	0	22	0	0	9	0	6	0	0	0	0	0	0
05:40 PM	0	13	0	3	0	5	8	16	0	0	17	30	0	17	0	0	14	0	8	0	0	0	0	0	0
05:45 PM	0	10	0	3	0	7	8	13	0	0	17	31	0	18	0	0	8	0	3	0	0	0	0	0	0
05:50 PM	0	12	0	3	0	7	7	19	0	0	15	27	0	12	0	0	15	1	5	0	0	0	0	0	0
05:55 PM	0	12	0	0	0	5	10	17	0	0	12	28	0	16	0	0	13	0	4	0	0	0	0	0	0
Total	**0**	**278**	**0**	**84**	**0**	**125**	**186**	**384**	**0**	**0**	**417**	**768**	**2**	**435**	**0**	**0**	**314**	**14**	**163**	**0**	**0**	**0**	**0**	**0**	**0**

Note: Passenger Vehilces

Quality Counts
DATA THAT DRIVES COMMUNITIES

Location: I-5 NB Ramps -- NE 179th St
Date: 2019/09/05
Site Code: 15065206

	NE 10th Ave Southbound					NE 179th St Westbound					I-5 NB Off Ramp Northbound					NE 179th St Eastbound					I-5 NB On Ramp Southeastbound				
Start Time	Right to I-5 NB On Ramp	Right	Thru	Left		Right	Right to I-5 NB On Ramp	Thru	Left		Right	Thru	Left to I-5 NB On Ramp	Left		Right	Thru	Left	Left to I-5 NB On Ramp		Right to NE 179th St	To I-5 NB Off Ramp	Left to NE 179th St	Left to NE 10th Ave	
04:00 PM	0	1	0	0		0	0	0	0		0	4	0	2		0	1	0	0		0	0	0	0	
04:05 PM	0	1	0	1		0	0	0	0		0	1	0	1		0	0	0	0		0	0	0	0	
04:10 PM	0	1	0	0		0	0	1	0		2	1	0	3		0	0	0	0		0	0	0	0	
04:15 PM	0	1	0	0		1	0	1	0		0	0	0	0		0	2	0	1		0	0	0	0	
04:20 PM	0	1	0	0		1	1	0	0		0	3	0	1		0	0	0	2		0	0	0	0	
04:25 PM	0	0	0	0		0	0	0	0		0	1	0	0		0	4	0	0		0	0	0	0	
04:30 PM	0	0	0	0		1	1	0	0		0	3	0	1		0	0	0	1		0	0	0	0	
04:35 PM	0	0	0	1		0	0	0	0		0	2	0	0		0	0	0	0		0	0	0	0	
04:40 PM	0	2	0	0		1	0	0	0		0	2	0	4		0	0	0	0		0	0	0	0	
04:45 PM	0	0	0	0		1	0	0	0		2	2	0	1		0	2	0	0		0	0	0	0	
04:50 PM	0	2	0	0		0	0	0	0		2	0	0	1		0	1	0	0		0	0	0	0	
04:55 PM	0	0	0	0		0	0	1	0		0	2	0	1		0	4	0	0		0	0	0	0	
05:00 PM	0	0	0	0		0	0	0	0		0	2	0	1		0	0	0	0		0	0	0	0	
05:05 PM	0	1	0	0		1	0	2	0		0	0	0	2		0	2	0	0		0	0	0	0	
05:10 PM	0	1	0	0		0	0	1	0		1	1	0	1		0	2	0	0		0	0	0	0	
05:15 PM	0	0	0	0		1	0	0	0		0	2	0	0		0	0	0	1		0	0	0	0	
05:20 PM	0	3	0	0		0	0	0	0		0	2	0	1		0	2	0	0		0	0	0	0	
05:25 PM	0	0	0	0		0	0	0	0		0	1	0	0		0	0	0	0		0	0	0	0	
05:30 PM	0	0	0	0		1	0	1	0		1	4	0	1		0	0	0	1		0	0	0	0	
05:35 PM	0	1	0	0		0	0	1	0		0	3	0	0		0	0	0	0		0	0	0	0	
05:40 PM	0	0	0	0		0	1	0	0		0	3	0	1		0	0	0	0		0	0	0	0	
05:45 PM	0	0	0	0		0	0	0	0		0	2	0	2		0	0	0	0		0	0	0	0	
05:50 PM	0	0	0	0		0	0	0	0		1	1	0	0		0	0	0	0		0	0	0	0	
05:55 PM	0	1	0	0		0	0	0	0		1	1	0	0		0	0	0	0		0	0	0	0	
Total	**0**	**16**	**0**	**2**		**8**	**3**	**8**	**0**		**10**	**43**	**0**	**24**		**0**	**20**	**0**	**6**		**0**	**0**	**0**	**0**	

Note: Heavy Vehicles

Quality Counts
DATA THAT DRIVES COMMUNITIES

Location: I-5 NB Ramps -- NE 179th St
Date: 2019/09/05
Site Code: 15065206

	NE 10th Ave Southbound					NE 179th St Westbound					I-5 NB Off Ramp Northbound					NE 179th St Eastbound					I-5 NB On Ramp Southeastbound				
Start Time	Right to I-5 NB On Ramp	Right	Thru	Left	Peds	Right	Right to I-5 NB On Ramp	Thru	Left	Peds	Right	Thru	Left to I-5 NB On Ramp	Left	Peds	Right	Thru	Left	Left to I-5 NB On Ramp	Peds	Right to NE 179th St	To I-5 NB Off Ramp	Left to NE 179th St	Left to NE 10th Ave	Peds
04:00 PM	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
04:05 PM	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
04:10 PM	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
04:15 PM	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
04:20 PM	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
04:25 PM	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
04:30 PM	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
04:35 PM	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
04:40 PM	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
04:45 PM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:50 PM	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
04:55 PM	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
05:00 PM	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
05:05 PM	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
05:10 PM	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
05:15 PM	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
05:20 PM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:25 PM	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
05:30 PM	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
05:35 PM	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
05:40 PM	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
05:45 PM	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
05:50 PM	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
05:55 PM	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
Total	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**

Note: Bike, Peds

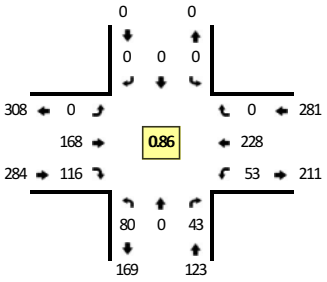
Type of peak hour being reported: Intersection Peak

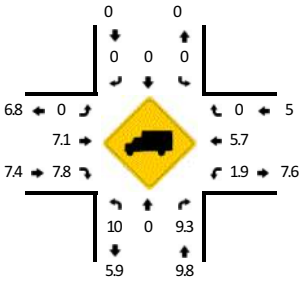
Method for determining peak hour: Total Entering Volume

LOCATION: NE 15th Ave -- NE 179th St
CITY/STATE: Clark, WA

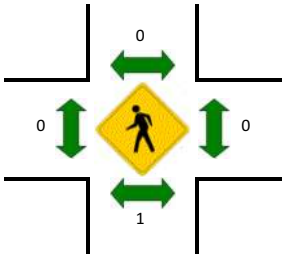
QC JOB #: 15065103
DATE: Thu, Sep 5 2019

Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

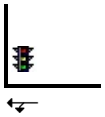


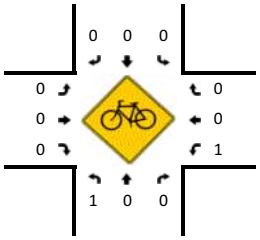


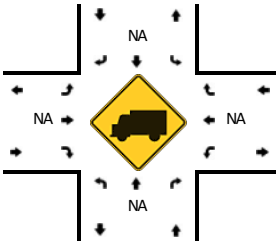
Quality Counts
DATA THAT DRIVES COMMUNITIES

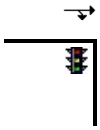


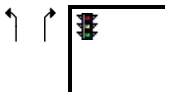


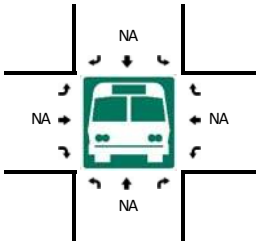












5-Min Count Period Beginning At	NE 15th Ave (Northbound)				NE 15th Ave (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	3	0	3	0	0	0	0	0	0	7	10	0	3	13	0	0	39	
7:05 AM	6	0	1	0	0	0	0	0	0	6	4	0	0	27	0	0	44	
7:10 AM	7	0	2	0	0	0	0	0	0	10	7	0	6	18	0	0	50	
7:15 AM	7	0	2	0	0	0	0	0	0	13	9	0	2	25	0	0	58	
7:20 AM	8	0	4	0	0	0	0	0	0	8	7	0	3	19	0	0	49	
7:25 AM	4	0	2	0	0	0	0	0	0	4	4	0	5	17	0	0	36	
7:30 AM	14	0	3	0	0	0	0	0	0	16	7	0	8	27	0	0	75	
7:35 AM	10	0	4	0	0	0	0	0	0	21	12	0	2	21	0	0	70	
7:40 AM	5	0	2	0	0	0	0	0	0	9	11	0	5	22	0	0	54	
7:45 AM	7	0	3	0	0	0	0	0	0	11	14	0	5	27	0	0	67	
7:50 AM	7	0	3	0	0	0	0	0	0	12	8	0	7	18	0	0	55	
7:55 AM	10	0	4	0	0	0	0	0	0	12	11	0	5	11	0	0	53	650
8:00 AM	5	0	1	0	0	0	0	0	0	13	12	0	3	13	0	0	47	658
8:05 AM	0	0	5	0	0	0	0	0	0	14	6	0	8	20	0	0	53	667
8:10 AM	9	0	5	0	0	0	0	0	0	11	9	0	4	18	0	0	56	673
8:15 AM	6	0	4	0	0	0	0	0	0	19	11	0	0	18	0	0	58	673
8:20 AM	4	0	5	0	0	0	0	0	0	16	5	0	4	19	0	0	53	677
8:25 AM	3	0	4	0	0	0	0	0	0	14	10	0	2	14	0	0	47	688
8:30 AM	9	0	4	0	0	0	0	0	0	8	5	0	4	20	0	0	50	663
8:35 AM	10	0	2	0	0	0	0	0	0	12	5	0	5	13	0	0	47	640
8:40 AM	6	0	2	0	0	0	0	0	0	10	12	0	5	43	0	0	78	664
8:45 AM	8	0	3	0	0	0	0	0	0	15	10	0	10	31	0	0	77	674
8:50 AM	9	0	4	0	0	0	0	0	0	12	9	0	4	20	0	0	58	677
8:55 AM	9	0	3	0	0	0	0	0	0	15	9	0	4	22	0	0	62	686

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	116	0	36	0	0	0	0	0	0	184	120	0	60	280	0	0	796
Heavy Trucks	16	0	4		0	0	0		0	12	12		0	12	0		56
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 9/13/2019 5:19 PM

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

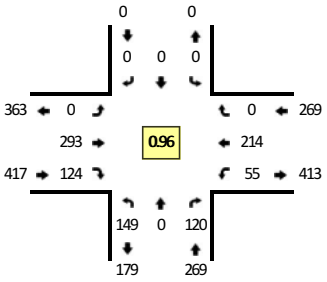
Type of peak hour being reported: Intersection Peak

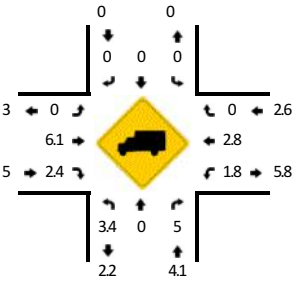
Method for determining peak hour: Total Entering Volume

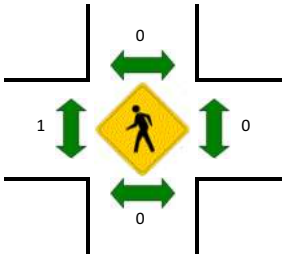
LOCATION: NE 15th Ave -- NE 179th St
CITY/STATE: Clark, WA

QC JOB #: 15065203
DATE: Thu, Sep 5 2019

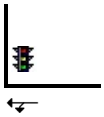
Peak-Hour: 4:25 PM -- 5:25 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

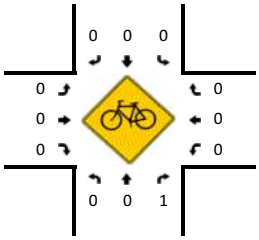


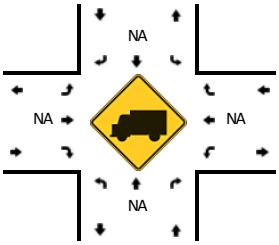


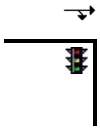


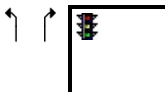


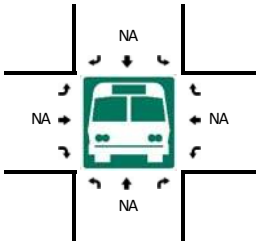












5-Min Count Period Beginning At	NE 15th Ave (Northbound)				NE 15th Ave (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	10	0	14	0	0	0	0	0	0	20	12	0	6	10	0	0	72	
4:05 PM	10	0	15	0	0	0	0	0	0	27	13	0	2	16	0	0	83	
4:10 PM	9	0	7	0	0	0	0	0	0	16	4	0	2	16	0	0	54	
4:15 PM	5	0	9	0	0	0	0	0	0	28	13	0	5	21	0	0	81	
4:20 PM	14	0	3	0	0	0	0	0	0	19	11	0	3	19	0	0	69	
4:25 PM	13	0	8	0	0	0	0	0	0	27	14	0	7	14	0	0	83	
4:30 PM	20	0	5	0	0	0	0	0	0	20	8	0	8	19	0	0	80	
4:35 PM	9	0	11	0	0	0	0	0	0	25	12	0	5	16	0	0	78	
4:40 PM	12	0	12	0	0	0	0	0	0	17	12	0	4	24	0	0	81	
4:45 PM	11	0	10	0	0	0	0	0	0	20	9	0	6	20	0	0	76	
4:50 PM	9	0	10	0	0	0	0	0	0	28	9	0	5	14	0	0	75	
4:55 PM	15	0	10	0	0	0	0	0	0	24	12	0	3	11	0	0	75	907
5:00 PM	10	0	15	0	0	0	0	0	0	26	7	0	7	18	0	0	83	918
5:05 PM	10	0	10	0	0	0	0	0	0	25	9	0	1	22	0	0	77	912
5:10 PM	12	0	9	0	0	0	0	0	0	35	12	0	4	18	0	0	90	948
5:15 PM	15	0	9	0	0	0	0	0	0	17	13	0	2	21	0	0	77	944
5:20 PM	13	0	11	0	0	0	0	0	0	29	7	0	3	17	0	0	80	955
5:25 PM	14	0	10	0	0	0	0	0	0	23	13	0	4	11	0	0	75	947
5:30 PM	8	0	7	0	0	0	0	0	0	19	5	0	5	19	0	0	63	930
5:35 PM	11	0	4	0	0	0	0	0	0	27	5	0	3	9	0	0	59	911
5:40 PM	3	0	11	0	0	0	0	0	0	16	11	0	6	29	0	0	76	906
5:45 PM	12	0	5	0	0	0	0	0	0	20	4	0	2	17	0	0	60	890
5:50 PM	12	0	7	0	0	0	0	0	0	18	8	0	3	17	0	0	65	880
5:55 PM	9	0	5	0	0	0	0	0	0	22	4	0	2	12	0	0	54	859

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	128	0	136	0	0	0	0	0	0	344	112	0	48	232	0	0	1000
Heavy Trucks	4	0	8		0	0	0		0	8	12		0	8	0		40
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

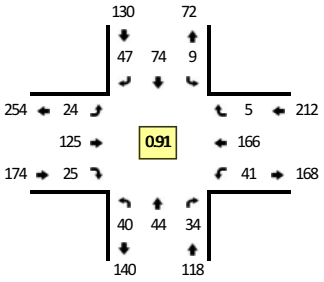
Report generated on 9/13/2019 5:22 PM

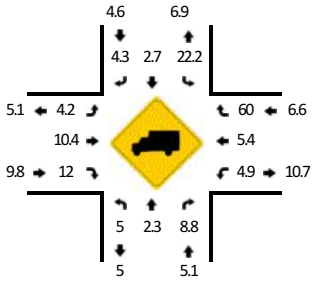
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

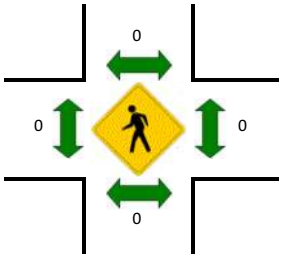
LOCATION: 8. NE 29th Ave -- NE 179th St | **QC JOB #:** 14982824
CITY/STATE: Clark, WA | **DATE:** Thu, May 16 2019

Peak-Hour: 7:55 AM -- 8:55 AM
Peak 15-Min: 8:30 AM -- 8:45 AM

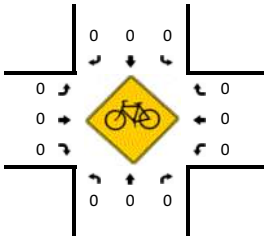


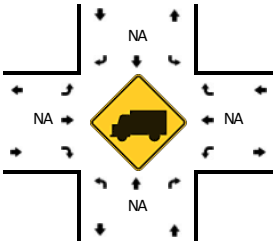


Quality Counts
DATA THAT DRIVES COMMUNITIES

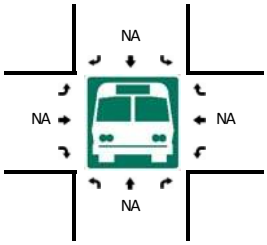












5-Min Count Period Beginning At	8. NE 29th Ave (Northbound)				8. NE 29th Ave (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	0	2	0	0	3	2	0	0	5	1	0	0	12	0	0	26	
7:05 AM	5	1	1	0	0	4	8	0	0	6	4	0	0	12	0	0	41	
7:10 AM	3	3	2	0	1	5	0	0	1	6	3	0	2	14	0	0	40	
7:15 AM	3	5	1	0	0	5	3	0	1	10	2	0	0	9	0	0	39	
7:20 AM	2	5	1	0	0	2	4	0	0	6	2	0	4	9	2	0	37	
7:25 AM	3	5	1	0	1	4	3	0	2	4	0	0	2	13	0	0	38	
7:30 AM	4	4	4	0	2	7	4	0	3	10	1	0	1	12	0	0	52	
7:35 AM	3	9	3	0	1	2	3	0	3	9	1	0	2	12	2	0	50	
7:40 AM	6	7	2	0	0	4	0	0	1	7	2	0	1	16	1	0	47	
7:45 AM	7	9	4	0	1	4	5	0	2	13	0	0	3	11	0	0	59	
7:50 AM	2	5	2	0	0	9	10	0	4	14	2	0	1	6	1	0	56	
7:55 AM	3	4	2	0	0	6	3	0	3	10	0	0	4	3	0	0	38	523
8:00 AM	1	1	3	0	2	3	3	0	3	11	3	0	4	18	0	0	52	549
8:05 AM	5	4	2	0	1	3	5	0	0	13	1	0	2	9	0	0	45	553
8:10 AM	1	4	5	0	0	9	5	0	3	10	3	0	0	18	1	0	59	572
8:15 AM	2	4	3	0	0	8	4	0	3	12	3	1	1	9	0	0	50	583
8:20 AM	2	3	5	0	2	4	6	0	2	11	0	0	3	11	3	0	52	598
8:25 AM	6	0	2	0	0	4	5	0	1	6	4	0	4	14	0	0	46	606
8:30 AM	6	5	2	0	0	4	3	0	2	14	2	0	2	23	0	0	63	617
8:35 AM	2	5	3	0	2	7	5	0	1	10	2	0	10	13	0	0	60	627
8:40 AM	1	7	5	0	1	6	4	0	2	6	2	0	2	16	0	0	52	632
8:45 AM	6	3	1	0	0	9	3	0	2	9	0	0	9	17	0	0	59	632
8:50 AM	5	4	1	0	1	11	1	0	1	13	5	0	0	15	1	0	58	634
8:55 AM	3	8	1	0	2	2	1	0	1	6	4	0	2	3	3	0	36	632

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	36	68	40	0	12	68	48	0	20	120	24	0	56	208	0	0	700
Heavy Trucks	4	0	12		4	4	4		0	16	0		4	12	0		60
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

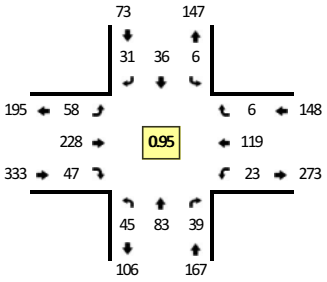
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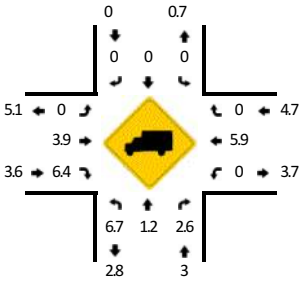
Report generated on 9/12/2019 3:20 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

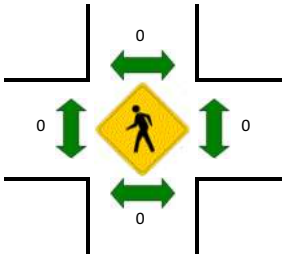
LOCATION: 8. NE 29th Ave -- NE 179th St | **QC JOB #:** 14982825
CITY/STATE: Clark, WA | **DATE:** Thu, May 16 2019

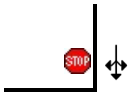
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 4:55 PM -- 5:10 PM

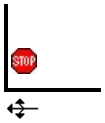


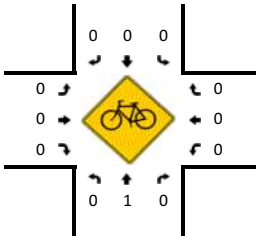


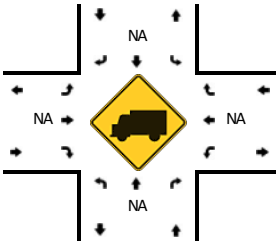
Quality Counts
DATA THAT DRIVES COMMUNITIES

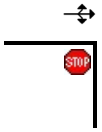


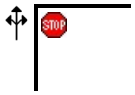


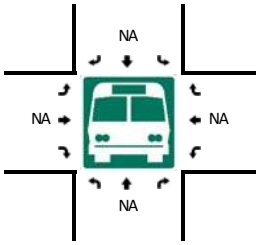












5-Min Count Period Beginning At	8. NE 29th Ave (Northbound)				8. NE 29th Ave (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	6	2	0	0	3	3	0	4	19	7	0	3	15	0	0	64	
4:05 PM	3	12	2	0	1	2	2	0	5	16	4	0	1	13	0	0	61	
4:10 PM	4	9	2	0	1	4	4	0	3	21	4	0	3	14	0	0	69	
4:15 PM	2	4	3	0	1	4	0	0	3	19	3	0	2	13	2	0	56	
4:20 PM	4	8	3	0	0	2	2	0	3	15	4	0	3	9	0	0	53	
4:25 PM	3	4	4	0	2	2	1	0	6	14	2	0	1	15	1	0	55	
4:30 PM	1	4	3	0	0	3	2	0	1	18	4	0	1	11	1	0	49	
4:35 PM	1	6	3	0	0	4	4	0	1	11	4	0	0	14	0	0	48	
4:40 PM	2	5	2	0	2	5	3	0	4	14	2	0	0	14	1	0	54	
4:45 PM	2	8	3	0	0	2	2	0	5	19	4	0	7	11	0	0	63	
4:50 PM	3	6	4	0	0	4	5	0	1	22	1	0	0	9	0	0	55	
4:55 PM	2	5	5	0	0	2	2	0	8	20	3	0	2	9	0	0	58	685
5:00 PM	7	4	2	0	0	2	2	0	5	22	7	0	4	8	1	0	64	685
5:05 PM	4	7	1	0	0	5	1	0	6	19	5	0	4	14	2	0	68	692
5:10 PM	2	9	2	0	0	4	2	0	6	16	2	0	0	12	1	0	56	679
5:15 PM	5	9	1	0	2	6	1	0	2	19	4	0	0	12	1	0	62	685
5:20 PM	8	5	1	0	1	0	2	0	3	19	4	0	2	7	0	0	52	684
5:25 PM	3	7	5	0	0	4	1	0	4	19	1	0	1	7	1	0	53	682
5:30 PM	7	10	4	0	0	2	2	0	6	27	6	0	2	7	0	0	73	706
5:35 PM	0	7	6	0	2	4	4	0	4	13	5	0	0	13	0	0	58	716
5:40 PM	2	6	5	0	1	1	7	0	8	13	5	0	1	10	0	0	59	721
5:45 PM	0	4	0	0	0	1	5	0	4	18	4	0	1	9	0	0	46	704
5:50 PM	0	4	2	0	2	6	5	0	2	20	4	0	1	18	0	0	64	713
5:55 PM	1	4	3	0	1	2	3	0	4	18	3	0	0	13	2	0	54	709

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	52	64	32	0	0	36	20	0	76	244	60	0	40	124	12	0	760
Heavy Trucks	4	4	4		0	0	0		0	4	8		0	4	0		28
Pedestrians		0				0				0				0			0
Bicycles	0	1	0		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

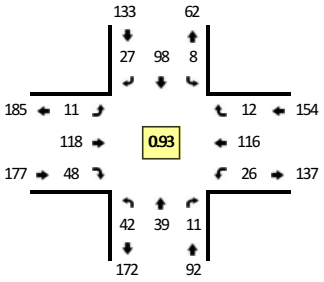
Comments:

Report generated on 9/12/2019 3:20 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

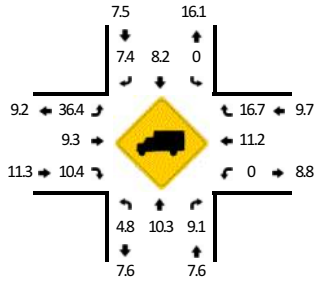
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

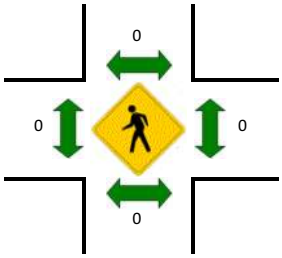
LOCATION: 9. NE 50th Ave -- NE 179th St | **QC JOB #:** 14982826
CITY/STATE: Clark, WA | **DATE:** Thu, May 16 2019

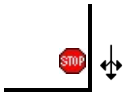
Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 8:20 AM -- 8:35 AM

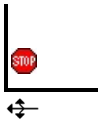


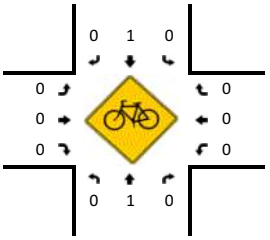


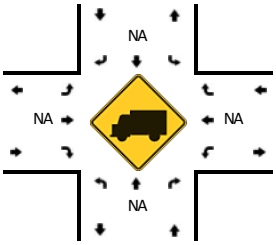


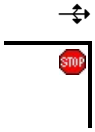


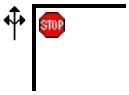


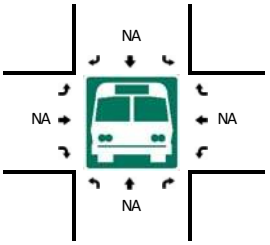












5-Min Count Period Beginning At	9. NE 50th Ave (Northbound)				9. NE 50th Ave (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	3	2	0	0	0	5	2	0	0	6	2	0	1	7	0	0	28	
7:05 AM	0	4	0	0	0	7	0	0	3	4	1	0	1	12	0	0	32	
7:10 AM	1	0	1	0	0	8	2	0	0	11	1	0	2	7	0	0	33	
7:15 AM	1	1	2	0	2	5	3	0	2	8	2	0	2	6	1	0	35	
7:20 AM	1	2	2	0	1	5	1	0	0	4	3	0	1	14	0	0	34	
7:25 AM	0	3	2	0	2	8	0	0	0	4	4	0	3	10	0	0	36	
7:30 AM	1	2	0	0	0	8	2	0	0	12	1	0	0	8	0	0	34	
7:35 AM	4	2	0	0	1	7	2	0	0	9	2	0	1	9	0	0	37	
7:40 AM	5	4	0	0	1	11	2	0	2	11	0	0	4	8	2	0	50	
7:45 AM	1	3	0	0	1	13	3	0	1	16	2	0	3	8	1	0	52	
7:50 AM	0	4	2	0	1	7	2	0	1	8	7	0	0	5	0	0	37	
7:55 AM	2	1	2	0	1	14	1	0	0	8	4	0	3	7	0	0	43	451
8:00 AM	4	3	0	0	0	10	4	0	1	11	2	0	2	10	0	0	47	470
8:05 AM	2	4	0	0	0	10	4	0	1	12	6	0	1	3	3	0	46	484
8:10 AM	2	2	0	0	0	4	0	0	0	9	3	0	2	15	2	0	39	490
8:15 AM	3	5	2	0	0	5	1	0	0	12	2	0	4	8	0	0	42	497
8:20 AM	3	4	2	0	2	5	3	0	0	8	7	0	0	16	1	0	51	514
8:25 AM	6	4	1	0	2	4	3	0	2	5	7	0	1	10	1	0	46	524
8:30 AM	7	3	1	0	0	5	2	0	1	8	3	0	4	18	0	0	52	542
8:35 AM	7	2	1	0	0	10	2	0	2	10	5	0	2	8	2	0	51	556
8:40 AM	4	4	3	0	2	4	3	0	2	7	2	0	4	9	0	0	44	550
8:45 AM	3	2	0	0	0	6	4	0	1	8	3	0	2	18	0	0	47	545
8:50 AM	0	1	1	0	2	7	1	0	0	7	3	0	1	12	0	0	35	543
8:55 AM	1	7	0	0	1	4	2	0	1	9	2	0	1	5	0	0	33	533

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	64	44	16	0	16	56	32	0	12	84	68	0	20	176	8	0	596
Heavy Trucks	4	4	0		0	8	0		4	8	0		0	32	4		64
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 9/12/2019 3:20 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

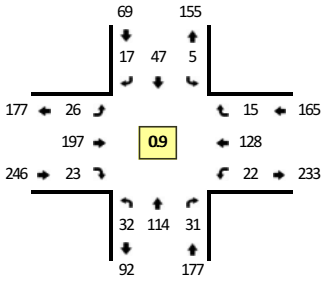
Type of peak hour being reported: Intersection Peak

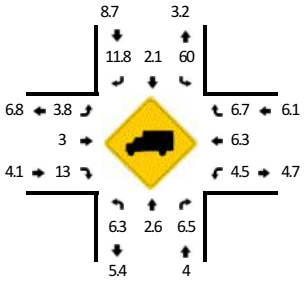
Method for determining peak hour: Total Entering Volume

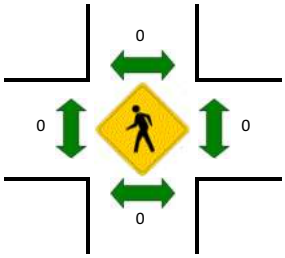
LOCATION: 9. NE 50th Ave -- NE 179th St
CITY/STATE: Clark, WA

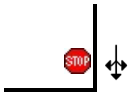
QC JOB #: 14982827
DATE: Thu, May 16 2019

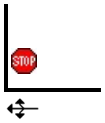
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

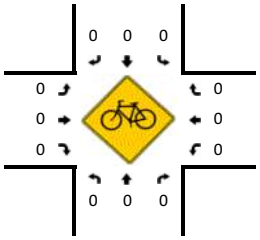


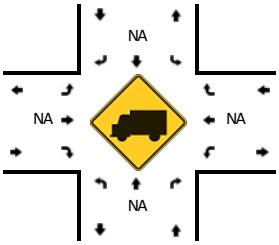


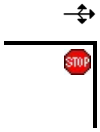


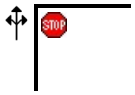


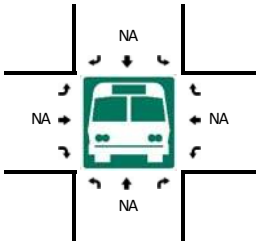












5-Min Count Period Beginning At	9. NE 50th Ave (Northbound)				9. NE 50th Ave (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	4	11	5	0	0	2	2	0	3	22	2	0	7	13	1	0	72	
4:05 PM	3	12	1	0	1	4	2	0	2	16	0	0	0	9	2	0	52	
4:10 PM	2	13	2	0	2	7	1	0	1	14	3	0	1	12	1	0	59	
4:15 PM	2	13	2	0	1	3	0	0	0	19	3	0	3	19	2	0	67	
4:20 PM	3	12	3	0	0	4	1	0	2	16	2	0	2	6	0	0	51	
4:25 PM	2	9	2	0	0	3	2	0	5	14	0	0	1	15	1	0	54	
4:30 PM	3	5	6	0	1	4	1	0	4	9	1	0	2	7	2	0	45	
4:35 PM	3	10	1	0	0	5	2	0	2	17	1	0	0	7	0	0	48	
4:40 PM	3	11	6	0	0	4	2	0	0	13	2	0	0	11	2	0	54	
4:45 PM	1	10	3	0	0	6	2	0	2	22	2	0	2	14	0	0	64	
4:50 PM	2	2	0	0	0	3	1	0	1	16	3	0	4	7	2	0	41	
4:55 PM	4	6	0	0	0	2	1	0	4	19	4	0	0	8	2	0	50	657
5:00 PM	3	6	0	0	0	6	1	0	0	13	3	0	1	6	0	0	39	624
5:05 PM	3	8	0	0	1	4	3	0	1	21	1	0	0	14	0	0	56	628
5:10 PM	3	19	2	0	0	12	5	0	2	22	0	0	1	7	2	0	75	644
5:15 PM	3	9	1	0	2	5	3	0	2	17	1	0	1	5	0	0	49	626
5:20 PM	1	9	5	0	1	5	0	0	1	15	2	0	0	3	4	0	46	621
5:25 PM	5	8	0	0	3	3	1	0	2	19	2	0	1	7	2	0	53	620
5:30 PM	1	6	3	0	0	8	0	0	2	25	3	0	2	11	1	0	62	637
5:35 PM	2	2	4	0	0	4	2	0	2	14	5	0	0	6	2	0	43	632
5:40 PM	4	3	1	0	1	2	0	0	1	18	3	0	2	8	0	0	43	621
5:45 PM	3	7	4	0	0	3	1	0	5	9	3	0	1	4	0	0	40	597
5:50 PM	2	11	0	0	1	4	1	0	4	13	1	0	3	16	1	0	57	613
5:55 PM	3	7	3	0	0	8	0	0	4	17	2	0	2	14	0	0	60	623

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	36	144	32	0	12	52	20	0	24	208	20	0	32	136	16	0	732
Heavy Trucks	8	4	0		8	0	4		0	8	8		0	8	4		52
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 9/12/2019 3:20 PM

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

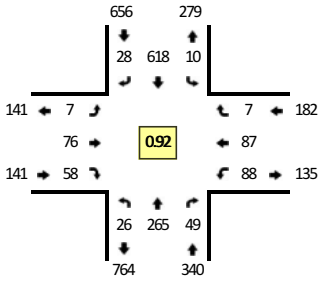
Type of peak hour being reported: Intersection Peak

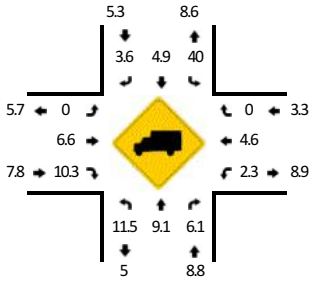
Method for determining peak hour: Total Entering Volume

LOCATION: 13. NE 72nd Ave -- NE 179th St
CITY/STATE: Clark, WA

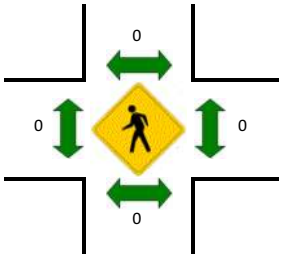
QC JOB #: 14982937
DATE: Thu, May 16 2019

Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

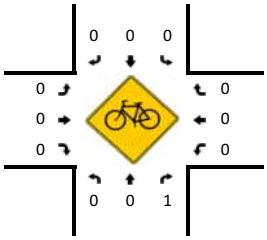


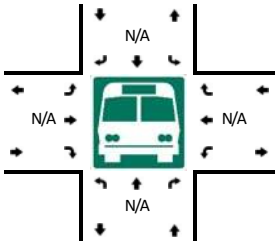


Quality Counts
DATA THAT DRIVES COMMUNITIES

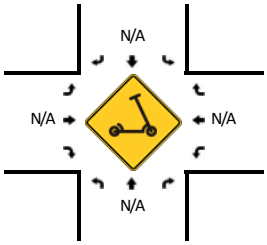












5-Min Count Period Beginning At	13. NE 72nd Ave (Northbound)				13. NE 72nd Ave (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	3	15	0	0	0	33	3	0	1	3	3	0	7	6	0	0	74	
7:05 AM	1	13	2	0	0	36	2	0	1	2	5	0	7	4	0	0	73	
7:10 AM	5	13	2	0	0	57	2	0	2	0	5	0	3	5	1	0	95	
7:15 AM	1	20	3	0	1	46	6	0	1	3	7	0	12	3	1	0	104	
7:20 AM	0	15	4	0	1	48	3	0	1	6	2	0	8	12	0	0	100	
7:25 AM	2	26	0	0	0	52	3	0	2	2	4	0	9	5	0	0	105	
7:30 AM	1	28	5	0	0	61	4	0	0	5	7	0	7	1	1	0	120	
7:35 AM	4	24	3	0	1	49	3	0	1	6	4	0	5	5	1	0	106	
7:40 AM	2	30	3	0	0	54	5	0	0	7	9	0	6	9	0	0	125	
7:45 AM	2	23	5	0	1	51	4	0	1	12	4	0	11	8	1	0	123	
7:50 AM	2	18	5	0	0	66	0	0	1	5	3	0	6	3	2	0	111	
7:55 AM	2	17	5	0	1	40	2	0	1	3	8	0	12	9	0	0	100	1236
8:00 AM	1	11	4	0	2	48	2	0	0	5	6	0	8	7	0	0	94	1256
8:05 AM	2	18	3	0	1	57	1	0	0	4	4	0	8	7	0	0	105	1288
8:10 AM	1	20	4	0	0	51	2	0	0	10	3	0	7	8	1	0	107	1300
8:15 AM	3	24	7	0	2	48	1	0	1	10	3	0	3	13	0	0	115	1311
8:20 AM	4	26	5	0	2	41	1	0	0	7	3	0	6	12	1	0	108	1319
8:25 AM	6	13	4	0	1	27	3	0	4	7	3	0	11	7	1	0	87	1301
8:30 AM	1	13	5	0	1	55	3	0	0	2	1	0	9	15	0	0	105	1286
8:35 AM	1	23	3	0	0	39	4	0	2	10	4	0	5	7	0	0	98	1278
8:40 AM	1	27	6	0	1	37	5	0	0	7	2	0	10	8	1	0	105	1258
8:45 AM	2	16	3	0	0	32	8	0	3	5	2	0	1	9	0	0	81	1216
8:50 AM	1	19	1	0	0	40	1	0	1	2	6	0	4	8	1	0	84	1189
8:55 AM	3	14	1	0	1	28	3	0	2	3	5	0	9	3	0	0	72	1161

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	284	52	0	4	684	36	0	8	96	64	0	92	80	12	0	1436
Heavy Trucks	0	28	4		0	16	4		0	0	0		0	12	0		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 11/27/2019 11:08 AM

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

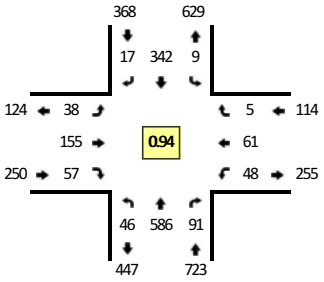
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

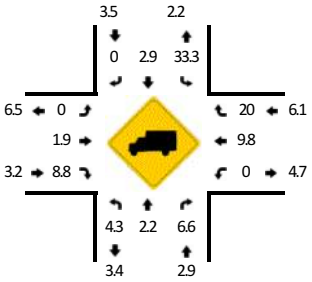
LOCATION: 13. NE 72nd Ave -- NE 179th St
CITY/STATE: Clark, WA

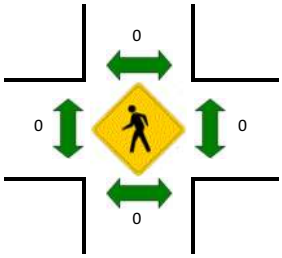
QC JOB #: 14982938
DATE: Thu, May 16 2019

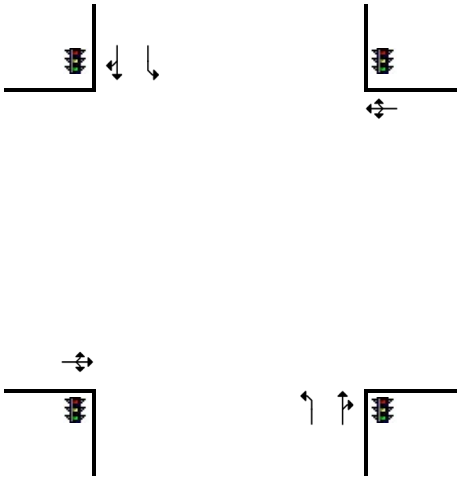
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

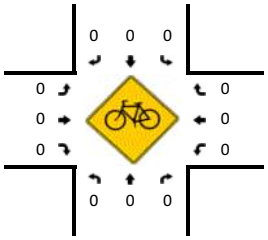


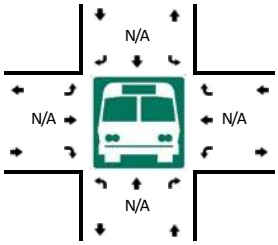
Quality Counts
DATA THAT DRIVES COMMUNITIES

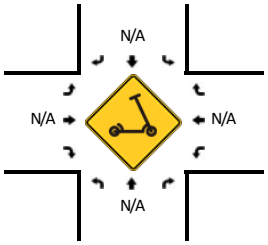












5-Min Count Period Beginning At	13. NE 72nd Ave (Northbound)				13. NE 72nd Ave (Southbound)				NE 179th St (Eastbound)				NE 179th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	4	40	8	0	0	32	0	0	3	11	4	0	9	12	0	0	123	
4:05 PM	6	35	10	0	1	33	3	0	3	16	4	0	6	6	2	0	125	
4:10 PM	2	29	7	0	1	51	3	0	3	15	5	0	3	15	0	0	134	
4:15 PM	7	43	6	0	2	24	1	0	3	10	4	0	3	7	0	0	110	
4:20 PM	4	58	18	0	0	30	1	0	4	9	8	0	2	2	0	0	136	
4:25 PM	2	45	10	0	2	19	3	0	1	13	1	0	4	10	0	0	110	
4:30 PM	6	43	7	0	0	25	1	0	3	12	3	0	5	2	0	0	107	
4:35 PM	5	51	7	0	2	35	1	0	4	11	1	0	2	4	0	0	123	
4:40 PM	6	48	6	0	1	28	2	0	1	12	3	0	8	9	0	0	124	
4:45 PM	3	41	7	0	1	39	0	0	2	12	6	0	3	7	0	0	121	
4:50 PM	4	45	11	0	2	27	4	0	6	13	2	0	2	6	1	0	123	
4:55 PM	2	40	7	0	0	16	0	0	4	16	4	0	3	5	2	0	99	1435
5:00 PM	1	56	8	0	1	28	4	0	4	8	2	0	3	2	0	0	117	1429
5:05 PM	6	64	8	0	0	19	1	0	3	11	8	0	4	3	0	0	127	1431
5:10 PM	2	51	2	0	1	28	1	0	3	11	3	0	4	9	1	0	116	1413
5:15 PM	3	56	11	0	1	22	3	0	5	10	8	0	2	1	0	0	122	1425
5:20 PM	6	49	13	0	2	33	0	0	4	15	4	0	4	4	0	0	134	1423
5:25 PM	8	53	7	0	0	35	0	0	0	20	6	0	2	0	1	0	132	1445
5:30 PM	3	39	6	0	0	36	2	0	2	8	5	0	5	6	0	0	112	1450
5:35 PM	2	44	5	0	0	31	0	0	4	19	6	0	8	9	0	0	128	1455
5:40 PM	3	56	8	0	0	23	0	0	5	11	3	0	4	5	0	0	118	1449
5:45 PM	3	48	5	0	0	27	1	0	2	8	5	0	6	2	1	0	108	1436
5:50 PM	6	46	10	0	1	30	2	0	1	9	1	0	4	13	0	0	123	1436
5:55 PM	5	27	10	0	0	19	2	0	1	11	9	0	2	4	0	0	90	1427

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	68	632	124	0	12	360	12	0	36	180	72	0	32	20	4	0	1552
Heavy Trucks	4	4	12		0	4	0		0	0	0		0	0	4		28
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 11/27/2019 11:08 AM

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

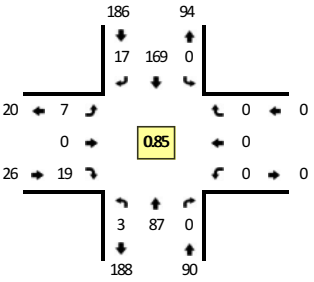
Type of peak hour being reported: Intersection Peak

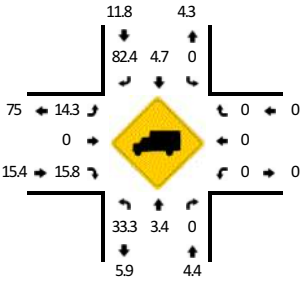
Method for determining peak hour: Total Entering Volume

LOCATION: 14. NE 50th Ave -- NE 174th St
CITY/STATE: Clark, WA

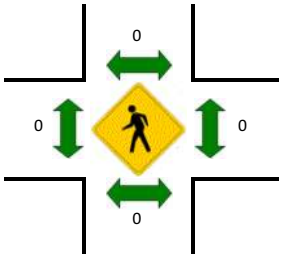
QC JOB #: 14982939
DATE: Thu, May 16 2019

Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 8:25 AM -- 8:40 AM

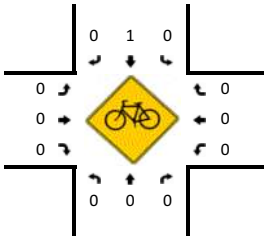


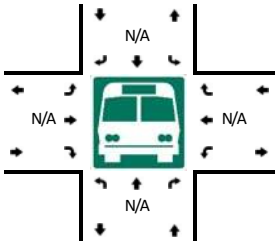


Quality Counts
DATA THAT DRIVES COMMUNITIES

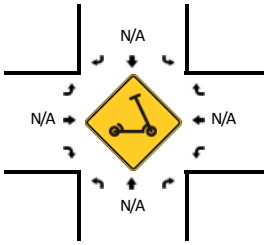












5-Min Count Period Beginning At	14. NE 50th Ave (Northbound)				14. NE 50th Ave (Southbound)				NE 174th St (Eastbound)				NE 174th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	3	0	0	0	11	0	0	0	0	0	0	0	0	0	0	14	
7:05 AM	0	4	0	0	0	8	1	0	0	0	0	0	0	0	0	0	13	
7:10 AM	0	2	0	0	0	9	0	0	0	0	1	0	0	0	0	0	12	
7:15 AM	0	3	0	0	0	9	0	0	1	0	1	0	0	0	0	0	14	
7:20 AM	0	5	0	0	0	9	0	0	0	0	0	0	0	0	0	0	14	
7:25 AM	2	5	0	0	0	14	3	0	0	0	2	0	0	0	0	0	26	
7:30 AM	0	2	0	0	0	8	0	0	2	0	3	0	0	0	0	0	15	
7:35 AM	1	3	0	0	0	11	0	0	0	0	2	0	0	0	0	0	17	
7:40 AM	0	9	0	0	0	12	1	0	1	0	5	0	0	0	0	0	28	
7:45 AM	0	3	0	0	0	18	1	0	1	0	1	0	0	0	0	0	24	
7:50 AM	1	6	0	0	0	15	1	0	0	0	2	0	0	0	0	0	25	
7:55 AM	1	5	0	0	0	19	1	0	0	0	3	0	0	0	0	0	29	231
8:00 AM	0	7	0	0	0	14	0	0	0	0	0	0	0	0	0	0	21	238
8:05 AM	0	6	0	0	0	18	1	0	0	0	2	0	0	0	0	0	27	252
8:10 AM	0	3	0	0	0	9	0	0	2	0	0	0	0	0	0	0	14	254
8:15 AM	0	8	0	0	0	11	0	0	1	0	1	0	0	0	0	0	21	261
8:20 AM	0	10	0	0	0	12	0	0	1	0	1	0	0	0	0	0	24	271
8:25 AM	1	11	0	0	0	15	0	0	0	0	0	0	0	0	0	0	27	272
8:30 AM	0	8	0	0	0	9	11	0	1	0	1	0	0	0	0	0	30	287
8:35 AM	0	11	0	0	0	17	1	0	0	0	3	0	0	0	0	0	32	302
8:40 AM	0	5	0	0	0	9	0	0	0	0	1	0	0	0	0	0	15	289
8:45 AM	0	5	0	0	0	11	0	0	0	0	0	0	0	0	0	0	16	281
8:50 AM	2	4	0	0	0	9	1	0	0	0	1	0	0	0	0	0	17	273
8:55 AM	0	7	0	0	0	9	0	0	0	0	0	0	0	0	0	0	16	260

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	120	0	0	0	164	48	0	4	0	16	0	0	0	0	0	356
Heavy Trucks	4	4	0		0	4	44		0	0	4		0	0	0		60
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1
Scooters																	

Comments:

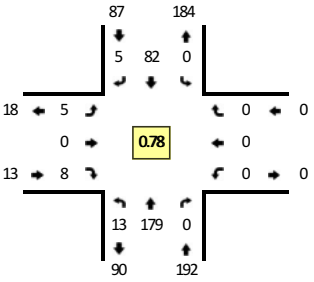
Report generated on 11/27/2019 11:08 AM

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

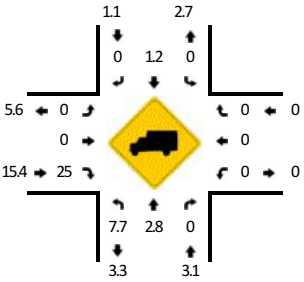
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

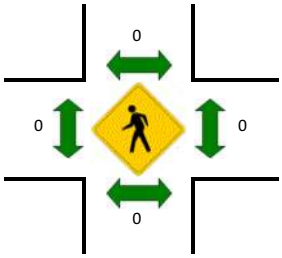
LOCATION: 14. NE 50th Ave -- NE 174th St | **QC JOB #:** 14982940
CITY/STATE: Clark, WA | **DATE:** Thu, May 16 2019

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

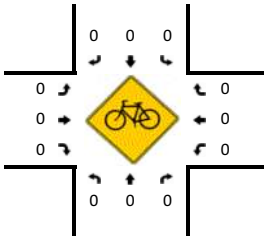


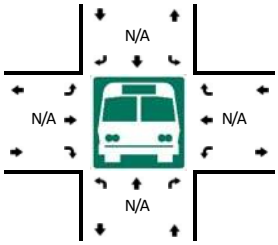




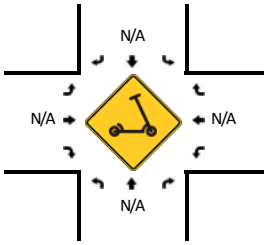












5-Min Count Period Beginning At	14. NE 50th Ave (Northbound)				14. NE 50th Ave (Southbound)				NE 174th St (Eastbound)				NE 174th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	25	0	0	0	8	0	0	0	0	1	0	0	0	0	0	37	
4:05 PM	0	13	0	0	0	4	0	0	1	0	2	0	0	0	0	0	20	
4:10 PM	0	20	0	0	0	15	0	0	0	0	1	0	0	0	0	0	36	
4:15 PM	0	16	0	0	0	8	1	0	0	0	0	0	0	0	0	0	25	
4:20 PM	2	18	0	0	0	6	2	0	0	0	0	0	0	0	0	0	28	
4:25 PM	1	13	0	0	0	2	1	0	1	0	0	0	0	0	0	0	18	
4:30 PM	0	14	0	0	0	6	1	0	1	0	0	0	0	0	0	0	22	
4:35 PM	0	14	0	0	0	4	0	0	1	0	1	0	0	0	0	0	20	
4:40 PM	2	17	0	0	0	7	0	0	0	0	3	0	0	0	0	0	29	
4:45 PM	1	15	0	0	0	11	0	0	0	0	0	0	0	0	0	0	27	
4:50 PM	4	5	0	0	0	4	0	0	0	0	0	0	0	0	0	0	13	
4:55 PM	0	9	0	0	0	7	0	0	1	0	0	0	0	0	0	0	17	292
5:00 PM	2	6	0	0	0	7	1	0	1	0	1	0	0	0	0	0	18	273
5:05 PM	1	10	0	0	0	6	1	0	1	0	0	0	0	0	0	0	19	272
5:10 PM	0	24	0	0	0	11	1	0	0	0	0	0	0	0	0	0	36	272
5:15 PM	2	13	0	0	0	7	0	0	0	0	1	0	0	0	0	0	23	270
5:20 PM	0	16	0	0	0	8	0	0	0	0	1	0	0	0	0	0	25	267
5:25 PM	2	11	0	0	0	4	1	0	0	0	2	0	0	0	0	0	20	269
5:30 PM	1	11	0	0	0	9	1	0	1	0	1	0	0	0	0	0	24	271
5:35 PM	3	8	0	0	0	11	1	0	0	0	0	0	0	0	0	0	23	274
5:40 PM	3	11	0	0	0	5	1	0	1	0	1	0	0	0	0	0	22	267
5:45 PM	0	14	0	0	0	6	3	0	1	0	1	0	0	0	0	0	25	265
5:50 PM	2	11	0	0	0	8	0	0	0	0	2	0	0	0	0	0	23	275
5:55 PM	0	13	0	0	0	11	0	0	1	0	2	0	0	0	0	0	27	285

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	232	0	0	0	108	0	0	4	0	16	0	0	0	0	0	372
Heavy Trucks	4	4	0		0	4	0		0	0	8		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 11/27/2019 11:08 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

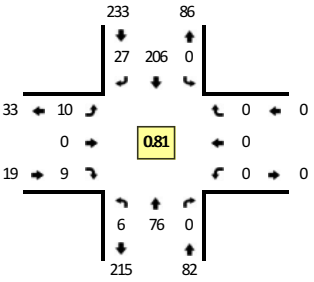
Type of peak hour being reported: Intersection Peak

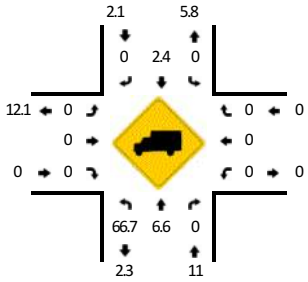
Method for determining peak hour: Total Entering Volume

LOCATION: NE 29th Ave -- NE 159th St
CITY/STATE: Mount Vista, WA

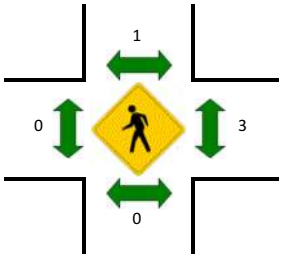
QC JOB #: 15202701
DATE: Thu, Mar 5 2020

Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:40 AM -- 8:55 AM

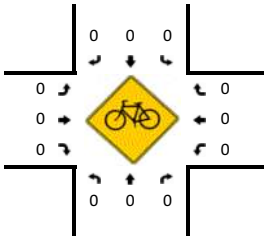


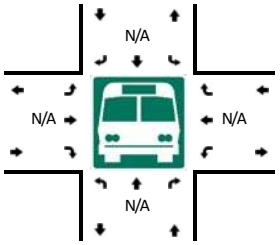


Quality Counts
DATA THAT DRIVES COMMUNITIES

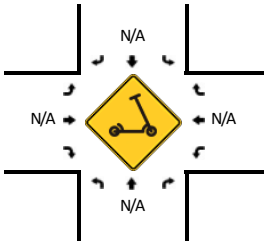












5-Min Count Period Beginning At	NE 29th Ave (Northbound)				NE 29th Ave (Southbound)				NE 159th St (Eastbound)				NE 159th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	4	0	0	0	12	1	0	0	0	0	0	0	0	0	0	17	
7:05 AM	1	4	0	0	0	10	1	0	2	0	1	0	0	0	0	0	19	
7:10 AM	0	6	0	0	0	15	3	0	0	0	1	0	0	0	0	0	25	
7:15 AM	1	5	0	0	0	20	1	0	0	0	1	0	0	0	0	0	28	
7:20 AM	1	6	0	0	0	19	1	0	2	0	0	0	0	0	0	0	29	
7:25 AM	0	5	0	0	0	14	3	0	1	0	2	0	0	0	0	0	25	
7:30 AM	0	7	0	0	0	22	2	0	0	0	0	0	0	0	0	0	31	
7:35 AM	0	6	0	0	0	13	0	0	0	0	2	0	0	0	0	0	21	
7:40 AM	0	5	0	0	0	19	1	0	0	0	1	0	0	0	0	0	26	
7:45 AM	1	6	0	0	0	22	0	0	1	0	0	0	0	0	0	0	30	
7:50 AM	1	6	0	0	0	25	1	0	1	0	1	0	0	0	0	0	35	
7:55 AM	1	2	0	0	0	14	1	0	0	0	0	0	0	0	0	0	18	304
8:00 AM	2	2	0	0	0	15	2	0	0	0	0	0	0	0	0	0	21	308
8:05 AM	0	3	0	0	0	14	3	0	1	0	1	0	0	0	0	0	22	311
8:10 AM	1	6	0	0	0	14	1	0	2	0	2	0	0	0	0	0	26	312
8:15 AM	1	10	0	0	0	16	3	0	1	0	0	0	0	0	0	0	31	315
8:20 AM	0	7	0	0	0	20	2	0	1	0	0	0	0	0	0	0	30	316
8:25 AM	0	8	0	0	0	18	1	0	0	0	1	0	0	0	0	0	28	319
8:30 AM	0	5	0	0	0	20	4	0	0	0	2	0	0	0	0	0	31	319
8:35 AM	1	6	0	0	0	13	0	0	1	0	0	0	0	0	0	0	21	319
8:40 AM	0	9	0	0	0	17	3	0	1	0	1	0	0	0	0	0	31	324
8:45 AM	1	6	0	0	0	25	3	0	2	0	2	0	0	0	0	0	39	333
8:50 AM	0	6	0	0	0	24	2	0	1	0	0	0	0	0	0	0	33	331
8:55 AM	0	8	0	0	0	10	3	0	0	0	0	0	0	0	0	0	21	334

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	84	0	0	0	264	32	0	16	0	12	0	0	0	0	0	412
Heavy Trucks	4	4	0		0	4	0		0	0	0		0	0	0		12
Buses																	
Pedestrians		0				4				0				4			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 3/11/2020 3:05 PM

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

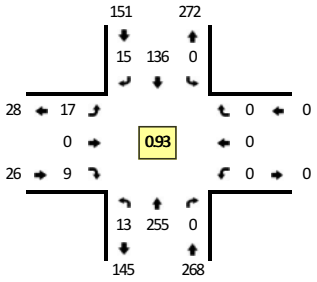
Type of peak hour being reported: Intersection Peak

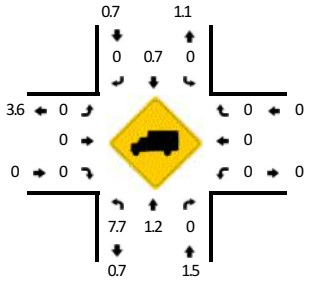
Method for determining peak hour: Total Entering Volume

LOCATION: NE 29th Ave -- NE 159th St
CITY/STATE: Mount Vista, WA

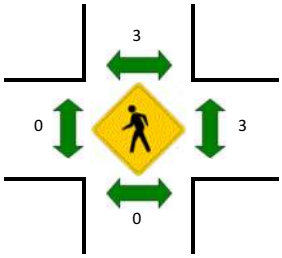
QC JOB #: 15202702
DATE: Thu, Mar 5 2020

Peak-Hour: 4:50 PM -- 5:50 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

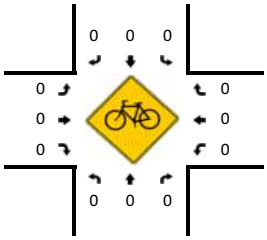


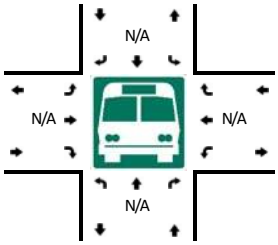


Quality Counts
DATA THAT DRIVES COMMUNITIES

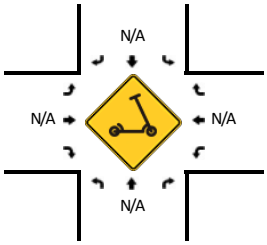












5-Min Count Period Beginning At	NE 29th Ave (Northbound)				NE 29th Ave (Southbound)				NE 159th St (Eastbound)				NE 159th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	19	0	0	0	13	0	0	2	0	0	0	0	0	0	0	36	
4:05 PM	3	13	0	0	0	12	0	0	1	0	1	0	0	0	0	0	30	
4:10 PM	0	12	0	0	0	10	3	0	4	0	0	0	0	0	0	0	29	
4:15 PM	3	21	0	0	0	14	0	0	3	0	0	0	0	0	0	0	41	
4:20 PM	0	21	0	1	0	7	0	0	4	0	2	0	0	0	0	0	35	
4:25 PM	0	19	0	0	0	7	2	0	1	0	0	0	0	0	0	0	29	
4:30 PM	1	17	0	0	0	13	1	0	4	0	0	0	0	0	0	0	36	
4:35 PM	2	14	0	0	0	12	0	0	1	0	1	0	0	0	0	0	30	
4:40 PM	0	18	0	0	0	14	0	0	1	0	1	0	0	0	0	0	34	
4:45 PM	1	24	0	0	0	7	2	0	1	0	0	0	0	0	0	0	35	
4:50 PM	0	23	0	0	0	9	2	0	2	0	1	0	0	0	0	0	37	
4:55 PM	1	24	0	0	0	9	3	0	5	0	2	0	0	0	0	0	44	416
5:00 PM	1	17	0	0	0	10	1	0	0	0	2	0	0	0	0	0	31	411
5:05 PM	1	26	0	0	0	12	2	0	1	0	0	0	0	0	0	0	42	423
5:10 PM	0	16	0	0	0	11	0	0	2	0	0	0	0	0	0	0	29	423
5:15 PM	2	34	0	0	0	9	1	0	2	0	0	0	0	0	0	0	48	430
5:20 PM	2	18	0	0	0	13	0	0	1	0	0	0	0	0	0	0	34	429
5:25 PM	1	22	0	0	0	11	1	0	0	0	0	0	0	0	0	0	35	435
5:30 PM	1	20	0	0	0	10	3	0	0	0	1	0	0	0	0	0	35	434
5:35 PM	1	22	0	0	0	15	0	0	1	0	0	0	0	0	0	0	39	443
5:40 PM	2	14	0	0	0	11	1	0	2	0	0	0	0	0	0	0	30	439
5:45 PM	1	19	0	0	0	16	1	0	1	0	3	0	0	0	0	0	41	445
5:50 PM	2	13	0	0	0	10	0	0	2	0	3	0	0	0	0	0	30	438
5:55 PM	0	23	0	0	0	14	0	0	0	0	0	0	0	0	0	0	37	431

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	304	0	0	0	128	12	0	20	0	0	0	0	0	0	0	476
Heavy Trucks	4	0	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 3/11/2020 3:05 PM

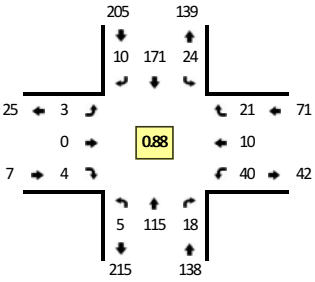
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

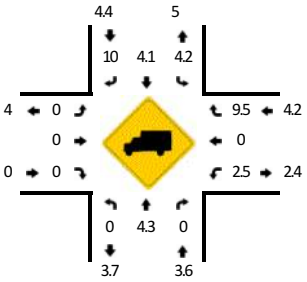
LOCATION: 15. NE 50th Ave -- NE 159th St
CITY/STATE: Clark, WA

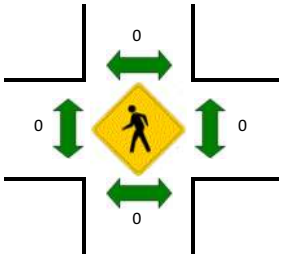
QC JOB #: 14982941
DATE: Thu, May 16 2019

Peak-Hour: 7:40 AM -- 8:40 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

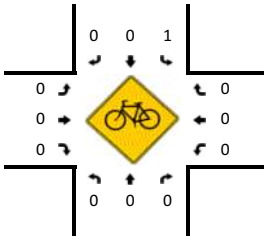


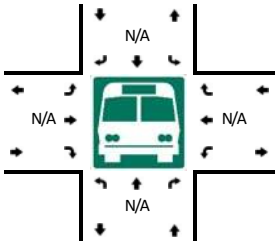
Quality Counts
DATA THAT DRIVES COMMUNITIES



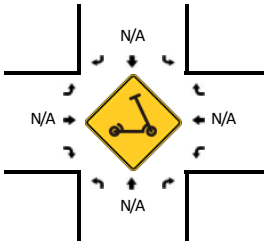












5-Min Count Period Beginning At	15. NE 50th Ave (Northbound)				15. NE 50th Ave (Southbound)				NE 159th St (Eastbound)				NE 159th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	4	0	0	0	6	1	0	0	0	0	0	3	1	2	0	17	
7:05 AM	0	5	1	0	1	6	0	0	0	0	0	0	1	0	1	0	15	
7:10 AM	0	5	0	0	0	9	0	0	0	0	0	0	1	1	0	0	16	
7:15 AM	1	4	1	0	0	11	0	0	0	0	0	0	0	1	0	0	18	
7:20 AM	0	4	0	0	0	11	0	0	0	0	0	0	1	1	3	0	20	
7:25 AM	2	2	1	0	1	7	3	0	0	0	0	0	1	0	0	0	17	
7:30 AM	0	5	0	0	1	9	2	0	0	0	0	0	2	0	0	0	19	
7:35 AM	0	4	3	0	1	9	3	0	0	0	0	0	2	1	1	0	24	
7:40 AM	0	8	4	0	3	14	1	0	0	0	0	0	2	2	0	0	34	
7:45 AM	0	4	0	0	0	16	0	0	1	0	1	0	7	2	1	0	32	
7:50 AM	1	7	1	0	0	20	0	0	0	0	0	0	6	0	0	0	35	
7:55 AM	1	8	1	0	2	16	2	0	0	0	1	0	6	2	3	0	42	289
8:00 AM	2	8	1	0	1	14	2	0	0	0	1	0	1	0	2	0	32	304
8:05 AM	1	9	2	0	3	16	0	0	1	0	0	0	3	1	1	0	37	326
8:10 AM	0	6	0	0	2	9	2	0	0	0	0	0	5	0	2	0	26	336
8:15 AM	0	19	5	0	3	8	0	0	0	0	0	0	4	0	4	0	43	361
8:20 AM	0	12	2	0	4	12	0	0	0	0	0	0	1	1	3	0	35	376
8:25 AM	0	23	1	0	1	12	1	0	0	0	0	0	0	1	2	0	41	400
8:30 AM	0	6	1	0	3	13	1	0	0	0	0	0	4	0	1	0	29	410
8:35 AM	0	5	0	0	2	21	1	0	1	0	1	0	1	1	2	0	35	421
8:40 AM	0	11	0	0	0	16	0	0	0	0	0	0	2	2	1	0	32	419
8:45 AM	1	3	3	0	3	11	1	0	0	0	0	0	1	2	0	0	25	412
8:50 AM	1	4	0	0	2	9	1	0	0	0	0	0	0	0	0	0	17	394
8:55 AM	0	11	0	0	2	5	4	0	0	0	0	0	1	0	1	0	24	376

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	216	32	0	32	128	4	0	0	0	0	0	20	8	36	0	476
Heavy Trucks	0	8	0		0	4	0		0	0	0		0	0	4		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 11/27/2019 11:08 AM

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

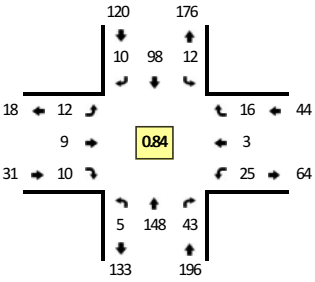
Type of peak hour being reported: Intersection Peak

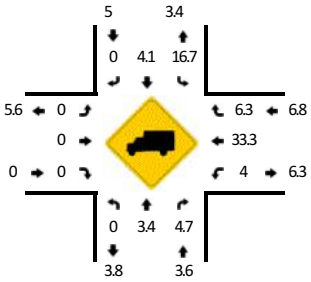
Method for determining peak hour: Total Entering Volume

LOCATION: 15. NE 50th Ave -- NE 159th St
CITY/STATE: Clark, WA

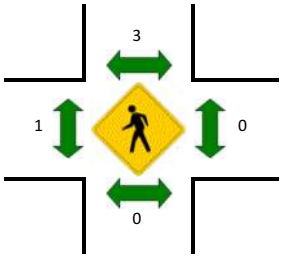
QC JOB #: 14982942
DATE: Thu, May 16 2019

Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:05 PM -- 4:20 PM

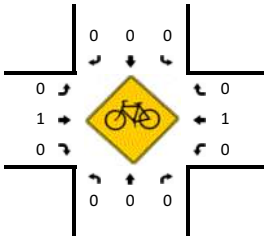


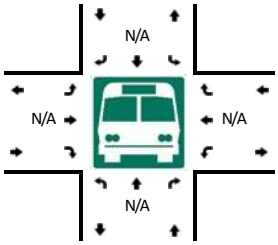


Quality Counts
DATA THAT DRIVES COMMUNITIES

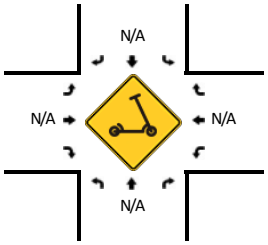












5-Min Count Period Beginning At	15. NE 50th Ave (Northbound)				15. NE 50th Ave (Southbound)				NE 159th St (Eastbound)				NE 159th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	13	3	0	0	8	1	0	2	1	1	0	3	0	2	0	35	
4:05 PM	0	13	7	0	2	14	1	0	3	0	0	0	1	1	1	0	43	
4:10 PM	2	13	5	0	1	9	2	0	0	1	0	0	2	1	1	0	37	
4:15 PM	0	9	5	0	1	12	3	0	1	3	2	0	0	0	1	0	37	
4:20 PM	0	19	2	0	1	5	1	0	1	0	2	0	3	0	1	0	35	
4:25 PM	0	12	2	0	0	3	2	0	1	0	0	0	4	0	1	0	25	
4:30 PM	1	14	4	0	1	7	0	0	1	0	1	0	1	0	2	0	32	
4:35 PM	0	13	4	0	2	6	0	0	0	0	0	0	1	0	3	0	29	
4:40 PM	0	15	3	0	0	7	0	0	1	2	0	0	3	0	1	0	32	
4:45 PM	1	12	3	0	1	7	0	0	0	1	1	0	1	0	0	0	27	
4:50 PM	0	7	4	0	1	11	0	0	1	1	1	0	4	1	3	0	34	
4:55 PM	0	8	1	0	2	9	0	0	1	0	2	0	2	0	0	0	25	391
5:00 PM	0	13	5	0	1	5	0	0	1	1	0	0	4	0	1	0	31	387
5:05 PM	0	7	5	0	1	9	0	0	1	2	1	0	1	0	0	0	27	371
5:10 PM	0	17	4	0	1	10	0	0	3	1	0	0	0	0	3	0	39	373
5:15 PM	0	12	0	0	4	4	0	0	2	2	1	0	2	1	5	0	33	369
5:20 PM	1	16	2	0	3	8	0	0	1	3	0	0	1	0	0	0	35	369
5:25 PM	0	11	2	0	0	9	0	0	0	1	1	0	2	0	1	0	27	371
5:30 PM	0	13	2	0	2	10	0	0	1	0	0	0	2	1	1	0	32	371
5:35 PM	0	9	3	0	0	10	1	0	0	1	0	0	1	0	0	0	25	367
5:40 PM	0	13	3	0	2	8	0	0	1	0	1	0	2	0	1	0	31	366
5:45 PM	0	11	3	0	1	6	0	0	0	0	1	0	1	0	0	0	23	362
5:50 PM	0	6	3	0	2	11	0	0	4	1	3	0	3	0	1	0	34	362
5:55 PM	1	11	1	0	1	12	0	0	0	0	1	0	1	0	0	0	28	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	8	140	68	0	16	140	24	0	16	16	8	0	12	8	12	0	468
Heavy Trucks	0	4	4		8	12	0		0	0	0		0	4	4		36
Buses																	
Pedestrians		0				12				4				0			16
Bicycles	0	0	0		0	0	0		0	0	0		0	1	0		1
Scooters																	

Comments:

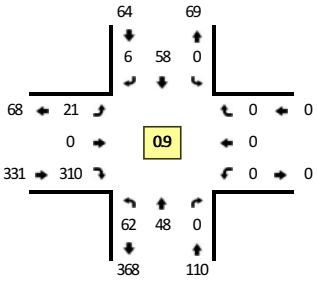
Report generated on 11/27/2019 11:08 AM

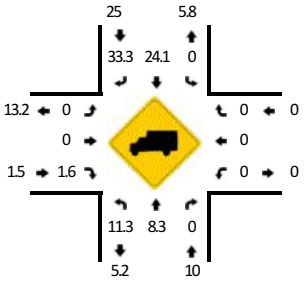
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

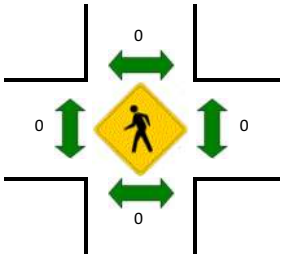
LOCATION: 4. NE 10th Ave -- NE 149th St | **QC JOB #:** 14982816
CITY/STATE: Clark, WA | **DATE:** Thu, May 16 2019

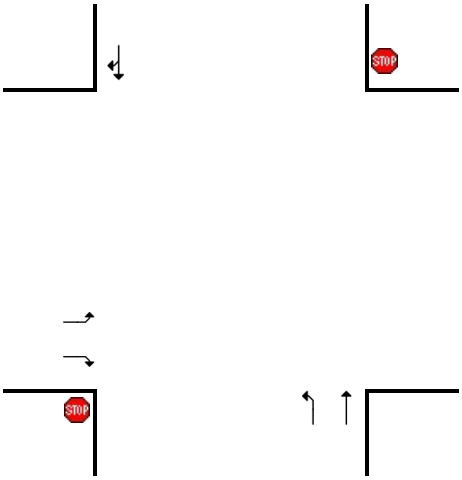
Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:15 AM -- 7:30 AM

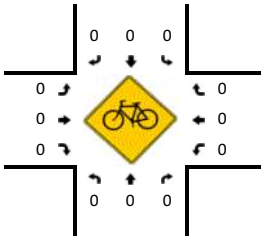


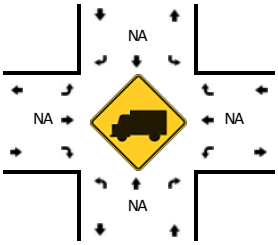


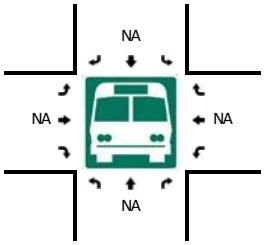
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	4. NE 10th Ave (Northbound)				4. 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	6	5	0	0	0	8	2	0	2	0	14	0	0	0	0	0	37	
7:05 AM	4	1	0	0	0	3	0	0	2	0	15	0	0	0	0	0	25	
7:10 AM	7	4	0	0	0	4	0	0	0	0	24	0	0	0	0	0	39	
7:15 AM	5	4	0	0	0	4	2	0	1	0	33	0	0	0	0	0	49	
7:20 AM	9	2	0	0	0	10	1	0	1	0	22	0	0	0	0	0	45	
7:25 AM	6	3	0	0	0	6	0	0	0	0	32	0	0	0	0	0	47	
7:30 AM	9	4	0	0	0	7	1	0	2	0	26	0	0	0	0	0	49	
7:35 AM	1	4	0	0	0	5	0	0	3	0	24	0	0	0	0	0	37	
7:40 AM	5	4	0	0	0	3	0	0	3	0	31	0	0	0	0	0	46	
7:45 AM	3	3	0	0	0	5	1	0	4	0	25	0	0	0	0	0	41	
7:50 AM	6	5	0	0	0	2	0	0	2	0	21	0	0	0	0	0	36	
7:55 AM	4	8	0	0	0	5	0	0	1	0	32	0	0	0	0	0	50	501
8:00 AM	4	5	0	0	0	6	1	0	2	0	16	0	0	0	0	0	34	498
8:05 AM	3	2	0	0	0	1	0	0	2	0	24	0	0	0	0	0	32	505
8:10 AM	8	1	0	0	0	2	0	0	8	0	17	0	0	0	0	0	36	502
8:15 AM	6	4	0	0	0	3	0	0	0	0	22	0	0	0	0	0	35	488
8:20 AM	7	3	0	0	0	3	1	0	1	0	9	0	0	0	0	0	24	467
8:25 AM	9	3	0	0	0	4	0	0	2	0	13	0	0	0	0	0	31	451
8:30 AM	7	0	0	0	0	2	0	0	4	0	13	0	0	0	0	0	26	428
8:35 AM	3	6	0	0	0	1	0	0	2	0	17	0	0	0	0	0	29	420
8:40 AM	7	1	0	0	0	3	0	0	1	0	14	0	0	0	0	0	26	400
8:45 AM	8	2	0	0	0	4	1	0	0	0	26	0	0	0	0	0	41	400
8:50 AM	6	4	0	0	0	3	0	0	0	0	17	0	0	0	0	0	30	394
8:55 AM	13	3	0	0	0	2	2	0	0	0	14	0	0	0	0	0	34	378

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	80	36	0	0	0	80	12	0	8	0	348	0	0	0	0	0	564
Heavy Trucks	12	8	0		0	20	0		0	0	8		0	0	0		48
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 9/12/2019 3:20 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

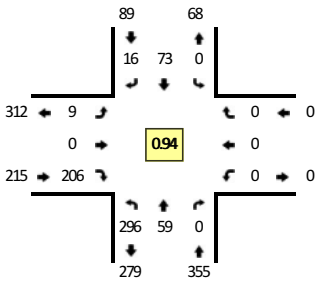
Type of peak hour being reported: Intersection Peak

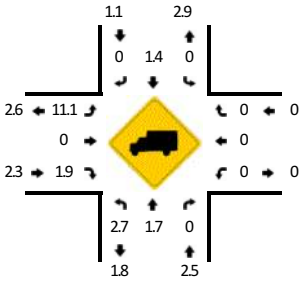
Method for determining peak hour: Total Entering Volume

LOCATION: 4. NE 10th Ave -- NE 149th St
CITY/STATE: Clark, WA

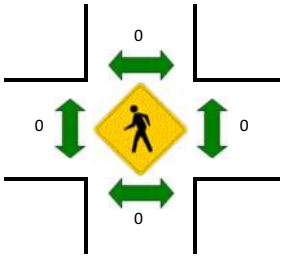
QC JOB #: 14982817
DATE: Thu, May 16 2019

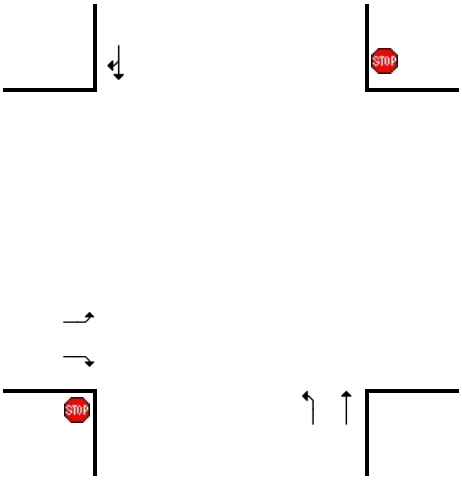
Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

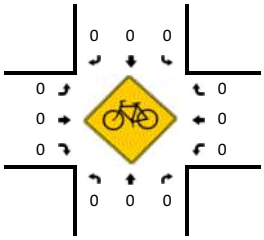


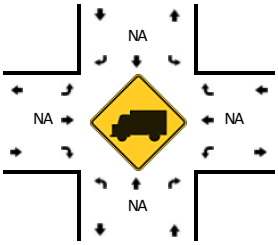


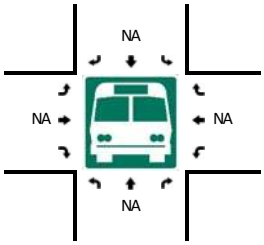
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	4. NE 10th Ave (Northbound)				4. 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	14	9	0	0	0	5	1	0	0	0	11	0	0	0	0	0	40	
4:05 PM	26	3	0	0	0	5	2	0	2	0	9	0	0	0	0	0	47	
4:10 PM	30	6	0	0	0	6	1	0	1	0	12	0	0	0	0	0	56	
4:15 PM	26	5	0	0	0	8	1	0	0	0	15	0	0	0	0	0	55	
4:20 PM	24	4	0	0	0	7	2	0	1	0	19	0	0	0	0	0	57	
4:25 PM	28	5	0	0	0	4	0	0	2	0	19	0	0	0	0	0	58	
4:30 PM	26	7	0	0	0	5	2	0	0	0	17	0	0	0	0	0	57	
4:35 PM	19	9	0	0	0	5	0	0	0	0	20	0	0	0	0	0	53	
4:40 PM	19	3	0	0	0	8	2	0	0	0	16	0	0	0	0	0	48	
4:45 PM	22	4	0	0	0	7	2	0	0	0	18	0	0	0	0	0	53	
4:50 PM	22	4	0	0	0	10	1	0	3	0	22	0	0	0	0	0	62	
4:55 PM	26	3	0	0	0	6	3	0	0	0	18	0	0	0	0	0	56	642
5:00 PM	28	6	0	0	0	2	0	0	0	0	21	0	0	0	0	0	57	659
5:05 PM	21	4	0	0	0	5	0	0	0	0	11	0	0	0	0	0	41	653
5:10 PM	24	4	0	0	0	3	4	0	0	0	13	0	0	0	0	0	48	645
5:15 PM	28	13	0	0	0	4	0	0	2	0	15	0	0	0	0	0	62	652
5:20 PM	23	3	0	0	0	4	1	0	0	0	15	0	0	0	0	0	46	641
5:25 PM	24	4	0	0	0	3	4	0	0	0	28	0	0	0	0	0	63	646
5:30 PM	31	9	0	0	0	1	4	0	0	0	17	0	0	0	0	0	62	651
5:35 PM	27	3	0	0	0	4	0	0	1	0	12	0	0	0	0	0	47	645
5:40 PM	31	6	0	0	0	1	0	0	2	0	17	0	0	0	0	0	57	654
5:45 PM	17	4	0	0	0	1	1	0	1	0	12	0	0	0	0	0	36	637
5:50 PM	22	2	0	0	0	5	1	0	0	0	17	0	0	0	0	0	47	622
5:55 PM	21	6	0	0	0	2	0	0	0	0	11	0	0	0	0	0	40	606

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	52	0	0	0	72	16	0	12	0	244	0	0	0	0	0	700
Heavy Trucks	12	0	0		0	4	0		4	0	0		0	0	0		20
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 9/12/2019 3:20 PM

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

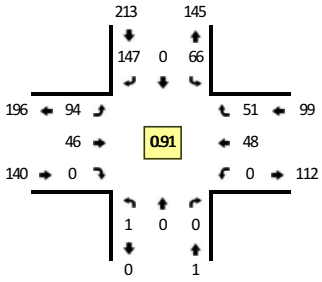
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

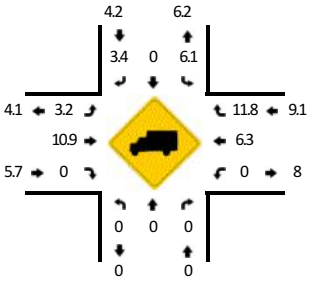
LOCATION: 17. NE 50th Ave -- NE Salmon Creek St
CITY/STATE: Clark, WA

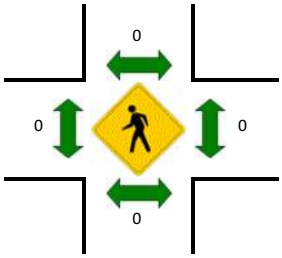
QC JOB #: 14982945
DATE: Thu, May 16 2019

Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 8:15 AM -- 8:30 AM

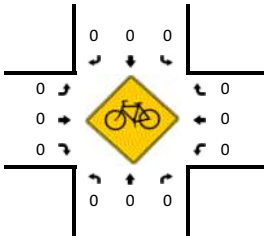


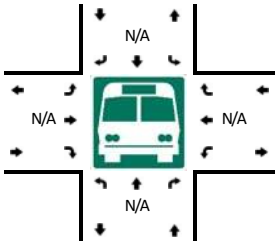




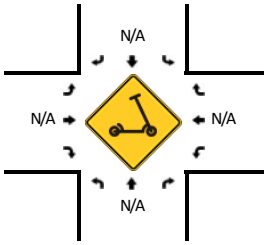












5-Min Count Period Beginning At	17. NE 50th Ave (Northbound)				17. NE 50th Ave (Southbound)				NE Salmon Creek St (Eastbound)				NE Salmon Creek St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	2	0	7	0	2	5	0	0	0	4	1	0	21	
7:05 AM	0	0	0	0	2	0	3	0	5	4	0	0	0	4	1	0	19	
7:10 AM	0	0	0	0	3	0	9	0	5	2	0	0	0	3	2	0	24	
7:15 AM	0	0	0	0	4	0	7	0	4	5	0	0	0	3	2	0	25	
7:20 AM	0	0	0	0	9	0	2	0	2	1	0	0	0	5	4	0	23	
7:25 AM	0	0	0	0	4	0	5	0	4	4	0	0	0	5	1	0	23	
7:30 AM	0	0	0	0	6	0	6	0	1	6	0	0	0	3	3	0	25	
7:35 AM	0	0	0	0	6	0	8	0	8	5	0	0	0	3	3	0	33	
7:40 AM	0	0	0	0	7	0	11	0	7	5	0	0	0	2	3	0	35	
7:45 AM	0	0	0	0	6	0	15	0	3	5	0	0	0	1	5	0	35	
7:50 AM	0	0	0	0	9	0	19	0	10	7	0	0	0	1	2	0	48	
7:55 AM	0	0	0	0	9	0	12	0	4	7	0	0	0	4	3	0	39	350
8:00 AM	0	0	0	0	5	0	11	0	4	2	0	0	0	5	10	0	37	366
8:05 AM	0	0	0	0	6	0	9	0	6	2	0	0	0	4	4	0	31	378
8:10 AM	0	0	0	0	7	0	6	0	6	5	0	0	0	5	3	0	32	386
8:15 AM	0	0	0	0	4	0	14	0	18	1	0	0	0	8	6	0	51	412
8:20 AM	0	0	0	0	3	0	8	0	14	1	0	0	0	4	2	0	32	421
8:25 AM	0	0	0	0	1	0	13	0	13	8	0	0	0	1	6	0	42	440
8:30 AM	1	0	0	0	5	0	11	0	4	5	0	0	0	5	2	0	33	448
8:35 AM	0	0	0	0	7	0	14	0	7	1	0	0	0	4	2	0	35	450
8:40 AM	0	0	0	0	4	0	15	0	5	2	0	0	0	6	6	0	38	453
8:45 AM	0	0	0	0	3	0	10	0	3	7	0	0	0	5	1	0	29	447
8:50 AM	0	0	0	0	2	0	7	0	3	3	0	0	0	8	2	0	25	424
8:55 AM	0	0	0	0	5	0	2	0	4	4	0	0	0	4	10	0	29	414

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	32	0	140	0	180	40	0	0	0	52	56	0	500
Heavy Trucks	0	0	0		0	0	4		0	4	0		0	0	4		12
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

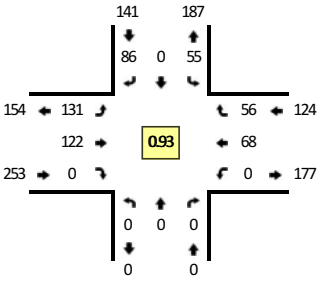
Report generated on 11/27/2019 11:08 AM

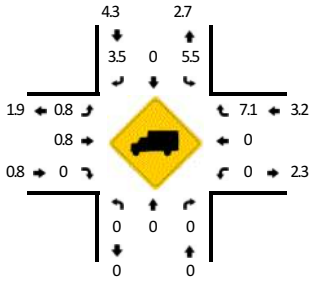
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

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

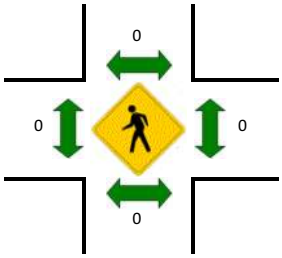
LOCATION: 17. NE 50th Ave -- NE Salmon Creek St | **QC JOB #:** 14982946
CITY/STATE: Clark, WA | **DATE:** Thu, May 16 2019

Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

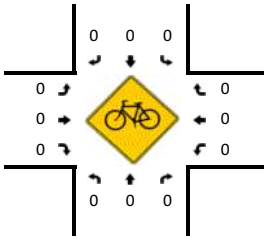


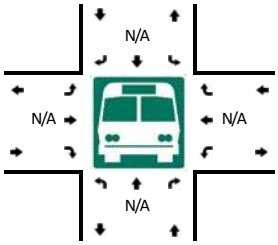


Quality Counts
DATA THAT DRIVES COMMUNITIES

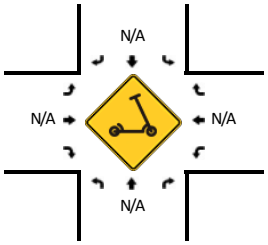












5-Min Count Period Beginning At	17. NE 50th Ave (Northbound)				17. NE 50th Ave (Southbound)				NE Salmon Creek St (Eastbound)				NE Salmon Creek St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	5	0	4	0	12	5	0	0	0	6	5	0	37	
4:05 PM	0	0	0	0	4	0	8	0	12	1	0	0	0	4	8	0	37	
4:10 PM	0	0	0	0	1	0	3	0	12	10	0	0	0	5	5	0	36	
4:15 PM	0	0	0	0	3	0	10	0	13	5	0	0	0	5	8	0	44	
4:20 PM	0	0	0	0	3	0	2	0	11	5	0	0	0	6	8	0	35	
4:25 PM	0	0	0	0	2	0	8	0	8	6	0	0	0	11	7	0	42	
4:30 PM	0	0	0	0	5	0	2	0	10	6	0	0	0	6	6	0	35	
4:35 PM	0	0	0	0	4	0	6	0	14	5	0	0	0	7	3	0	39	
4:40 PM	0	0	0	0	3	0	5	0	13	2	0	0	0	6	5	0	34	
4:45 PM	0	0	0	0	7	0	8	0	14	8	0	0	0	8	3	0	48	
4:50 PM	0	0	0	0	5	0	12	0	9	12	0	0	0	0	2	0	40	
4:55 PM	0	0	0	0	9	0	4	0	11	11	0	0	0	2	2	0	39	466
5:00 PM	0	0	0	0	3	0	6	0	9	10	0	0	0	6	2	0	36	465
5:05 PM	0	0	0	0	3	0	8	0	11	11	0	0	0	6	5	0	44	472
5:10 PM	0	0	0	0	3	0	7	0	12	9	0	0	0	4	9	0	44	480
5:15 PM	0	0	0	0	5	0	7	0	7	11	0	0	0	10	8	0	48	484
5:20 PM	0	0	0	0	3	0	5	0	13	11	0	0	0	5	11	0	48	497
5:25 PM	0	0	0	0	3	0	8	0	9	11	0	0	0	5	2	0	38	493
5:30 PM	0	0	0	0	3	0	9	0	17	8	0	0	0	3	2	0	42	500
5:35 PM	0	0	0	0	5	0	9	0	9	10	0	0	0	13	7	0	53	514
5:40 PM	0	0	0	0	6	0	3	0	10	10	0	0	0	6	3	0	38	518
5:45 PM	0	0	0	0	2	0	6	0	12	6	0	0	0	1	4	0	31	501
5:50 PM	0	0	0	0	2	0	5	0	5	9	0	0	0	7	4	0	32	493
5:55 PM	0	0	0	0	15	0	11	0	7	4	0	0	0	5	3	0	45	499

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	44	0	76	0	128	124	0	0	0	76	112	0	560
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	8		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 11/27/2019 11:08 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Appendix B Existing Conditions Traffic Operations Worksheets



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	84	462	30	4	35	776	84	30	43	33	66	50
Future Volume (vph)	84	462	30	4	35	776	84	30	43	33	66	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95		0.97	1.00	1.00	0.97	1.00
Frt	1.00	1.00	0.85		1.00	0.99		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1719	3252	1568		1669	3303		2736	1652	1292	3400	1827
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1719	3252	1568		1669	3303		2736	1652	1292	3400	1827
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	90	497	32	4	38	834	90	32	46	35	71	54
RTOR Reduction (vph)	0	0	17	0	0	3	0	0	0	31	0	0
Lane Group Flow (vph)	90	497	15	0	42	921	0	32	46	4	71	54
Heavy Vehicles (%)	5%	11%	3%	0%	9%	7%	14%	28%	15%	25%	3%	4%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	1	6		3	8		7	4
Permitted Phases			2							8		
Actuated Green, G (s)	10.9	38.5	38.5		6.4	34.0		3.9	9.6	9.6	6.0	11.7
Effective Green, g (s)	10.9	38.5	38.5		6.4	34.0		3.9	9.6	9.6	6.0	11.7
Actuated g/C Ratio	0.13	0.47	0.47		0.08	0.42		0.05	0.12	0.12	0.07	0.14
Clearance Time (s)	6.0	6.0	6.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	229	1536	740		131	1377		130	194	152	250	262
v/s Ratio Prot	c0.05	c0.15			0.03	c0.28		0.01	0.03		c0.02	c0.03
v/s Ratio Perm			0.01							0.00		
v/c Ratio	0.39	0.32	0.02		0.32	0.67		0.25	0.24	0.03	0.28	0.21
Uniform Delay, d1	32.3	13.4	11.5		35.5	19.2		37.4	32.6	31.8	35.7	30.8
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	0.1	0.0		1.4	1.2		1.0	0.6	0.1	0.6	0.4
Delay (s)	33.4	13.5	11.5		36.9	20.4		38.4	33.3	31.9	36.3	31.2
Level of Service	C	B	B		D	C		D	C	C	D	C
Approach Delay (s)		16.3				21.2			34.3			32.1
Approach LOS		B				C			C			C

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	81.5	Sum of lost time (s)	21.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	176
Future Volume (vph)	176
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1524
Flt Permitted	1.00
Satd. Flow (perm)	1524
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	189
RTOR Reduction (vph)	162
Lane Group Flow (vph)	27
Heavy Vehicles (%)	6%
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	11.7
Effective Green, g (s)	11.7
Actuated g/C Ratio	0.14
Clearance Time (s)	5.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	218
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.12
Uniform Delay, d1	30.4
Progression Factor	1.00
Incremental Delay, d2	0.3
Delay (s)	30.7
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	11	26	550	11	1	43	783	4	24	8	38	4
Future Volume (vph)	11	26	550	11	1	43	783	4	24	8	38	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	6.0	4.5		4.5	6.0	4.5	4.5	6.0	6.0	4.5
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (prot)		1805	3252	1369		1721	3312	1077	1656	1696	1455	1805
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (perm)		1805	3252	1369		1721	3312	1077	1656	1696	1455	1805
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	12	28	591	12	1	46	842	4	26	9	41	4
RTOR Reduction (vph)	0	0	0	6	0	0	0	2	0	0	34	0
Lane Group Flow (vph)	0	40	591	6	0	47	842	2	26	9	7	4
Heavy Vehicles (%)	0%	0%	11%	18%	0%	5%	9%	50%	9%	12%	11%	0%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	NA	Perm	Prot
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6			8	
Actuated Green, G (s)		4.3	28.5	32.5		4.6	28.8	29.7	4.0	11.8	11.8	0.9
Effective Green, g (s)		4.3	28.5	32.5		4.6	28.8	29.7	4.0	11.8	11.8	0.9
Actuated g/C Ratio		0.06	0.43	0.49		0.07	0.43	0.44	0.06	0.18	0.18	0.01
Clearance Time (s)		4.5	6.0	4.5		4.5	6.0	4.5	4.5	6.0	6.0	4.5
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		116	1387	666		118	1427	478	99	299	257	24
v/s Ratio Prot		0.02	0.18	0.00		c0.03	c0.25	0.00	c0.02	c0.01		0.00
v/s Ratio Perm				0.00				0.00			0.00	
v/c Ratio		0.34	0.43	0.01		0.40	0.59	0.00	0.26	0.03	0.03	0.17
Uniform Delay, d1		29.9	13.4	8.8		29.8	14.5	10.3	30.0	22.8	22.8	32.6
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		1.8	0.2	0.0		2.2	0.7	0.0	1.4	0.0	0.0	3.3
Delay (s)		31.7	13.6	8.8		32.0	15.2	10.3	31.4	22.8	22.8	35.9
Level of Service		C	B	A		C	B	B	C	C	C	D
Approach Delay (s)			14.7				16.0			25.7		
Approach LOS			B				B			C		

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	66.8	Sum of lost time (s)	21.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	13	73
Future Volume (vph)	13	73
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.0	
Lane Util. Factor	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1638	
Flt Permitted	1.00	
Satd. Flow (perm)	1638	
Peak-hour factor, PHF	0.93	0.93
Adj. Flow (vph)	14	78
RTOR Reduction (vph)	68	0
Lane Group Flow (vph)	24	0
Heavy Vehicles (%)	8%	0%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	8.7	
Effective Green, g (s)	8.7	
Actuated g/C Ratio	0.13	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	213	
v/s Ratio Prot	c0.01	
v/s Ratio Perm		
v/c Ratio	0.11	
Uniform Delay, d1	25.6	
Progression Factor	1.00	
Incremental Delay, d2	0.2	
Delay (s)	25.9	
Level of Service	C	
Approach Delay (s)	26.3	
Approach LOS	C	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	46	27	102	54	20	110	50	75	15	62	79
Future Volume (veh/h)	48	46	27	102	54	20	110	50	75	15	62	79
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1722	1722	1722	1752	1678	1678	1693	1722	1722
Adj Flow Rate, veh/h	64	61	36	136	72	27	147	67	100	20	83	105
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	7	7	7	12	12	12	10	15	15	14	12	12
Cap, veh/h	228	181	82	307	122	38	188	181	270	40	128	162
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.11	0.30	0.30	0.02	0.19	0.19
Sat Flow, veh/h	466	813	368	748	550	169	1668	608	907	1612	691	874
Grp Volume(v), veh/h	161	0	0	235	0	0	147	0	167	20	0	188
Grp Sat Flow(s),veh/h/ln	1647	0	0	1467	0	0	1668	0	1514	1612	0	1565
Q Serve(g_s), s	0.0	0.0	0.0	2.5	0.0	0.0	3.5	0.0	3.5	0.5	0.0	4.5
Cycle Q Clear(g_c), s	3.2	0.0	0.0	5.7	0.0	0.0	3.5	0.0	3.5	0.5	0.0	4.5
Prop In Lane	0.40		0.22	0.58		0.11	1.00		0.60	1.00		0.56
Lane Grp Cap(c), veh/h	491	0	0	467	0	0	188	0	452	40	0	291
V/C Ratio(X)	0.33	0.00	0.00	0.50	0.00	0.00	0.78	0.00	0.37	0.50	0.00	0.65
Avail Cap(c_a), veh/h	1730	0	0	1600	0	0	1100	0	1530	1103	0	1584
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	0.0	0.0	14.3	0.0	0.0	17.5	0.0	11.2	19.5	0.0	15.3
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.8	0.0	0.0	2.7	0.0	0.5	3.5	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	1.0	0.0	0.0	1.6	0.0	0.0	1.1	0.0	0.8	0.2	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	0.0	0.0	15.2	0.0	0.0	20.2	0.0	11.7	23.0	0.0	17.7
LnGrp LOS	B	A	A	B	A	A	C	A	B	C	A	B
Approach Vol, veh/h		161			235			314			208	
Approach Delay, s/veh		13.9			15.2			15.7			18.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.3	18.4		14.8	11.9	13.8		14.8
Change Period (Y+Rc), s	* 6.3	* 6.3		* 5.8	* 7.3	* 6.3		* 5.8
Max Green Setting (Gmax), s	* 28	* 41		* 43	* 27	* 41		* 43
Max Q Clear Time (g_c+I1), s	2.5	5.5		5.2	5.5	6.5		7.7
Green Ext Time (p_c), s	0.0	0.9		0.9	0.2	1.0		1.4

Intersection Summary	
HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	46	92	4	47	120	25	13	44	27	19	59	27
Future Vol, veh/h	46	92	4	47	120	25	13	44	27	19	59	27
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	0	9	0	4	5	0	8	5	4	0	5	0
Mvmt Flow	61	123	5	63	160	33	17	59	36	25	79	36
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	10.4	9.2	9.3
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	32%	24%	18%
Vol Thru, %	52%	65%	62%	56%
Vol Right, %	32%	3%	13%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	84	142	192	105
LT Vol	13	46	47	19
Through Vol	44	92	120	59
RT Vol	27	4	25	27
Lane Flow Rate	112	189	256	140
Geometry Grp	1	1	1	1
Degree of Util (X)	0.16	0.257	0.342	0.195
Departure Headway (Hd)	5.133	4.895	4.806	5.003
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	692	727	742	710
Service Time	3.217	2.971	2.875	3.082
HCM Lane V/C Ratio	0.162	0.26	0.345	0.197
HCM Control Delay	9.2	9.7	10.4	9.3
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.6	1	1.5	0.7

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	138	15	49	144	13	16	21	17	38	62	9
Future Vol, veh/h	4	138	15	49	144	13	16	21	17	38	62	9
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	2	7	4	4	8	7	5	6	5	8	11
Mvmt Flow	5	175	19	62	182	16	20	27	22	48	78	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.4	10.3	8.8	9.5
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	30%	3%	24%	35%
Vol Thru, %	39%	88%	70%	57%
Vol Right, %	31%	10%	6%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	54	157	206	109
LT Vol	16	4	49	38
Through Vol	21	138	144	62
RT Vol	17	15	13	9
Lane Flow Rate	68	199	261	138
Geometry Grp	1	1	1	1
Degree of Util (X)	0.098	0.259	0.344	0.198
Departure Headway (Hd)	5.167	4.695	4.746	5.174
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	688	761	754	688
Service Time	3.243	2.751	2.799	3.243
HCM Lane V/C Ratio	0.099	0.261	0.346	0.201
HCM Control Delay	8.8	9.4	10.3	9.5
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.3	1	1.5	0.7

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	4	104	1	27	78	17	1	11	20	28	12	7
Future Vol, veh/h	4	104	1	27	78	17	1	11	20	28	12	7
Conflicting Peds, #/hr	0	0	0	0	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	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	25	4	0	8	15	19	0	0	5	15	25	14
Mvmt Flow	5	124	1	32	93	20	1	13	24	33	14	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	113	0	0	125	0	0	313	312	125	320	302	103
Stage 1	-	-	-	-	-	-	135	135	-	167	167	-
Stage 2	-	-	-	-	-	-	178	177	-	153	135	-
Critical Hdwy	4.35	-	-	4.18	-	-	7.1	6.5	6.25	7.25	6.75	6.34
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.25	5.75	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.25	5.75	-
Follow-up Hdwy	2.425	-	-	2.272	-	-	3.5	4	3.345	3.635	4.225	3.426
Pot Cap-1 Maneuver	1345	-	-	1425	-	-	643	606	918	608	574	920
Stage 1	-	-	-	-	-	-	873	789	-	805	719	-
Stage 2	-	-	-	-	-	-	828	756	-	820	743	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1345	-	-	1425	-	-	611	589	918	570	558	920
Mov Cap-2 Maneuver	-	-	-	-	-	-	611	589	-	570	558	-
Stage 1	-	-	-	-	-	-	870	786	-	802	702	-
Stage 2	-	-	-	-	-	-	785	738	-	782	740	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	1.7	10	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	760	1345	-	-	1425	-	-	601
HCM Lane V/C Ratio	0.05	0.004	-	-	0.023	-	-	0.093
HCM Control Delay (s)	10	7.7	0	-	7.6	0	-	11.6
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.3



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	194	3	80	107	2	54
Future Volume (veh/h)	194	3	80	107	2	54
Initial Q (Qb), veh	0	0	0	0	0	0
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	1796	1796	1752	1722	1159	1648
Adj Flow Rate, veh/h	234	4	96	129	2	65
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	7	7	10	12	50	17
Cap, veh/h	982	17	654	936	87	111
Arrive On Green	0.29	0.29	0.29	0.29	0.08	0.08
Sat Flow, veh/h	3523	59	1069	3358	1104	1397
Grp Volume(v), veh/h	116	122	96	129	2	65
Grp Sat Flow(s),veh/h/ln	1706	1786	1069	1636	1104	1397
Q Serve(g_s), s	0.9	0.9	1.3	0.5	0.0	0.8
Cycle Q Clear(g_c), s	0.9	0.9	2.3	0.5	0.0	0.8
Prop In Lane		0.03	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	488	511	654	936	87	111
V/C Ratio(X)	0.24	0.24	0.15	0.14	0.02	0.59
Avail Cap(c_a), veh/h	3480	3641	2528	6673	2009	2542
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	4.9	4.9	5.7	4.7	7.6	7.9
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.0	0.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.0	5.0	5.8	4.7	7.6	9.8
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	238			225	67	
Approach Delay, s/veh	5.0			5.2	9.7	
Approach LOS	A			A	A	

Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	10.8				10.8	7.0
Change Period (Y+Rc), s	* 5.7				* 5.7	5.6
Max Green Setting (Gmax), s	* 36				* 36	32.4
Max Q Clear Time (g_c+I1), s	4.3				2.9	2.8
Green Ext Time (p_c), s	0.6				0.3	0.1

Intersection Summary	
HCM 6th Ctrl Delay	5.7
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

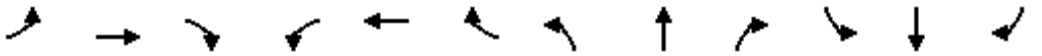
Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	6	267	210	81	262	9
Future Vol, veh/h	6	267	210	81	262	9
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, %	0	10	9	15	2	11
Mvmt Flow	7	297	233	90	291	10

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	323	0	-	0	441	162
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	163	-
Critical Hdwy	4.1	-	-	-	6.84	7.12
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.2	-	-	-	3.52	3.41
Pot Cap-1 Maneuver	1248	-	-	-	545	827
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	849	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1248	-	-	-	542	827
Mov Cap-2 Maneuver	-	-	-	-	542	-
Stage 1	-	-	-	-	740	-
Stage 2	-	-	-	-	849	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	19.3
HCM LOS			C

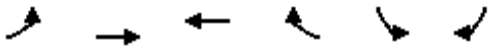
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1248	-	-	-	548
HCM Lane V/C Ratio	0.005	-	-	-	0.549
HCM Control Delay (s)	7.9	-	-	-	19.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	3.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	137	391	337	194	0	0	0	0	93	1	97
Future Volume (vph)	0	137	391	337	194	0	0	0	0	93	1	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		1.00	1.00	0.91	0.91						1.00	1.00
Frpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	0.98						0.95	1.00
Satd. Flow (prot)		1743	1553	1564	3107						1678	1455
Flt Permitted		1.00	1.00	0.95	0.98						0.95	1.00
Satd. Flow (perm)		1743	1553	1564	3107						1678	1455
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	146	416	359	206	0	0	0	0	99	1	103
RTOR Reduction (vph)	0	0	349	0	0	0	0	0	0	0	0	91
Lane Group Flow (vph)	0	146	67	187	378	0	0	0	0	0	100	12
Confl. Peds. (#/hr)	2					2						
Heavy Vehicles (%)	0%	9%	4%	5%	12%	0%	0%	0%	0%	8%	0%	11%
Turn Type		NA	Perm	Split	NA					Perm	NA	Perm
Protected Phases		6		2	2						8	
Permitted Phases			6							8		8
Actuated Green, G (s)		12.1	12.1	40.8	40.8						8.6	8.6
Effective Green, g (s)		12.1	12.1	40.8	40.8						8.6	8.6
Actuated g/C Ratio		0.16	0.16	0.54	0.54						0.11	0.11
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		281	250	850	1690						192	166
v/s Ratio Prot		c0.08		0.12	c0.12							
v/s Ratio Perm			0.04								0.06	0.01
v/c Ratio		0.52	0.27	0.22	0.22						0.52	0.07
Uniform Delay, d1		28.8	27.6	8.9	8.9						31.3	29.6
Progression Factor		1.00	1.00	1.10	1.11						1.00	1.00
Incremental Delay, d2		1.6	0.6	0.6	0.3						2.5	0.2
Delay (s)		30.4	28.2	10.3	10.1						33.8	29.8
Level of Service		C	C	B	B						C	C
Approach Delay (s)		28.7			10.2			0.0			31.8	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		

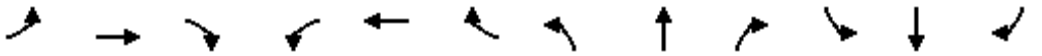
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	89	141	531	80	0	0
Future Volume (Veh/h)	89	141	531	80	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	99	157	590	89	0	0
Pedestrians					1	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		440	122			
pX, platoon unblocked	0.96				0.96	0.96
vC, conflicting volume	680				990	340
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	588				911	235
tC, single (s)	4.3				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.3				3.5	3.3
p0 queue free %	89				100	100
cM capacity (veh/h)	901				238	744

Direction, Lane #	EB 1	EB 2	WB 1	WB 2
Volume Total	99	157	393	286
Volume Left	99	0	0	0
Volume Right	0	0	0	89
cSH	901	1700	1700	1700
Volume to Capacity	0.11	0.09	0.23	0.17
Queue Length 95th (ft)	9	0	0	0
Control Delay (s)	9.5	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	3.7		0.0	
Approach LOS				

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	133	0	0	324	47	121	154	100	53	0	166
Future Volume (vph)	8	133	0	0	324	47	121	154	100	53	0	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			3.5		4.0	5.0		4.5		4.5
Lane Util. Factor		1.00			0.95		0.97	0.95		1.00		1.00
Frpb, ped/bikes		1.00			1.00		1.00	1.00		1.00		1.00
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00		1.00
Frt		1.00			0.98		1.00	0.94		1.00		0.85
Flt Protected		1.00			1.00		0.95	1.00		0.95		1.00
Satd. Flow (prot)		1762			3351		3127	3205		1612		1482
Flt Permitted		0.98			1.00		0.95	1.00		0.95		1.00
Satd. Flow (perm)		1728			3351		3127	3205		1612		1482
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	148	0	0	360	52	134	171	111	59	0	184
RTOR Reduction (vph)	0	0	0	0	9	0	0	96	0	0	0	164
Lane Group Flow (vph)	0	157	0	0	403	0	134	186	0	59	0	20
Confl. Peds. (#/hr)	1					1						
Heavy Vehicles (%)	0%	8%	0%	0%	4%	16%	12%	6%	6%	12%	0%	9%
Turn Type	pm+pt	NA			NA		Prot	NA		Prot		Perm
Protected Phases	1	6			2		7	4		3		
Permitted Phases	6											8
Actuated Green, G (s)		47.4			47.4		5.6	10.4		3.2		8.0
Effective Green, g (s)		47.4			48.4		6.6	10.4		3.2		8.0
Actuated g/C Ratio		0.63			0.65		0.09	0.14		0.04		0.11
Clearance Time (s)		4.5			4.5		5.0	5.0		4.5		4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0		3.0
Lane Grp Cap (vph)		1092			2162		275	444		68		158
v/s Ratio Prot					c0.12		0.04	c0.06		c0.04		
v/s Ratio Perm		0.09										0.01
v/c Ratio		0.14			0.19		0.49	0.42		0.87		0.12
Uniform Delay, d1		5.6			5.4		32.6	29.5		35.7		30.3
Progression Factor		1.01			1.00		1.00	1.00		1.00		1.00
Incremental Delay, d2		0.1			0.2		1.4	0.6		64.6		0.4
Delay (s)		5.7			5.6		33.9	30.2		100.3		30.7
Level of Service		A			A		C	C		F		C
Approach Delay (s)		5.7			5.6			31.4			47.6	
Approach LOS		A			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	250	35	5	328	43	32
Future Vol, veh/h	250	35	5	328	43	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	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	8	9	20	4	5	17
Mvmt Flow	272	38	5	357	47	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	310	0	658	291
Stage 1	-	-	-	-	291	-
Stage 2	-	-	-	-	367	-
Critical Hdwy	-	-	4.3	-	6.45	6.37
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	-	-	2.38	-	3.545	3.453
Pot Cap-1 Maneuver	-	-	1155	-	424	714
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	694	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1155	-	422	714
Mov Cap-2 Maneuver	-	-	-	-	422	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	691	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	511	-	-	1155	-
HCM Lane V/C Ratio	0.16	-	-	0.005	-
HCM Control Delay (s)	13.4	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	162	120	55	245	88	45
Future Volume (vph)	162	120	55	245	88	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9			5.9	5.6	5.6
Lane Util. Factor	1.00			1.00	1.00	1.00
Frpb, ped/bikes	0.99			1.00	1.00	1.00
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.94			1.00	1.00	0.85
Flt Protected	1.00			0.99	0.95	1.00
Satd. Flow (prot)	1652			1788	1641	1482
Flt Permitted	1.00			0.88	0.95	1.00
Satd. Flow (perm)	1652			1595	1641	1482
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	188	140	64	285	102	52
RTOR Reduction (vph)	27	0	0	0	0	45
Lane Group Flow (vph)	301	0	0	349	102	7
Confl. Peds. (#/hr)		1	1			
Heavy Vehicles (%)	7%	8%	2%	6%	10%	9%
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases			2		8	8
Actuated Green, G (s)	18.3			18.3	5.0	5.0
Effective Green, g (s)	18.3			18.3	5.0	5.0
Actuated g/C Ratio	0.53			0.53	0.14	0.14
Clearance Time (s)	5.9			5.9	5.6	5.6
Vehicle Extension (s)	2.0			2.0	1.0	1.0
Lane Grp Cap (vph)	868			838	235	212
v/s Ratio Prot	0.18					
v/s Ratio Perm				c0.22	c0.06	0.01
v/c Ratio	0.35			0.42	0.43	0.04
Uniform Delay, d1	4.8			5.0	13.6	12.8
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			0.1	0.5	0.0
Delay (s)	4.9			5.1	14.1	12.8
Level of Service	A			A	B	B
Approach Delay (s)	4.9			5.1	13.7	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	34.8	Sum of lost time (s)	11.5
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	130	26	43	172	5	42	46	35	9	77	49
Future Vol, veh/h	25	130	26	43	172	5	42	46	35	9	77	49
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	4	10	12	5	5	60	5	2	9	22	3	4
Mvmt Flow	27	143	29	47	189	5	46	51	38	10	85	54
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10	10.7	9.6	10
HCM LOS	A	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	34%	14%	20%	7%
Vol Thru, %	37%	72%	78%	57%
Vol Right, %	28%	14%	2%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	123	181	220	135
LT Vol	42	25	43	9
Through Vol	46	130	172	77
RT Vol	35	26	5	49
Lane Flow Rate	135	199	242	148
Geometry Grp	1	1	1	1
Degree of Util (X)	0.198	0.274	0.336	0.224
Departure Headway (Hd)	5.276	5.062	4.998	5.439
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	684	714	711	665
Service Time	3.28	3.062	3.098	3.439
HCM Lane V/C Ratio	0.197	0.279	0.34	0.223
HCM Control Delay	9.6	10	10.7	10
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.7	1.1	1.5	0.9

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	122	50	27	120	12	44	40	11	8	102	28
Future Vol, veh/h	11	122	50	27	120	12	44	40	11	8	102	28
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, %	36	9	10	0	11	17	5	10	9	0	8	7
Mvmt Flow	12	131	54	29	129	13	47	43	12	9	110	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.3	9.2	9.1	9.1
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	46%	6%	17%	6%
Vol Thru, %	42%	67%	75%	74%
Vol Right, %	12%	27%	8%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	183	159	138
LT Vol	44	11	27	8
Through Vol	40	122	120	102
RT Vol	11	50	12	28
Lane Flow Rate	102	197	171	148
Geometry Grp	1	1	1	1
Degree of Util (X)	0.145	0.284	0.227	0.2
Departure Headway (Hd)	5.121	5.188	4.77	4.844
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	696	689	747	736
Service Time	3.19	3.25	2.832	2.908
HCM Lane V/C Ratio	0.147	0.286	0.229	0.201
HCM Control Delay	9.1	10.3	9.2	9.1
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.5	1.2	0.9	0.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	79	60	91	90	7	27	275	51	10	641	29
Future Volume (veh/h)	7	79	60	91	90	7	27	275	51	10	641	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1826	1826	1826	1722	1767	1767	1307	1826	1826
Adj Flow Rate, veh/h	8	86	65	99	98	8	29	299	55	11	697	32
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, %	7	7	7	5	5	5	12	9	9	40	5	5
Cap, veh/h	77	166	119	218	153	11	54	715	131	18	820	38
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.03	0.49	0.49	0.01	0.47	0.47
Sat Flow, veh/h	35	951	682	679	880	63	1640	1452	267	1245	1732	80
Grp Volume(v), veh/h	159	0	0	205	0	0	29	0	354	11	0	729
Grp Sat Flow(s),veh/h/ln	1668	0	0	1622	0	0	1640	0	1719	1245	0	1812
Q Serve(g_s), s	0.0	0.0	0.0	1.4	0.0	0.0	0.9	0.0	7.0	0.5	0.0	19.0
Cycle Q Clear(g_c), s	4.6	0.0	0.0	6.0	0.0	0.0	0.9	0.0	7.0	0.5	0.0	19.0
Prop In Lane	0.05		0.41	0.48		0.04	1.00		0.16	1.00		0.04
Lane Grp Cap(c), veh/h	361	0	0	382	0	0	54	0	846	18	0	858
V/C Ratio(X)	0.44	0.00	0.00	0.54	0.00	0.00	0.54	0.00	0.42	0.63	0.00	0.85
Avail Cap(c_a), veh/h	1420	0	0	1323	0	0	889	0	1285	675	0	1354
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.2	0.0	0.0	20.6	0.0	0.0	25.5	0.0	8.7	26.2	0.0	12.4
Incr Delay (d2), s/veh	0.8	0.0	0.0	1.2	0.0	0.0	8.2	0.0	0.3	31.4	0.0	3.1
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	1.7	0.0	0.0	2.3	0.0	0.0	0.4	0.0	1.7	0.3	0.0	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.0	0.0	0.0	21.8	0.0	0.0	33.7	0.0	9.0	57.6	0.0	15.5
LnGrp LOS	C	A	A	C	A	A	C	A	A	E	A	B
Approach Vol, veh/h		159			205			383			740	
Approach Delay, s/veh		21.0			21.8			10.9			16.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	15.3	6.9	31.3	15.3	5.9	32.3
Change Period (Y+Rc), s	* 6	* 5.1	* 6	* 6	* 5.1	* 6
Max Green Setting (Gmax), s	* 44	* 29	* 40	* 44	* 29	* 40
Max Q Clear Time (g_c+I1), s	8.0	2.9	21.0	6.6	2.5	9.0
Green Ext Time (p_c), s	1.3	0.0	4.4	1.0	0.0	2.0

Intersection Summary	
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	7	0	20	0	0	0	3	90	0	0	175	18
Future Vol, veh/h	7	0	20	0	0	0	3	90	0	0	175	18
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	-	-	-2	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	14	0	16	0	0	0	33	3	0	0	5	82
Mvmt Flow	8	0	24	0	0	0	4	106	0	0	206	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	331	331	217	343	341	106	227	0	0	106	0	0
Stage 1	217	217	-	114	114	-	-	-	-	-	-	-
Stage 2	114	114	-	229	227	-	-	-	-	-	-	-
Critical Hdwy	7.24	6.5	6.36	7.1	6.5	6.2	4.43	-	-	4.1	-	-
Critical Hdwy Stg 1	6.24	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.24	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.626	4	3.444	3.5	4	3.3	2.497	-	-	2.2	-	-
Pot Cap-1 Maneuver	600	592	789	615	584	954	1178	-	-	1498	-	-
Stage 1	759	727	-	896	805	-	-	-	-	-	-	-
Stage 2	862	805	-	778	720	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	598	590	789	595	582	954	1178	-	-	1498	-	-
Mov Cap-2 Maneuver	598	590	-	595	582	-	-	-	-	-	-	-
Stage 1	756	727	-	892	802	-	-	-	-	-	-	-
Stage 2	859	802	-	755	720	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.2	0	0.3	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1178	-	-	729	-	1498	-	-
HCM Lane V/C Ratio	0.003	-	-	0.044	-	-	-	-
HCM Control Delay (s)	8.1	0	-	10.2	0	0	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-	-

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	9	6	78	211	28
Future Vol, veh/h	10	9	6	78	211	28
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	0	0	67	7	2	0
Mvmt Flow	12	11	7	96	260	35
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.8	9.4	9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	7%	53%	0%
Vol Thru, %	93%	0%	88%
Vol Right, %	0%	47%	12%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	84	19	239
LT Vol	6	10	0
Through Vol	78	0	211
RT Vol	0	9	28
Lane Flow Rate	104	23	295
Geometry Grp	1	1	1
Degree of Util (X)	0.153	0.03	0.326
Departure Headway (Hd)	5.318	4.621	3.982
Convergence, Y/N	Yes	Yes	Yes
Cap	669	779	894
Service Time	3.392	2.621	2.052
HCM Lane V/C Ratio	0.155	0.03	0.33
HCM Control Delay	9.4	7.8	9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.1	1.4

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	3	0	4	42	10	22	5	119	19	25	177	10
Future Vol, veh/h	3	0	4	42	10	22	5	119	19	25	177	10
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	-	-	-	-	-	-	120	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	2	0	10	0	4	0	4	4	10
Mvmt Flow	3	0	5	48	11	25	6	135	22	28	201	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	439	432	207	423	426	146	212	0	0	157	0	0
Stage 1	263	263	-	158	158	-	-	-	-	-	-	-
Stage 2	176	169	-	265	268	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.3	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.39	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	532	519	839	541	524	880	1370	-	-	1411	-	-
Stage 1	747	694	-	844	771	-	-	-	-	-	-	-
Stage 2	831	763	-	740	691	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	499	507	839	528	511	880	1370	-	-	1411	-	-
Mov Cap-2 Maneuver	499	507	-	528	511	-	-	-	-	-	-	-
Stage 1	744	680	-	841	768	-	-	-	-	-	-	-
Stage 2	792	760	-	721	677	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	12	0.3	0.9
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1370	-	-	649	596	1411	-	-
HCM Lane V/C Ratio	0.004	-	-	0.012	0.141	0.02	-	-
HCM Control Delay (s)	7.6	-	-	10.6	12	7.6	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.5	0.1	-	-

MOVEMENT SUMMARY

Site: 120 [NE 10th Ave/NE 149th St - Existing AM]

Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 10th Ave												
3	L2	71	11.0	0.044	6.1	LOS A	0.0	0.0	0.00	0.60	0.00	34.4
8	T1	56	8.0	0.032	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	40.0
Approach		127	9.7	0.044	3.4	NA	0.0	0.0	0.00	0.33	0.00	36.7
North: NE 10th Ave												
4	T1	67	24.0	0.149	13.4	LOS B	0.5	14.9	0.43	0.99	0.43	31.5
14	R2	7	33.0	0.149	10.3	LOS B	0.5	14.9	0.43	0.99	0.43	31.2
Approach		73	24.8	0.149	13.1	LOS B	0.5	14.9	0.43	0.99	0.43	31.4
West: NE 149th St												
5	L2	24	0.0	0.029	9.4	LOS A	0.1	3.3	0.39	0.83	0.39	33.2
12	R2	358	2.0	0.227	6.0	LOS A	0.0	0.0	0.00	0.59	0.00	34.8
Approach		382	1.9	0.227	6.2	LOS A	0.1	3.3	0.02	0.61	0.02	34.7
All Vehicles		582	6.5	0.227	6.5	NA	0.5	14.9	0.07	0.60	0.07	34.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	6.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	98	48	50	53	68	153
Future Vol, veh/h	98	48	50	53	68	153
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	120
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	11	6	12	6	3
Mvmt Flow	108	53	55	58	75	168

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	113	0	-	0	353	84
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	269	-
Critical Hdwy	4.13	-	-	-	6.46	6.23
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.227	-	-	-	3.554	3.327
Pot Cap-1 Maneuver	1470	-	-	-	637	972
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	767	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1470	-	-	-	589	972
Mov Cap-2 Maneuver	-	-	-	-	589	-
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	767	-

Approach	EB	WB	SB
HCM Control Delay, s	5.1	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1470	-	-	-	589	972
HCM Lane V/C Ratio	0.073	-	-	-	0.127	0.173
HCM Control Delay (s)	7.6	0	-	-	12	9.5
HCM Lane LOS	A	A	-	-	B	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4	0.6

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	176	994	49	4	46	569	83	52	100	56	1	102
Future Volume (vph)	176	994	49	4	46	569	83	52	100	56	1	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95		0.97	1.00	1.00		0.97
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	1.00	0.85		1.00	0.98		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	1687	3438	1455		1639	3321		3127	1759	1509		3215
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00		0.95
Satd. Flow (perm)	1687	3438	1455		1639	3321		3127	1759	1509		3215
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	181	1025	51	4	47	587	86	54	103	58	1	105
RTOR Reduction (vph)	0	0	27	0	0	6	0	0	0	50	0	0
Lane Group Flow (vph)	181	1025	24	0	51	667	0	54	103	8	0	106
Confl. Peds. (#/hr)								1				
Heavy Vehicles (%)	7%	5%	11%	0%	11%	7%	4%	12%	8%	7%	0%	9%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	Prot
Protected Phases	5	2		1	1	6		3	8		7	7
Permitted Phases			2							8		
Actuated Green, G (s)	16.7	43.8	43.8		7.3	34.4		5.9	13.3	13.3		9.2
Effective Green, g (s)	16.7	43.8	43.8		7.3	34.4		5.9	13.3	13.3		9.2
Actuated g/C Ratio	0.18	0.46	0.46		0.08	0.36		0.06	0.14	0.14		0.10
Clearance Time (s)	6.0	6.0	6.0		5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	297	1591	673		126	1207		195	247	212		312
v/s Ratio Prot	c0.11	c0.30			0.03	0.20		0.02	c0.06			c0.03
v/s Ratio Perm			0.02							0.01		
v/c Ratio	0.61	0.64	0.04		0.40	0.55		0.28	0.42	0.04		0.34
Uniform Delay, d1	35.9	19.4	13.9		41.6	24.0		42.3	37.1	35.1		39.9
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Incremental Delay, d2	3.5	0.9	0.0		2.1	0.6		0.8	1.1	0.1		0.7
Delay (s)	39.5	20.3	13.9		43.7	24.5		43.1	38.3	35.2		40.5
Level of Service	D	C	B		D	C		D	D	D		D
Approach Delay (s)		22.8				25.9			38.6			
Approach LOS		C				C			D			

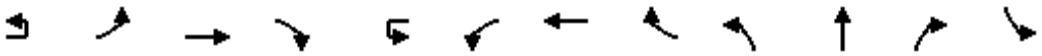
Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	94.6	Sum of lost time (s)	21.0
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	60	141
Future Volume (vph)	60	141
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	5.0	5.0
Lane Util. Factor	1.00	1.00
Frpb, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1810	1548
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1810	1548
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	62	145
RTOR Reduction (vph)	0	120
Lane Group Flow (vph)	62	25
Confl. Peds. (#/hr)		1
Heavy Vehicles (%)	5%	3%
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Actuated Green, G (s)	16.6	16.6
Effective Green, g (s)	16.6	16.6
Actuated g/C Ratio	0.18	0.18
Clearance Time (s)	5.0	5.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	317	271
v/s Ratio Prot	c0.03	
v/s Ratio Perm		0.02
v/c Ratio	0.20	0.09
Uniform Delay, d1	33.3	32.7
Progression Factor	1.00	1.00
Incremental Delay, d2	0.3	0.2
Delay (s)	33.6	32.8
Level of Service	C	C
Approach Delay (s)	35.6	
Approach LOS	D	

Intersection Summary



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	12	74	1068	30	4	44	670	12	21	23	58	9
Future Volume (vph)	12	74	1068	30	4	44	670	12	21	23	58	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	6.0	4.5		4.5	6.0	4.5	4.5	6.0	6.0	4.5
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (prot)		1759	3438	1568		1772	3374	1615	1719	1667	1583	1805
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (perm)		1759	3438	1568		1772	3374	1615	1719	1667	1583	1805
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	12	76	1101	31	4	45	691	12	22	24	60	9
RTOR Reduction (vph)	0	0	0	13	0	0	0	6	0	0	53	0
Lane Group Flow (vph)	0	88	1101	18	0	49	691	6	22	24	7	9
Heavy Vehicles (%)	0%	3%	5%	3%	0%	2%	7%	0%	5%	14%	2%	0%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	NA	Perm	Prot
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6			8	
Actuated Green, G (s)		10.6	41.9	47.1		6.4	37.7	40.0	5.2	9.7	9.7	2.3
Effective Green, g (s)		10.6	41.9	47.1		6.4	37.7	40.0	5.2	9.7	9.7	2.3
Actuated g/C Ratio		0.13	0.52	0.58		0.08	0.46	0.49	0.06	0.12	0.12	0.03
Clearance Time (s)		4.5	6.0	4.5		4.5	6.0	4.5	4.5	6.0	6.0	4.5
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		229	1771	908		139	1564	794	109	198	188	51
v/s Ratio Prot		c0.05	c0.32	0.00		0.03	0.20	0.00	c0.01	c0.01		0.00
v/s Ratio Perm				0.01				0.00			0.00	
v/c Ratio		0.38	0.62	0.02		0.35	0.44	0.01	0.20	0.12	0.04	0.18
Uniform Delay, d1		32.4	14.0	7.3		35.5	14.7	10.5	36.1	32.0	31.7	38.6
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		1.1	0.7	0.0		1.5	0.2	0.0	0.9	0.3	0.1	1.7
Delay (s)		33.4	14.7	7.3		37.0	14.9	10.5	37.0	32.3	31.8	40.2
Level of Service		C	B	A		D	B	B	D	C	C	D
Approach Delay (s)			15.9				16.3			33.0		
Approach LOS			B				B			C		

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	81.3	Sum of lost time (s)	21.0
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	15	32
Future Volume (vph)	15	32
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.0	
Lane Util. Factor	1.00	
Frt	0.90	
Flt Protected	1.00	
Satd. Flow (prot)	1668	
Flt Permitted	1.00	
Satd. Flow (perm)	1668	
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	15	33
RTOR Reduction (vph)	30	0
Lane Group Flow (vph)	18	0
Heavy Vehicles (%)	7%	0%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	6.8	
Effective Green, g (s)	6.8	
Actuated g/C Ratio	0.08	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	139	
v/s Ratio Prot	0.01	
v/s Ratio Perm		
v/c Ratio	0.13	
Uniform Delay, d1	34.5	
Progression Factor	1.00	
Incremental Delay, d2	0.4	
Delay (s)	34.9	
Level of Service	C	
Approach Delay (s)	35.8	
Approach LOS	D	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	53	10	72	68	26	184	189	189	17	75	78
Future Volume (veh/h)	52	53	10	72	68	26	184	189	189	17	75	78
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1885	1841	1841	1900	1781	1781
Adj Flow Rate, veh/h	60	62	12	84	79	30	214	220	220	20	87	91
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
Percent Heavy Veh, %	6	6	6	6	6	6	1	4	4	0	8	8
Cap, veh/h	227	171	27	229	140	45	277	291	291	45	166	173
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.15	0.35	0.35	0.02	0.21	0.21
Sat Flow, veh/h	554	956	149	573	779	249	1795	844	844	1810	797	834
Grp Volume(v), veh/h	134	0	0	193	0	0	214	0	440	20	0	178
Grp Sat Flow(s),veh/h/ln	1659	0	0	1600	0	0	1795	0	1689	1810	0	1631
Q Serve(g_s), s	0.0	0.0	0.0	1.7	0.0	0.0	4.7	0.0	9.4	0.4	0.0	4.0
Cycle Q Clear(g_c), s	2.7	0.0	0.0	4.4	0.0	0.0	4.7	0.0	9.4	0.4	0.0	4.0
Prop In Lane	0.45		0.09	0.44		0.16	1.00		0.50	1.00		0.51
Lane Grp Cap(c), veh/h	425	0	0	414	0	0	277	0	583	45	0	339
V/C Ratio(X)	0.32	0.00	0.00	0.47	0.00	0.00	0.77	0.00	0.76	0.44	0.00	0.52
Avail Cap(c_a), veh/h	1722	0	0	1726	0	0	1205	0	1692	1228	0	1639
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.9	0.0	0.0	15.5	0.0	0.0	16.6	0.0	11.8	19.6	0.0	14.4
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.8	0.0	0.0	1.7	0.0	2.0	2.5	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	1.4	0.0	0.0	1.5	0.0	2.5	0.2	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	0.0	0.0	16.3	0.0	0.0	18.3	0.0	13.9	22.2	0.0	15.6
LnGrp LOS	B	A	A	B	A	A	B	A	B	C	A	B
Approach Vol, veh/h		134			193			654			198	
Approach Delay, s/veh		15.3			16.3			15.3			16.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.3	20.4		13.1	12.9	14.8		13.1
Change Period (Y+Rc), s	* 6.3	* 6.3		* 5.8	6.6	* 6.3		* 5.8
Max Green Setting (Gmax), s	* 28	* 41		* 43	27.4	* 41		* 43
Max Q Clear Time (g_c+I1), s	2.4	11.4		4.7	6.7	6.0		6.4
Green Ext Time (p_c), s	0.0	2.7		0.7	0.2	1.0		1.1

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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	9	231	10	23	145	8	17	64	51	13	33	7
Future Vol, veh/h	9	231	10	23	145	8	17	64	51	13	33	7
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, %	0	3	0	5	4	0	0	0	0	0	0	0
Mvmt Flow	10	269	12	27	169	9	20	74	59	15	38	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.6	9.8	9.3	8.9
HCM LOS	B	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	4%	13%	25%
Vol Thru, %	48%	92%	82%	62%
Vol Right, %	39%	4%	5%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	250	176	53
LT Vol	17	9	23	13
Through Vol	64	231	145	33
RT Vol	51	10	8	7
Lane Flow Rate	153	291	205	62
Geometry Grp	1	1	1	1
Degree of Util (X)	0.21	0.377	0.277	0.09
Departure Headway (Hd)	4.937	4.67	4.864	5.249
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	721	765	733	675
Service Time	3.011	2.73	2.93	3.335
HCM Lane V/C Ratio	0.212	0.38	0.28	0.092
HCM Control Delay	9.3	10.6	9.8	8.9
HCM Lane LOS	A	B	A	A
HCM 95th-tile Q	0.8	1.8	1.1	0.3

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	256	12	32	146	20	15	75	38	17	43	11
Future Vol, veh/h	19	256	12	32	146	20	15	75	38	17	43	11
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, %	11	1	0	6	0	5	0	3	0	0	0	9
Mvmt Flow	22	298	14	37	170	23	17	87	44	20	50	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	12.3	10.5	9.9	9.4
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	7%	16%	24%
Vol Thru, %	59%	89%	74%	61%
Vol Right, %	30%	4%	10%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	128	287	198	71
LT Vol	15	19	32	17
Through Vol	75	256	146	43
RT Vol	38	12	20	11
Lane Flow Rate	149	334	230	83
Geometry Grp	1	1	1	1
Degree of Util (X)	0.22	0.46	0.326	0.128
Departure Headway (Hd)	5.333	5.069	5.102	5.563
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	676	714	709	646
Service Time	3.349	3.069	3.102	3.582
HCM Lane V/C Ratio	0.22	0.468	0.324	0.128
HCM Control Delay	9.9	12.3	10.5	9.4
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.8	2.4	1.4	0.4

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	13	100	5	32	117	21	4	11	26	20	8	8
Future Vol, veh/h	13	100	5	32	117	21	4	11	26	20	8	8
Conflicting Peds, #/hr	0	0	0	0	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	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	7	0	3	3	5	25	0	4	11	0	0
Mvmt Flow	15	114	6	36	133	24	5	13	30	23	9	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	157	0	0	120	0	0	373	376	117	386	367	145
Stage 1	-	-	-	-	-	-	147	147	-	217	217	-
Stage 2	-	-	-	-	-	-	226	229	-	169	150	-
Critical Hdwy	4.1	-	-	4.13	-	-	7.35	6.5	6.24	7.21	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.5	-	6.21	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.5	-	6.21	5.5	-
Follow-up Hdwy	2.2	-	-	2.227	-	-	3.725	4	3.336	3.599	4	3.3
Pot Cap-1 Maneuver	1435	-	-	1462	-	-	544	558	930	557	565	908
Stage 1	-	-	-	-	-	-	804	779	-	765	727	-
Stage 2	-	-	-	-	-	-	728	718	-	812	777	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1435	-	-	1462	-	-	516	537	930	515	544	908
Mov Cap-2 Maneuver	-	-	-	-	-	-	516	537	-	515	544	-
Stage 1	-	-	-	-	-	-	795	770	-	757	707	-
Stage 2	-	-	-	-	-	-	692	699	-	765	768	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	1.4	10.3	11.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	730	1435	-	-	1462	-	-	577
HCM Lane V/C Ratio	0.064	0.01	-	-	0.025	-	-	0.071
HCM Control Delay (s)	10.3	7.5	0	-	7.5	0	-	11.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0.2



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	179	7	93	217	12	98
Future Volume (veh/h)	179	7	93	217	12	98
Initial Q (Qb), veh	0	0	0	0	0	0
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	1856	1796	1870	1781	1885
Adj Flow Rate, veh/h	197	8	102	238	13	108
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	3	7	2	8	1
Cap, veh/h	945	38	643	972	211	199
Arrive On Green	0.27	0.27	0.27	0.27	0.12	0.12
Sat Flow, veh/h	3546	140	1130	3647	1697	1598
Grp Volume(v), veh/h	100	105	102	238	13	108
Grp Sat Flow(s),veh/h/ln	1763	1830	1130	1777	1697	1598
Q Serve(g_s), s	0.8	0.8	1.4	1.0	0.1	1.2
Cycle Q Clear(g_c), s	0.8	0.8	2.3	1.0	0.1	1.2
Prop In Lane		0.08	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	482	501	643	972	211	199
V/C Ratio(X)	0.21	0.21	0.16	0.24	0.06	0.54
Avail Cap(c_a), veh/h	3408	3539	2519	6871	2928	2757
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	5.3	5.3	6.1	5.3	7.2	7.7
Incr Delay (d2), s/veh	0.1	0.1	0.0	0.0	0.0	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	0.1	0.1	0.1	0.1	0.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.3	5.3	6.2	5.4	7.3	8.6
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	205			340	121	
Approach Delay, s/veh	5.3			5.6	8.4	
Approach LOS	A			A	A	

Timer - Assigned Phs	2				6	8
Phs Duration (G+Y+Rc), s	10.8				10.8	7.9
Change Period (Y+Rc), s	* 5.7				* 5.7	5.6
Max Green Setting (Gmax), s	* 36				* 36	32.4
Max Q Clear Time (g_c+I1), s	4.3				2.8	3.2
Green Ext Time (p_c), s	0.9				0.2	0.3

Intersection Summary	
HCM 6th Ctrl Delay	6.0
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

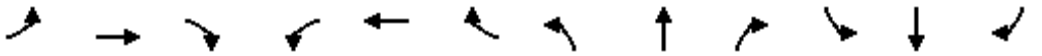
Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	34	300	275	146	169	11
Future Vol, veh/h	34	300	275	146	169	11
Conflicting Peds, #/hr	1	0	0	1	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	97	97	97	97	97	97
Heavy Vehicles, %	6	5	7	4	7	9
Mvmt Flow	35	309	284	151	174	11

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	436	0	-	0	586	219
Stage 1	-	-	-	-	361	-
Stage 2	-	-	-	-	225	-
Critical Hdwy	4.22	-	-	-	6.94	7.08
Critical Hdwy Stg 1	-	-	-	-	5.94	-
Critical Hdwy Stg 2	-	-	-	-	5.94	-
Follow-up Hdwy	2.26	-	-	-	3.57	3.39
Pot Cap-1 Maneuver	1092	-	-	-	430	764
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	776	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1091	-	-	-	415	763
Mov Cap-2 Maneuver	-	-	-	-	415	-
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	775	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	19.8
HCM LOS			C

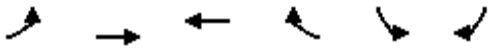
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1091	-	-	-	427
HCM Lane V/C Ratio	0.032	-	-	-	0.435
HCM Control Delay (s)	8.4	-	-	-	19.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	2.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	188	281	286	335	0	0	0	0	111	4	86
Future Volume (vph)	0	188	281	286	335	0	0	0	0	111	4	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Lane Util. Factor		1.00	1.00	0.91	0.91						1.00	1.00
Frpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Flpb, ped/bikes		1.00	1.00	1.00	1.00						1.00	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	0.99						0.95	1.00
Satd. Flow (prot)		1792	1524	1564	3235						1628	1482
Flt Permitted		1.00	1.00	0.95	0.99						0.95	1.00
Satd. Flow (perm)		1792	1524	1564	3235						1628	1482
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	0	194	290	295	345	0	0	0	0	114	4	89
RTOR Reduction (vph)	0	0	238	0	0	0	0	0	0	0	0	78
Lane Group Flow (vph)	0	194	52	206	434	0	0	0	0	0	118	11
Confl. Peds. (#/hr)	1					1						
Heavy Vehicles (%)	0%	6%	6%	5%	6%	0%	0%	0%	0%	10%	50%	9%
Turn Type		NA	Perm	Split	NA					Perm	NA	Perm
Protected Phases		6		2	2						8	
Permitted Phases			6							8		8
Actuated Green, G (s)		13.5	13.5	38.6	38.6						9.4	9.4
Effective Green, g (s)		13.5	13.5	38.6	38.6						9.4	9.4
Actuated g/C Ratio		0.18	0.18	0.51	0.51						0.13	0.13
Clearance Time (s)		4.5	4.5	4.5	4.5						4.5	4.5
Vehicle Extension (s)		3.0	3.0	3.0	3.0						3.0	3.0
Lane Grp Cap (vph)		322	274	804	1664						204	185
v/s Ratio Prot		c0.11		0.13	c0.13							
v/s Ratio Perm			0.03								0.07	0.01
v/c Ratio		0.60	0.19	0.26	0.26						0.58	0.06
Uniform Delay, d1		28.3	26.1	10.2	10.2						30.9	28.9
Progression Factor		1.00	1.00	1.16	1.16						1.00	1.00
Incremental Delay, d2		3.2	0.3	0.7	0.4						3.9	0.1
Delay (s)		31.4	26.5	12.6	12.1						34.9	29.0
Level of Service		C	C	B	B						C	C
Approach Delay (s)		28.5			12.3			0.0			32.4	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

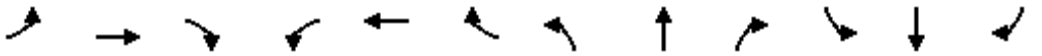
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	104	195	622	107	0	0
Future Volume (Veh/h)	104	195	622	107	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	111	207	662	114	0	0
Pedestrians					1	
Lane Width (ft)					0.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		440	122			
pX, platoon unblocked	0.95				0.96	0.95
vC, conflicting volume	777				1149	389
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	659				1002	250
tC, single (s)	4.2				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	87				100	100
cM capacity (veh/h)	866				203	718

Direction, Lane #	EB 1	EB 2	WB 1	WB 2
Volume Total	111	207	441	335
Volume Left	111	0	0	0
Volume Right	0	0	0	114
cSH	866	1700	1700	1700
Volume to Capacity	0.13	0.12	0.26	0.20
Queue Length 95th (ft)	11	0	0	0
Control Delay (s)	9.8	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	3.4		0.0	
Approach LOS				

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	188	0	0	312	71	251	420	225	55	0	165
Future Volume (vph)	7	188	0	0	312	71	251	420	225	55	0	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			3.5		4.0	5.0		4.5		4.5
Lane Util. Factor		1.00			0.95		0.97	0.95		1.00		1.00
Frpb, ped/bikes		1.00			1.00		1.00	0.99		1.00		1.00
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00		1.00
Frt		1.00			0.97		1.00	0.95		1.00		0.85
Flt Protected		1.00			1.00		0.95	1.00		0.95		1.00
Satd. Flow (prot)		1745			3389		3335	3287		1770		1538
Flt Permitted		0.99			1.00		0.95	1.00		0.95		1.00
Satd. Flow (perm)		1726			3389		3335	3287		1770		1538
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	7	200	0	0	332	76	267	447	239	59	0	176
RTOR Reduction (vph)	0	0	0	0	19	0	0	99	0	0	0	139
Lane Group Flow (vph)	0	207	0	0	389	0	267	587	0	59	0	37
Confl. Peds. (#/hr)	1					1			1	1		
Heavy Vehicles (%)	0%	9%	0%	0%	2%	9%	5%	4%	2%	2%	0%	5%
Turn Type	pm+pt	NA			NA		Prot	NA		Prot		Perm
Protected Phases	1	6			2		7	4		3		
Permitted Phases	6											8
Actuated Green, G (s)		38.4			38.4		7.0	19.4		3.2		15.6
Effective Green, g (s)		38.4			39.4		8.0	19.4		3.2		15.6
Actuated g/C Ratio		0.51			0.53		0.11	0.26		0.04		0.21
Clearance Time (s)		4.5			4.5		5.0	5.0		4.5		4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0		3.0
Lane Grp Cap (vph)		883			1780		355	850		75		319
v/s Ratio Prot					0.11		c0.08	c0.18		0.03		
v/s Ratio Perm		c0.12										0.02
v/c Ratio		0.23			0.22		0.75	0.69		0.79		0.11
Uniform Delay, d1		10.1			9.5		32.5	25.1		35.6		24.1
Progression Factor		1.04			1.00		1.00	1.00		1.00		1.00
Incremental Delay, d2		0.1			0.3		8.7	2.4		40.6		0.2
Delay (s)		10.7			9.8		41.2	27.5		76.1		24.3
Level of Service		B			A		D	C		E		C
Approach Delay (s)		10.7			9.8			31.4			37.3	
Approach LOS		B			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	75.0	Sum of lost time (s)	17.5
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	407	61	32	345	38	26
Future Vol, veh/h	407	61	32	345	38	26
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	94	94	94	94	94	94
Heavy Vehicles, %	8	2	7	3	8	5
Mvmt Flow	433	65	34	367	40	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	498	0	901	466
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	435	-
Critical Hdwy	-	-	4.17	-	6.48	6.25
Critical Hdwy Stg 1	-	-	-	-	5.48	-
Critical Hdwy Stg 2	-	-	-	-	5.48	-
Follow-up Hdwy	-	-	2.263	-	3.572	3.345
Pot Cap-1 Maneuver	-	-	1041	-	301	590
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	640	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1041	-	289	590
Mov Cap-2 Maneuver	-	-	-	-	289	-
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	614	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	17.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	365	-	-	1041	-
HCM Lane V/C Ratio	0.187	-	-	0.033	-
HCM Control Delay (s)	17.1	-	-	8.6	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	304	129	57	222	155	125
Future Volume (vph)	304	129	57	222	155	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9			5.9	5.6	5.6
Lane Util. Factor	1.00			1.00	1.00	1.00
Frpb, ped/bikes	1.00			1.00	1.00	1.00
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.96			1.00	1.00	0.85
Flt Protected	1.00			0.99	0.95	1.00
Satd. Flow (prot)	1740			1830	1749	1538
Flt Permitted	1.00			0.84	0.95	1.00
Satd. Flow (perm)	1740			1550	1749	1538
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	317	134	59	231	161	130
RTOR Reduction (vph)	16	0	0	0	0	102
Lane Group Flow (vph)	435	0	0	290	161	28
Confl. Peds. (#/hr)					1	
Heavy Vehicles (%)	6%	2%	2%	3%	3%	5%
Turn Type	NA		Perm	NA	Perm	Perm
Protected Phases	6			2		
Permitted Phases			2		8	8
Actuated Green, G (s)	15.7			15.7	7.4	7.4
Effective Green, g (s)	15.7			15.7	7.4	7.4
Actuated g/C Ratio	0.45			0.45	0.21	0.21
Clearance Time (s)	5.9			5.9	5.6	5.6
Vehicle Extension (s)	2.0			2.0	1.0	1.0
Lane Grp Cap (vph)	789			703	374	328
v/s Ratio Prot	c0.25					
v/s Ratio Perm				0.19	c0.09	0.02
v/c Ratio	0.55			0.41	0.43	0.08
Uniform Delay, d1	6.9			6.4	11.8	10.9
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.5			0.1	0.3	0.0
Delay (s)	7.4			6.5	12.1	10.9
Level of Service	A			A	B	B
Approach Delay (s)	7.4			6.5	11.6	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	34.6	Sum of lost time (s)	11.5
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	60	237	49	24	123	6	47	86	40	6	37	32
Future Vol, veh/h	60	237	49	24	123	6	47	86	40	6	37	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	4	6	0	6	0	7	1	3	0	0	0
Mvmt Flow	63	249	52	25	129	6	49	91	42	6	39	34
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	12.2	9.6	10.4	9
HCM LOS	B	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	17%	16%	8%
Vol Thru, %	50%	68%	80%	49%
Vol Right, %	23%	14%	4%	43%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	173	346	153	75
LT Vol	47	60	24	6
Through Vol	86	237	123	37
RT Vol	40	49	6	32
Lane Flow Rate	182	364	161	79
Geometry Grp	1	1	1	1
Degree of Util (X)	0.272	0.479	0.225	0.116
Departure Headway (Hd)	5.385	4.731	5.141	5.294
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	672	754	702	681
Service Time	3.385	2.82	3.141	3.3
HCM Lane V/C Ratio	0.271	0.483	0.229	0.116
HCM Control Delay	10.4	12.2	9.6	9
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	1.1	2.6	0.9	0.4

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	204	24	23	133	16	33	118	32	5	49	18
Future Vol, veh/h	27	204	24	23	133	16	33	118	32	5	49	18
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	4	3	13	5	6	7	6	3	6	60	2	12
Mvmt Flow	30	227	27	26	148	18	37	131	36	6	54	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11.4	10.2	10.6	10.5
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	18%	11%	13%	7%
Vol Thru, %	64%	80%	77%	68%
Vol Right, %	17%	9%	9%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	183	255	172	72
LT Vol	33	27	23	5
Through Vol	118	204	133	49
RT Vol	32	24	16	18
Lane Flow Rate	203	283	191	80
Geometry Grp	1	1	1	1
Degree of Util (X)	0.301	0.399	0.276	0.142
Departure Headway (Hd)	5.324	5.066	5.193	6.378
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	675	714	692	562
Service Time	3.356	3.066	3.221	4.415
HCM Lane V/C Ratio	0.301	0.396	0.276	0.142
HCM Control Delay	10.6	11.4	10.2	10.5
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.3	1.9	1.1	0.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	161	59	50	63	5	48	608	94	9	355	18
Future Volume (veh/h)	39	161	59	50	63	5	48	608	94	9	355	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1752	1752	1752	1841	1870	1870	1411	1856	1856
Adj Flow Rate, veh/h	41	171	63	53	67	5	51	647	100	10	378	19
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, %	2	2	2	10	10	10	4	2	2	33	3	3
Cap, veh/h	106	250	85	188	202	13	85	758	117	17	777	39
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.05	0.48	0.48	0.01	0.44	0.44
Sat Flow, veh/h	164	1172	397	467	946	59	1753	1582	244	1344	1752	88
Grp Volume(v), veh/h	275	0	0	125	0	0	51	0	747	10	0	397
Grp Sat Flow(s),veh/h/ln	1732	0	0	1472	0	0	1753	0	1826	1344	0	1840
Q Serve(g_s), s	4.2	0.0	0.0	0.0	0.0	0.0	1.7	0.0	20.9	0.4	0.0	8.9
Cycle Q Clear(g_c), s	8.5	0.0	0.0	3.8	0.0	0.0	1.7	0.0	20.9	0.4	0.0	8.9
Prop In Lane	0.15		0.23	0.42		0.04	1.00		0.13	1.00		0.05
Lane Grp Cap(c), veh/h	440	0	0	402	0	0	85	0	875	17	0	816
V/C Ratio(X)	0.62	0.00	0.00	0.31	0.00	0.00	0.60	0.00	0.85	0.58	0.00	0.49
Avail Cap(c_a), veh/h	1599	0	0	1340	0	0	1059	0	1450	812	0	1460
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	0.0	0.0	19.4	0.0	0.0	27.0	0.0	13.3	28.4	0.0	11.4
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.4	0.0	0.0	6.7	0.0	2.8	27.2	0.0	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.0	1.4	0.0	0.0	0.8	0.0	6.5	0.3	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.7	0.0	0.0	19.8	0.0	0.0	33.7	0.0	16.1	55.7	0.0	11.9
LnGrp LOS	C	A	A	B	A	A	C	A	B	E	A	B
Approach Vol, veh/h		275			125			798			407	
Approach Delay, s/veh		22.7			19.8			17.2			13.0	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	18.3	7.9	31.7	18.3	5.8	33.8
Change Period (Y+Rc), s	* 6	* 5.1	* 6	* 6	* 5.1	* 6
Max Green Setting (Gmax), s	* 52	* 35	* 46	* 52	* 35	* 46
Max Q Clear Time (g_c+I1), s	5.8	3.7	10.9	10.5	2.4	22.9
Green Ext Time (p_c), s	0.8	0.1	2.2	1.8	0.0	4.9

Intersection Summary	
HCM 6th Ctrl Delay	17.3
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	5	0	8	0	0	0	13	186	0	0	85	5
Future Vol, veh/h	5	0	8	0	0	0	13	186	0	0	85	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	-	-	-2	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	25	0	0	0	8	3	0	0	1	0
Mvmt Flow	6	0	10	0	0	0	17	238	0	0	109	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	384	384	112	389	387	238	115	0	0	238	0	0
Stage 1	112	112	-	272	272	-	-	-	-	-	-	-
Stage 2	272	272	-	117	115	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.45	7.1	6.5	6.2	4.18	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.525	3.5	4	3.3	2.272	-	-	2.2	-	-
Pot Cap-1 Maneuver	578	553	882	574	551	806	1437	-	-	1341	-	-
Stage 1	898	807	-	738	688	-	-	-	-	-	-	-
Stage 2	738	688	-	892	804	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	572	545	882	561	543	806	1437	-	-	1341	-	-
Mov Cap-2 Maneuver	572	545	-	561	543	-	-	-	-	-	-	-
Stage 1	885	807	-	728	678	-	-	-	-	-	-	-
Stage 2	728	678	-	882	804	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	0	0.5	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1437	-	-	730	-	1341	-	-
HCM Lane V/C Ratio	0.012	-	-	0.023	-	-	-	-
HCM Control Delay (s)	7.5	0	-	10	0	0	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-	-

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	9	13	261	139	15
Future Vol, veh/h	17	9	13	261	139	15
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	18	10	14	281	149	16
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8	9.2	8.2
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	5%	65%	0%
Vol Thru, %	95%	0%	90%
Vol Right, %	0%	35%	10%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	274	26	154
LT Vol	13	17	0
Through Vol	261	0	139
RT Vol	0	9	15
Lane Flow Rate	295	28	166
Geometry Grp	1	1	1
Degree of Util (X)	0.334	0.037	0.19
Departure Headway (Hd)	4.083	4.802	4.129
Convergence, Y/N	Yes	Yes	Yes
Cap	872	750	856
Service Time	2.144	2.802	2.215
HCM Lane V/C Ratio	0.338	0.037	0.194
HCM Control Delay	9.2	8	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.5	0.1	0.7

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑		↰	↑	
Traffic Vol, veh/h	12	9	10	26	3	17	5	154	45	12	102	10
Future Vol, veh/h	12	9	10	26	3	17	5	154	45	12	102	10
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	120	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	4	33	6	0	3	5	17	4	0
Mvmt Flow	14	11	12	31	4	20	6	183	54	14	121	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	389	405	130	393	384	211	133	0	0	238	0	0
Stage 1	155	155	-	223	223	-	-	-	-	-	-	-
Stage 2	234	250	-	170	161	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.14	6.83	6.26	4.1	-	-	4.27	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.14	5.83	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.14	5.83	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.536	4.297	3.354	2.2	-	-	2.353	-	-
Pot Cap-1 Maneuver	574	538	925	563	504	819	1464	-	-	1246	-	-
Stage 1	852	773	-	775	665	-	-	-	-	-	-	-
Stage 2	774	704	-	827	710	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	550	529	923	539	496	818	1464	-	-	1245	-	-
Mov Cap-2 Maneuver	550	529	-	539	496	-	-	-	-	-	-	-
Stage 1	849	764	-	771	662	-	-	-	-	-	-	-
Stage 2	748	700	-	794	702	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	11.4	0.2	0.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1464	-	-	624	613	1245	-	-
HCM Lane V/C Ratio	0.004	-	-	0.059	0.089	0.011	-	-
HCM Control Delay (s)	7.5	-	-	11.1	11.4	7.9	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0	-	-

MOVEMENT SUMMARY

Site: 120 [NE 10th Ave/NE 149th St - Existing PM]

Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 10th Ave												
3	L2	327	3.0	0.186	6.0	LOS A	0.0	0.0	0.00	0.60	0.00	34.7
8	T1	65	2.0	0.035	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	40.0
Approach		391	2.8	0.186	5.0	NA	0.0	0.0	0.00	0.50	0.00	35.5
North: NE 10th Ave												
4	T1	81	1.0	0.193	13.3	LOS B	0.7	17.8	0.55	0.98	0.55	32.0
14	R2	18	0.0	0.193	10.9	LOS B	0.7	17.8	0.55	0.98	0.55	32.0
Approach		99	0.8	0.193	12.8	LOS B	0.7	17.8	0.55	0.98	0.55	32.0
West: NE 149th St												
5	L2	10	11.0	0.018	12.9	LOS B	0.1	2.0	0.57	0.86	0.57	31.5
12	R2	228	2.0	0.144	6.0	LOS A	0.0	0.0	0.00	0.59	0.00	34.8
Approach		237	2.4	0.144	6.2	LOS A	0.1	2.0	0.02	0.60	0.02	34.7
All Vehicles		728	2.4	0.193	6.5	NA	0.7	17.8	0.08	0.60	0.08	34.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	136	127	71	58	57	89
Future Vol, veh/h	136	127	71	58	57	89
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	120
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	0	7	5	3
Mvmt Flow	148	138	77	63	62	97

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	140	0	-	0	543	109
Stage 1	-	-	-	-	109	-
Stage 2	-	-	-	-	434	-
Critical Hdwy	4.11	-	-	-	6.45	6.23
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.209	-	-	-	3.545	3.327
Pot Cap-1 Maneuver	1449	-	-	-	496	942
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	647	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1449	-	-	-	441	942
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	807	-
Stage 2	-	-	-	-	647	-

Approach	EB	WB	SB
HCM Control Delay, s	4	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1449	-	-	-	441	942
HCM Lane V/C Ratio	0.102	-	-	-	0.14	0.103
HCM Control Delay (s)	7.8	0	-	-	14.5	9.3
HCM Lane LOS	A	A	-	-	B	A
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5	0.3

Appendix C Concurrency Corridor V/C Ratios

Table C-1: Existing East-West Corridor Segment Analyses

Roadway Segment	Road Classification[1]	Single Direction Capacity/Hour[2]	Maximum Volume (vph)[3]	V/C Ratio
NE 219th Street between				
I-5 Northbound Off-ramp and NE 10th Avenue (EB)	State Route	1800	1220	0.68
I-5 Northbound Off-ramp and NE 10th Avenue (WB)			985	0.55
NE 10th Avenue and NE 29th Avenue (EB)		1800	1185	0.66
NE 10th Avenue and NE 29th Avenue (WB)			900	0.50
NE 29th Avenue and NE 50th Avenue(EB)		1800	1135	0.63
NE 29th Avenue and NE 50th Avenue(WB)			830	0.46
NE 199th Street between				
NE Delfel and NE 10th Avenue (EB)	Urban Minor Arterial (M-4cb)	600[4]	120	0.20
NE Delfel and NE 10th Avenue (WB)			330	0.55
NE 10th Avenue and NE 29th Avenue (EB)		600[4]	260	0.43
NE 10th Avenue and NE 29th Avenue (WB)			175	0.29
NE 29th Avenue and NE 50th Avenue (EB)	Urban Minor Arterial (M-2cb)	600[4]	300	0.50
NE 29th Avenue and NE 50th Avenue (WB)			195	0.33
NE 50th Avenue and NE 72nd Avenue (EB)		600[4]	315	0.53
NE 50th Avenue and NE 72nd Avenue (WB)			210	0.35
NE 179th Street between				
NW 41st Avenue and NW 11th Avenue (EB)	Rural Major Collector (R-2)	600[4]	120	0.20
NW 41st Avenue and NW 11th Avenue (WB)			130	0.22
NW 11th Avenue and NE Delfel Road S (EB)	Principal Arterial (Pr-4cb)	600[4]	200	0.33
NW 11th Avenue and NE Delfel Road S (WB)			230	0.38
NE Delfel Road S and NE 10th Avenue (EB)		1,800	530	0.29
NE Delfel Road S and NE 10th Avenue (WB)			730	0.41
NE 10th Avenue and NE 15th Avenue (EB)		600[4]	470	0.78
NE 10th Avenue and NE 15th Avenue (WB)			385	0.64
NE 15th Avenue and NE 29th Avenue (EB)		600[4]	430	0.72
NE 15th Avenue and NE 29th Avenue (WB)			300	0.50
NE 29th Avenue and NE 50th Avenue (EB)		600[4]	285	0.48
NE 29th Avenue and NE 50th Avenue (WB)			220	0.37
NE 50th Avenue and NE 72nd Avenue (EB)		600[4]	260	0.43
NE 50th Avenue and NE 72nd Avenue (WB)			175	0.29
NE 72nd Avenue and NE 92nd Avenue (EB)	Rural Major Collector (R-2)	600[4]	265	0.44
NE 72nd Avenue and NE 92nd Avenue (WB)			190	0.32
NE 174th Street between				
NE 40th Avenue and NE 50th Avenue (EB)	Urban Collector (C-2b)	600[4]	30	0.05
NE 40th Avenue and NE 50th Avenue (WB)			25	0.04
NE 159th Street between				
NE 25th Avenue and NE 29th Avenue (EB)	Urban Collector (C-2)	800	30	0.04
NE 25th Avenue and NE 29th Avenue (WB)			35	0.04
NE 50th Avenue and NE 72nd Avenue (EB)	Urban Collector (C-2cb)	600[4]	85	0.14
NE 50th Avenue and NE 72nd Avenue (WB)			75	0.13
NE 149th Street between				
NW 11th Avenue and NE 10th Avenue (EB)	Urban Collector (C-2)	800	345	0.43
NW 11th Avenue and NE 10th Avenue (WB)			325	0.41
NE Salmon Creek Street between				
WSU Entrance Road and NE 50th Avenue (EB)	Urban Minor Arterial (M-2cb)	600[4]	265	0.44
WSU Entrance Road and NE 50th Avenue (WB)			205	0.34

[1] Source: Clark County Arterial Atlas (Reference 5)

[2] Per Clark County Code: For roadways not fully built-out to county standards, the capacity shall be determined based on the current roadway condition.

[3] vph: vehicles per hour, based on turning movement counts collected at the study intersections.

[4] Based on existing 2-lane cross-section.

Table C-2: Existing North-South Corridor Segment Analyses

Roadway Segment	Road Classification[1]	Single Direction Capacity/Hour[2]	Maximum Volume (vph)[3]	V/C Ratio
NW 11th Avenue between				
NE 199th Street and NE 179th Street (NB)	Urban Minor Arterial (M-2cb)	600[4]	50	0.08
NE 199th Street and NE 179th Street (SB)			50	0.08
NE 179th Street and NE 164th Street (NB)		600[4]	45	0.08
NE 179th Street and NE 164th Street (SB)			50	0.08
NE Delfel Road (N & S) between				
NE 199th Street and NE 179th Street (NB)	Urban Collector (C-2)	600[4]	185	0.31
NE 199th Street and NE 179th Street (SB)			275	0.46
NE 179th Street and NE 10th Avenue (NB)	Urban Collector (C-2cb)	900	110	0.12
NE 179th Street and NE 10th Avenue (SB)			105	0.12
NE 10th Avenue between (West of I-5)				
NE 154th Street and NE 149th Street (NB)	Urban Collector (C-2cb)	600[4]	75	0.13
NE 154th Street and NE 149th Street (SB)			95	0.16
NE 149th Street and NE 139th Street (NB)		900	575	0.64
NE 149th Street and NE 139th Street (SB)			555	0.62
NE 10th Avenue between (West of I-5)				
NE 221th Street and NE 219th Street (NB)	Commercial-Industrial (CI)	800	360	0.45
NE 221th Street and NE 219th Street (SB)			305	0.38
NE 219th Street and NE 199th Street (NB)	Urban Minor Arterial (M-2cb)	800[4]	270	0.34
NE 219th Street and NE 199th Street (SB)			170	0.21
NE 199th Street and NE 179th Street (NB)		800[4]	565	0.71
NE 199th Street and NE 179th Street (SB)			220	0.28
NE 15th Avenue between				
NE 179th Street and NE 173rd Street (NB)	Urban Minor Arterial (M-2cb)	900	280	0.31
NE 179th Street and NE 173rd Street (SB)			190	0.21
NE 29th Avenue between				
NE 259th Street and NE 219th Street (NB)	Rural Minor Collector (Rm-2)	600[4]	110	0.18
NE 259th Street and NE 219th Street (SB)			90	0.15
NE 219th Street and NE 199th Street (NB)	Rural Minor Collector (R-2)	600[4]	115	0.19
NE 219th Street and NE 199th Street (SB)			105	0.18
NE 199th Street and NE 179th Street (NB)	Urban Minor Arterial (M-4cb)	600[4]	155	0.26
NE 199th Street and NE 179th Street (SB)			135	0.23
NE 179th Street and NE 159th Street (NB)		600[4]	280	0.47
NE 179th Street and NE 159th Street (SB)			240	0.40
NE 50th Avenue between				
NE 219th Street and NE 199th Street (NB)	Rural Minor Collector (Rm-2)	600[4]	115	0.19
NE 219th Street and NE 199th Street (SB)			110	0.18
NE 199th Street and NE 179th Street (NB)	Urban Minor Arterial (M-4cb)	600[4]	165	0.28
NE 199th Street and NE 179th Street (SB)			140	0.23
NE 179th Street and NE 174th Street (NB)		600[4]	195	0.33
NE 179th Street and NE 174th Street (SB)			195	0.33
NE 174th Street and NE 159th Street (NB)	Urban Minor Arterial (M-2cb)	600[4]	200	0.33
NE 174th Street and NE 159th Street (SB)			215	0.36
NE 159th Street and NE Salmon Creek Road (NB)		600[4]	205	0.34
NE 159th Street and NE Salmon Creek Road (SB)			225	0.38
NE 72nd Avenue between				
NE 199th Street and NE 179th Street (NB)	Principal Arterial (Pr-4cb)	800[4]	655	0.82
NE 199th Street and NE 179th Street (SB)			685	0.86
NE 179th Street and NE 159th Street (NB)		800[4]	750	0.94
NE 179th Street and NE 159th Street (SB)			795	0.99

[1] Source: Clark County Arterial Atlas (Reference 5)

[2] Per Clark County Code: For roadways not fully built-out to county standards, the capacity shall be determined based on the current roadway condition. For roadways with lane widths twelve (12) feet and greater, and with paved shoulder widths two (2) feet and greater, the lane capacity shall be eight hundred (800) vehicles per hour. For roadways with lane widths between eleven (11) and twelve (12) feet and with paved shoulder widths two (2) feet and greater, the lane capacity shall be seven hundred (700) vehicles per hour. For roadways with lane widths less than eleven (11) feet, the lane capacity shall be six hundred (600) vehicles per hour.

[3] vph: vehicles per hour, based on turning movement counts collected at the study intersections.

[4] Based on existing 2-lane cross-section.

Table C-3: 2025 Background Traffic Volumes and East-West Roadway Capacities

Roadway Segment	Road Classification[1]	Single Direction Capacity/Hour[2]	Maximum Volume (vph)[3]	V/C Ratio
NE 219th Street between				
I-5 Northbound Off-ramp and NE 10th Avenue (EB)	State Route	1800	1335	0.74
I-5 Northbound Off-ramp and NE 10th Avenue (WB)			1075	0.60
NE 10th Avenue and NE 29th Avenue (EB)		1800	1295	0.72
NE 10th Avenue and NE 29th Avenue (WB)			1000	0.56
NE 29th Avenue and NE 50th Avenue(EB)		1800	1245	0.69
NE 29th Avenue and NE 50th Avenue(WB)			930	0.52
NE 199th Street between				
NE Delfel and NE 10th Avenue (EB)	Urban Minor Arterial (M-4cb)	600[4]	165	0.28
NE Delfel and NE 10th Avenue (WB)			395	0.66
NE 10th Avenue and NE 29th Avenue (EB)		600[4]	295	0.49
NE 10th Avenue and NE 29th Avenue (WB)			200	0.33
NE 29th Avenue and NE 50th Avenue (EB)	Urban Minor Arterial (M-2cb)	600[4]	335	0.56
NE 29th Avenue and NE 50th Avenue (WB)			220	0.37
NE 50th Avenue and NE 72nd Avenue (EB)		600[4]	380	0.63
NE 50th Avenue and NE 72nd Avenue (WB)			270	0.45
NE 179th Street between				
NW 41st Avenue and NW 11th Avenue (EB)	Rural Major Collector (R-2)	600[4]	170	0.28
NW 41st Avenue and NW 11th Avenue (WB)			185	0.31
NW 11th Avenue and NE Delfel Road (EB)	Principal Arterial (Pr-4cb)	600[4]	365	0.61
NW 11th Avenue and NE Delfel Road (WB)			425	0.71
NE Delfel Road S and I-5 Northbound Ramps (EB)		1 800	790	0.44
NE Delfel Road S and I-5 Northbound Ramps (WB)			1435	0.80
I-5 Northbound Ramps and NE 12th Avenue (EB)		1 800[5]	1885	1.05
I-5 Northbound Ramps and NE 12th Avenue (WB)		1 800	1610	0.89
NE 12th Avenue and NE 15th Avenue (EB)		1 800	1660	0.92
NE 12th Avenue and NE 15th Avenue (WB)			1080	0.60
NE 15th Avenue and NE 29th Avenue (EB)		1 800	920	0.51
NE 15th Avenue and NE 29th Avenue (WB)			715	0.40
NE 29th Avenue and NE 50th Avenue (EB)		1 800	830	0.46
NE 29th Avenue and NE 50th Avenue (WB)			665	0.37
NE 50th Avenue and NE 72nd Avenue (EB)		1 800	480	0.27
NE 50th Avenue and NE 72nd Avenue (WB)			385	0.21
NE 72nd Avenue and NE 92nd Avenue (EB)	Rural Major Collector (R-2)	600[4]	400	0.22
NE 72nd Avenue and NE 92nd Avenue (WB)			285	0.16
NE 174th Street between				
NE 40th Avenue and NE 50th Avenue (EB)	Urban Collector (C-2b)	600[4]	70	0.12
NE 40th Avenue and NE 50th Avenue (WB)			65	0.11
NE 159th Street between				
NE 25th Avenue and NE 29th Avenue (EB)	Urban Collector (C-2)	800	30	0.04
NE 25th Avenue and NE 29th Avenue (WB)			40	0.05
NE 50th Avenue and NE 72nd Avenue (EB)	Urban Collector (C-2cb)	600[4]	95	0.16
NE 50th Avenue and NE 72nd Avenue (WB)			100	0.17
NE 149th Street between				
NW 11th Avenue and NE 10th Avenue (EB)	Urban Collector (C-2)	800	405	0.51
NW 11th Avenue and NE 10th Avenue (WB)			380	0.48
NE Salmon Creek Street between				
WSU Entrance Road and NE 50th Avenue (EB)	Urban Minor Arterial (M-2cb)	600	365	0.61
WSU Entrance Road and NE 50th Avenue (WB)			310	0.52

[1] Source: Clark County Arterial Atlas (Reference 5)

[2] Per Clark County Code: For roadways not fully built-out to county standards, the capacity shall be determined based on the current roadway condition. For

[3] vph: vehicles per hour, based on turning movement counts collected at the study intersections.

[4] Based on existing 2-lane cross-section.

[5] Assumed two lane section. Addition of auxilary lane would increase to 2,700, pending resolution of long-term interchange design.

Table C-4: 2025 Background Traffic Volumes and North-South Roadway Capacities

Roadway Segment	Road Classification[1]	Single Direction Capacity/Hour[2]	Maximum Volume (vph)[3]	V/C Ratio
NW 11th Avenue between				
NE 199th Street and NE 179th Street (NB)	Urban Minor Arterial (M-2cb)	600[4]	70	0.12
NE 199th Street and NE 179th Street (SB)			75	0.13
NE 179th Street and NE 164th Street (NB)		900	200	0.22
NE 179th Street and NE 164th Street (SB)			230	0.26
NE Delfel Road (N & S) between				
NE 199th Street and NE 179th Street (NB)	Urban Collector (C-2)	800[4]	200	0.25
NE 199th Street and NE 179th Street (SB)			295	0.37
NE 179th Street and NE 10th Avenue (NB)	Urban Collector (C-2cb)	900	170	0.19
NE 179th Street and NE 10th Avenue (SB)			150	0.17
NW 10th Avenue between (West of I-5)				
NE 154th Street and NE 149th Street (NB)	Urban Collector (C-2cb)	600[4]	120	0.20
NE 154th Street and NE 149th Street (SB)			155	0.26
NE 149th Street and NE 139th Street (NB)		900	660	0.73
NE 149th Street and NE 139th Street (SB)			650	0.72
NE 10th Avenue between (East of I-5)				
NE 221th Street and NE 219th Street (NB)	Commercial-Industrial (CI)	800	465	0.58
NE 221th Street and NE 219th Street (SB)			390	0.49
NE 219th Street and NE 199th Street (NB)	Urban Minor Arterial (M-2cb)	800	375	0.47
NE 219th Street and NE 199th Street (SB)			270	0.34
NE 199th Street and NE 194th Street (NB)		800	680	0.85
NE 199th Street and NE 194th Street (SB)			280	0.35
NE 15th Avenue between				
NE 199th Street and NE 179th Street (NB)	Urban Minor Arterial (M-2cb)	900	820	0.91
NE 199th Street and NE 179th Street (SB)			495	0.55
NE 179th Street and NE 173rd Street (NB)		900	750	0.83
NE 179th Street and NE 173rd Street (SB)			700	0.78
NE 29th Avenue between				
NE 259th Street and NE 219th Street (NB)	Rural Minor Collector (Rm-2)	600[4]	125	0.21
NE 259th Street and NE 219th Street (SB)			100	0.17
NE 219th Street and NE 199th Street (NB)	Rural Minor Collector (R-2)	600[4]	130	0.22
NE 219th Street and NE 199th Street (SB)			115	0.19
NE 199th Street and NE 179th Street (NB)	Urban Minor Arterial (M-4cb)	900	175	0.19
NE 199th Street and NE 179th Street (SB)			150	0.17
NE 179th Street and NE 159th Street (NB)		900	415	0.46
NE 179th Street and NE 159th Street (SB)			360	0.40
NE 50th Avenue between				
NE 219th Street and NE 199th Street (NB)	Rural Major Collector (R-2)	600[4]	195	0.33
NE 219th Street and NE 199th Street (SB)			170	0.28
NE 199th Street and NE 179th Street (NB)	Urban Minor Arterial (M-4cb)	900	275	0.31
NE 199th Street and NE 179th Street (SB)			250	0.28
NE 179th Street and NE 174th Street (NB)		900	380	0.42
NE 179th Street and NE 174th Street (SB)			370	0.41
NE 174th Street and NE 159th Street (NB)	Urban Minor Arterial (M-2cb)	600[4]	390	0.65
NE 174th Street and NE 159th Street (SB)			400	0.67
NE 159th Street and NE Salmon Creek Road (NB)		600[4]	390	0.65
NE 159th Street and NE Salmon Creek Road (SB)			415	0.69
NE 72nd Avenue between				
NE 199th Street and NE 179th Street (NB)	Principal Arterial (Pr-4cb)	800[4]	730	0.91
NE 199th Street and NE 179th Street (SB)			745	0.93
NE 179th Street and NE 159th Street (NB)		800[4]	875	1.09
NE 179th Street and NE 159th Street (SB)			895	1.12

[1] Source: Clark County Arterial Atlas (Reference 5)

[2] Per Clark County Code: For roadways not fully built-out to county standards, the capacity shall be determined based on the current roadway condition. For roadways with lane widths twelve (12) feet and greater, and with paved shoulder widths two (2) feet and greater, the lane capacity shall be eight hundred (800) vehicles per hour. For roadways with lane widths between eleven (11) and twelve (12) feet and with paved shoulder widths two (2) feet and greater, the lane capacity shall be seven hundred (700) vehicles per hour. For roadways with lane widths less than eleven (11) feet, the lane capacity shall be six hundred (600) vehicles per hour.

[3] vph: vehicles per hour, based on turning movement counts collected at the study intersections.

[4] Based on existing 2-lane cross-section.

Table C-5: 2025 Total Traffic Volumes and East-West Roadway Capacities

Roadway Segment	Road Classification[1]	Single Direction Capacity/Hour[2]	Maximum Volume (vph)[3]	V/C Ratio
NE 219th Street between				
I-5 Northbound Off-ramp and NE 10th Avenue (EB)	State Route	1800	1335	0.74
I-5 Northbound Off-ramp and NE 10th Avenue (WB)			1075	0.60
NE 10th Avenue and NE 29th Avenue (EB)		1800	1300	0.72
NE 10th Avenue and NE 29th Avenue (WB)			1005	0.56
NE 29th Avenue and NE 50th Avenue(EB)		1800	1250	0.69
NE 29th Avenue and NE 50th Avenue(WB)			935	0.52
NE 199th Street between				
NE Delfel and NE 10th Avenue (EB)	Urban Minor Arterial (M-4cb)	600[4]	170	0.28
NE Delfel and NE 10th Avenue (WB)			395	0.66
NE 10th Avenue and NE 29th Avenue (EB)		600[4]	300	0.50
NE 10th Avenue and NE 29th Avenue (WB)			205	0.34
NE 29th Avenue and NE 50th Avenue (EB)	Urban Minor Arterial (M-2cb)	600[4]	340	0.57
NE 29th Avenue and NE 50th Avenue (WB)			220	0.37
NE 50th Avenue and NE 72nd Avenue (EB)		600[4]	380	0.63
NE 50th Avenue and NE 72nd Avenue (WB)			275	0.46
NE 179th Street between				
NW 41st Avenue and NW 11th Avenue (EB)	Rural Major Collector (R-2)	600[4]	170	0.28
NW 41st Avenue and NW 11th Avenue (WB)			185	0.31
NW 11th Avenue and NE Delfel Road (EB)	Principal Arterial (Pr-4cb)	600[4]	365	0.61
NW 11th Avenue and NE Delfel Road (WB)			425	0.71
NE Delfel Road S and I-5 Northbound Ramps (EB)		1 800	800	0.44
NE Delfel Road S and I-5 Northbound Ramps (WB)			1445	0.80
I-5 Northbound Ramps and NE 12th Avenue (EB)		1,800[5]	1905	1.06
I-5 Northbound Ramps and NE 12th Avenue (WB)		1 800	1620	0.90
NE 12th Avenue and NE 15th Avenue (EB)		1 800	1680	0.93
NE 12th Avenue and NE 15th Avenue (WB)			1090	0.61
NE 15th Avenue and NE 29th Avenue (EB)		1 800	940	0.52
NE 15th Avenue and NE 29th Avenue (WB)			735	0.41
NE 29th Avenue and NE 50th Avenue (EB)		1 800	835	0.46
NE 29th Avenue and NE 50th Avenue (WB)			670	0.37
NE 50th Avenue and NE 72nd Avenue (EB)		1 800	480	0.27
NE 50th Avenue and NE 72nd Avenue (WB)			390	0.22
NE 72nd Avenue and NE 92nd Avenue (EB)	Rural Major Collector (R-2)	600[4]	400	0.22
NE 72nd Avenue and NE 92nd Avenue (WB)			285	0.16
NE 174th Street between				
NE 40th Avenue and NE 50th Avenue (EB)	Urban Collector (C-2b)	600[4]	70	0.12
NE 40th Avenue and NE 50th Avenue (WB)			65	0.11
NE 159th Street between				
NE 25th Avenue and NE 29th Avenue (EB)	Urban Collector (C-2)	800	30	0.04
NE 25th Avenue and NE 29th Avenue (WB)			40	0.05
NE 50th Avenue and NE 72nd Avenue (EB)	Urban Collector (C-2cb)	600[4]	95	0.16
NE 50th Avenue and NE 72nd Avenue (WB)			100	0.17
NE 149th Street between				
NW 11th Avenue and NE 10th Avenue (EB)	Urban Collector (C-2)	900	405	0.45
NW 11th Avenue and NE 10th Avenue (WB)			380	0.42
NE Salmon Creek Street between				
WSU Entrance Road and NE 50th Avenue (EB)	Urban Minor Arterial (M-2cb)	600	365	0.61
WSU Entrance Road and NE 50th Avenue (WB)			310	0.52

[1] Source: Clark County Arterial Atlas (Reference 5)

[2] Per Clark County Code: For roadways not fully built-out to county standards, the capacity shall be determined based on the current roadway condition.

[3] vph: vehicles per hour, based on turning movement counts collected at the study intersections.

[4] Based on existing 2-lane cross-section.

[5] Assumed two lane section. Addition of auxilary lane would increase to 2,700, pending resolution of long-term interchange design.

Table C-6: 2025 Total Traffic Volumes and North-South Roadway Capacities

Roadway Segment	Road Classification[1]	Single Direction Capacity/Hour[2]	Maximum Volume (vph)[3]	V/C Ratio
NW 11th Avenue between				
NE 199th Street and NE 179th Street (NB)	Urban Minor Arterial (M-2cb)	600[4]	70	0.12
NE 199th Street and NE 179th Street (SB)			75	0.13
NE 179th Street and NE 164th Street (NB)		900	200	0.22
NE 179th Street and NE 164th Street (SB)			235	0.26
NE Delfel Road (N & S) between				
NE 199th Street and NE 179th Street (NB)	Urban Collector (C-2)	800[4]	200	0.25
NE 199th Street and NE 179th Street (SB)			295	0.37
NE 179th Street and NE 10th Avenue (NB)	Urban Collector (C-2cb)	900	170	0.19
NE 179th Street and NE 10th Avenue (SB)			150	0.17
NE 10th Avenue between (West of I-5)				
NE 154th Street and NE 149th Street (NB)	Urban Collector (C-2cb)	600[4]	120	0.20
NE 154th Street and NE 149th Street (SB)			155	0.26
NE 149th Street and NE 139th Street (NB)		900	660	0.73
NE 149th Street and NE 139th Street (SB)			650	0.72
NE 10th Avenue between (West of I-5)				
NE 221th Street and NE 219th Street (NB)	Commercial-Industrial (CI)	800	465	0.58
NE 221th Street and NE 219th Street (SB)			390	0.49
NE 219th Street and NE 199th Street (NB)	Urban Minor Arterial (M-2cb)	800	375	0.47
NE 219th Street and NE 199th Street (SB)			270	0.34
NE 199th Street and NE 194th Street (NB)		800	680	0.85
NE 199th Street and NE 194th Street (SB)			280	0.35
NE 15th Avenue between				
NE 199th Street and NE 179th Street (NB)	Urban Minor Arterial (M-2cb)	900	820	0.91
NE 199th Street and NE 179th Street (SB)			495	0.55
NE 179th Street and NE 173rd Street (NB)		900	750	0.83
NE 179th Street and NE 173rd Street (SB)			700	0.78
NE 29th Avenue between				
NE 259th Street and NE 219th Street (NB)	Rural Minor Collector (Rm-2)	600[4]	125	0.21
NE 259th Street and NE 219th Street (SB)			100	0.17
NE 219th Street and NE 199th Street (NB)	Rural Minor Collector (R-2)	600[4]	135	0.23
NE 219th Street and NE 199th Street (SB)			120	0.20
NE 199th Street and NE 179th Street (NB)	Urban Minor Arterial (M-4cb)	900	215	0.24
NE 199th Street and NE 179th Street (SB)			190	0.21
NE 179th Street and NE 159th Street (NB)		900	430	0.48
NE 179th Street and NE 159th Street (SB)			370	0.41
NE 50th Avenue between				
NE 219th Street and NE 199th Street (NB)	Rural Major Collector (R-2)	600[4]	195	0.33
NE 219th Street and NE 199th Street (SB)			170	0.28
NE 199th Street and NE 179th Street (NB)	Urban Minor Arterial (M-4cb)	900	275	0.31
NE 199th Street and NE 179th Street (SB)			250	0.28
NE 179th Street and NE 174th Street (NB)		900	380	0.42
NE 179th Street and NE 174th Street (SB)			370	0.41
NE 174th Street and NE 159th Street (NB)	Urban Minor Arterial (M-2cb)	600[4]	390	0.65
NE 174th Street and NE 159th Street (SB)			400	0.67
NE 159th Street and NE Salmon Creek Road (NB)		600[4]	395	0.66
NE 159th Street and NE Salmon Creek Road (SB)			420	0.70
NE 72nd Avenue between				
NE 199th Street and NE 179th Street (NB)	Principal Arterial (Pr-4cb)	800[4]	730	0.91
NE 199th Street and NE 179th Street (SB)			745	0.93
NE 179th Street and NE 159th Street (NB)		800[4]	880	1.10
NE 179th Street and NE 159th Street (SB)			900	1.13

[1] Source: Clark County Arterial Atlas (Reference 5)

[2] Per Clark County Code: For roadways not fully built-out to county standards, the capacity shall be determined based on the current roadway condition. For

[3] vph: vehicles per hour, based on turning movement counts collected at the study intersections.

[4] Based on existing 2-lane cross-section.

Appendix D Crash Data

OFFICER REPORTED CRASHES THAT OCCURRED at OR in the vicinity of MULTIPLE INTERSECTIONS IN CLARK COUNTY
01/01/2015 - 12/31/2019 *See 2nd tab below for road info & interchange drawing*
Under 23 U.S. Code § 148 and 23 U.S. Code § 409, 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.

KAI REC_ID	JURISDICTION	COUNTY	CITY	INDEXED PRIMARY TRAFFICWAY	PRIMARY TRAFFICWAY	MILEPOST	A/B	BLOCK NUMBER	INTERSECTING TRAFFICWAY	DIST FROM REF POINT	MI or FT	CO ONLY INTERSECTING COUNTY ROAD MILEPOST	COMP DIR FROM REF POINT	REFERENCE POINT NAME	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE
1	County Road	Clark		NE 149TH ST	41150	0.75			41300			0			No	E717479	09/30/2017	50:00:0	No Apparent Injury	0	0	1	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
2	County Road	Clark		NE DELFEL RD	41471	0			94300			2.3			No	E630355	01/09/2017	42:00:0	Possible Injury	1	0	1	0	0	Passenger Car
3	County Road	Clark		NE 10TH AVE	41761	0.99			43680			3			No	E228743	12/24/2013	24:00:0	Unknown	0	0	1	0	0	Passenger Car
4	County Road	Clark		NE 10TH AVE	41761	0.99			43680			3			No	E290708	12/06/2013	20:00:0	Suspected Minor Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
5	County Road	Clark		NE 10TH AV	41761	0.99			43680			3			No	E370002	10/28/2014	40:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
6	County Road	Clark		NE 10TH AVE	41761	0.99			43680			3			No	E472035	10/11/2015	48:00:0	Possible Injury	1	0	2	0	0	Passenger Car
7	County Road	Clark		NE 10TH AVE	41761	0.99			43680			3			No	E617052	12/06/2016	21:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
8	County Road	Clark		SE WOODBURN RD	41761	0									No	E286233	08/27/2013	44:00:0	Unknown	0	0	1	0	0	Passenger Car
9	County Road	Clark		NE 29TH AVE	43330	3.26			43680			2			No	E254968	07/01/2013	09:00:0	Died in Hospital	2	1	2	0	0	Passenger Car
10	County Road	Clark		NE 29TH AVE	43330	3.26			43680			2			No	E761688	01/22/2018	20:00:0	Possible Injury	1	0	2	0	0	Passenger Car
11	County Road	Clark		NE 29TH AVE	43330	2.27									No	E609798	11/18/2016	10:00:0	No Apparent Injury	0	0	1	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
12	County Road	Clark		NE 199TH ST	43330	3.28									No	E343104	07/20/2014	50:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
13	County Road	Clark		NE 199TH ST	43680	2.98			41761			0.98			No	E344837	07/02/2014	28:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
14	County Road	Clark		NE 199TH ST	43680	3			41761			0.99			No	E227769	02/20/2013	56:00:0	Possible Injury	2	0	2	0	0	Passenger Car
15	County Road	Clark		NE 199TH ST	43680	3			41761			0.99			No	E331955	05/09/2014	24:00:0	Possible Injury	1	0	2	0	0	Passenger Car
16	County Road	Clark		NE 199TH ST	43680	3			41761			0.99			No	E563855	07/14/2016	45:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
17	County Road	Clark		NE 199TH ST	43680	3			41761			0.99			No	E734788	11/10/2017	58:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
18	County Road	Clark		NE 199TH ST	43680	3			41761			0.99			No	E745573	12/09/2017	29:00:0	Possible Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
19	County Road	Clark		NE 199TH ST	43680	1.99			43330			3.27			No	E324889	04/16/2014	30:00:0	Possible Injury	2	0	2	0	0	Passenger Car
20	County Road	Clark		NE 199TH ST	43680	1.99			43330			3.27			No	E341631	07/06/2014	06:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
21	County Road	Clark		NE 199TH ST	43680	1.99			43330			3.27			No	E341632	07/05/2014	18:00:0	Possible Injury	1	0	2	0	0	Passenger Car
22	County Road	Clark		NE 199TH ST	43680	2			43330			3.26			No	E245502	05/21/2013	45:00:0	Possible Injury	1	0	1	0	0	Passenger Car
23	County Road	Clark		NE 199TH ST	43680	2			43330			3.26			No	E282775	11/05/2013	22:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
24	County Road	Clark		NE 199TH ST	43680	2			43330			3.26			No	E443782	07/15/2015	09:00:0	Suspected Serious Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
25	County Road	Clark		NE 199TH ST	43680	2			43330			3.26			No	E461060	09/06/2015	05:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
26	County Road	Clark		NE 199TH ST	43680	2			43330			3.26			No	E526148	03/16/2016	29:00:0	Suspected Minor Injury	2	0	2	0	0	Passenger Car
27	County Road	Clark		NE 199TH ST	43680	2			43330			3.26			No	E527846	03/24/2016	42:00:0	Suspected Minor Injury	2	0	2	0	0	Passenger Car
28	County Road	Clark		NE 199TH ST	43680	2			43330			3.26			No	E604523	11/03/2016	40:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
29	County Road	Clark		NE 199TH ST	43680	2			43330			3.26			No	E660080	03/30/2017	05:00:0	Possible Injury	1	0	2	0	0	Passenger Car
30	County Road	Clark		NE 199TH ST	43680	2			43330			3.26			No	E717001	09/27/2017	17:00:0	No Apparent Injury	0	0	3	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
31	County Road	Clark		NE 29TH AVE	43680	2			43330			3.26			No	E734803	11/11/2017	40:00:0	Possible Injury	1	0	2	0	0	Passenger Car
32	County Road	Clark		NE 199TH ST	43680	2			43330			3.26			No	E752736	12/21/2017	38:00:0	Possible Injury	1	0	2	0	0	Passenger Car
33	County Road	Clark		NE 29TH AVE	43680	2			43330			3.26			No	E802865	05/29/2018	14:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
34	County Road	Clark		NE 199TH ST	43680	2			43330			3.26			No	E810747	07/17/2018	21:00:0	No Apparent Injury	0	0	2	0	0	Truck (Flatbad,Van,etc)
35	County Road	Clark		NE 199TH ST	43680	1			44390			3			No	E273266	09/21/2013	15:00:0	No Apparent Injury	0	0	1	0	0	Passenger Car
36	County Road	Clark		NE 199TH STREET	43680	1			44390			3			No	E367452	10/22/2014	22:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
37	County Road	Clark		NE 199TH ST	43680	1			44390			3			No	E391318	01/06/2015	01:00:0	No Apparent Injury	0	0	1	0	0	Passenger Car
38	County Road	Clark		NE 199TH ST	43680	1									No	E360096	09/18/2014	12:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
39	County Road	Clark		NE 199TH	43680	1.04									No	E278230	10/09/2013	45:00:0	No Apparent Injury	0	0	1	0	0	Truck (Flatbad,Van,etc)
40	County Road	Clark		NE 199TH ST	43680	1.18									No	E622958	12/20/2016	43:00:0	Possible Injury	1	0	1	0	0	Passenger Car
41	County Road	Clark		NE 199TH ST	43680	1.3									No	E802147	05/25/2018	25:00:0	No Apparent Injury	0	0	1	0	0	Passenger Car
42	County Road	Clark		NE 199TH ST	43680	1.5									No	E465707	09/27/2015	40:00:0	No Apparent Injury	0	0	1	0	0	Passenger Car
43	County Road	Clark		NE 199TH ST	43680	1.5									No	E692645	07/17/2017	48:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
44	County Road	Clark		NE 199TH ST	43680	1.62									No	E363925	10/06/2014	02:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
45	County Road	Clark		NE 199TH ST	43680	1.62									No	E643554	02/17/2017	39:00:0	No Apparent Injury	0	0	1	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
46	County Road	Clark		NE 199TH ST	43680	1.69									No	E819983	07/20/2018	35:00:0	Possible Injury	1	0	1	0	0	Passenger Car
47	County Road	Clark		NE 50TH AVE	44390	3			43680			1			No	E495104	12/17/2015	08:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
48	County Road	Clark		NE 50TH AVE	44390	3			43680			1			No	E520475	02/29/2016	25:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
49	County Road	Clark		NE 50TH AVE	44390	3			43680			1			No	E757523	12/30/2017	14:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
50	County Road	Clark		NE 50TH AVE	44390	4.99			44460			0.63			No	E527729	03/23/2016	20:00:0	Possible Injury	2	0	2	0	0	Passenger Car
51	County Road	Clark		NE 50TH AVE	44390	4.97									No	E819719	07/19/2018	15:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
52	County Road	Clark		NE 50TH AVE	44460	0.63			44390			4.99			No	E728523	10/28/2017	20:00:0	Possible Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
53	County Road	Clark		NE 72ND AVE	91250	6.27			94360			2.99			No	E247584	05/27/2013	45:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
54	County Road	Clark		NE 72ND AV	91250	6.27			94360			2.99			No	E434002	06/09/2015	57:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
55	County Road	Clark		NE 72ND AVE	91250	6.27			94360			2.99			No	E456671	08/29/2015	10:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
56	County Road	Clark		NE 72ND AVE	91250	6.27			94360			2.99			No	E648587	02/19/2017	13:00:0	Suspected Minor Injury	6	0	4	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
57	County Road	Clark		NE 72ND AVE	91250	6.27			94360			2.99			No	E673058	05/20/2017	18:00:0	Suspected Minor Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
58	County Road	Clark		NE 72ND AVE	91250	6.27			94360			2.99			No	E758298	01/13/2018	03:00:0	Possible Injury	3	0	3	0	0	Passenger Car
59	County Road	Clark		NE 72ND AV	91250	6.26									No	E421189	04/25/2015	22:00:0	Possible Injury	1	0	2	0	0	Passenger Car
60	County Road	Clark		NE SALMON CREEK AVEN	94130	2.31									No	E414276	03/30/2015	52:00:0	Unknown	0	0	1	0	0	Passenger Car
61	County Road	Clark		NW 179TH ST	94300	1.49			41410			1.5			No	E237714	04/11/2013	22:00:0	Possible Injury	4	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
62	County Road	Clark		NW 179TH ST	94300	1.49			41410			1.5			No	E331493	05/24/2014	29:00:0	Suspected Minor Injury	3	0	2	0	0	Passenger Car
63	County Road	Clark		NW 179TH ST	94300	1.49			41410			1.5			No	E349344	07/19/2014	48:00:0	Suspected Minor Injury	3	0	2	0	0	Passenger Car
64	County Road	Clark		NW 179TH ST	94300	1.49			41410			1.5			No	E687025	06/28/2017	25:00:0	Possible Injury	1	0	2	0	0	Motorcycle
65	County Road	Clark		NW 179TH ST	94300	1.49			41410			1.5			No	E726853	10/24/2017	39:00:0	Suspected Minor Injury	1	0	2	0	0	Passenger Car
66	County Road	Clark		NW 179TH ST	94300	1.49			41410			1.5			No	E731560	11/02/2017	03:00:0	Possible Injury	1	0	2	0	0	Passenger Car
67	County Road	Clark		NW 179TH ST	94300	1.49			41410			1.5			No	E790045	04/18/2018	10:00:0	Possible Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
68	County Road	Clark		NW 179TH ST	94300	1.49			41410			1.5			No	E812857	06/28/2018	38:00:0	Possible Injury	1	0	2	0	0	Passenger Car
69	County Road	Clark		NW 179TH ST	94300	1.49			41410			1.5			No	E832299	08/17/2018	04:00:0	Possible Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
70	County Road	Clark		NE 179TH ST	94360	0.28			43110			2.51			No	E247583	05/30/2013	45:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
71	County Road	Clark		179TH ST	94360	0.28			43110			2.51			No	E385407	11/20/2014	23:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
72	County Road	Clark		NE 179TH ST	94360	0.28			43110			2.51			No	E393116	01/16/2015	24:00:0	Suspected Minor Injury	1	0	4	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
73	County Road	Clark		NE 179TH ST	94360	0.28			43110			2.51			No	E568292	06/19/2016	46:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
74	County Road	Clark		NE 179TH ST	94360	0.28			43110			2.51			No	E606798	11/02/2016	30:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
75	County Road	Clark		NE 179TH ST	94360	0.28			43110			2.51			No	E746855	12/13/2017	04:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
76	County Road	Clark		NE 179TH ST	94360	0.28			43110			2.51			No	E762613	09/18/2017	25:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
77	County Road	Clark		NE 179TH ST	94360	0.99			43330			2.26			No	E273388	09/04/2013	28:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
78	County Road	Clark		NE 179TH ST	94360	0.99			43330			2.26			No	E290710	12/06/2013	44:00:0	No Apparent Injury	0	0	3	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
79	County Road	Clark		NE 199TH STREET	94360	0.99			43330			2.26			No	E295259	12/22/2013	44:00:0	Possible Injury	2	0	2	0	0	Passenger Car
80	County Road	Clark		NE 29TH AV	94360	0.99			43330			2.27			No	E316462	02/28/2014	32:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
81	County Road	Clark		NE 179TH ST	94360	0.99			43330			2.26			No	E413010	04/01/2015	05:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
82	County Road	Clark		NE 179TH ST	94360	0.99			43330			2.26			No	E482481	11/14/2015	59:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
83	County Road	Clark		NE 179TH ST	94360	0.99			43330			2.26			No	E528341	03/26/2016	12:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
84	County Road	Clark		NE 179TH ST	94360	0.99			43330			2.26			No	E681300	06/13/2017	10:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
85	County Road	Clark		NE 179TH ST	94360	0.99			43330			2.26			No	E683287	06/20/2017	15:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
86	County Road	Clark		NE 179TH ST	94360	0.99			43330			2.26			No	E746213	12/11/2017	16:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
87	County Road	Clark		NE 179TH ST	94360	0.99			43330			2.26			No	E794822	05/04/2018	45:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
88	County Road	Clark		NE 179TH ST	94360	1.98			44390			4.01			No	E316792	03/14/2014	23:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
89	County Road	Clark		NE 179TH ST	94360	1.98			44390			3.99			No	E856353	10/25/2018	58:00:0	No Apparent Injury	0	0	2	0	0	Not Stated
90	County Road	Clark		NE 179TH ST	94360	2.99			91250			6.27			No	E485741	11/23/2015	05:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
91	County Road	Clark		NE 179TH ST	94360	2.99			91250			6.27			No	E583705	09/12/2016	25:00:0	Possible Injury	3	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
92	County Road	Clark		NE 179TH ST	94360	2.99			91250			6.27			No	E858281	10/31/2018	24:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
93	County Road	Clark		NE 179TH ST	94360	2									No	E260838	08/01/2013	19:00:0	Possible Injury	1	0	1	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
94	County Road	Clark		NE 179TH ST	94360	2.98									No	E416513	04/13/2015	03:00:0	No Apparent Injury	0	0	1	0	0	Passenger Car
95	County Road	Clark		179TH STREET	94360	2.99									No	E231662	02/27/2013	58:00:0	Possible Injury	1	0	2	0	0	Passenger Car
96	State Route	Clark		S02	502	1.57									No	E331343	05/30/2014	23:00:0	Possible Injury	2	0	2	0	0	Passenger Car
97	State Route	Clark		S02	502	1.58									No	E375093	11/19/2014	50:00:0	Possible Injury	1	0	2	0	0	Passenger Car
98	State Route	Clark		S02	502	1.6									No	E818164	07/15/2018	27:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
99	State Route	Clark		S02	502	1.61									No	E227423	01/25/2013	45:00:0	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
100	State Route	Clark		S02	502	1.61									No	E237024	03/29/2013	14:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
101	State Route	Clark		S02	502	1.61									No	E242248	04/25/2013	20:00:0	Suspected Minor Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
102	State Route	Clark		S02	502	1.61									No	E264232	08/10/2013	41:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
103	State Route	Clark		S02	502	1.61									No	E592931	10/01/2016	37:00:0	Suspected Minor Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
104	State Route	Clark		S02	502	1.61									No	E813728	06/25/2018	10:00:0	No Apparent Injury	0	0	1	0	0	Truck Tractor & Semi-Trailer
105	State Route	Clark		S02	502	1.63									No	E289149	11/21/2013	27:00:0	No Apparent Injury	0	0	4	0	0	Passenger Car
106	State Route	Clark		S02	502	1.67									No	E276813	10/05/2013	44:00:0	Possible Injury	1	0	1	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
107	State Route	Clark		S05LX00951	005LX00951	0.02									No	E472197	10/09/2015	42:00:0	Possible Injury	1	0	2	0	0	Passenger Car
108	State Route	Clark		S05LX00951	005LX00951	0.12									No	E700701	08/12/2017	28:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
109	State Route	Clark		S05LX00951	005LX00951	0.12									No	E876531	12/26/2018	44:00:0	Possible Injury	1	0	2	0	0	Passenger Car
110	State Route	Clark		S05LX00951	005LX00951	0.14									No	E238750	03/10/2013	52:00:0	Possible Injury	2	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
111	State Route	Clark		S05LX00951	005LX00951	0.14									No	E286388	11/13/2013	35:00:0	Possible Injury	2	0	3	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
112	State Route	Clark		S05LX00951	005LX00951	0.14									No	E344831	07/24/2014	52:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
113	State Route	Clark		S05LX00951	005LX00951	0.14									No	E381918	12/04/2014	05:00:0	Possible Injury	1	0	2	0	0	Passenger Car
114	State Route	Clark		NE 10TH AV	005LX00951	0.14									No	E397728	01/26/2015	23:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
115	State Route	Clark		S05LX00951	005LX00951	0.14									No	E513311	02/06/2016	39:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
116	State Route	Clark		S05LX00951	005LX00951	0.14									No	E804784	06/03/2018	18:00:0	Suspected Serious Injury	1	0	2	0	0	Motorcycle
117	State Route	Clark		S05P100917	005P100917	0.26									No	E260079	07/29/2013	36:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
118	State Route	Clark		S05P100917	005P100917	0.29									No	E808553	06/08/2018	57:00:0	No Apparent Injury	0	0	1	0	0	Passenger Car
119	State Route	Clark		S05P100917	005P100917	0.31									No	E387093	12/25/2014	18:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
120	State Route	Clark		S05Q100994	005Q100994	0.02									No	E294488	12/15/2013	00:00:0	Suspected Minor Injury	1	0	1	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
121	State Route	Clark		S05S100923	005S100923	0.01									No	E874615	12/09/2018	12:00:0	No Apparent Injury	0	0	1	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
122	County Road	Clark			41150	0.75			41300			0			No	EA41034	03/20/2020	22:00:0	Possible Injury	1	0	1	0	0	Passenger Car
123	County Road	Clark			43330	3.26			43470			0.75			No	E757528	01/03/2018	01:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
124	County Road	Clark			43330	2.27									No	E609798	11/18/2016	10:00:0	No Apparent Injury	0	0	1	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
125	County Road	Clark			43330	2.54									No	E670833	05/12/2017	50:00:0	Suspected Minor Injury	1	0	1	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
126	County Road	Clark			94300	1.49			41410			1.5			No	E920125	05/12/2019	31:00:0	Possible Injury	1	0	2	0	0	Passenger Car
127	County Road	Clark			94300	1.49			41410			1.5			No	E950045	08/13/2019	34:00:0	Possible Injury	1	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb
128	County Road	Clark			94300	1.49			41410			1.5			No	EA46538	07/10/2020	44:00:0	Possible Injury	1	0	2	0	0	Passenger Car
129	County Road	Clark			94300	1.49			41410			1.5			No	E940501	07/15/2019	55:00:0	Possible Injury	1	0	2	0	0	Passenger Car
130	County Road	Clark			94300	1.49			41410			1.5			No	E939561	07/12/2019	49:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
131	County Road	Clark			94300	1.49			41410			1.5			No	E926116	06/01/2019	53:00:0	Suspected Minor Injury	1	0	1	0	1	Passenger Car
132	County Road	Clark			94300	1.49			41410			1.5			No	E923280	05/18/2019	26:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
133	County Road	Clark			94300	1.49			41410			1.5			No	E951476	08/13/2019	43:00:0	Possible Injury	1	0	2	0	0	Passenger Car
134	County Road	Clark			94360	0.99			43330			2.26			No	EA47114	07/07/2020	56:00:0	No Apparent Injury	0	0	2	0	0	Passenger Car
135	County Road	Clark			94360	0.99			43330	

KAI REC_ID	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION	FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO
1		At Intersection and Related	Clear or Partly Cloudy	Wet	Dusk	Fence	Making Right Turn		West	South
2		Not at Intersection and Not Related	Raining	Wet	Dark-No Street Lights	Tree or Stump (stationary)	Going Straight Ahead		South	Northeast
3		At Intersection and Related	Overcast	Dry	Dark-Street Lights On	Signal Pole	Going Straight Ahead		East	West
4	Passenger Car	At Intersection and Related	Snowing	Snow/Slush	Dawn	Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East
5	Pickup,Panel Truck or Vanette under 10,000 lb	Not at Intersection and Not Related	Overcast	Wet	Dark-No Street Lights	From same direction - all others	Making Left Turn	Going Straight Ahead	Northeast	South
6	Not Stated	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On	From same direction - one right turn - one straight	Making Right Turn	Going Straight Ahead	South	East
7	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign	South	North
8		Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Dark-No Street Lights	Earth Bank or Ledge	Going Straight Ahead		North	South
9	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South
10	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Starting in Traffic Lane	Going Straight Ahead	South	North
11		Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Daylight	Utility Pole	Going Straight Ahead		South	North
12	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Changing Lanes	Going Straight Ahead	North	South
13	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North
14	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South
15	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Making Left Turn	North	South
16	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-No Street Lights	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South
17	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Wet	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South
18	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On	Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East
19	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	East
20	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - one left turn - one straight	Slowing	Making Left Turn	West	East
21	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North
22		At Intersection and Not Related	Raining	Wet	Daylight	Roadway Ditch	Going Straight Ahead		East	West
23	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Fog or Smog or Smoke	Wet	Dark-No Street Lights	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South
24	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dusk	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South
25	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-No Street Lights	Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East
26	Passenger Car	At Intersection and Related	Overcast	Wet	Daylight	Entering at angle	Making Right Turn	Going Straight Ahead	South	East
27	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Wrong Way on Divided Hwy	North	South
28	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-No Street Lights	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South
29	Passenger Car	At Intersection and Related	Overcast	Wet	Daylight	Entering at angle	Starting in Traffic Lane	Going Straight Ahead	North	South
30	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South
31	Passenger Car	At Intersection and Related	Overcast	Wet	Dark-No Street Lights	Entering at angle	Starting in Traffic Lane	Going Straight Ahead	North	South
32	Truck Tractor	At Intersection and Related	Fog or Smog or Smoke	Ice	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	East
33	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Making Left Turn	Going Straight Ahead	South	West
34	Truck (Flatbed,Van,etc)	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East
35		At Intersection and Related	Raining	Wet	Dark-No Street Lights	Roadway Ditch	Making Right Turn		South	East
36	Passenger Car	At Intersection and Related	Raining	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West
37		At Intersection and Related	Fog or Smog or Smoke	Wet	Daylight	Earth Bank or Ledge	Going Straight Ahead		West	East
38	Pickup,Panel Truck or Vanette under 10,000 lb	Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - all others	Going Straight Ahead	Going Straight Ahead	North	North
39		Not at Intersection and Not Related	Overcast	Dry	Daylight	Utility Pole	Going Straight Ahead		West	East
40		Not at Intersection and Not Related	Overcast	Wet	Daylight	Utility Pole	Going Straight Ahead		West	East
41		Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Daylight	Vehicle overturned	Overtaking and Passing		West	East
42		Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On	Earth Bank or Ledge	Going Straight Ahead		East	West
43	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Not Related	Clear or Partly Cloudy	Dry	Daylight	Same direction -- both turning left -- one stopped -- sideswipe	Making Left Turn	Stopped for Traffic	West	East
44	Passenger Car	Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Daylight	Utility Pole	Going Straight Ahead	Going Straight Ahead	West	East
45		Not at Intersection and Not Related	Clear or Partly Cloudy	Wet	Dark-No Street Lights	Mailbox	Going Straight Ahead		East	West
46		At Intersection and Not Related	Clear or Partly Cloudy	Dry	Daylight	Earth Bank or Ledge	Going Straight Ahead		East	West
47	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Dark-No Street Lights	Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East
48	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Dark-No Street Lights	Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West
49	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Wet	Dark-No Street Lights	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South
50	Passenger Car	At Intersection and Related	Overcast	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East
51	Passenger Car	Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Dark-No Street Lights	From opposite direction - all others	Going Straight Ahead	Going Straight Ahead	South	North
52	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Starting in Traffic Lane	Going Straight Ahead	West	East
53	Passenger Car	At Intersection and Related	Overcast	Wet	Daylight	From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	North	South
54	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - both moving - rear-end	Starting in Traffic Lane	Going Straight Ahead	South	North
55	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Wet	Daylight	From same direction - both going straight - both moving - sideswipe	Changing Lanes	Going Straight Ahead	North	South
56	Passenger Car	At Intersection and Related	Raining	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South
57	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dawn	Entering at angle	Going Straight Ahead	Making Left Turn	North	South
58	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign	South	North
59	Pickup,Panel Truck or Vanette under 10,000 lb	At Driveway within Major Intersection	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped for Traffic	North	South
60		Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Daylight	Tree or Stump (stationary)	Going Straight Ahead		West	East
61	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South
62	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-No Street Lights	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South
63	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North
64	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Making Left Turn	West	East
65	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North
66	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East
67	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Slowing	South	North
68	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North
69	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Starting in Traffic Lane	Going Straight Ahead	South	North
70	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South
71	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South
72	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South
73	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign	East	West
74	Passenger Car	At Intersection and Related	Overcast	Wet	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South
75	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South
76	Passenger Car	Intersection Related but Not at Intersection	Overcast	Dry	Daylight	From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Slowing	East	West
77	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East
78	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Slowing	Stopped at Signal or Stop Sign	East	West
79	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North
80		At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Wood Sign Post	Going Straight Ahead		East	West
81	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Wet	Dark-No Street Lights	Entering at angle	Making Left Turn	Stopped for Traffic	East	South
82	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-No Street Lights	Entering at angle	Making Left Turn	Going Straight Ahead	South	West
83	Passenger Car	At Intersection and Related	Overcast	Dry	Daylight	Entering at angle	Going Straight Ahead	Starting in Traffic Lane	West	East
84	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South
85	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-No Street Lights	Entering at angle	Going Straight Ahead	Starting From Parked Position	West	East
86	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dawn	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North
87	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Making Left Turn	Stopped at Signal or Stop Sign	East	South
88	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-No Street Lights	From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Going Straight Ahead	East	West
89	Passenger Car	At Intersection and Related	Raining	Wet	Dark-No Street Lights	Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West
90	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South
91	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	West	North
92	Passenger Car	At Intersection and Related	Overcast	Wet	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South
93		Not at Intersection and Not Related	Overcast	Dry	Daylight	Earth Bank or Ledge	Going Straight Ahead		East	West
94		Not at Intersection and Not Related	Raining	Wet	Dark-No Street Lights	Fence	Going Straight Ahead		East	West
95	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Daylight	Entering at angle	Starting in Traffic Lane	Going Straight Ahead	South	North
96	Pickup,Panel Truck or Vanette under 10,000 lb	Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped for Traffic	West	East
97	Pickup,Panel Truck or Vanette under 10,000 lb	Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - both moving - head-on	Going Straight Ahead	Going Straight Ahead	East	West
98	Pickup,Panel Truck or Vanette under 10,000 lb	Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On	From same direction - both going straight - both moving - rear-end	Other*	Slowing	West	East
99	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped for Traffic	East	West
100	Passenger Car	At Intersection and Related	Overcast	Dry	Dark-Street Lights On	From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Slowing	West	East
101	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped for Traffic	East	West
102	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Dusk	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped for Traffic	West	East
103	Farm Tractor and/or Farm equipment	At Intersection and Related	Raining	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East
104		At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Vehicle overturned	Making U-Turn		West	West
105	Passenger Car	Intersection Related but Not at Intersection	Clear or Partly Cloudy	Dry	Dark-No Street Lights	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped for Traffic	East	West
106		Driveway Related but Not at Driveway	Clear or Partly Cloudy	Dry	Daylight	Roadway Ditch	Going Straight Ahead		West	East
107	Passenger Car	At Intersection and Related	Overcast	Dry	Daylight	From same direction - both going straight - both moving - sideswipe	Changing Lanes	Going Straight Ahead	East	South
108	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	West	North
109	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Wet	Dark-No Street Lights	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	West	North
110	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Daylight	Entering at angle	Going Straight Ahead	Making Left Turn	West	East
111	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Dark-Street Lights On	Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West
112	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East
113	Passenger Car	At Intersection and Related	Raining	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North
114	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East
115	Passenger Car	At Intersection and Not Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On	From same direction - both going straight - both moving - sideswipe	Overtaking and Passing	Going Straight Ahead	West	East
116	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Overtaking and Passing	Going Straight Ahead	South	North
117	Pickup,Panel Truck or Vanette under 10,000 lb	Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Dawn	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped in Roadway	South	North
118		Not at Intersection and Not Related	Overcast	Dry	Dark-Street Lights On	Guardrail - Leading End	Going Straight Ahead		South	North
119	Pickup,Panel Truck or Vanette under 10,000 lb	Intersection Related but Not at Intersection	Overcast	Wet	Daylight	From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Slowing	South	North
120		At Intersection and Not Related	Raining	Wet	Daylight	Roadway Ditch	Making Left Turn		West	North
121		Not at Intersection and Not Related	Overcast	Wet	Dark-Street Lights On	Metal Sign Post	Going Straight Ahead		North	South
122		Not at Intersection and Not Related	Clear	Dry	Dark-Street Lights On	Wood Sign Post	Going Straight Ahead		South	North
123	Pickup,Panel Truck or Vanette under 10,000 lb	Intersection Related but Not at Intersection	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped for Traffic	South	North
124		Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Daylight	Utility Pole	Going Straight Ahead		South	North
125		Not at Intersection and Not Related	Clear or Partly Cloudy	Wet	Daylight	Mailbox	Going Straight Ahead		South	North
126	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North
127	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	North	South
128	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North
129	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Daylight	Entering at angle	Making Left Turn	Going Straight Ahead	North	West
130	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - one right turn - one straight	Making Right Turn	Going Straight Ahead	East	West
131		At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Vehicle Strikes Pedalcyclist	Going Straight Ahead		South	North
132	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Starting in Traffic Lane	Going Straight Ahead	South	North
133	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North
134	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Daylight	Entering at angle	Starting in Traffic Lane	Starting in Traffic Lane	East	West
135	Passenger Car	At Intersection and Related	Raining	Wet	Dark-Street Lights Off	Entering at angle	Going Straight Ahead	Starting in Traffic Lane	South	North
136	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Dark-No Street Lights	Entering at angle	Making Right Turn	Starting in Traffic Lane	North	West
137	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign	East	West
138	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On	Entering at angle	Going Straight Ahead	Making Left Turn	East	West
139	Pickup,Panel Truck or Vanette under 10,000 lb	Intersection Related but Not at Intersection	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Slowing	West	East
140	Pickup,Panel Truck or Vanette under 10,000 lb	Intersection Related but Not at Intersection	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Slowing	West	East
141	Passenger Car	At Intersection and Not Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - both moving - sideswipe	Going Straight Ahead	Going Straight Ahead	North	South
142	Pickup,Panel Truck or Vanette under 10,000 lb	At Driveway within Major Intersection	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Stopped in Roadway	East	West
143	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - both moving - rear-end	Slowing	Slowing	East	West
144	Passenger Car	At Intersection and Related	Overcast	Dry	Daylight	From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	East	West
145	Pickup,Panel Truck or Vanette under 10,000 lb	Intersection Related but Not at Intersection	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Other*	Stopped at Signal or Stop Sign	West	East
146	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Dusk	Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West
147	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	East	West
148	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign	East	West
149	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Dark-Street Lights On	From same direction - both going straight - one stopped - rear-end	Slowing	Stopped at Signal or Stop Sign	West	East
150	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Dark-Street Lights On	From opposite direction - one left turn - one straight	Going Straight Ahead	Starting in Traffic Lane	East	West
151	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	West	East
152	Passenger Car	At Intersection and Related	Overcast	Wet	Daylight	Entering at angle	Making Right Turn	Going Straight Ahead	South	East
153	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign	West	East
154	Truck (Flatbed,Van,etc)	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - all others	Making U-Turn	Going Straight Ahead	South	South
155	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - one right turn - one straight	Making Right Turn	Going Straight Ahead	West	South
156		At Intersection and Not Related	Overcast	Wet	Daylight	Crash Cushions - Impact Attenuators	Going Straight Ahead		West	East
157		Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Dark-Street Lights On	Crash Cushions - Impact Attenuators	Going Straight Ahead		West	East
158	Pickup,Panel Truck or Vanette under 10,000 lb	Intersection Related but Not at Intersection	Overcast	Wet	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign	East	West
159	Pickup,Panel Truck or Vanette under 10,000 lb	Not at Intersection and Not Related	Clear or Partly Cloudy	Dry	Daylight	From same direction - both going straight - both moving - sideswipe	Changing Lanes	Going Straight Ahead	East	West
160	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Daylight	From same direction - both going straight - one stopped - rear-end	Going Straight Ahead	Stopped at Signal or Stop Sign	West	East
161	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Going Straight Ahead	South	North
162	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Making Left Turn	Going Straight Ahead	East	South
163	Pickup,Panel Truck or Vanette under 10,000 lb	Intersection Related but Not at Intersection	Clear	Dry	Dark-Street Lights On	From same direction - both going straight - both moving - rear-end	Going Straight Ahead	Going Straight Ahead	East	West
164		Not at Intersection and Not Related	Other	Dry	Daylight	Crash Cushions - Impact Attenuators	Going Straight Ahead		West	East
165	Passenger Car	At Intersection and Related	Overcast	Wet	Daylight	Entering at angle	Making Left Turn	Going Straight Ahead	North	East
166	Passenger Car	At Intersection and Related	Overcast	Dry	Dusk	Same direction -- both turning left -- both moving -- sideswipe	Making Left Turn	Making Left Turn	East	South
167	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Not Related	Raining	Wet	Dark-No Street Lights	From same direction - all others	Making U-Turn	Going Straight Ahead	West	West
168	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South
169	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Raining	Wet	Daylight	From opposite direction - one left turn - one straight	Making Left Turn	Going Straight Ahead	East	South
170		At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Fence	Making Right Turn		West	South
171		Not at Intersection and Not Related	Raining	Wet	Dark-No Street Lights	Utility Pole	Going Straight Ahead		West	East
172	Passenger Car	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight	Entering at angle	Going Straight Ahead	Making Left Turn	North	South

KAI REC_ID	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)
1			Unknown Driver Distraction					
2			Under Influence of Alcohol					
3			Other					
4	South	North	Exceeding Reas. Safe Speed			None		
5	South	North	Inattention			None		
6			Other			Other		
7	Vehicle Stopped	Vehicle Stopped	Unknown Driver Distraction			None		
8			Exceeding Stated Speed Limit	Exceeding Reas. Safe Speed				
9	West	East	Disregard Stop Sign - Flashing Red	Driver Interacting with Passengers, Anim		None		
10	West	East	Did Not Grant RW to Vehicle			None		
11			Unknown Driver Distraction					
12	East	West	Inattention	Did Not Grant RW to Vehicle		None		
13	West	East	Disregard Stop and Go Light			None		
14	West	East	Inattention	Did Not Grant RW to Vehicle		None		
15	West	North	Other			None		
16	West	East	Did Not Grant RW to Vehicle			Driver Not Distracted		
17	West	East	Inattention	Did Not Grant RW to Vehicle		None		
18	South	North	None			None		
19	West	East	Did Not Grant RW to Vehicle			None		
20	West	North	Operating Defective Equipment			None		
21	East	West	Did Not Grant RW to Vehicle			None		
22			Unknown Driver Distraction					
23	West	East	Disregard Stop Sign - Flashing Red			None		
24	West	East	Disregard Stop Sign - Flashing Red	Inattention	Driver Interacting with Passengers, Anim	None		
25	North	South	None			Other		
26	West	East	Did Not Grant RW to Vehicle			None		
27	West	East	Disregard Stop Sign - Flashing Red			None		
28	West	East	Did Not Grant RW to Vehicle			Driver Not Distracted		
29	West	East	Did Not Grant RW to Vehicle			None		
30	West	East	Inattention			None		
31	East	West	Did Not Grant RW to Vehicle			Driver Not Distracted		
32	West	East	Disregard Stop Sign - Flashing Red			None		
33	West	East	Improper Turn			None		
34	South	North	None			Did Not Grant RW to Vehicle		
35			Inattention					
36	South	North	Inattention	Did Not Grant RW to Vehicle		None		
37			Other Driver Distractions Inside Vehicle					
38	East	West	Inattention			None		
39			Inattention					
40			Apparently Fatigued					
41			Inattention	Exceeding Stated Speed Limit				
42			Operating Defective Equipment					
43	Vehicle Stopped	Vehicle Stopped	Follow Too Closely			None		
44	East	West	Inattention			None		
45			Under Influence of Alcohol					
46			Operating Defective Equipment					
47	South	North	Inattention	Driver Distractions Outside Vehicle		None		
48	South	North	Inattention			None		
49	West	East	Inattention	Did Not Grant RW to Vehicle		None		
50	North	South	Did Not Grant RW to Vehicle			None		
51	North	South	Under Influence of Alcohol			None		
52	North	South	Inattention			None		
53	South	West	Disregard Stop and Go Light	Inattention		None		
54	South	North	Inattention	Follow Too Closely		None		
55	North	South	Inattention			None		
56	West	East	Under Influence of Alcohol	Disregard Stop and Go Light		Disregard Stop and Go Light	Inattention	
57	East	South	Under Influence of Alcohol	Exceeding Reas. Safe Speed		None		
58	Vehicle Stopped	Vehicle Stopped	Disregard Stop and Go Light			None		
59	Vehicle Stopped	Vehicle Stopped	Follow Too Closely			None		
60			Other					
61	East	West	Disregard Stop Sign - Flashing Red			None		
62	East	West	Under Influence of Alcohol	Did Not Grant RW to Vehicle		None		
63	West	East	Did Not Grant RW to Vehicle			None		
64	South	West	Other			Did Not Grant RW to Vehicle		
65	West	East	Inattention	Did Not Grant RW to Vehicle		None		
66	South	North	None			Disregard Stop Sign - Flashing Red		
67	East	West	Did Not Grant RW to Vehicle			None		
68	West	East	Did Not Grant RW to Vehicle			None		
69	West	East	Did Not Grant RW to Vehicle			None		
70	West	East	Did Not Grant RW to Vehicle			None		
71	East	West	Improper Turn			None		
72	West	East	Did Not Grant RW to Vehicle			None		
73	Vehicle Backing	Vehicle Stopped	Driver Distractions Outside Vehicle			None		
74	West	East	Improper Turn			None		
75	West	East	Did Not Grant RW to Vehicle			None		
76	East	West	Under Influence of Alcohol	Follow Too Closely		None		
77	North	South	Disregard Stop Sign - Flashing Red			None		
78	Vehicle Stopped	Vehicle Stopped	Exceeding Reas. Safe Speed			None		
79	East	West	Did Not Grant RW to Vehicle			None		
80			Operating Defective Equipment					
81	South	Vehicle Stopped	Inattention			None		
82	West	East	None			Inattention		
83	South	North	Disregard Stop Sign - Flashing Red			None		
84	East	West	Disregard Stop Sign - Flashing Red			None		
85	Vehicle Stopped	North	Disregard Stop Sign - Flashing Red			Driver Not Distracted		
86	West	East	Disregard Stop Sign - Flashing Red			None		
87	Vehicle Stopped	Vehicle Stopped	Other			Other		
88	East	West	Under Influence of Alcohol			Driver Not Distracted		
89	North	South	Did Not Grant RW to Vehicle			None		
90	West	East	Did Not Grant RW to Vehicle			None		
91	East	West	Did Not Grant RW to Vehicle			None		
92	West	East	Did Not Grant RW to Vehicle			None		
93			Apparently Ill					
94			Other					
95	West	East	Disregard Stop and Go Light			None		
96	West	Vehicle Stopped	Inattention	Follow Too Closely		None		
97	West	East	Apparently Asleep	Over Center Line		Driver Not Distracted		
98	West	East	Under Influence of Alcohol	Other		Under Influence of Alcohol	Other	
99	East	Vehicle Stopped	Inattention			None		
100	West	East	Follow Too Closely			None		
101	East	Vehicle Stopped	Inattention			None		
102	West	Vehicle Stopped	Inattention	Exceeding Reas. Safe Speed		None		
103	North	South	Exceeding Reas. Safe Speed			None		
104			Improper U-Turn					
105	East	Vehicle Stopped	Inattention	Follow Too Closely		None		
106			Inattention	Exceeding Reas. Safe Speed				
107	East	West	Did Not Grant RW to Vehicle			None		
108	East	West	Did Not Grant RW to Vehicle			None		
109	East	West	Did Not Grant RW to Vehicle			None		
110	South	West	Disregard Stop and Go Light			None		
111	South	North	Disregard Stop and Go Light	Unknown Driver Distraction		None		
112	South	North	Inattention			None		
113	West	East	Inattention	Did Not Grant RW to Vehicle		None		
114	South	North	Inattention			None		
115	West	East	Improper Passing			None		
116	East	West	Disregard Stop and Go Light	Exceeding Stated Speed Limit	Did Not Grant RW to Vehicle	None		
117	South	North	Under Influence of Alcohol			None		
118			Under Influence of Alcohol					
119	South	North	Inattention	Follow Too Closely		None		
120			Exceeding Reas. Safe Speed					
121			Under Influence of Alcohol					
122			Unknown Distraction					
123	Vehicle Stopped	Vehicle Stopped	Inattention			None		
124			Unknown Distraction					
125			Under Influence of Alcohol					
126	East	West	Inattention	Did Not Grant RW to Vehicle		None		
127	East	West	Did Not Grant RW to Vehicle			None		
128	West	East	Disregard Traffic Sign and Signals			None		
129	West	East	Did Not Grant RW to Vehicle			None		
130	East	North	Follow Too Closely			None		
131			Inattention					
132	West	East	Inattention			None		
133	West	East	Did Not Grant RW to Vehicle			None		
134	North	South	Did Not Grant RW to Vehicle			None		
135	West	East	Disregard Stop Sign - Flashing Red			None		
136	East	West	Disregard Stop Sign - Flashing Red	Inattention		None		
137	East	West	Unknown Distraction			None		
138	South	West	Did Not Grant RW to Vehicle			None		
139	West	East	Apparently Ill			None		
140	West	East	Follow Too Closely			None		
141	North	South	Did Not Grant RW to Vehicle			Did Not Grant RW to Vehicle		
142	North	Vehicle Stopped	Other Contributing Circ Not Listed			Other Contributing Circ Not Listed		
143	East	West	Inattention	Exceeding Reas. Safe Speed	Follow Too Closely	None		
144	West	North	Disregard Stop and Go Light	Inattention		None		
145	West	Vehicle Stopped	Other Contributing Circ Not Listed			None		
146	South	North	Disregard Stop and Go Light	Inattention		None		
147	South	North	Disregard Stop and Go Light			None		
148	Vehicle Stopped	Vehicle Stopped	Unknown Distraction			Driver Not Distracted		
149	West	Vehicle Stopped	Inattention			None		
150	East	North	Inattention	Did Not Grant RW to Vehicle		None		
151	South	North	Disregard Stop and Go Light			None		
152	West	East	Improper Turn/Merge	Inattention		None		
153	Vehicle Stopped	Vehicle Stopped	Other Contributing Circ Not Listed			None		
154	North	North	Improper U-Turn	Inattention		None		
155	West	East	Improper Turn/Merge			None		
156			Apparently Asleep or Fatigued					
157			Under Influence of Alcohol					
158	Vehicle Stopped	Vehicle Stopped	Follow Too Closely			None		
159	East	West	Did Not Grant RW to Vehicle			None		
160	Vehicle Stopped	Vehicle Stopped	Exceeding Reas. Safe Speed			None		
161	East	West	Disregard Stop and Go Light	Exceeding Reas. Safe Speed		None		
162	East	West	Did Not Grant RW to Vehicle			None		
163	East	West	Under Influence of Alcohol	Follow Too Closely		None		
164			Under Influence of Drugs					
165	East	West	Did Not Grant RW to Vehicle			None		
166	East	South	Improper Turn/Merge			None		
167	West	East	Other Contributing Circ Not Listed	Improper U-Turn	Inattention	Other Contributing Circ Not Listed	Inattention	Follow Too Closely
168	West	East	Inattention			None		
169	West	East	Did Not Grant RW to Vehicle			None		
170			Other Contributing Circ Not Listed					
171			Apparently Asleep or Fatigued					
172	West	North	None			Did Not Grant RW to Vehicle		

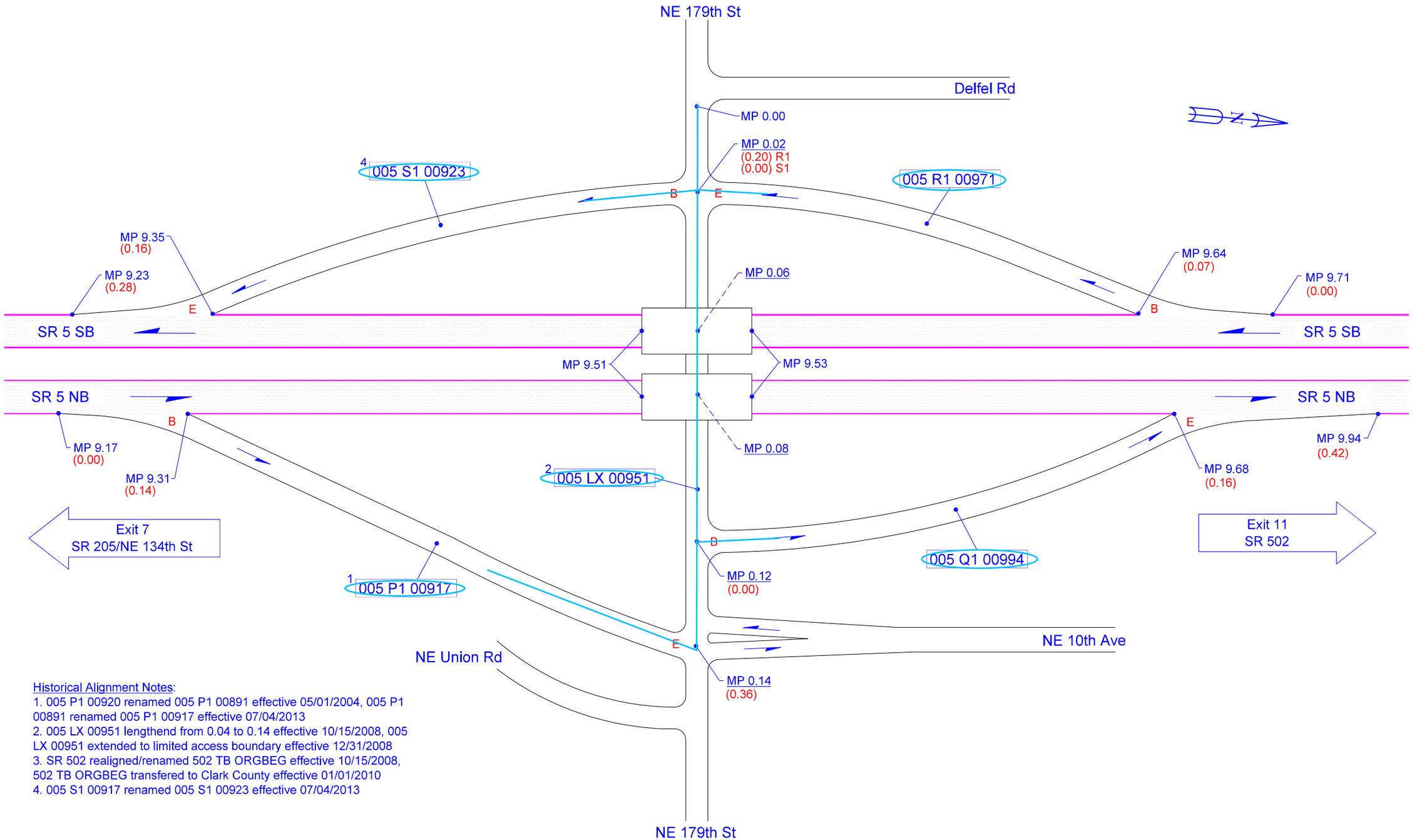
KAI REC_ID	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
1	Past the Outside Shoulder of Primary Trafficway	1088427.79	151888.98
2	Past the Outside Shoulder of Primary Trafficway	1087608.96	159390.11
3	Past the Outside Shoulder of Primary Trafficway	1088806.834	165053.459
4	Lane of Primary Trafficway	1088806.834	165053.459
5	Lane of Primary Trafficway	1088806.83	165053.46
6	Lane of Primary Trafficway	1088796.66	165037.85
7	Lane of Primary Trafficway	1088796.65	165037.85
8	Past the Outside Shoulder of Primary Trafficway	1167452.89	99935.21
9	Lane of Primary Trafficway	1094031.856	164878.353
10	Lane of Primary Trafficway	1094033.9	164923.41
11	Past the Outside Shoulder of Primary Trafficway	1093916.77	159932.98
12	Lane of Primary Trafficway	1094034.89	164985.08
13	Lane of Primary Trafficway	1088659.95	165031.45
14	Lane of Primary Trafficway	1088550.31	165034.357
15	Lane of Primary Trafficway	1088550.3	165034.36
16	Lane of Primary Trafficway	1088796.66	165037.85
17	Lane of Primary Trafficway	1088796.65	165037.85
18	Lane of Primary Trafficway	1088796.65	165037.85
19	Lane of Primary Trafficway	1094033.9	164923.42
20	Lane of Primary Trafficway	1094085.53	164918.39
21	Lane of Primary Trafficway	1094085.53	164918.39
22	Past the Outside Shoulder of Primary Trafficway	1094033.019	164919.341
23	Lane of Primary Trafficway	1094033.019	164919.341
24	Lane of Primary Trafficway	1094033.88	164923.41
25	Lane of Primary Trafficway	1094033.88	164923.41
26	Lane of Primary Trafficway	1094033.88	164923.41
27	Lane of Primary Trafficway	1094033.88	164923.41
28	Lane of Primary Trafficway	1094033.88	164923.41
29	Lane of Primary Trafficway	1094033.9	164923.41
30	Lane of Primary Trafficway	1094033.9	164923.41
31	Lane of Primary Trafficway	1094033.9	164923.41
32	Lane of Primary Trafficway	1094033.9	164923.41
33	Lane of Primary Trafficway	1094033.9	164923.41
34	Lane of Primary Trafficway	1094033.9	164923.41
35	Past the Outside Shoulder of Primary Trafficway	1099283.991	164829.881
36	Lane of Primary Trafficway	1099283.99	164829.88
37	Past the Outside Shoulder of Primary Trafficway	1099277.78	164832.54
38	Lane of Primary Trafficway	1099283.99	164829.88
39	Past the Outside Shoulder of Primary Trafficway	1099073.831	164832.722
40	Past the Outside Shoulder of Primary Trafficway	1098325.3	164845.79
41	Past the Outside Shoulder of Primary Trafficway	1097594.13	164858
42	Past the Outside Shoulder of Primary Trafficway	1096848.8	164871.09
43	Lane of Primary Trafficway	1096647.22	164874.14
44	Past the Outside Shoulder of Primary Trafficway	1096028.34	164885.19
45	Past the Outside Shoulder of Primary Trafficway	1095137.28	164902.56
46	Past the Outside Shoulder of Primary Trafficway	1095685.97	164893.58
47	Lane of Primary Trafficway	1099227.76	164832.55
48	Lane of Primary Trafficway	1099143.9	159575.38
49	Lane of Primary Trafficway	1099285.25	164829.89
50	Lane of Primary Trafficway	1098988.27	154319.24
51	Lane of Primary Trafficway	1098994.09	154419.41
52	Lane of Primary Trafficway	1098988.27	154319.26
53	Lane of Primary Trafficway	1104472.362	159521.008
54	Lane of Primary Trafficway	1104472.404	159522.591
55	Lane of Primary Trafficway	1104474.44	159538.15
56	Lane of Primary Trafficway	1104474.44	159538.16
57	Lane of Primary Trafficway	1104474.44	159538.16
58	Lane of Primary Trafficway	1104474.44	159538.16
59	Lane of Primary Trafficway	1104471.003	159469.825
60	Past the Outside Shoulder of Primary Trafficway	1097248.123	152387.222
61	Lane of Primary Trafficway	1083397.79	159877.246
62	Lane of Primary Trafficway	1083397.79	159877.25
63	Lane of Primary Trafficway	1083390.05	159881.86
64	Lane of Primary Trafficway	1083390.06	159881.85
65	Lane of Primary Trafficway	1083390.06	159881.85
66	Lane of Primary Trafficway	1083390.06	159881.85
67	Lane of Primary Trafficway	1083390.06	159881.85
68	Lane of Primary Trafficway	1083390.06	159881.85
69	Lane of Primary Trafficway	1083390.06	159881.85
70	Lane of Primary Trafficway	1089843.276	159728.275
71	Lane of Primary Trafficway	1089843.45	159728.61
72	Lane of Primary Trafficway	1090128.58	159722.04
73	Lane of Primary Trafficway	1090128.59	159722.04
74	Lane of Primary Trafficway	1090128.59	159722.04
75	Lane of Primary Trafficway	1090128.58	159722.05
76	Lane of Primary Trafficway	1089239.13	159753.28
77	Lane of Primary Trafficway	1093727.593	159641.726
78	Lane of Primary Trafficway	1093727.593	159641.726
79	Lane of Primary Trafficway	1093727.593	159641.726
80	Past the Outside Shoulder of Primary Trafficway	1093727.593	159641.726
81	Intersecting Trafficway	1093706.912	159642.2
82	Lane of Primary Trafficway	1093914.42	159639.32
83	Lane of Primary Trafficway	1093914.42	159639.32
84	Other Location (City/County/Misc. Trafficway)	1093914.43	159639.33
85	Lane of Primary Trafficway	1093914.43	159639.33
86	Lane of Primary Trafficway	1093914.43	159639.33
87	Intersecting Trafficway	1093914.43	159639.33
88	Lane of Primary Trafficway	1099144.031	159569.815
89	Lane of Primary Trafficway	1099143.9	159575.36
90	Lane of Primary Trafficway	1104474.44	159538.15
91	Lane of Primary Trafficway	1104474.44	159538.15
92	Lane of Primary Trafficway	1104474.44	159538.16
93	Past the Outside Shoulder of Primary Trafficway	1099249.526	159569.6
94	Past the Outside Shoulder of Primary Trafficway	1104400.27	159540.59
95	Lane of Primary Trafficway	1104472.726	159534.727
96	Lane 2 Increasing Milepost	1093970.31	170206.65
97	Lane 1 Increasing Milepost	1094014.48	170205.8
98	Lane 1 Increasing Milepost	1094128.25	170186.29
99	Lane 1 Decreasing Milepost	1094181.26	170202.59
100	Lane 1 Increasing Milepost	1094181.26	170202.59
101	Lane 1 Decreasing Milepost	1094181.26	170202.59
102	Lane 2 Increasing Milepost	1094181.26	170202.59
103	Lane 3 Increasing Milepost	1094178.77	170185.52
104	Right Shoulder Decreasing Milepost	1094180.86	170185.25
105	Lane 1 Decreasing Milepost	1094235.13	170224.58
106	Past Right Shoulder Increasing Milepost	1094501.18	170194.99
107	Left Turn Lane LX Decreasing Milepost	1088142.18	159708.74
108	Lane 2 LX Decreasing Milepost	1088597.15	159797.42
109	Lane 1 LX Decreasing Milepost	1088597.15	159797.42
110	Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was not lane specific)	1088721.81	159822.19
111	Lane 1 LX Decreasing Milepost	1088700.26	159818.41
112	Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was not lane specific)	1088703.03	159818.89
113	Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was not lane specific)	1088721.81	159822.19
114	Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was not lane specific)	1088703.38	159816.88
115	Lane 1 LX Increasing Milepost (Prior to 2002 Impact Location Code was not lane specific)	1088721.81	159822.19
116	Lane 1 LX Decreasing Milepost	1088703.64	159816.08
117	Lane 1 Off Ramp Increasing Milepost Side of Mainline	1088663.94	159468.63
118	Left Shoulder Off Ramp Increasing Milepost Side of Mainline	1088664.4	159441.08
119	Lane 1 Off Ramp Increasing Milepost Side of Mainline	1088714.16	159742.96
120	Past Right Shoulder On Ramp Increasing Milepost Side of Mainline	1088555.7	159898.97
121	Past Left Shoulder On Ramp Decreasing Milepost Side of Mainline	1088159.27	159647
122	Past the Outside Shoulder of Primary Trafficway	1088399.87	151852.22
123	Lane of Primary Trafficway	1093765.68	154305.27
124	Past the Outside Shoulder of Primary Trafficway	1093916.77	159932.98
125	Past the Outside Shoulder of Primary Trafficway	1093944.06	161167.94
126	Lane of Primary Trafficway	1083390.06	159881.85
127	Intersecting Trafficway	1083390.06	159881.85
128	Lane of Primary Trafficway	1083390.06	159881.86
129	Lane of Primary Trafficway	1083390.06	159881.85
130	Lane of Primary Trafficway	1083390.06	159881.85
131	Lane of Primary Trafficway	1083390.06	159881.85
132	Lane of Primary Trafficway	1083390.06	159881.85
133	Lane of Primary Trafficway	1083390.06	159881.85
134	Lane of Primary Trafficway	1093914.43	159639.32
135	Lane of Primary Trafficway	1093914.43	159639.32
136	Lane of Primary Trafficway	1093914.43	159639.33
137	Lane of Primary Trafficway	1093914.19	159640.78
138	Lane of Primary Trafficway	1093914.43	159639.33
139	Lane 3 Increasing Milepost	1088813.7	170262.7
140	Lane 3 Increasing Milepost	1088798.27	170260.86
141	Intersecting Road Decreasing Milepost	1088893.24	170311.04
142	Lane 1 Decreasing Milepost	1088884.32	170314.66
143	Lane 2 Decreasing Milepost	1088890.52	170306.91
144	Lane 2 Decreasing Milepost	1088873.35	170293
145	Lane 3 Increasing Milepost	1088865.07	170261.47
146	Lane 2 Decreasing Milepost	1088914.45	170306.26
147	Lane 1 Decreasing Milepost	1088911.33	170259.66
148	Lane 1 Decreasing Milepost	1088913.3	170305.83
149	Lane 1 Increasing Milepost	1088910.52	170258.87
150	Lane 2 Decreasing Milepost	1088905.96	170306
151	Lane 2 Decreasing Milepost	1088911.11	170305.57
152	Lane 2 Increasing Milepost	1088907.74	170265.48
153	Lane 2 Increasing Milepost	1088920.37	170260.52
154	Lane 2 Decreasing Milepost	1088913.22	170305.16
155	Lane 1 Increasing Milepost	1088908.71	170281.77
156	In Median Increasing Milepost	1088920.93	170285.47
157	Median Shoulder Increasing Milepost	1088992.92	170257.87
158	Lane 1 Decreasing Milepost	1089015.55	170307.33
159	Lane 1 Decreasing Milepost	1089013.89	170304.38
160	Left Turn Lane Increasing Milepost	1094068.67	170176.48
161	Lane 1 Decreasing Milepost	1094182.06	170225.52
162	Lane 1 Decreasing Milepost	1094185.98	170219.33
163	Lane 1 Decreasing Milepost	1094245.98	170223.94
164	Median Shoulder Increasing Milepost	1094300.29	170182.42
165	Lane 1 LX Decreasing Milepost	1088034.55	159688.04
166	Intersecting Road Increasing Milepost	1088140.76	159709.76
167	Lane of Primary Trafficway	1090128.58	159722.04
168	Lane of Primary Trafficway	1090128.58	159722.05
169	Lane of Primary Trafficway	1090128.58	159722.04
170	Intersecting Trafficway	1099142.27	159530.78
171	Past the Outside Shoulder of Primary Trafficway	1099114.32	159575.86
172	Lane of Primary Trafficway	1099107.35	158253.98

COUNTY ROAD INTERSECTIONS

10th Ave (Co Rd # 41761, mp 0.970 - 1.010) @ 199th St (Co Rd # 43680, mp 2.980 - 3.020)
10th Ave (Co Rd #41150, MP 0.730 - 0.770) @ 149th St (Co Rd #41300, MP 0.000 - 0.020)
11th Ave (Co Rd #41410, MP 1.480 - 1.520) @ 179th St (Co Rd #94300, MP 1.470 - 1.510)
15th Ave (Co Rd # 43110, mp 2.490 - 2.510) @ 179th St (Co Rd # 94360, mp 0.260 - 0.300)
29th Ave (Co Rd #43330, MP 1.240 - 1.280) @ 159th St (Co Rd #43470, MP 0.730 - 0.750)
29th Ave (Co Rd # 43330, mp 2.240 - 2.280) @ 179th St (Co Rd # 94360, mp 0.970 - 1.010)
29th Ave (Co Rd #43330, MP 2.240 - 2.730) from 179th Ave to 188th St (Private Rd)
29th Ave (Co Rd # 43330, mp 3.240 - 3.280) @ 199th Ave (Co Rd # 43680, mp 1.980 - 2.020) - *No Reported Crashes*
50th Ave (Co Rd # 44390, mp 2.980 - 3.020) @ 199th Ave (Co Rd # 43680, mp 0.980 - 1.020)
50th Ave (Co Rd # 44390, mp 3.970 - 4.010) @ 179th St (Co Rd # 94360, mp 1.960 - 2.000)
50th Ave (Co Rd # 44390, mp 4.970 - 5.010) @ 159th St (Co Rd # 44460, mp 0.610 - 0.630)
50th Ave (Co Rd # 44390, mp 5.460 - 5.480) @ Salmon Creek St (Co Rd # 94130, mp 2.310 - 2.350) - *No Reported Crashes*
72nd Ave (Co Rd # 91250, mp 6.250 - 6.290) @ 179th St (Co Rd # 94360, mp 2.97 - 3.010)
Delfel Rd (Co Rd # 41471, mp 0.000 - 0.020 - North Leg) @ 179th St (Co Rd # 94300, mp 2.280 - 2.320) - *No Reported Crashes*

STATE ROUTE INTERSECTIONS

SR 005LX00951 (aka 179th St, mp 0.00 - 0.02 - East Leg & Co Rd # 94300, mp 2.350 - 2.390 - West Leg) @ Delfel Rd (Co Rd # 41860, mp 0.000 - 0.020 - North Leg)
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) - *No Reported Crashes*
SR 005S100923 (SR 005 SB on-ramp, mp 0.00 - 0.09) @ SR 005LX00951 (aka 179th St, mp 0.00 - 0.07) - *No Reported Crashes*
SR 005LX00951 (aka 179th St, mp 0.10 - 0.14) @ SR 005 NB on-ramp - *No Reported Crashes*
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 0.000 - 0.020 - East Leg) @ SR 005 NB off ramp & 10th Ave (Co Rd # 41761, mp 0.000 - 0.020) - *No Reported Crashes*
SR 005P100917 (SR 005 NB off-ramp, mp 0.26 - 0.36) @ SR 005LX00951 (aka 179th St mp 0.12 - 0.14 - West Leg & Co Rd # 94360, mp 0.000 - 0.020 - East Leg) - *No Reported Crashes*
SR 502 (aka 219th St, MP 0.53 - 0.67) @ 10th Ave
SR 502 (aka 219th St, MP 1.52 - 1.70) @ 29th Ave



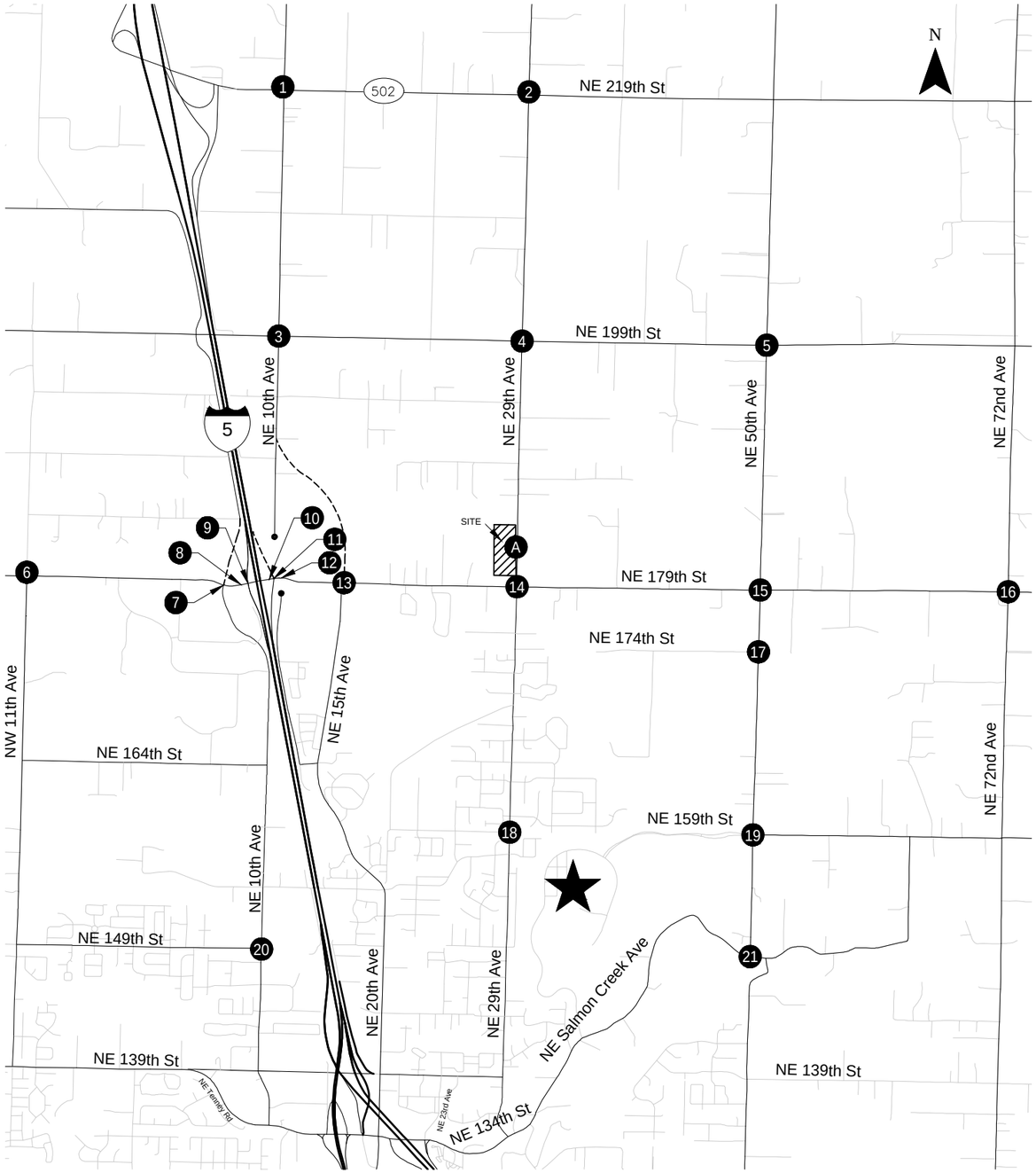
Historical Alignment Notes:

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

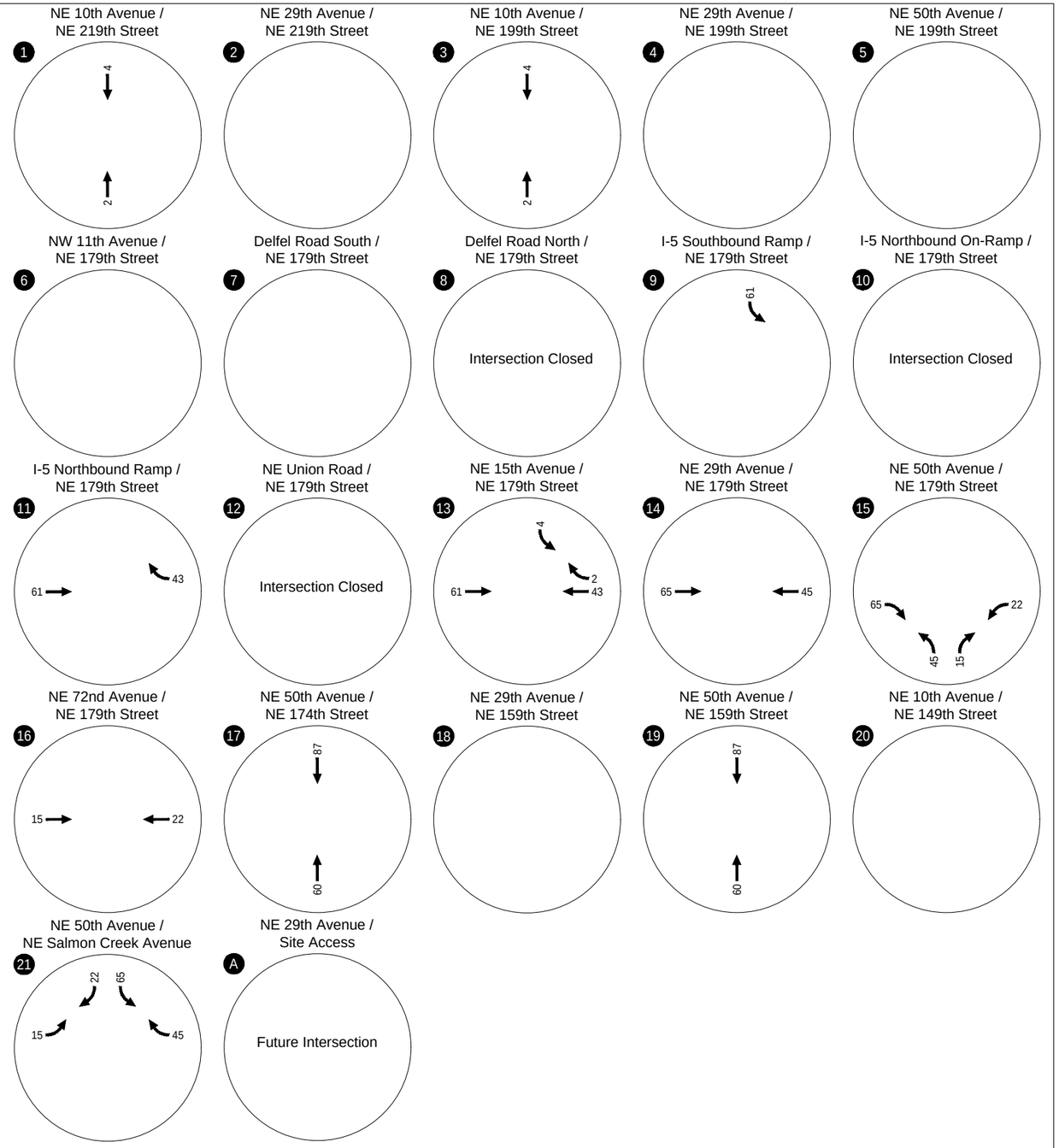
Not To Scale

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

Appendix E In-Process Developments and Planned Transportation Improvements



★ - LOCATION OF IN-PROCESS DEVELOPMENT

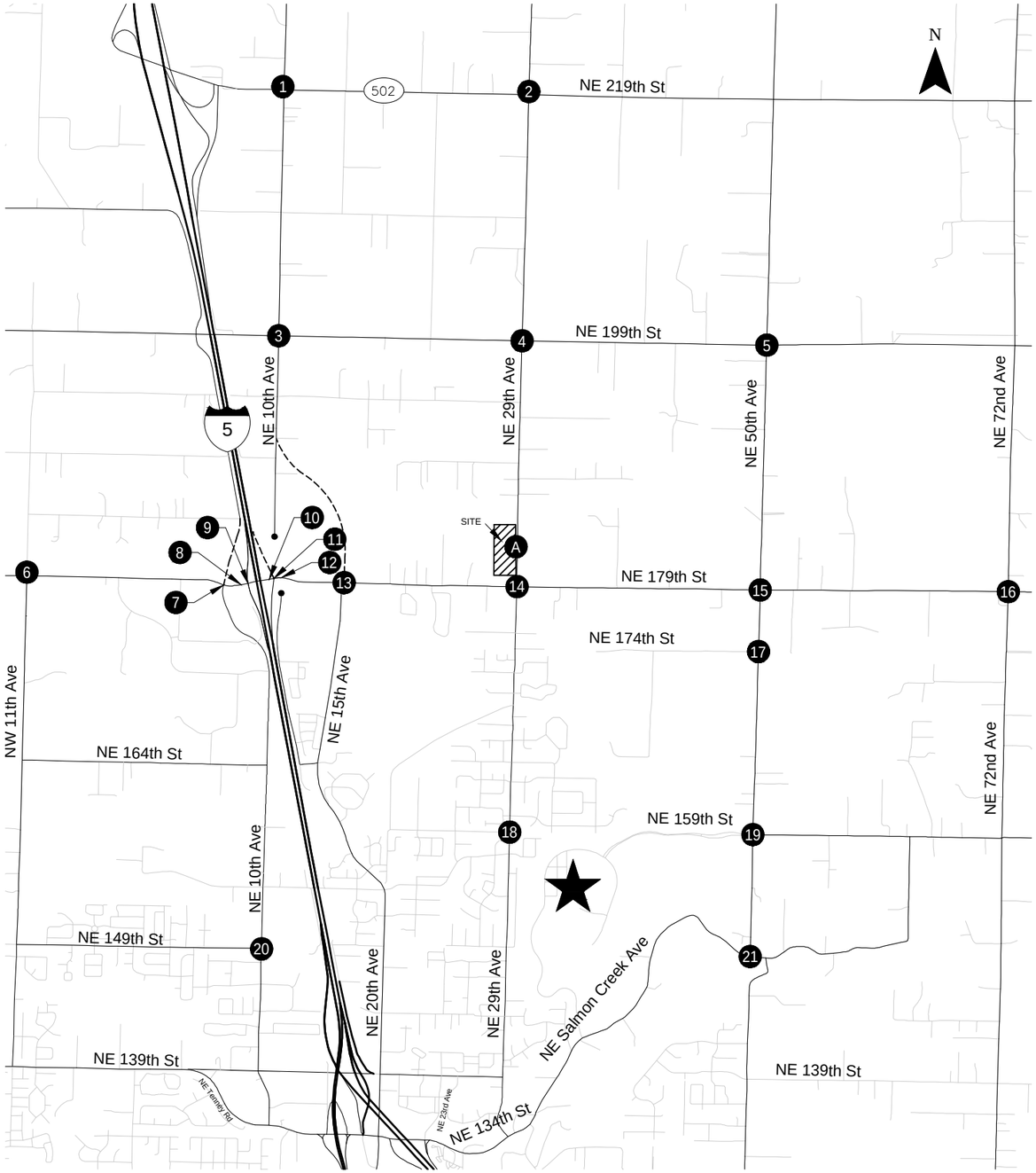


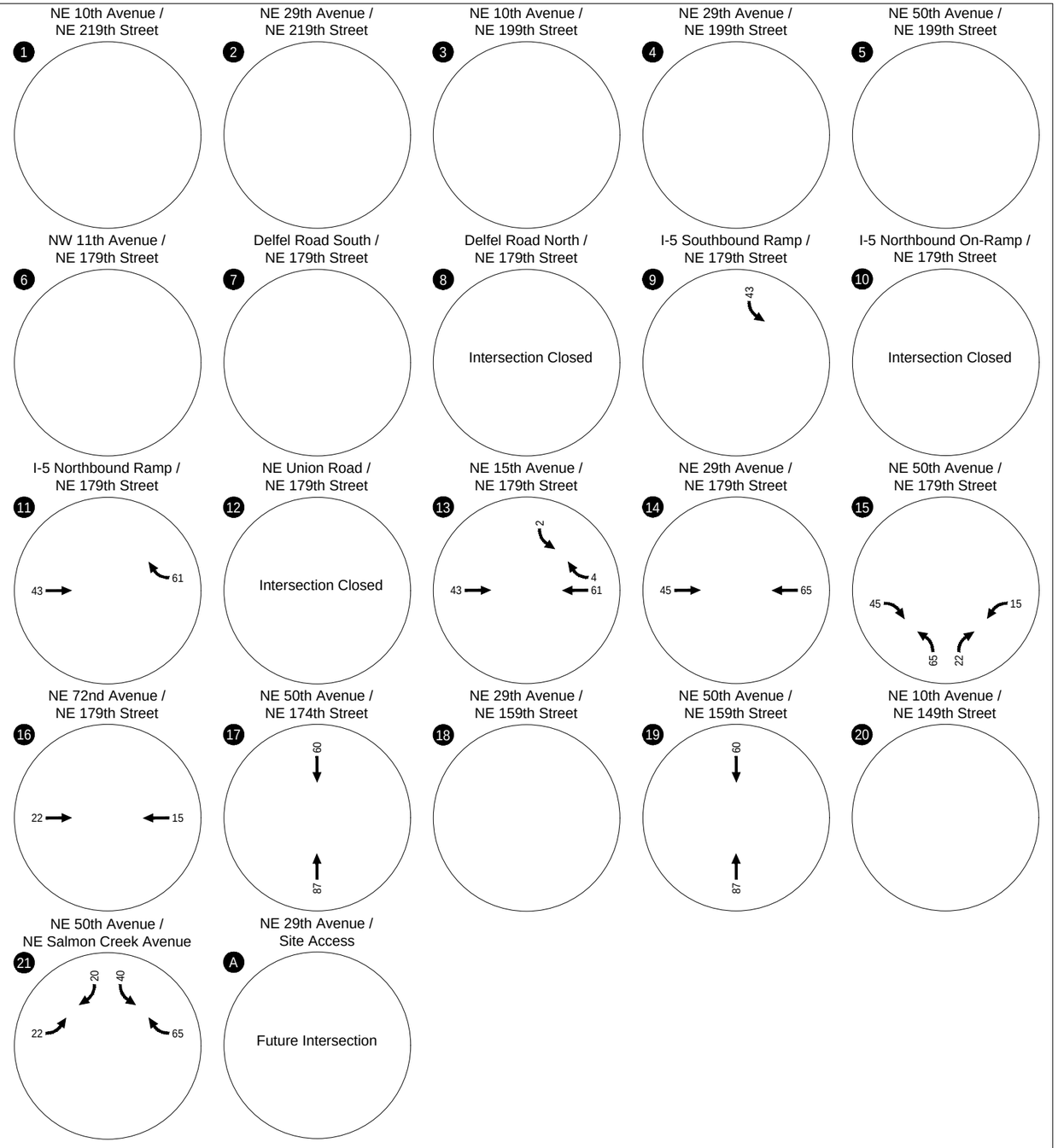
In-Process Trips: Washington State University, Weekday AM Peak Hour
Clark County, Washington

Figure
E1-1

KITTELSON & ASSOCIATES

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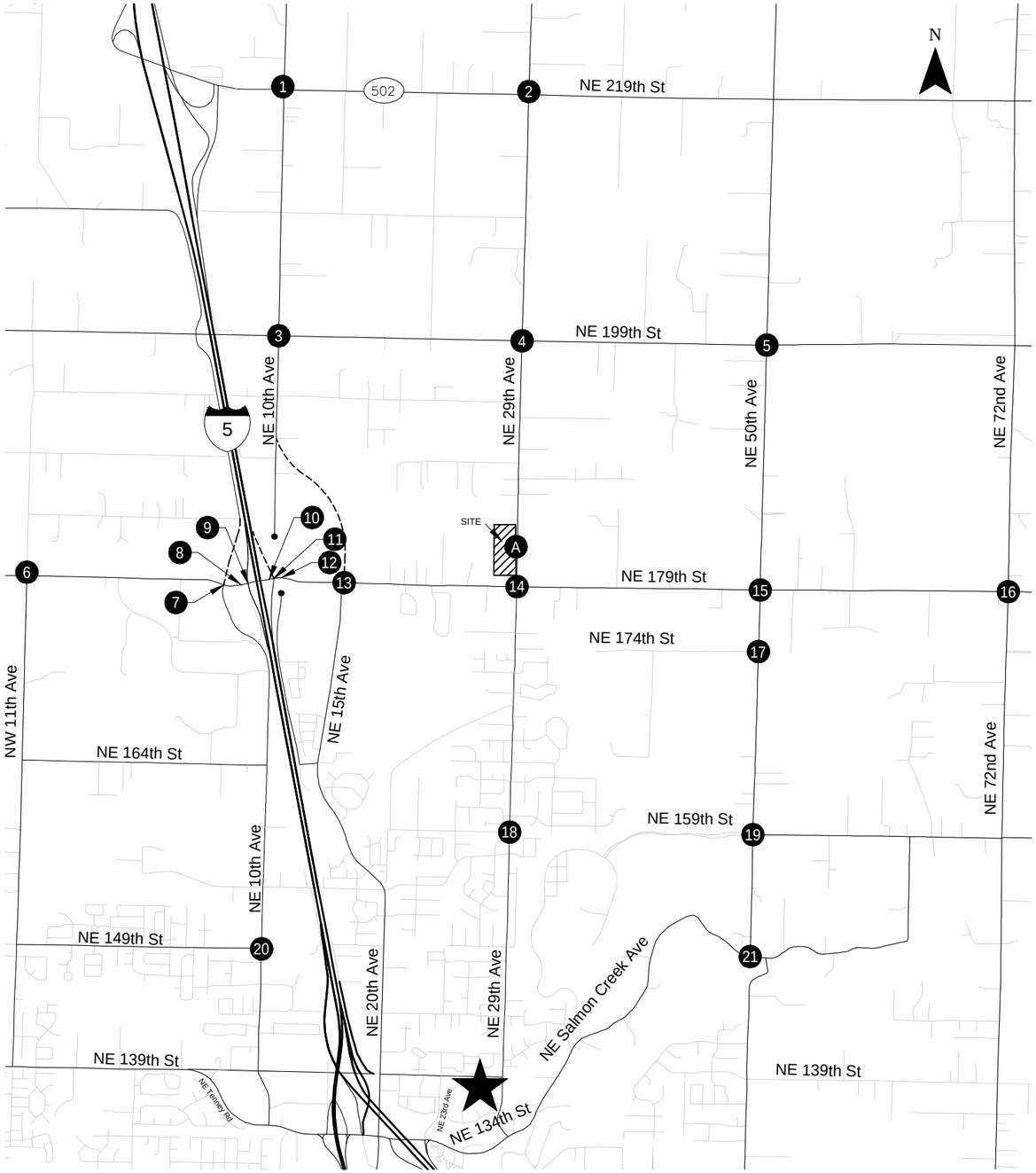
★ - LOCATION OF IN-PROCESS DEVELOPMENT

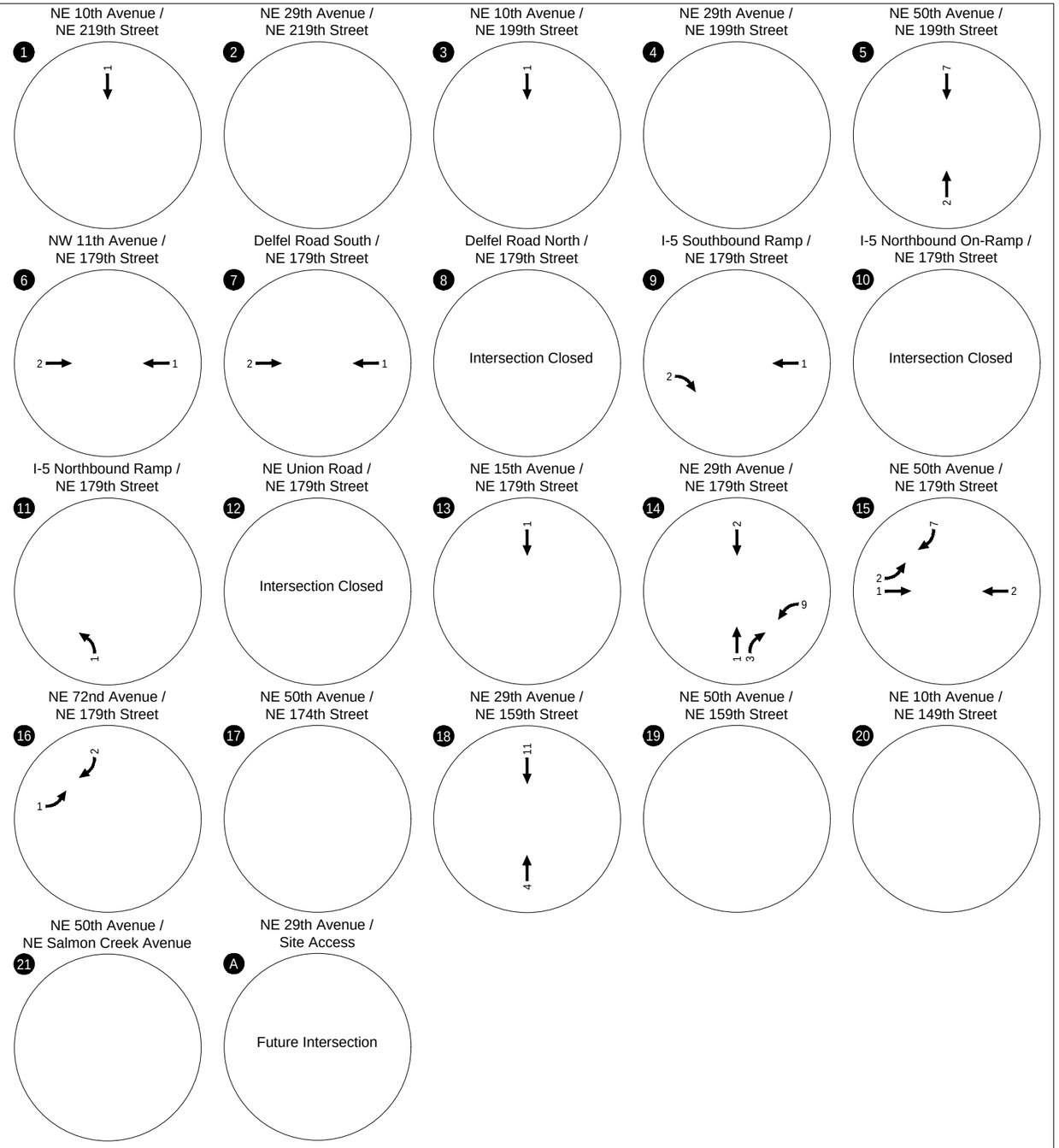
In-Process Trips: Washington State University, Weekday PM Peak Hour
Clark County, Washington

Figure
E1-2

KITTELSON & ASSOCIATES

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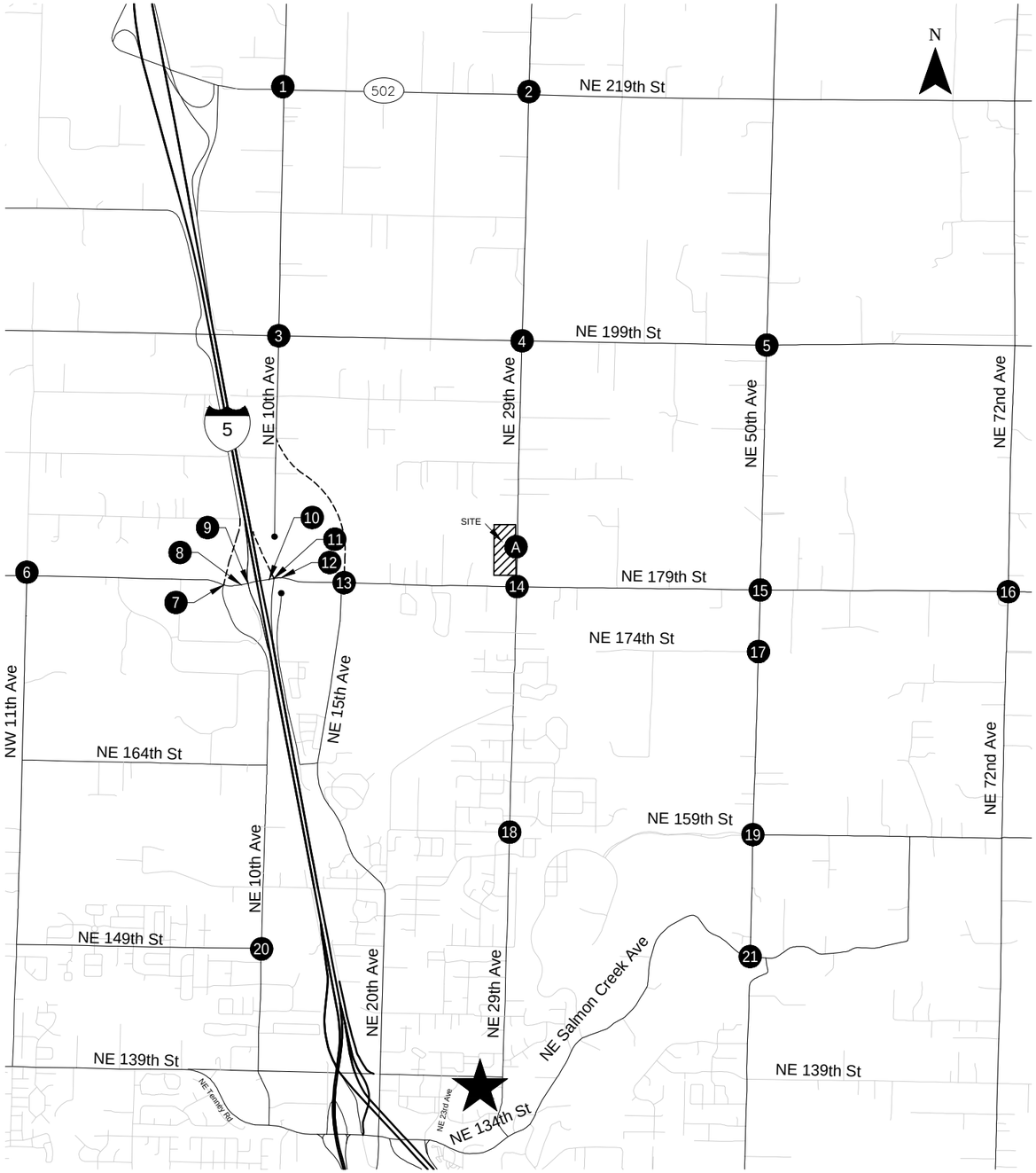
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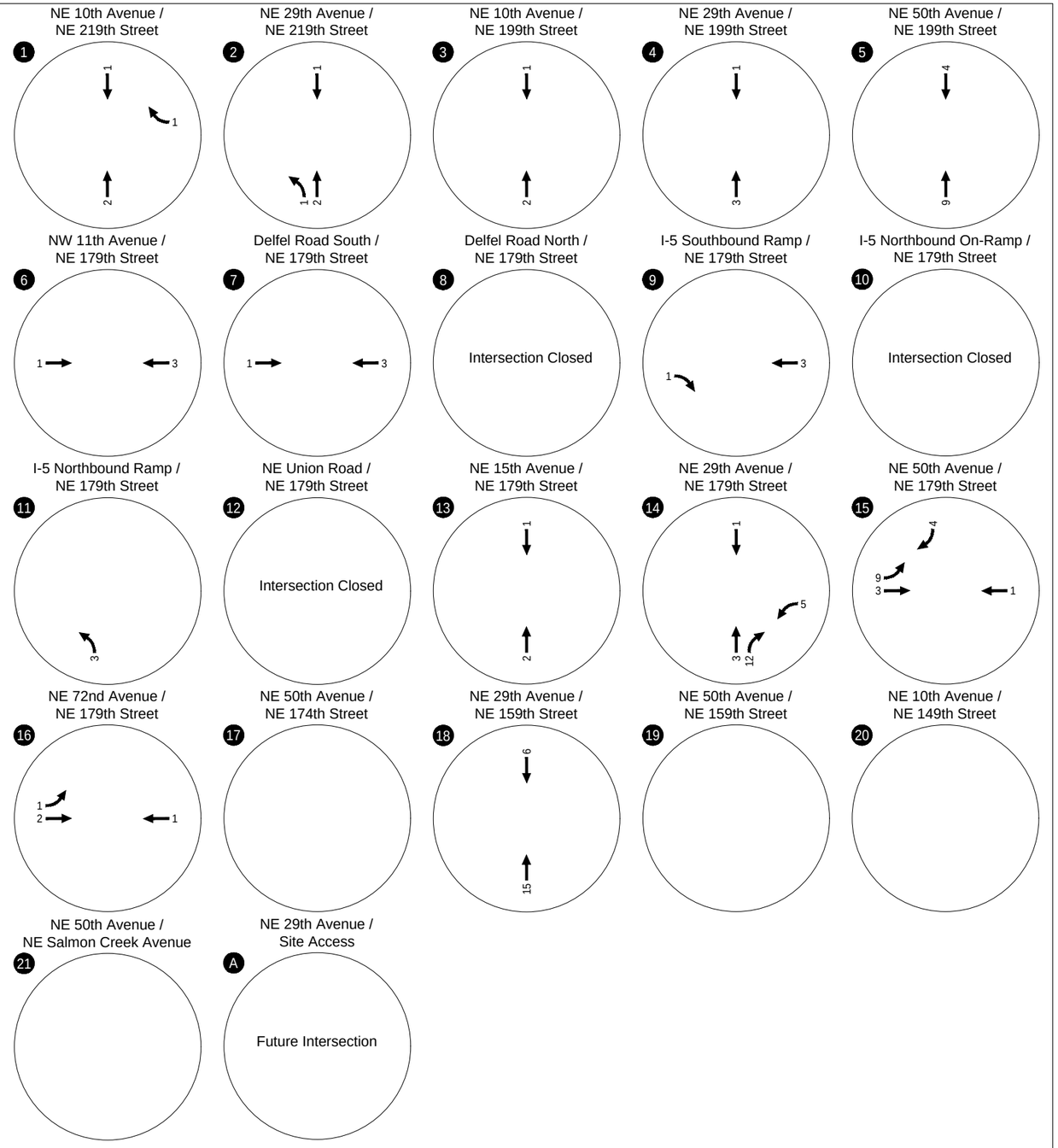
In-Process Trips: Vancouver Clinic Salmon Creek Phase 2, Weekday AM Peak Hour
Clark County, Washington

Figure
E2-1

KITTELSON & ASSOCIATES

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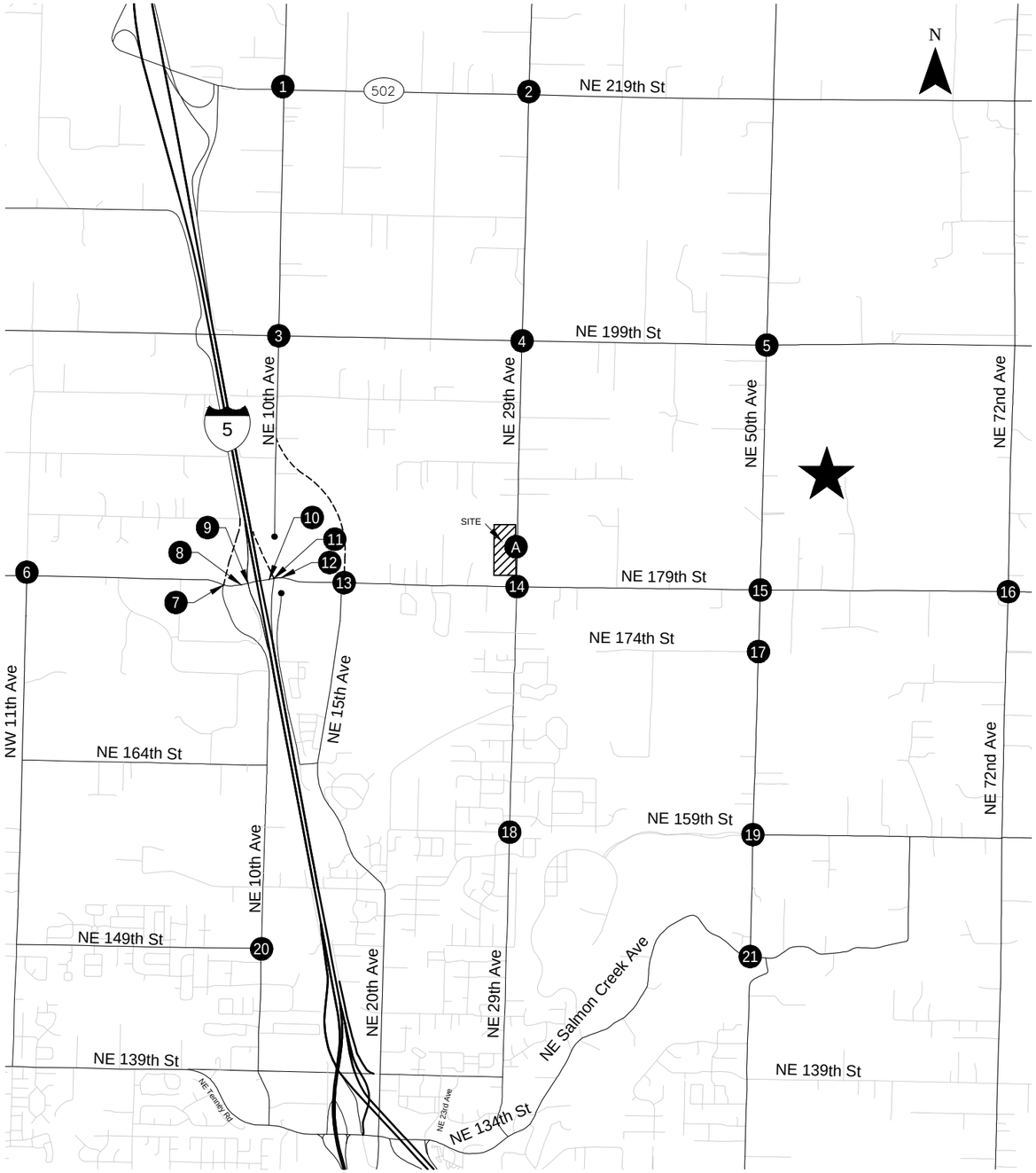
★ - LOCATION OF IN-PROCESS DEVELOPMENT

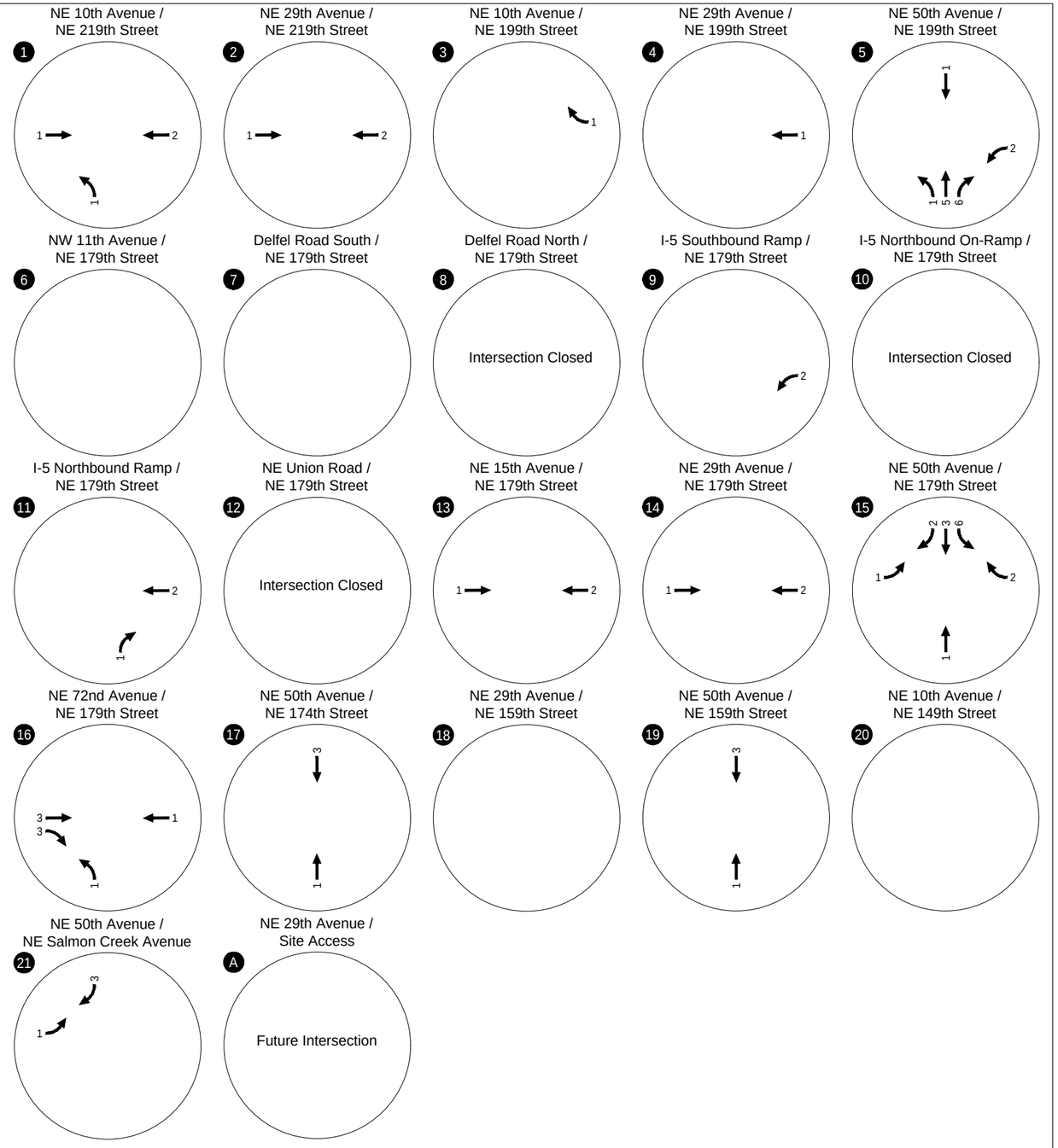
In-Process Trips: Vancouver Clinic Salmon Creek Phase 2, Weekday PM Peak Hour
Clark County, Washington

Figure
E2-2

KITTELSON & ASSOCIATES

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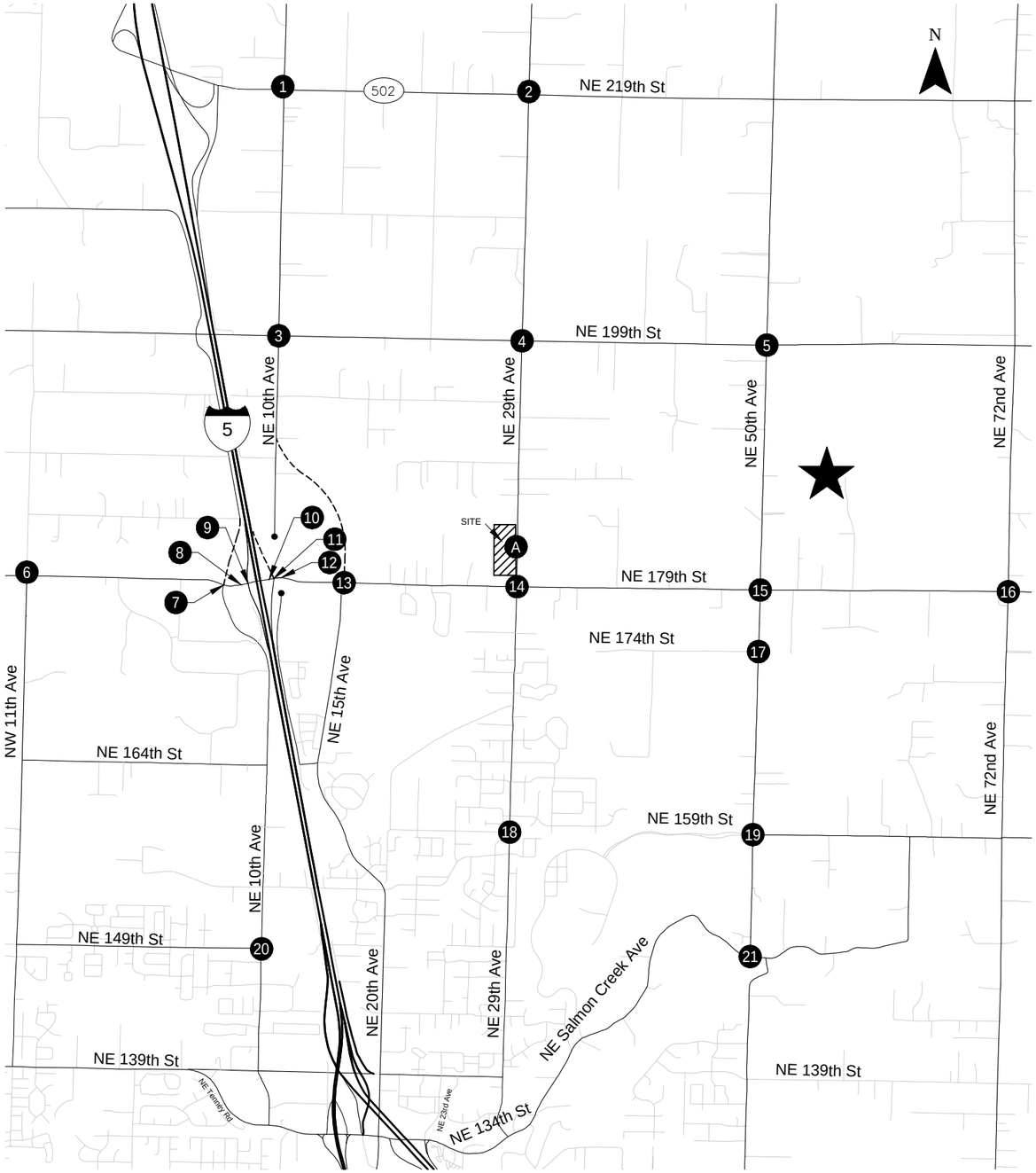
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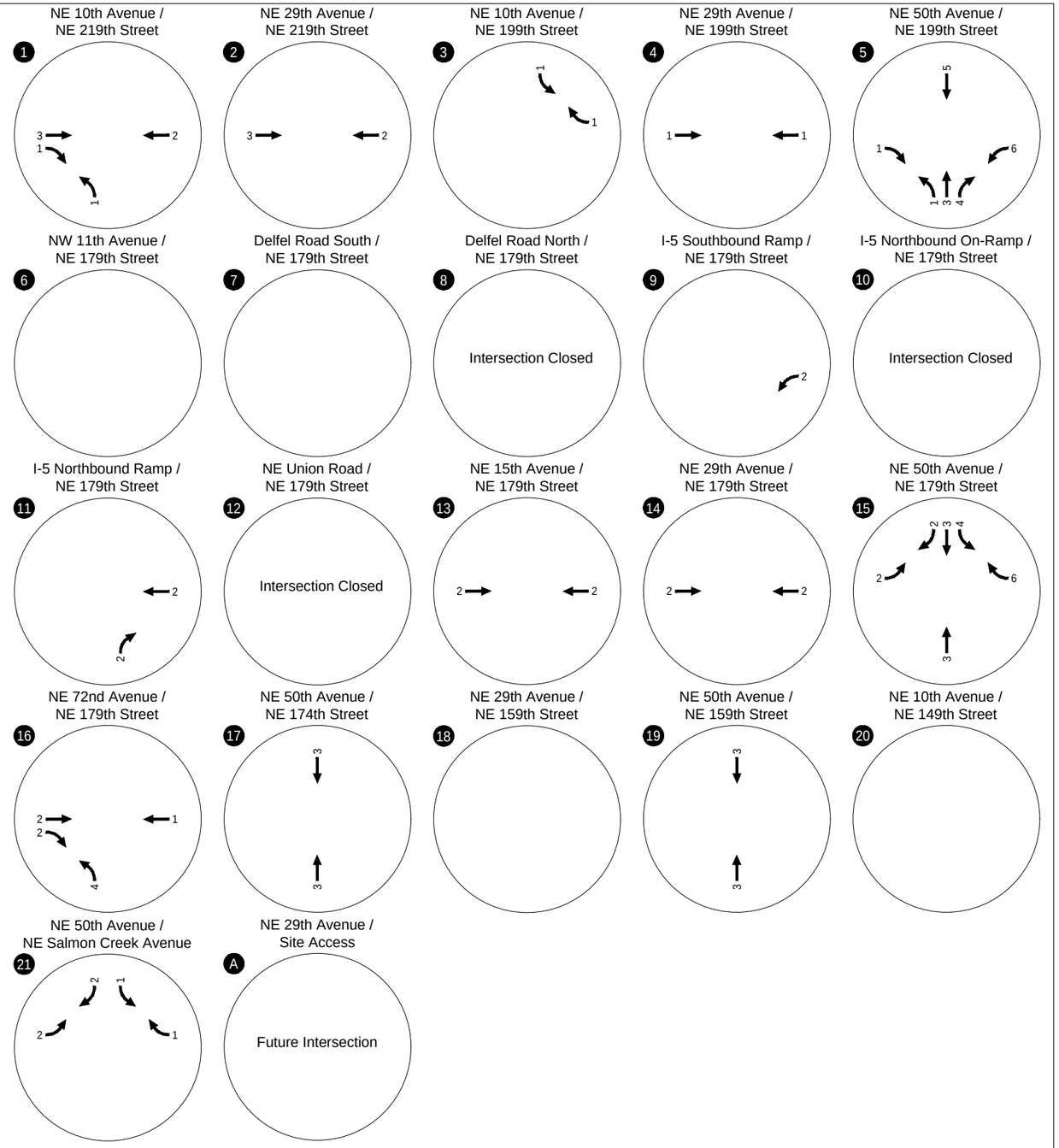
In-Process Trips: Mountain Estates, Weekday AM Peak Hour
Clark County, Washington

Figure
E3-1

KITTELSON & ASSOCIATES

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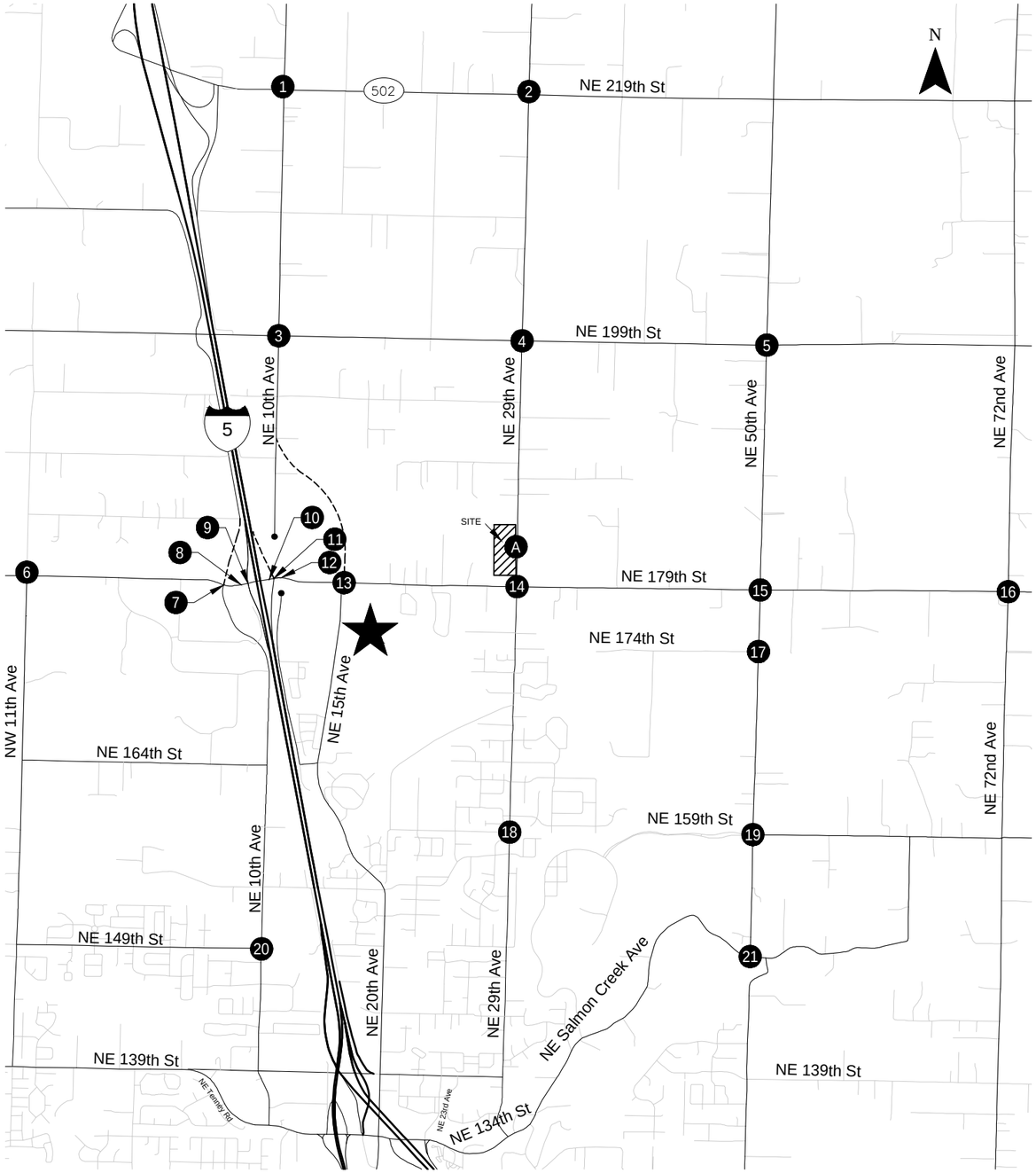
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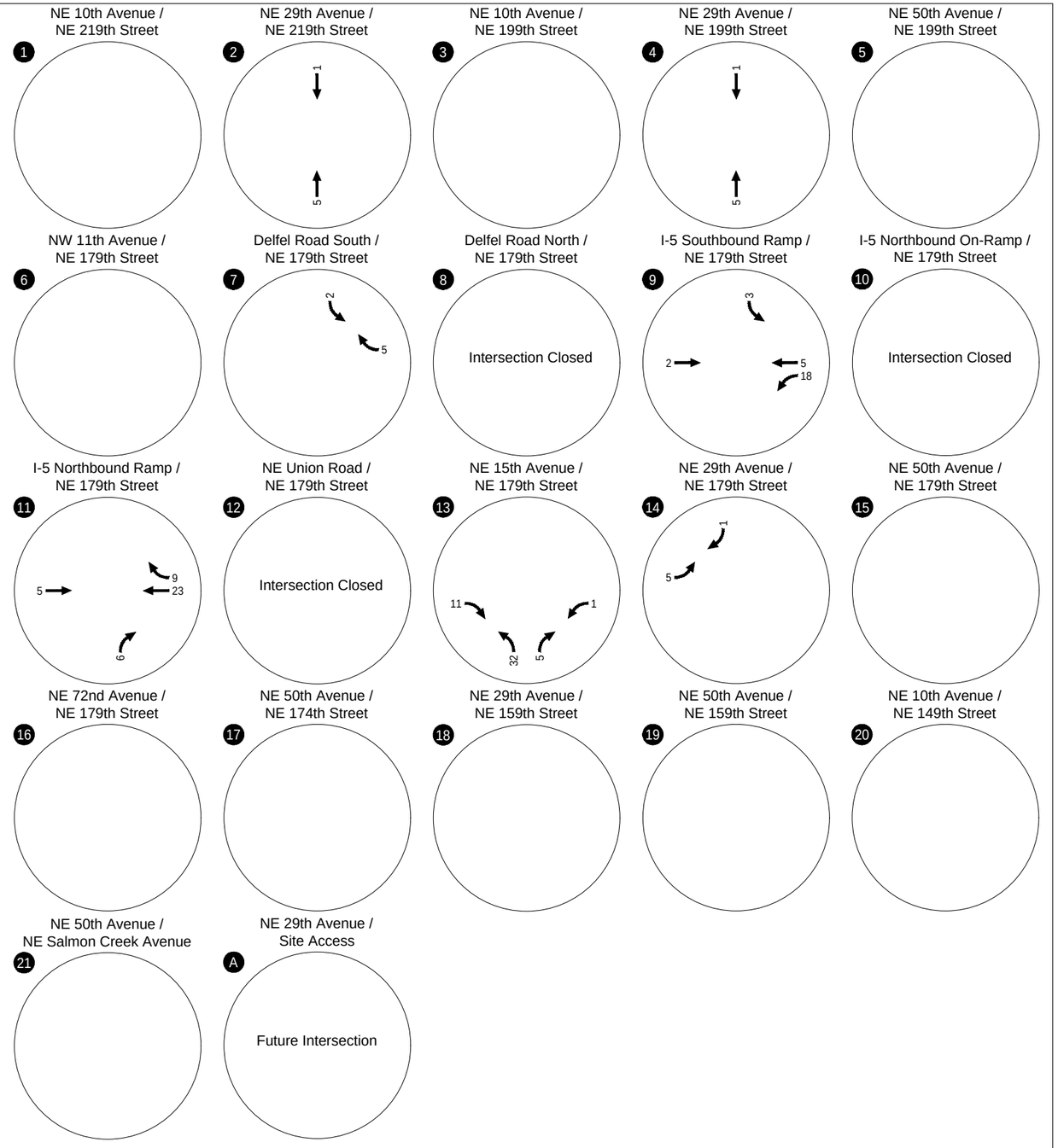
In-Process Trips: Mountain Estates, Weekday PM Peak Hour
Clark County, Washington

Figure
E3-2

KITTELSON & ASSOCIATES

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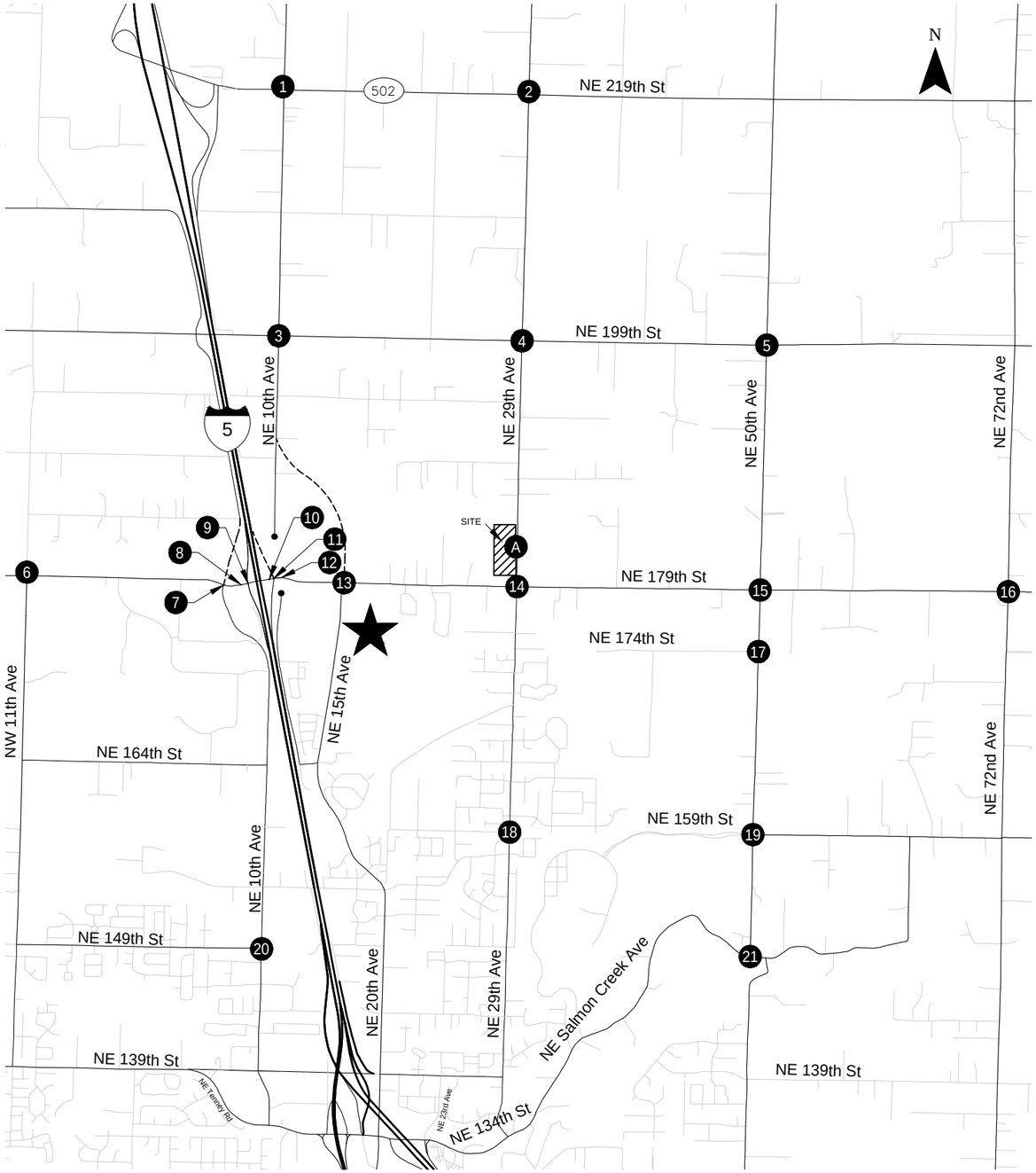
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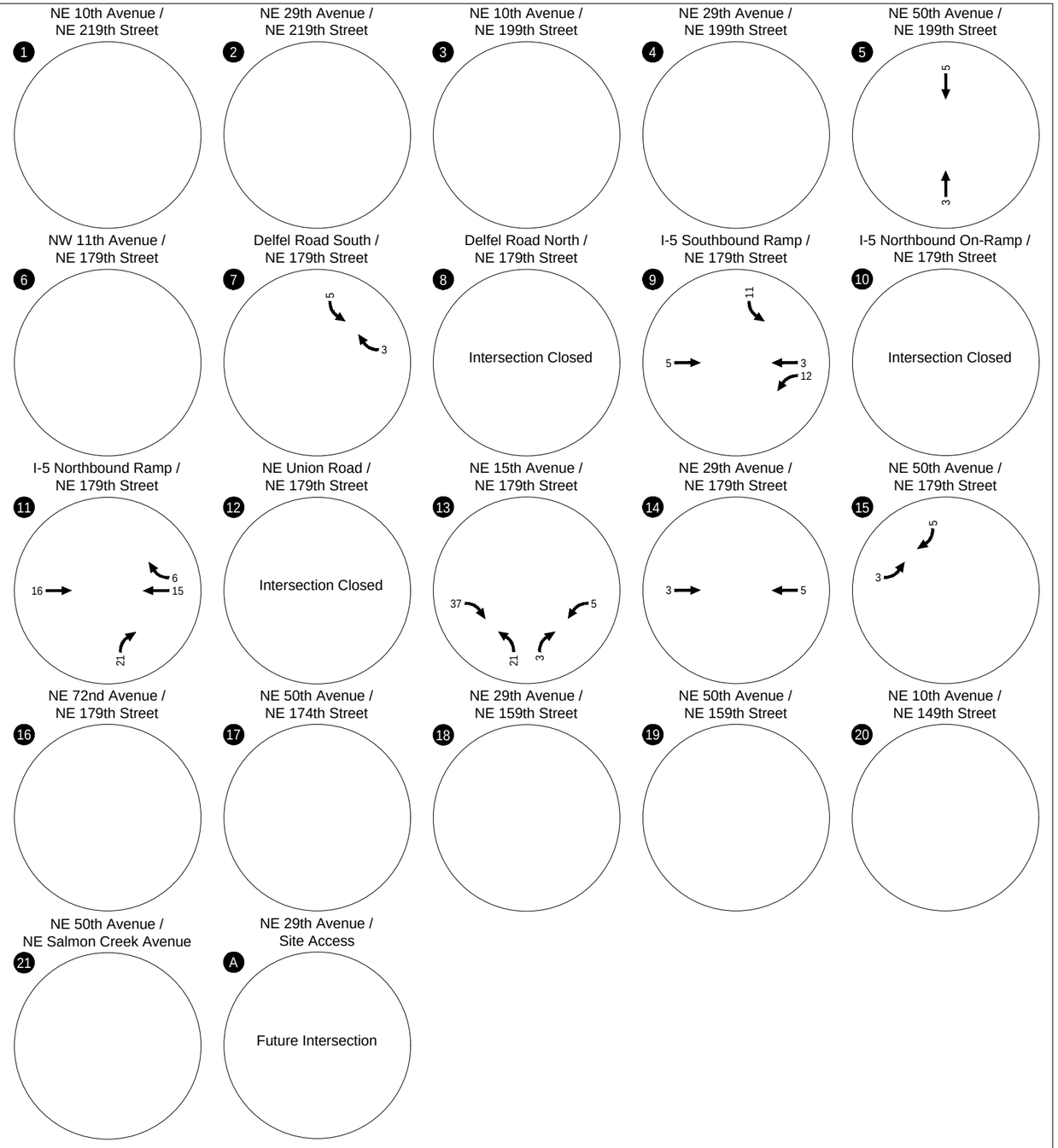
In-Process Trips: Wipple Creek, Weekday AM Peak Hour
Clark County, Washington

Figure
E4-1

KITTELSON & ASSOCIATES

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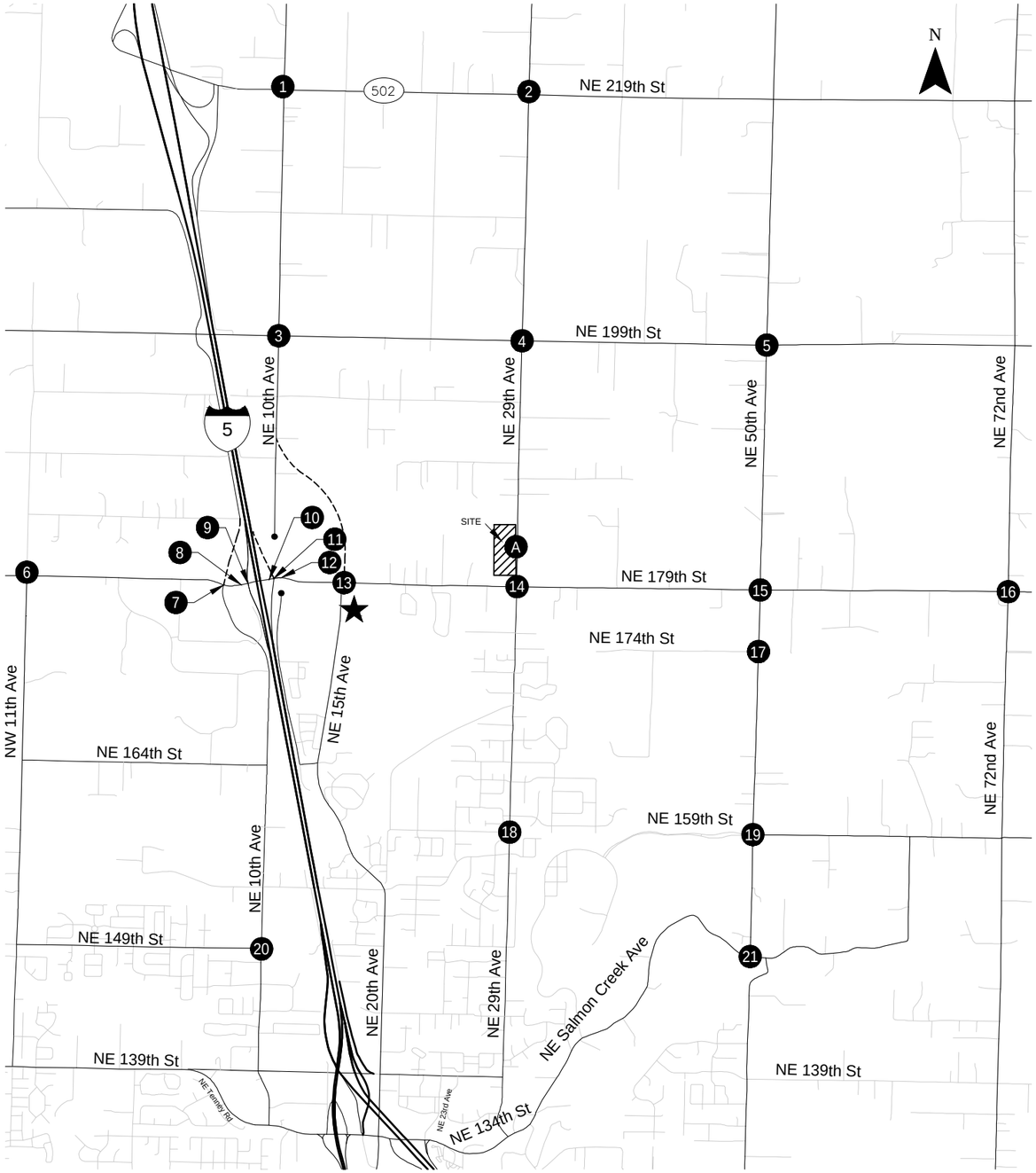
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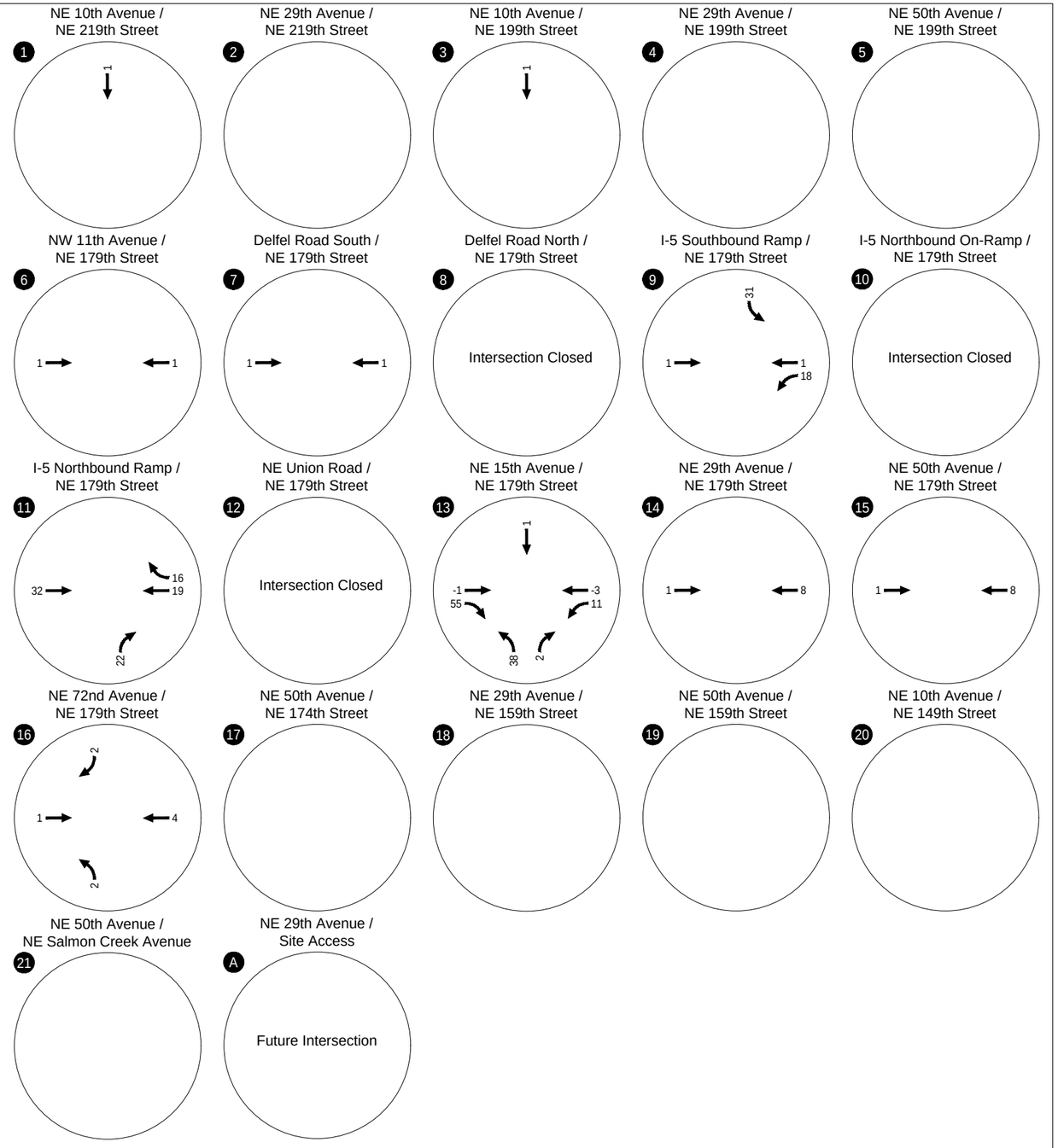
In-Process Trips: Wipple Creek, Weekday PM Peak Hour
Clark County, Washington

Figure
E4-2

KITTELSON & ASSOCIATES

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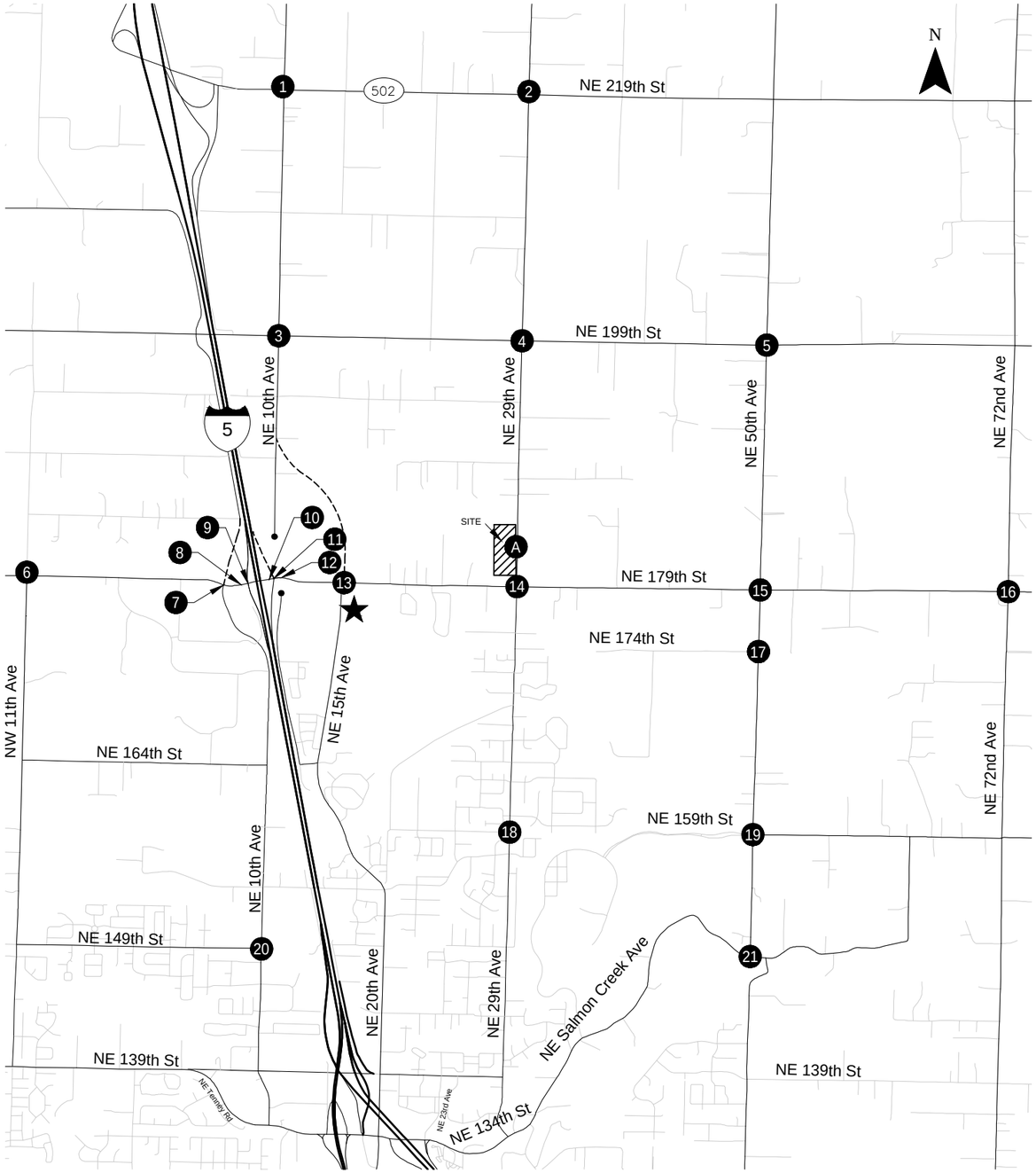
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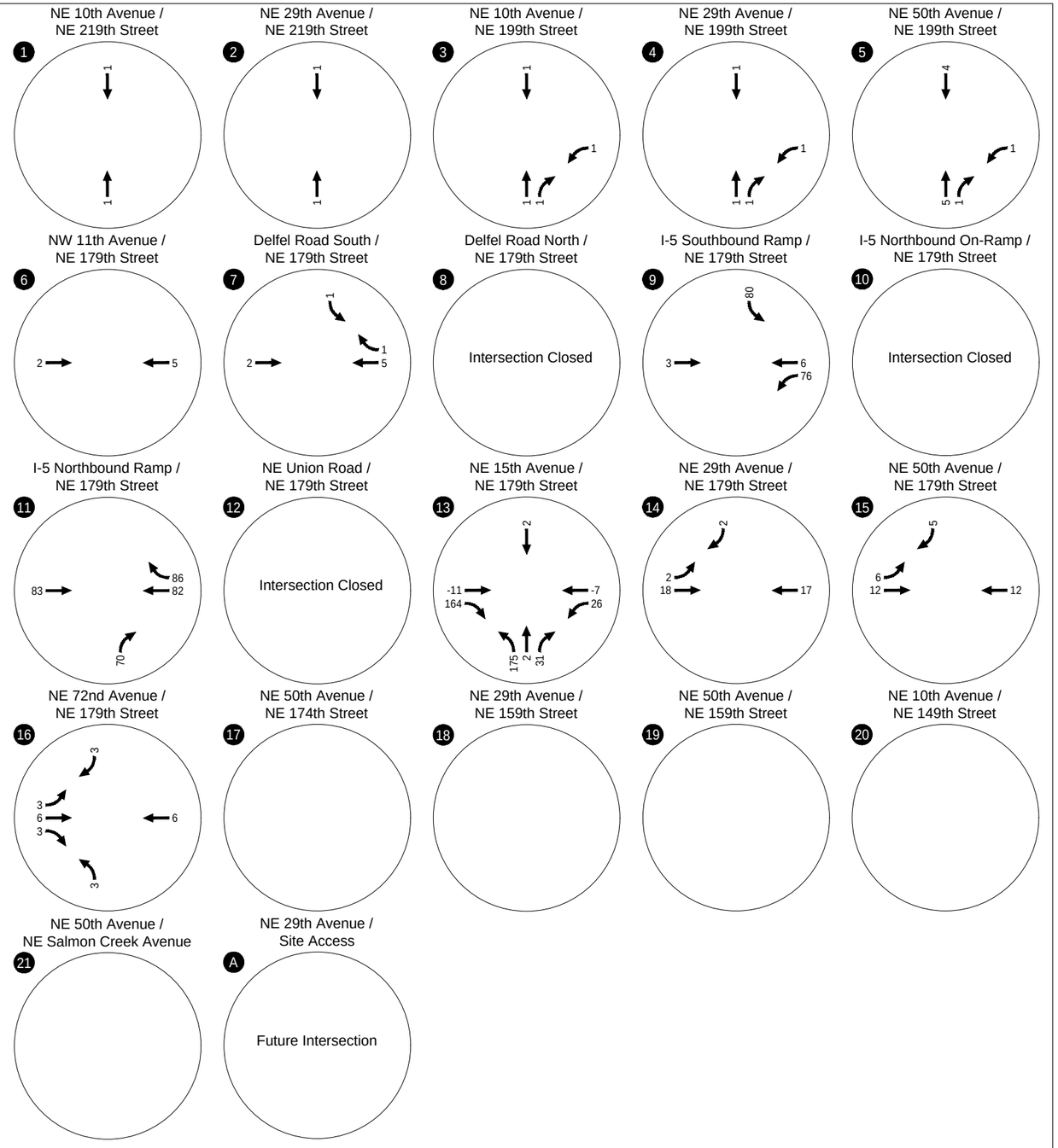
In-Process Trips: Three Creeks Phase 1 Commercial, Weekday AM Peak Hour
Clark County, Washington

Figure
E5-1

KITTELSON & ASSOCIATES

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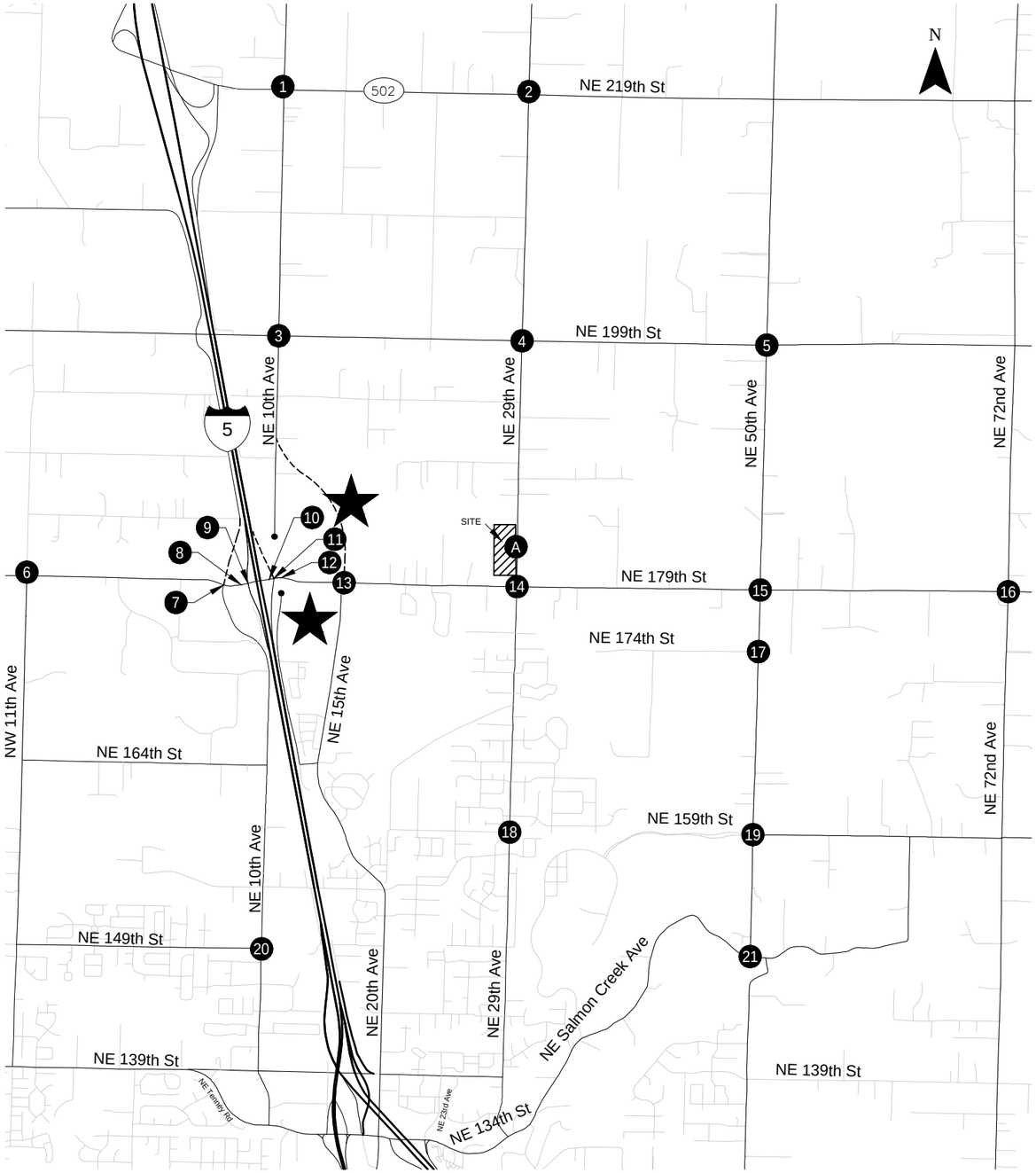
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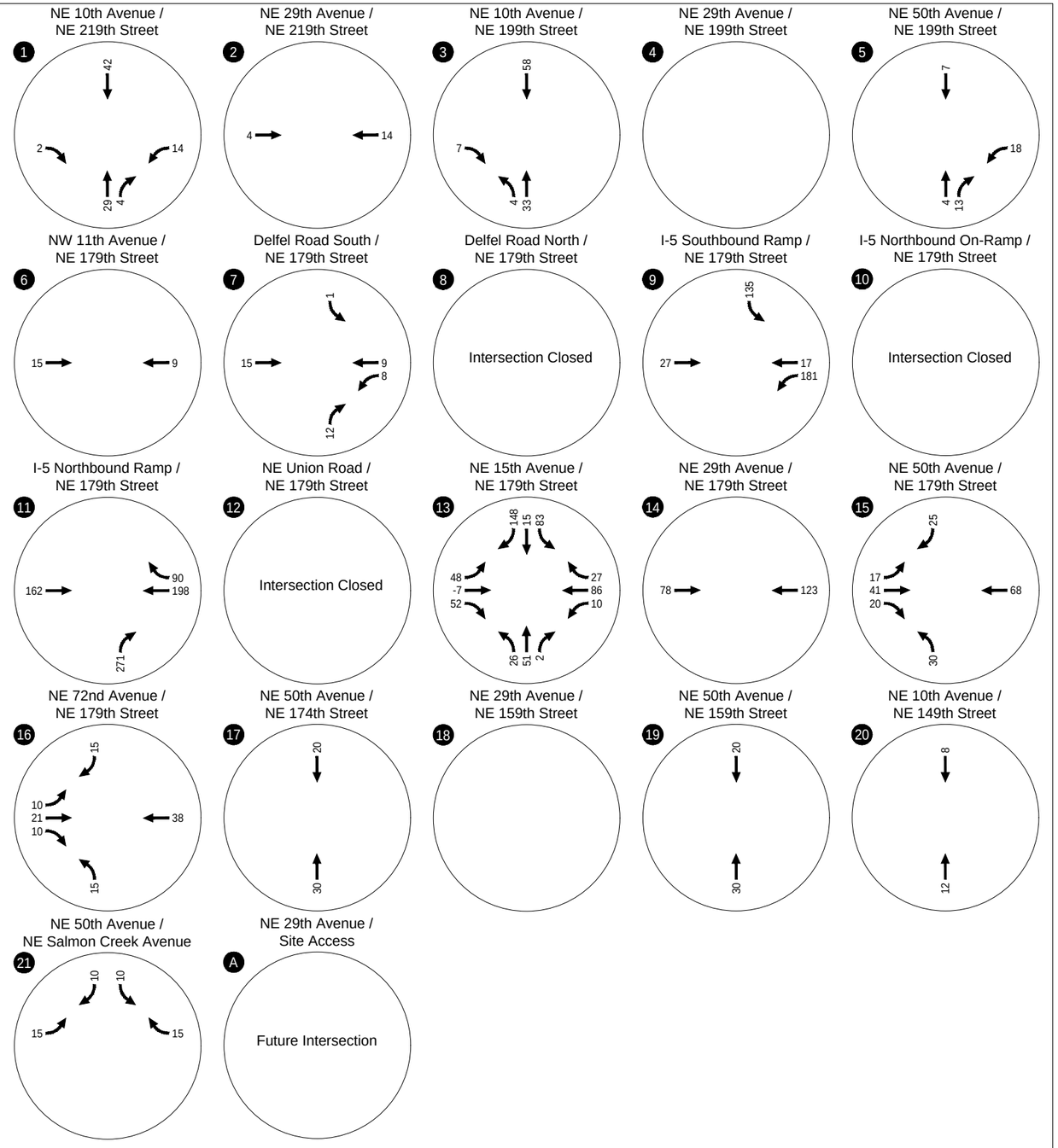
In-Process Trips: Three Creeks Phase 1 Commercial, Weekday PM Peak Hour
Clark County, Washington

Figure
E5-2

KITTELSON & ASSOCIATES

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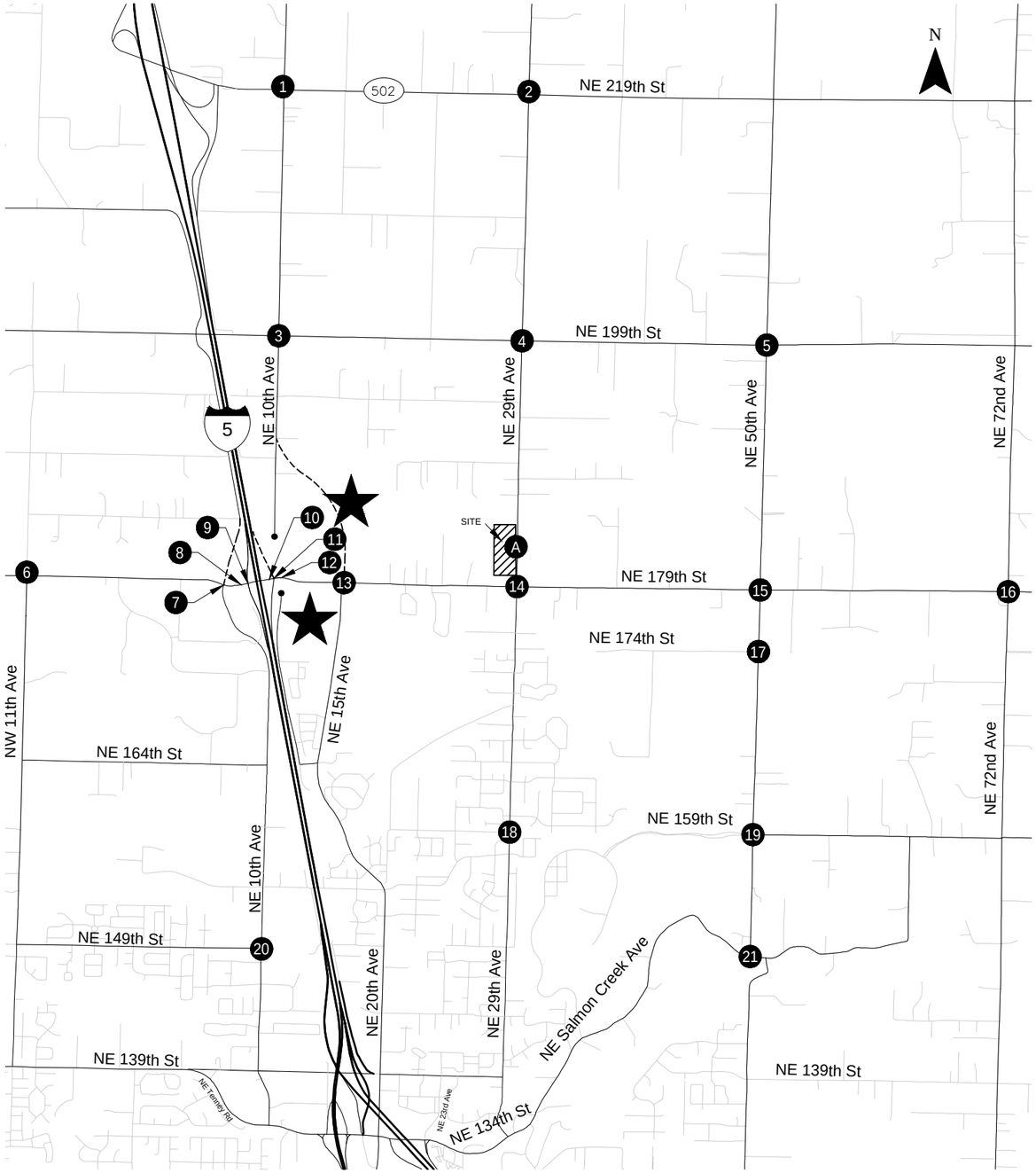
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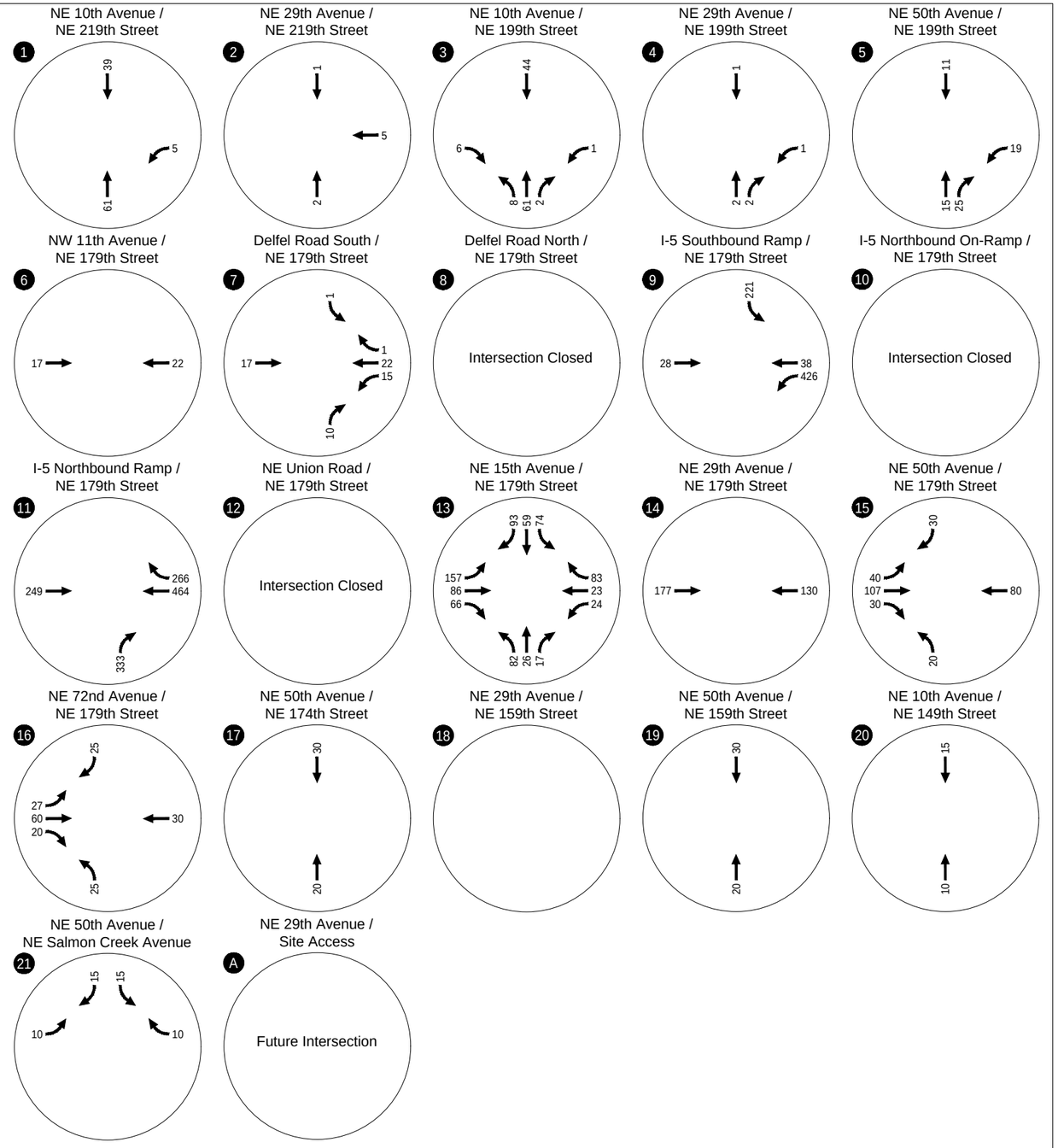
In-Process Trips: Three Creeks Phase 2 & North, Weekday AM Peak Hour
Clark County, Washington

Figure
E6-1

KITTELSON & ASSOCIATES

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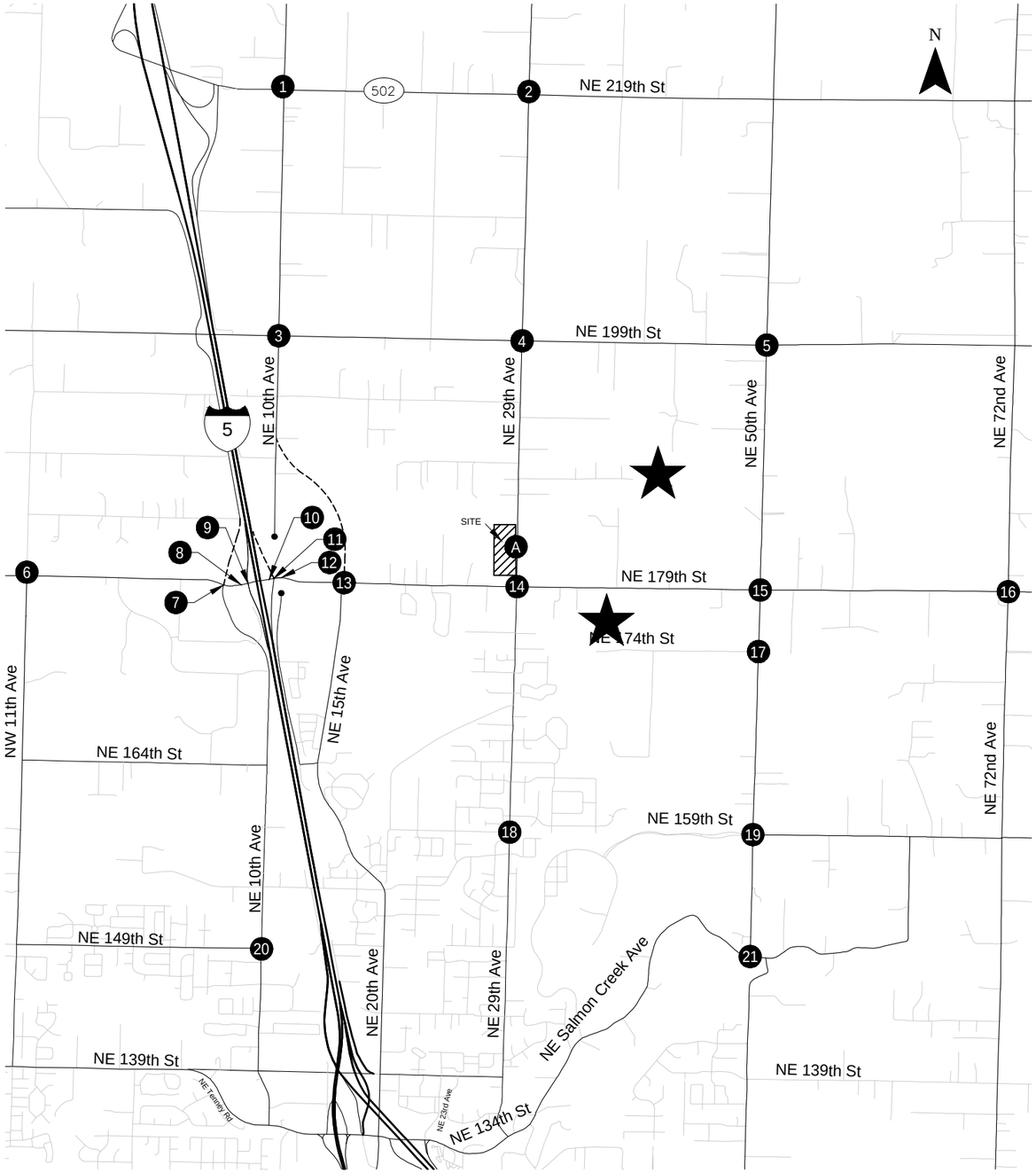
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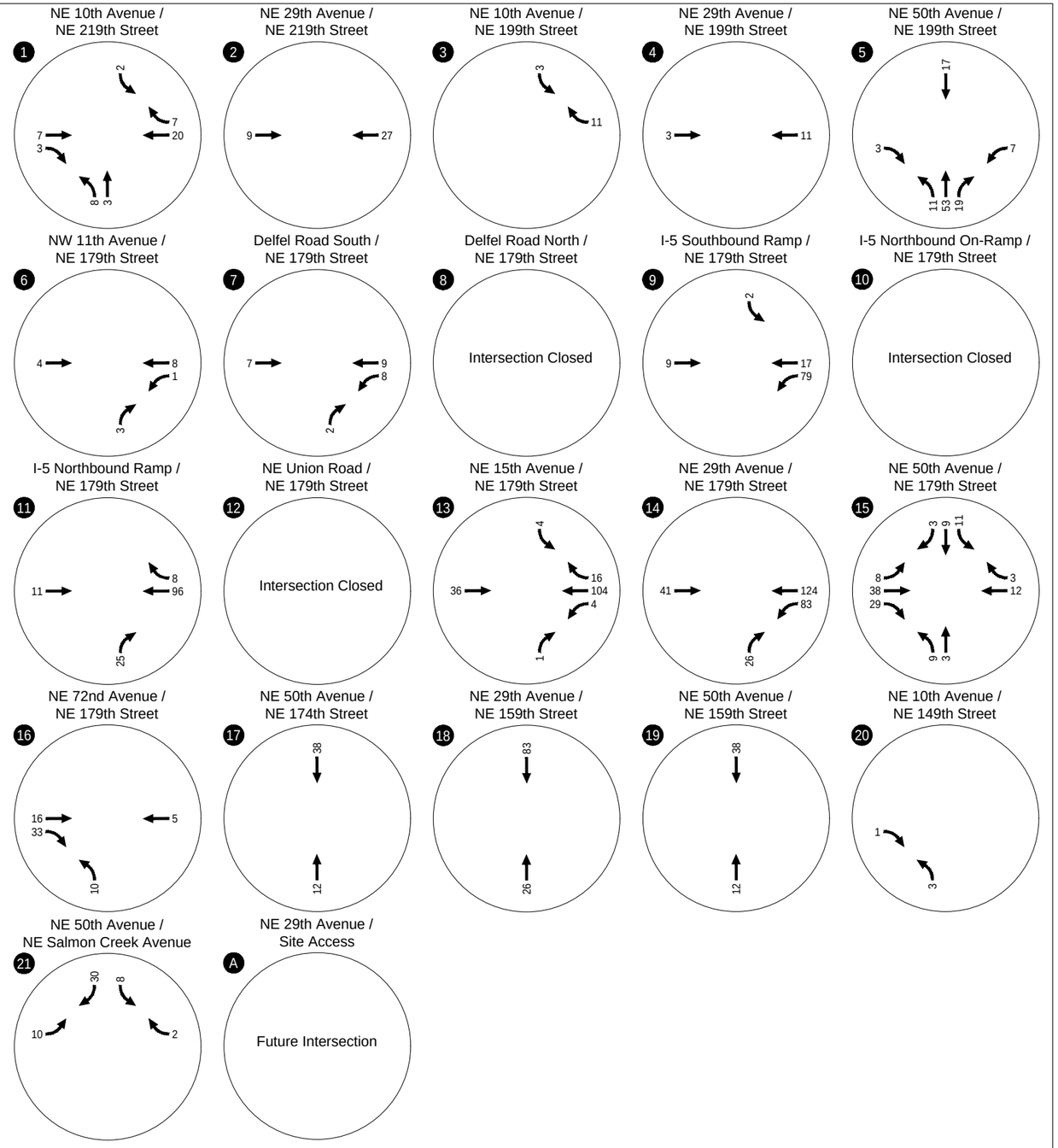
In-Process Trips: Three Creeks Phase 2 & North, Weekday PM Peak Hour
Clark County, Washington

Figure
E6-2

KITTELSON & ASSOCIATES

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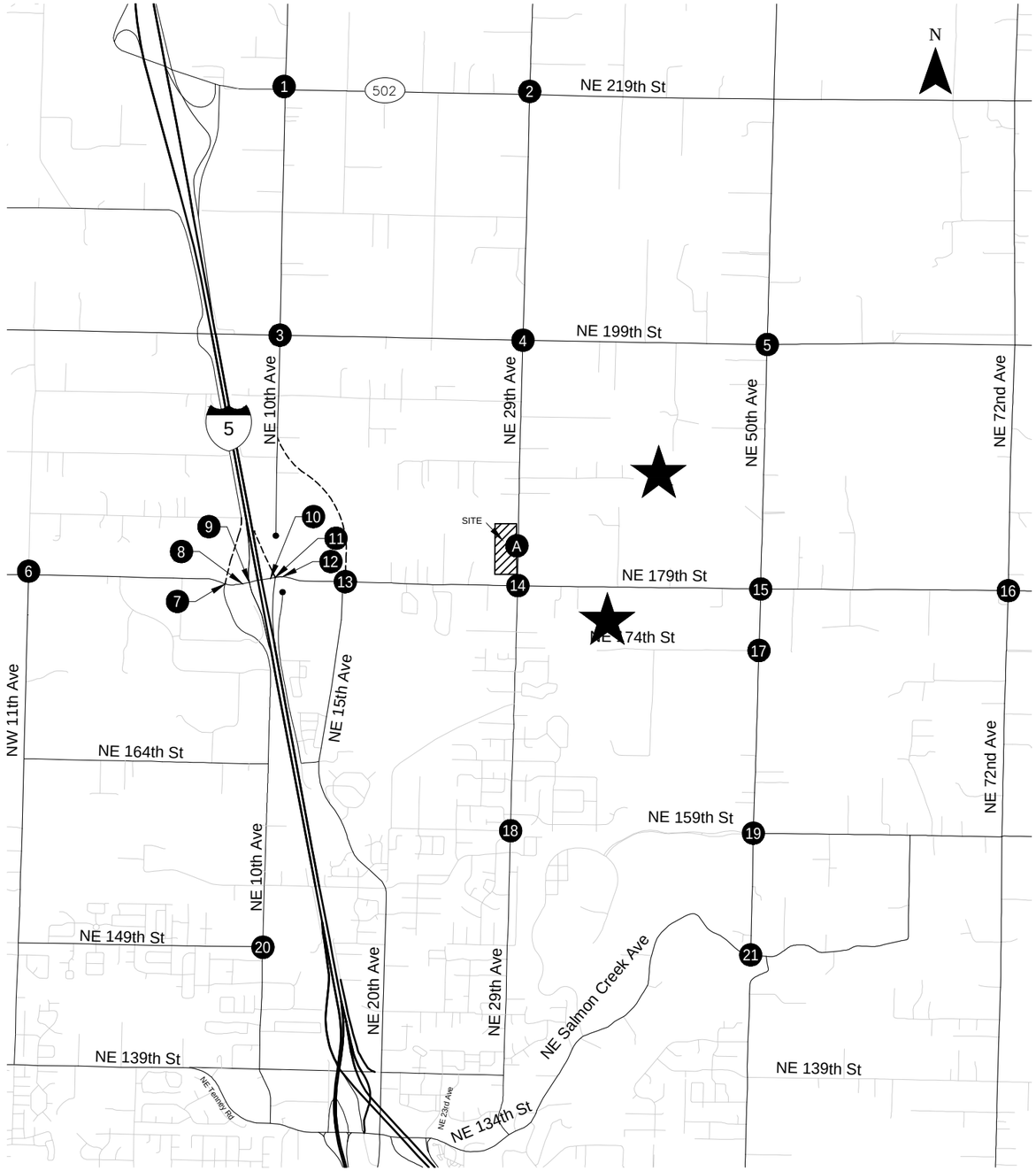
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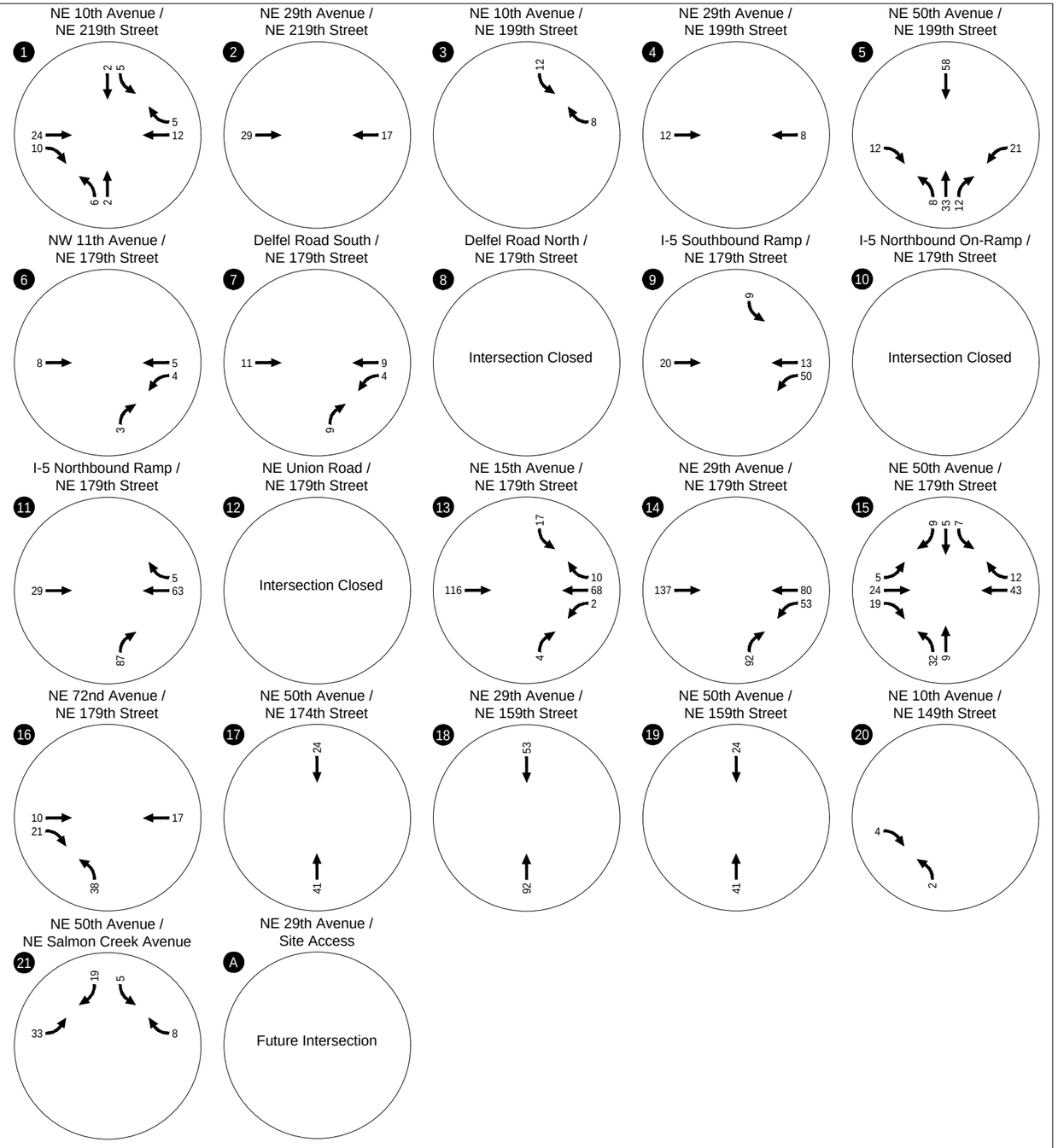
In-Process Trips: Mill Creek PUD, Weekday AM Peak Hour
Clark County, Washington

Figure
E7-1

KITTELSON & ASSOCIATES

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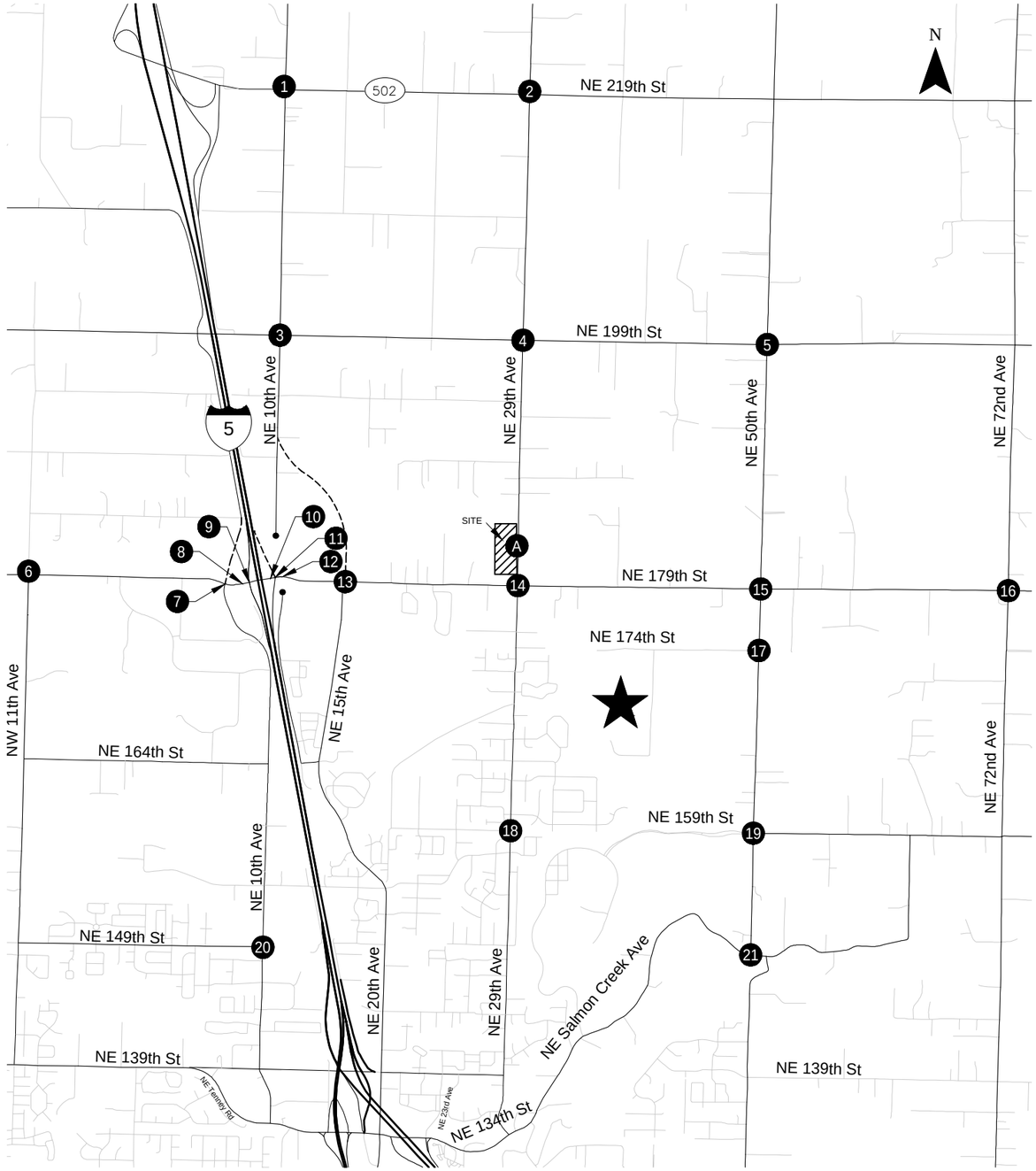
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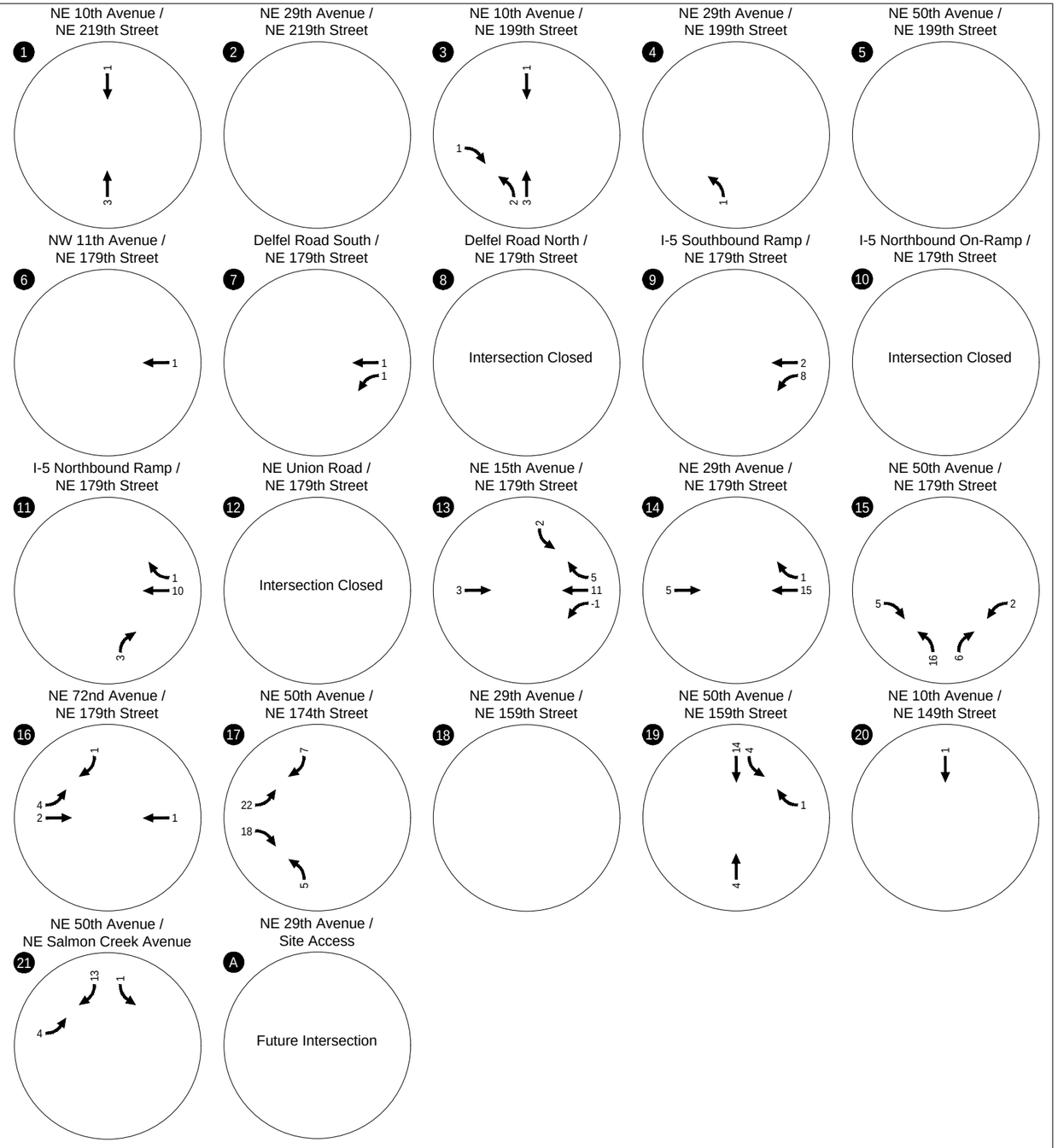
In-Process Trips: Mill Creek PUD, Weekday PM Peak Hour
Clark County, Washington

Figure
E7-2

KITTELSON & ASSOCIATES

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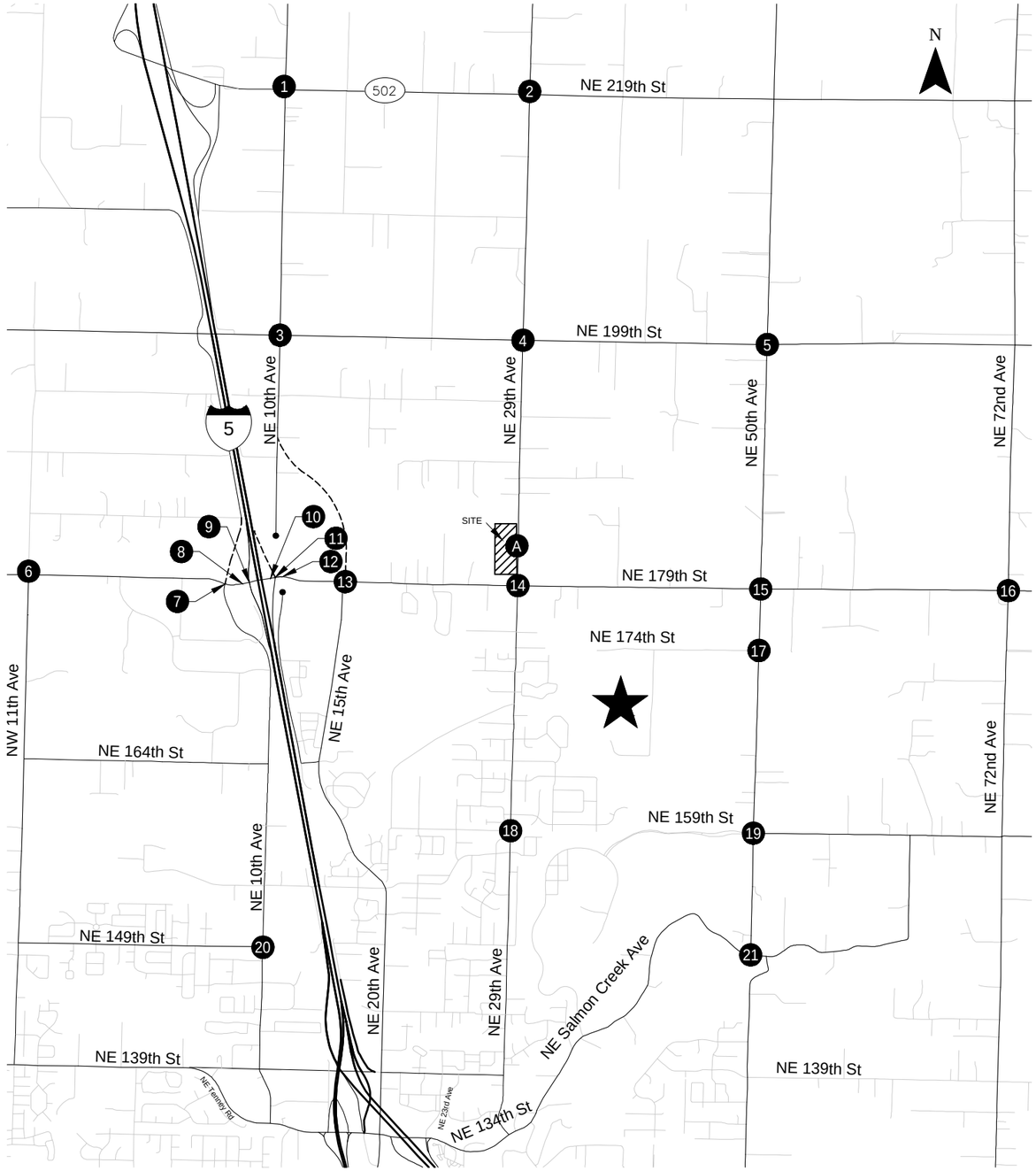
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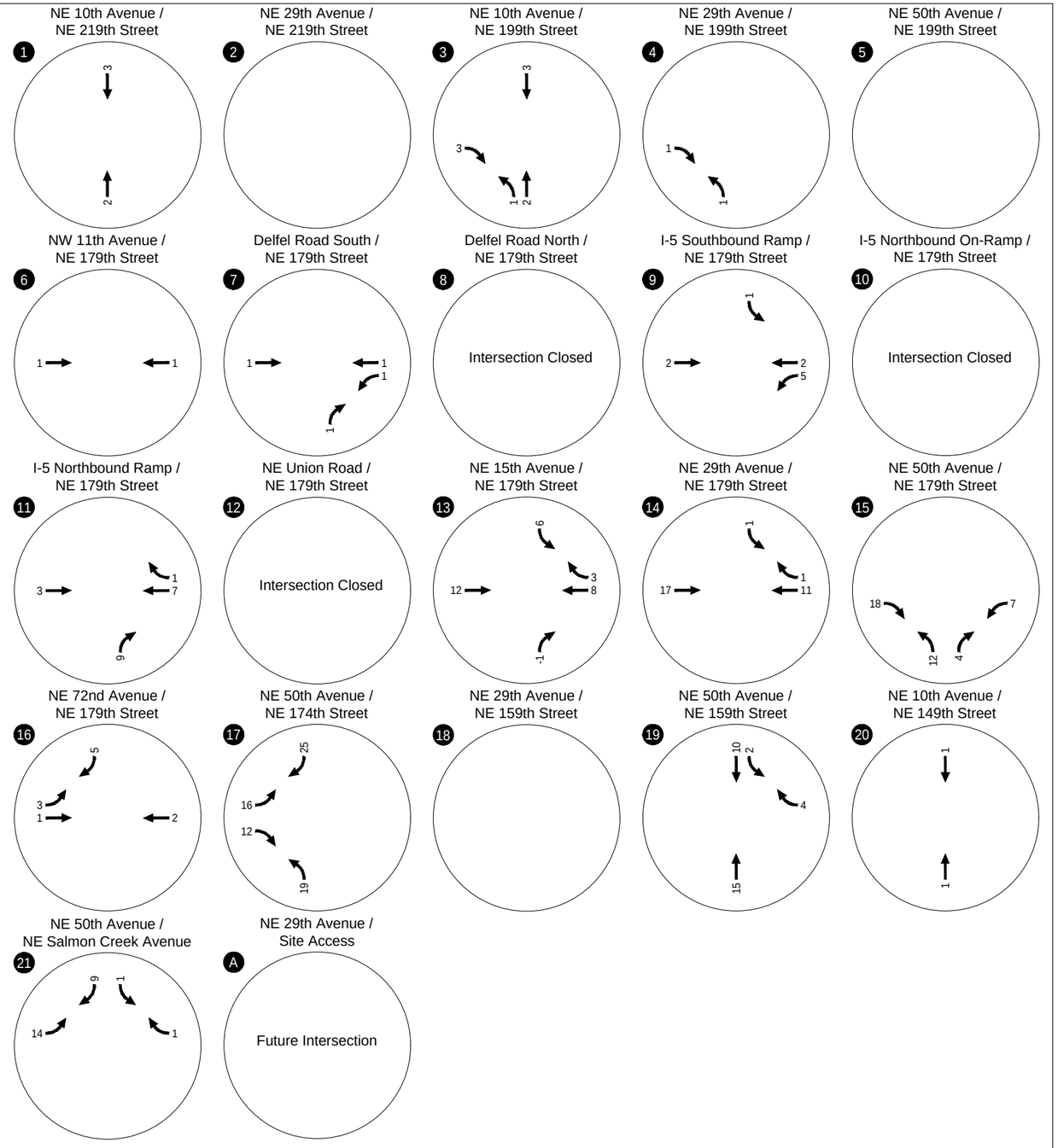
In-Process Trips: M&H Subdivision, Weekday AM Peak Hour
Clark County, Washington

Figure
E8-1

KITTELSON & ASSOCIATES

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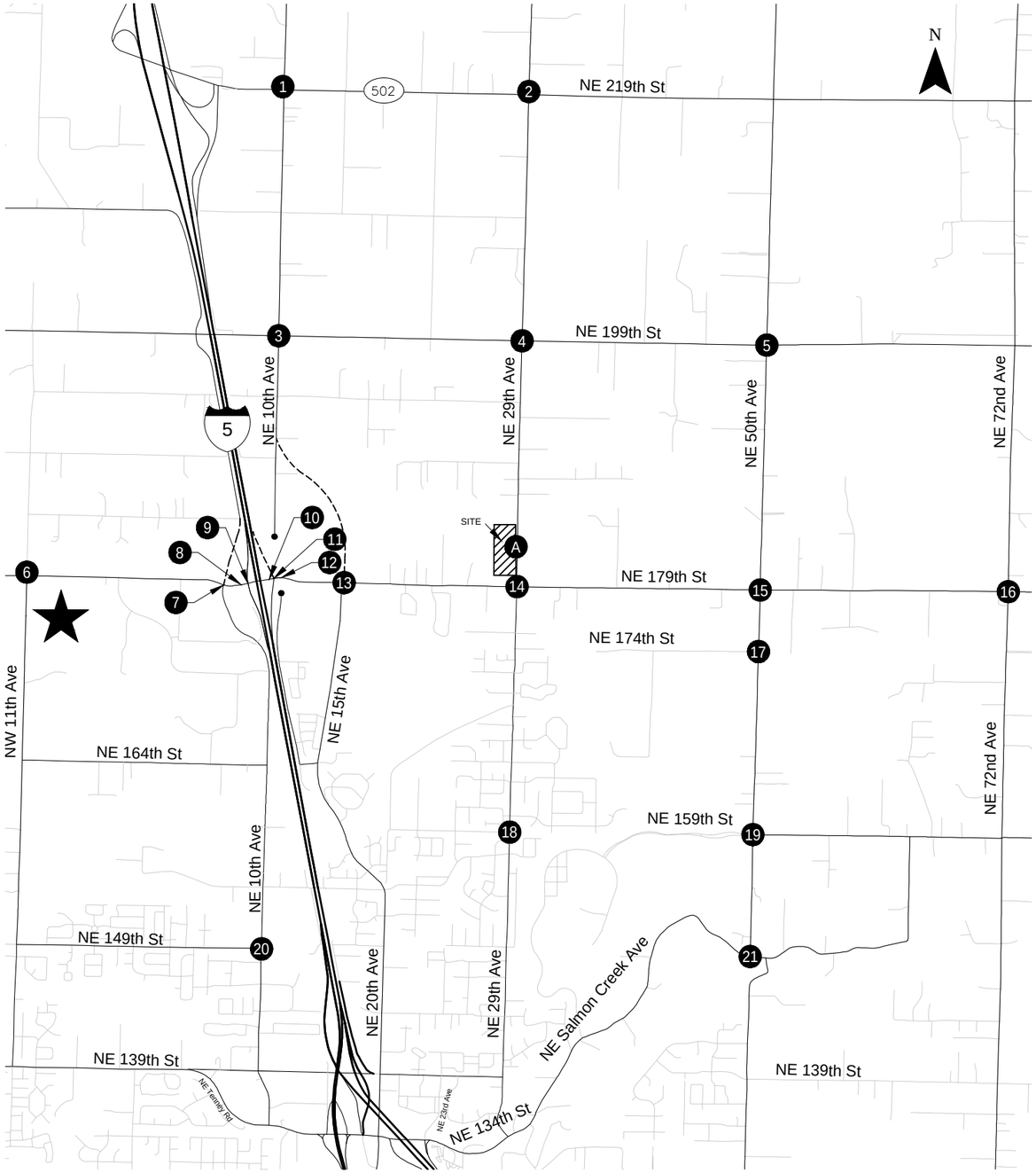
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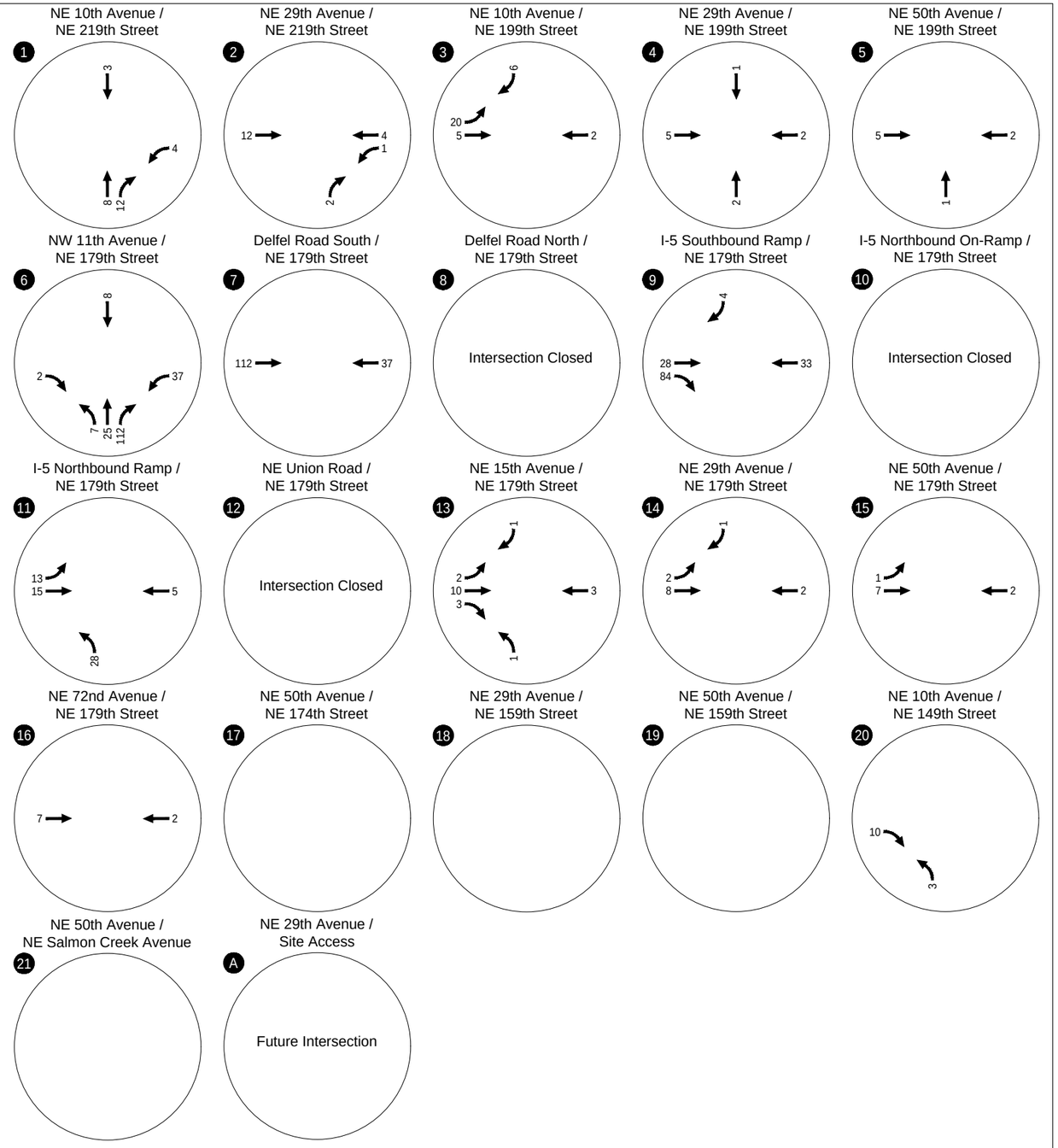
In-Process Trips: M&H Subdivision, Weekday PM Peak Hour
Clark County, Washington

Figure
E8-2

KITTELSON & ASSOCIATES

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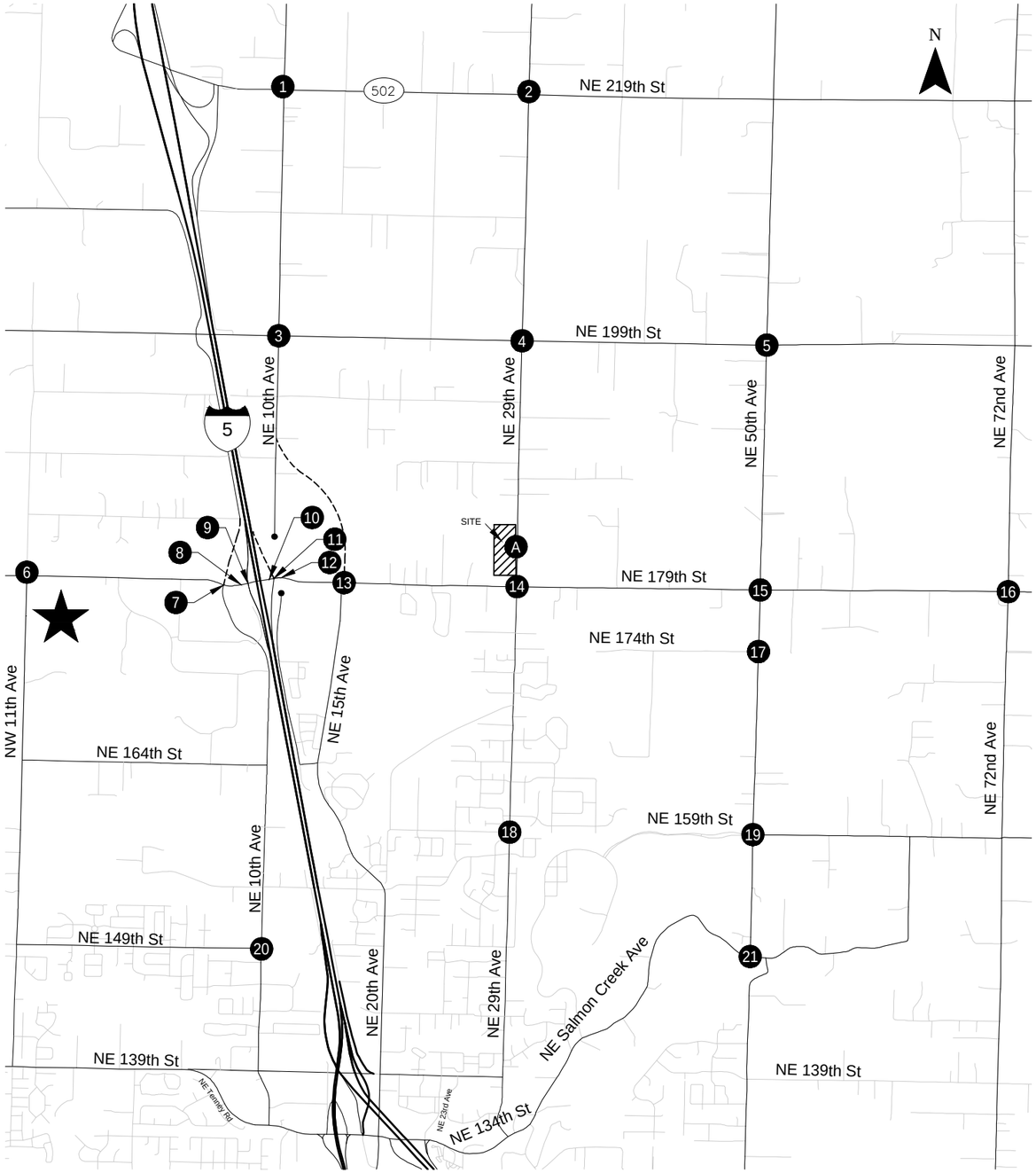
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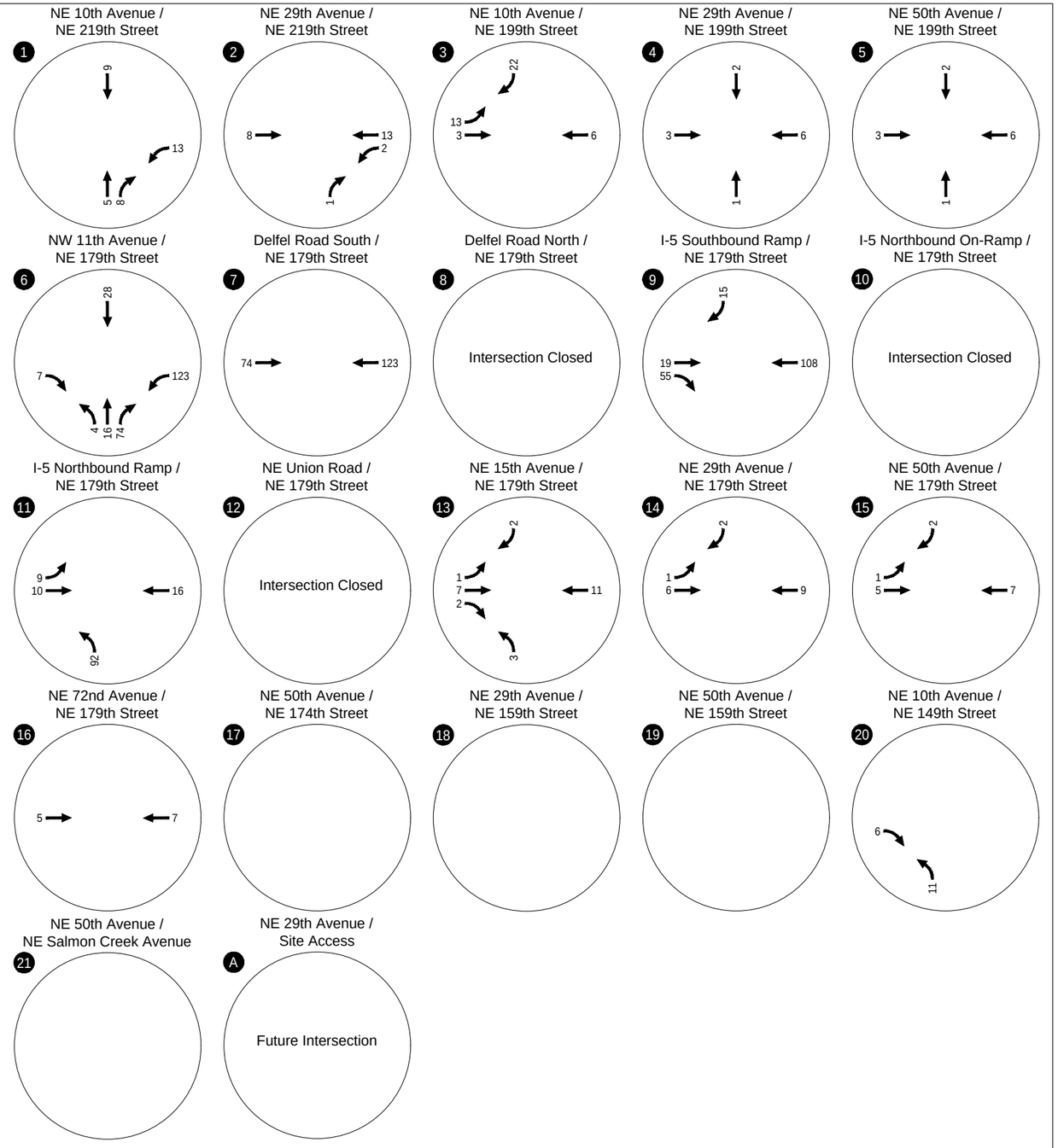
In-Process Trips: North Haven, Weekday AM Peak Hour
Clark County, Washington

Figure
E9-1

KITTELSON & ASSOCIATES

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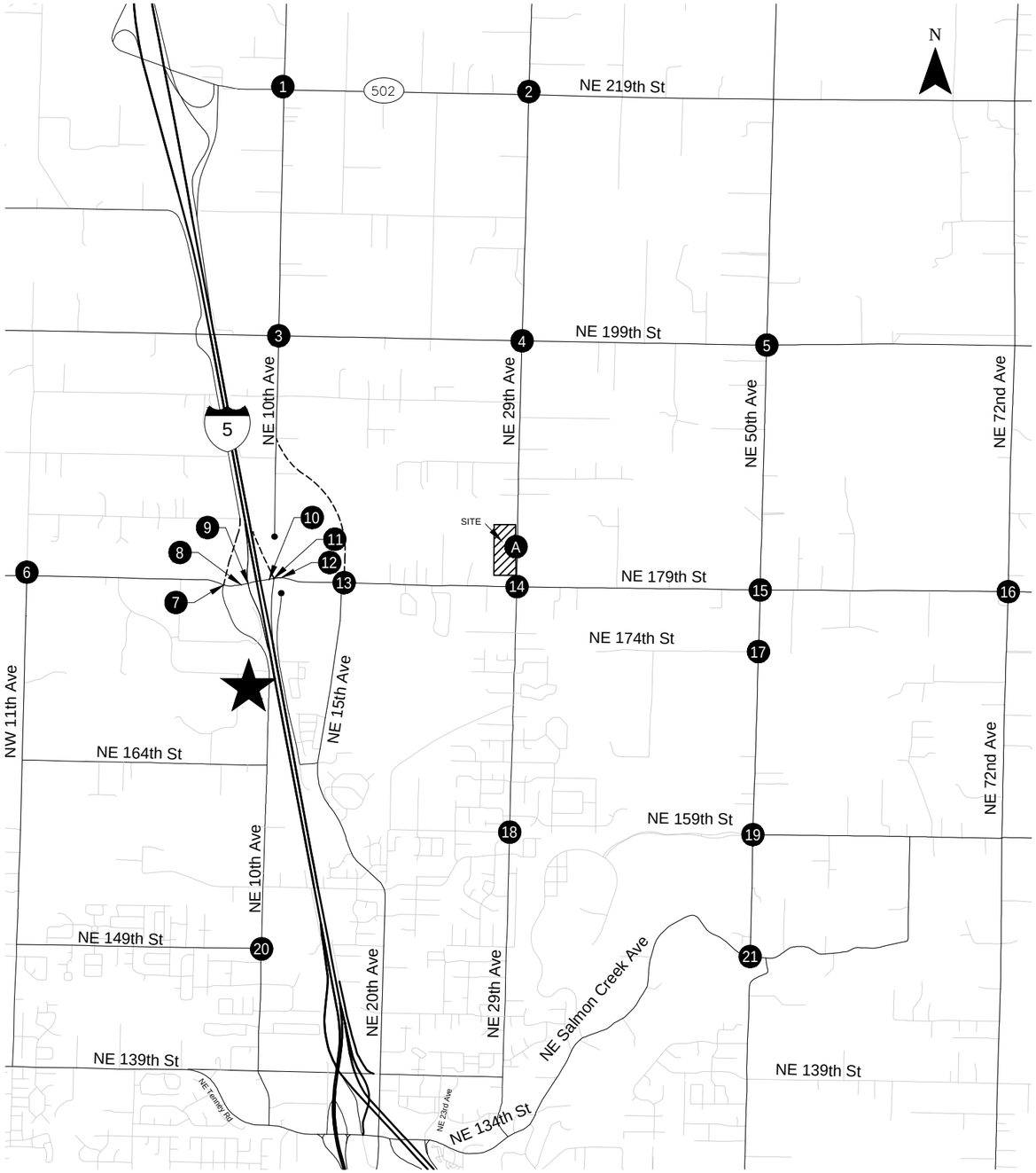
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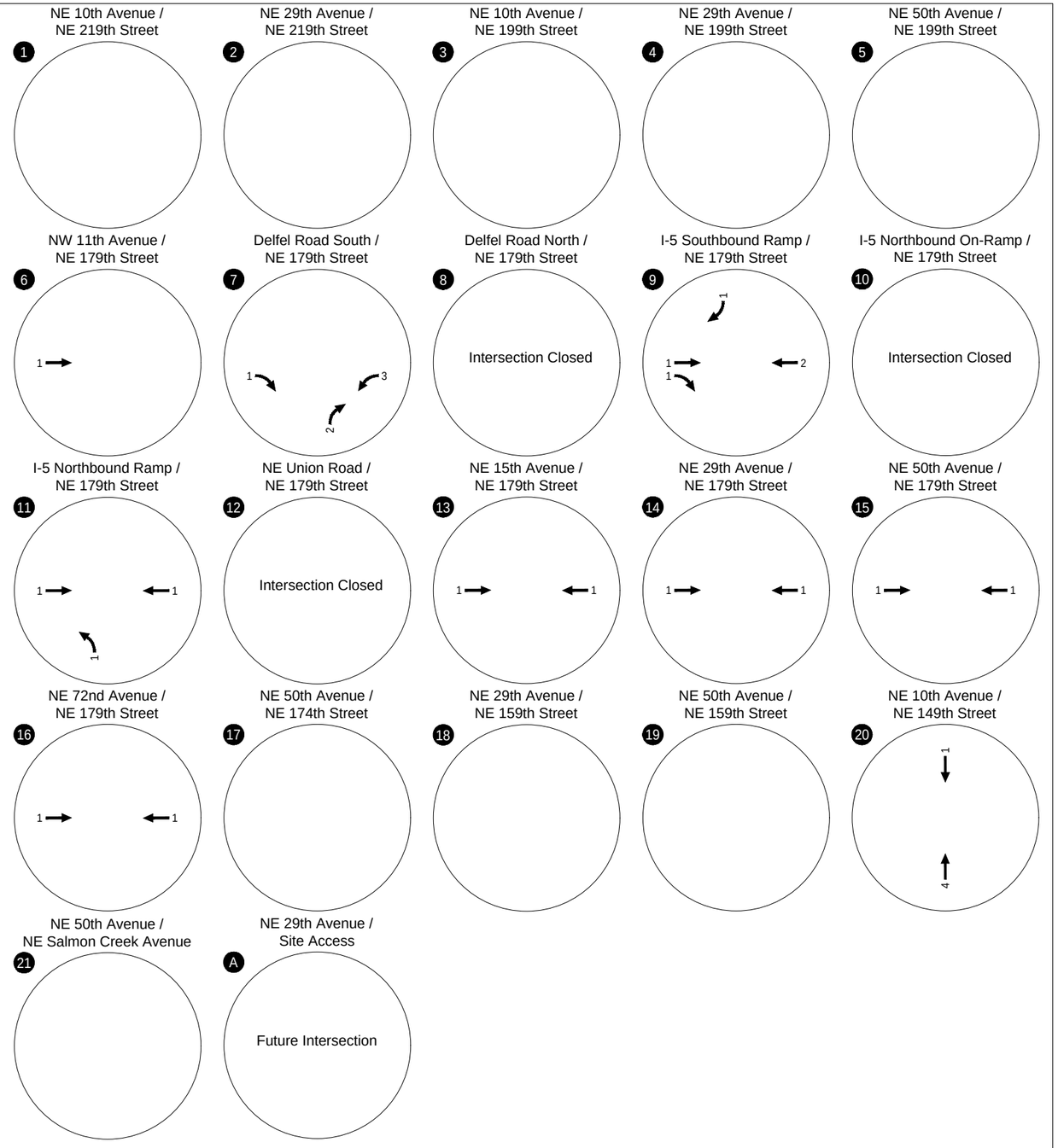
In-Process Trips: North Haven, Weekday PM Peak Hour
Clark County, Washington

Figure
E9-2

KITTELSON & ASSOCIATES

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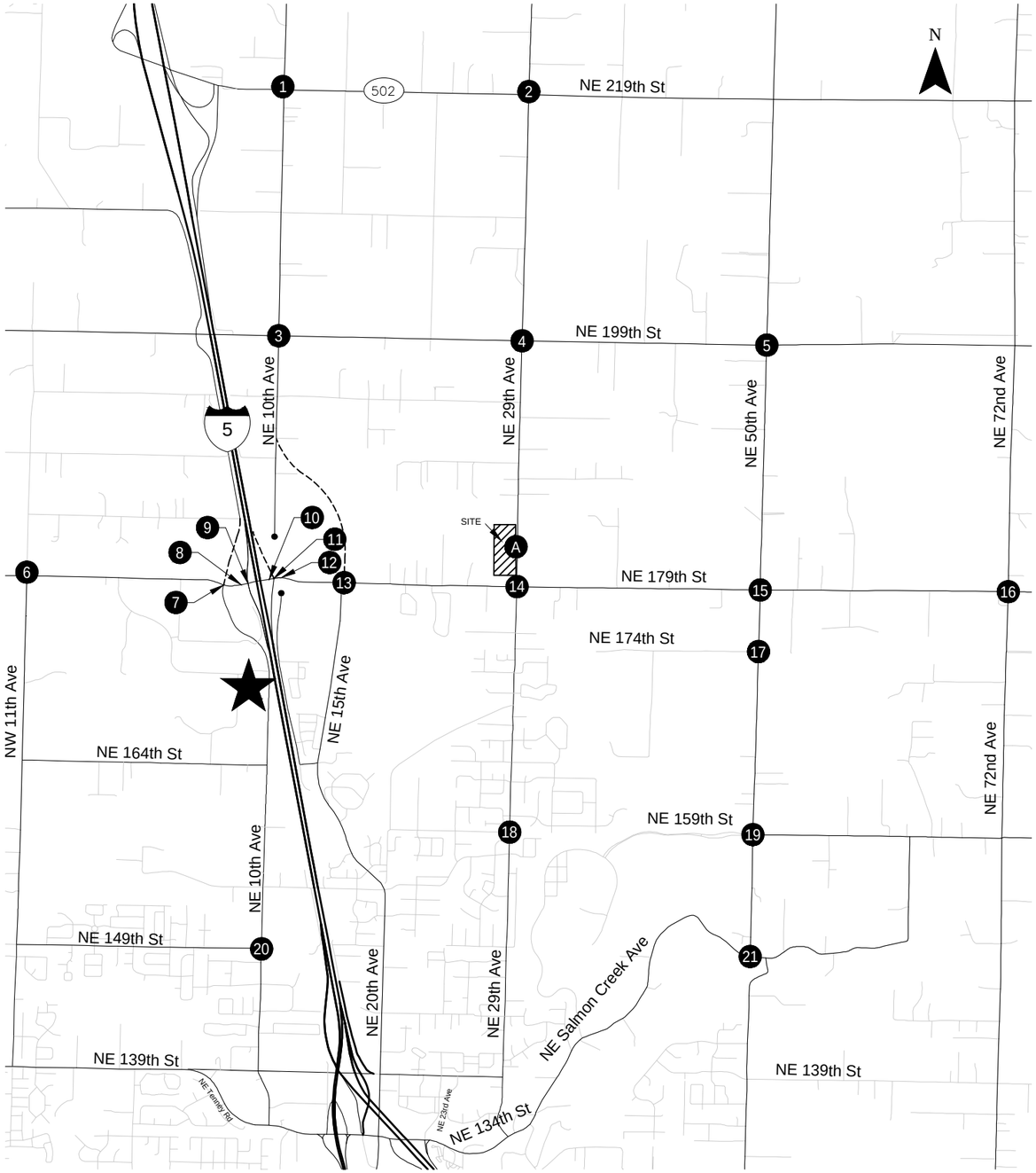
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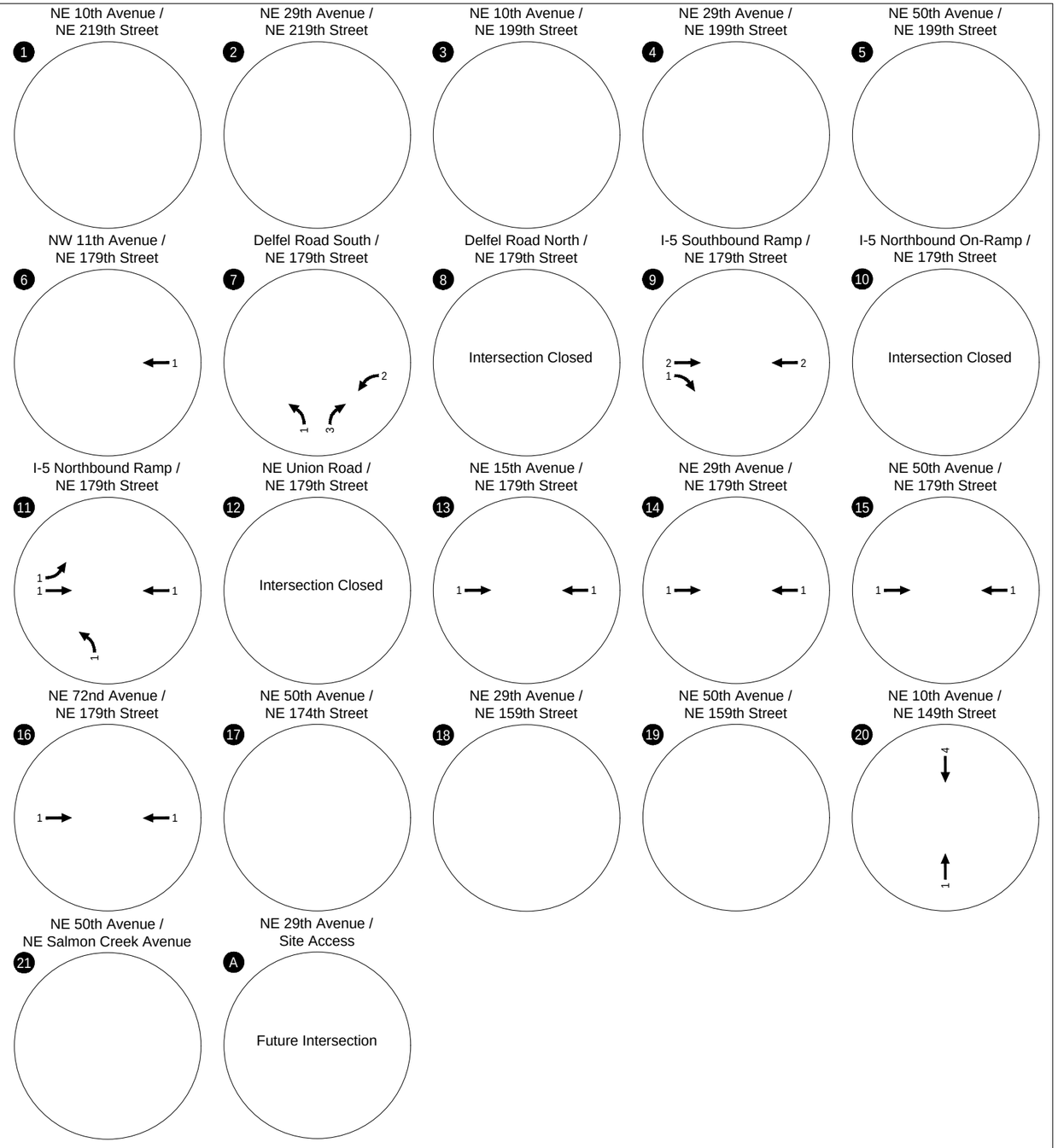
In-Process Trips: Peterson Machinery, Weekday AM Peak Hour
Clark County, Washington

Figure
E10-1

KITTELSON & ASSOCIATES

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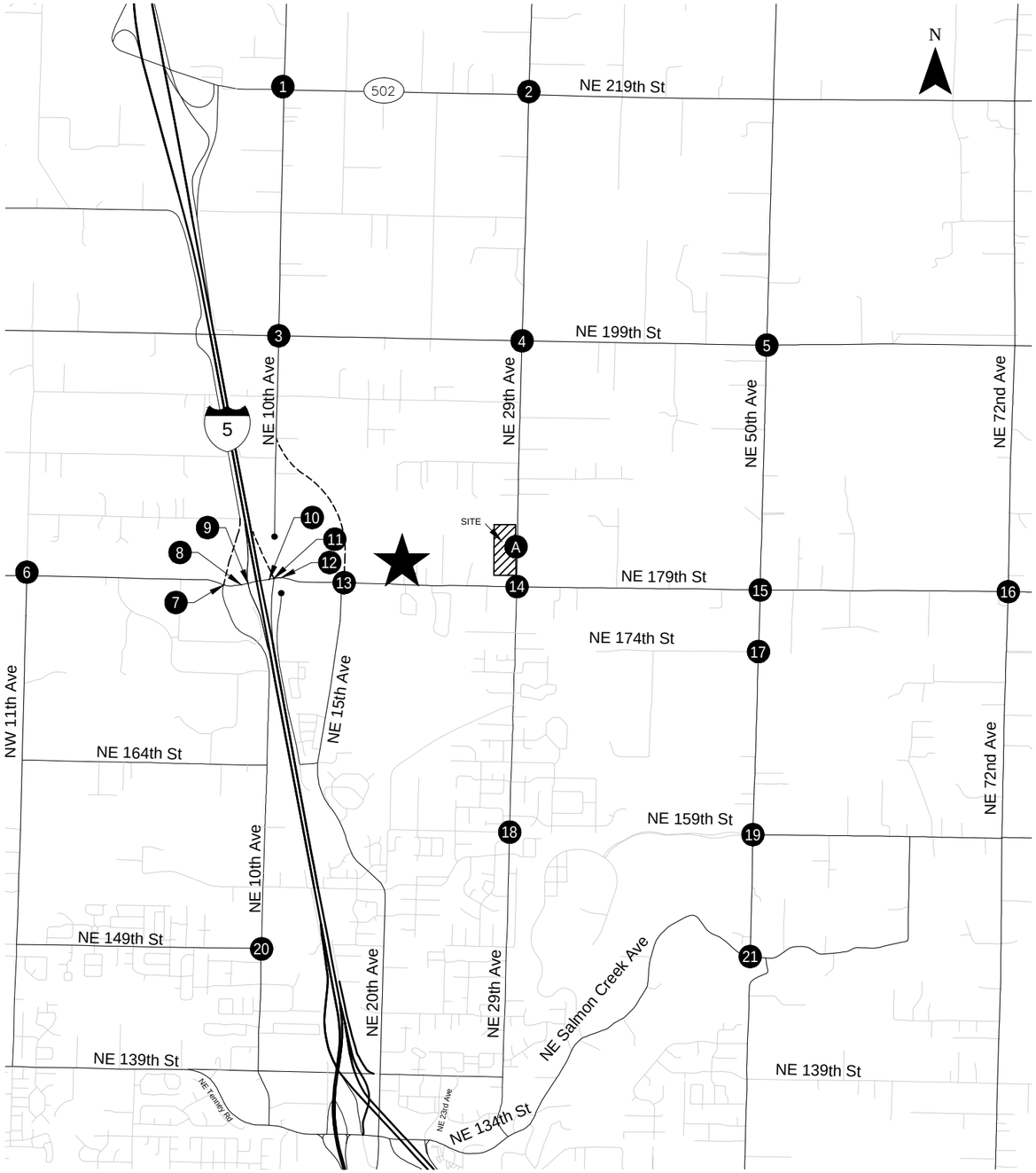
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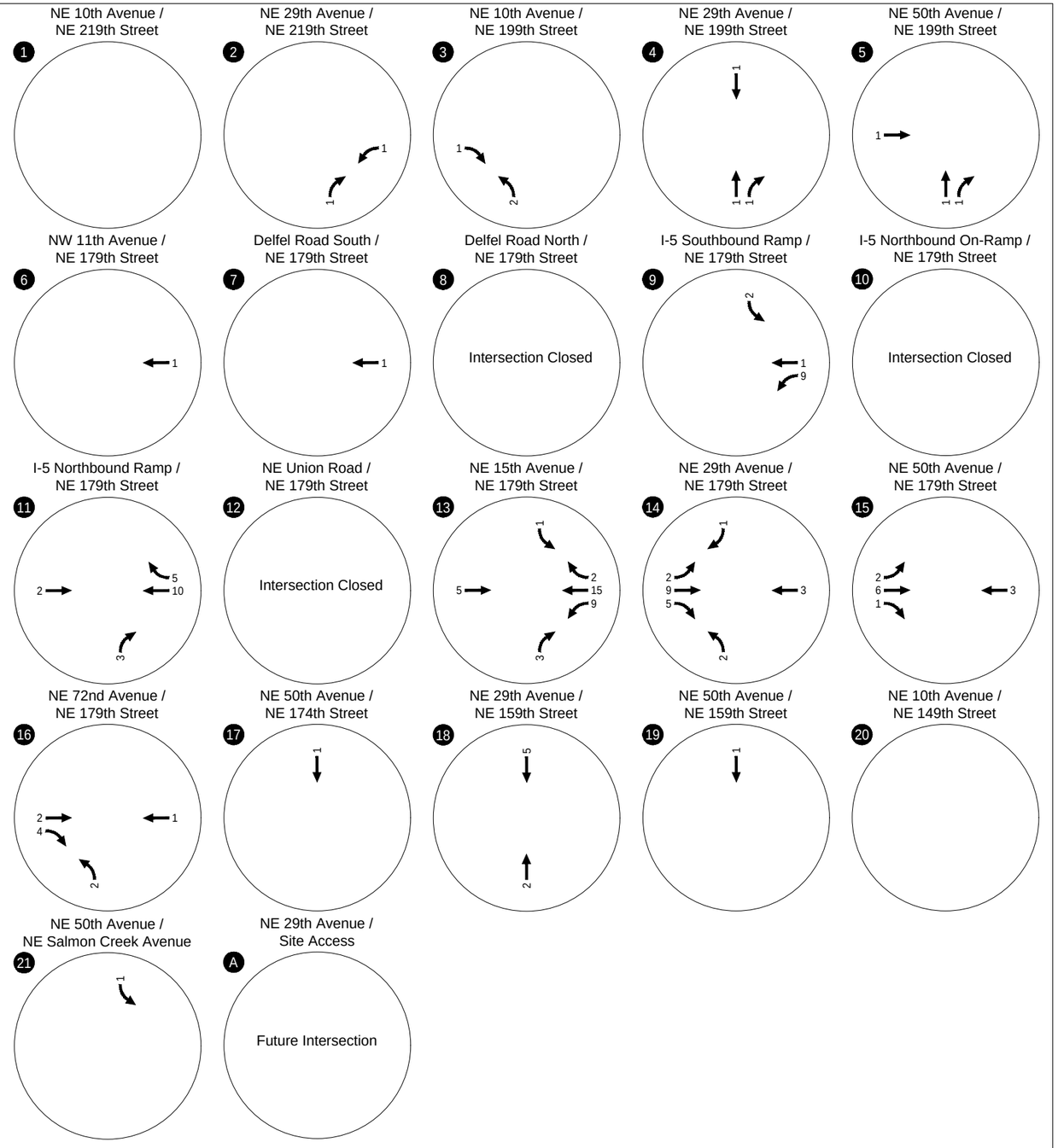
In-Process Trips: Peterson Machinery, Weekday PM Peak Hour
Clark County, Washington

Figure
E10-2

KITTELSON & ASSOCIATES

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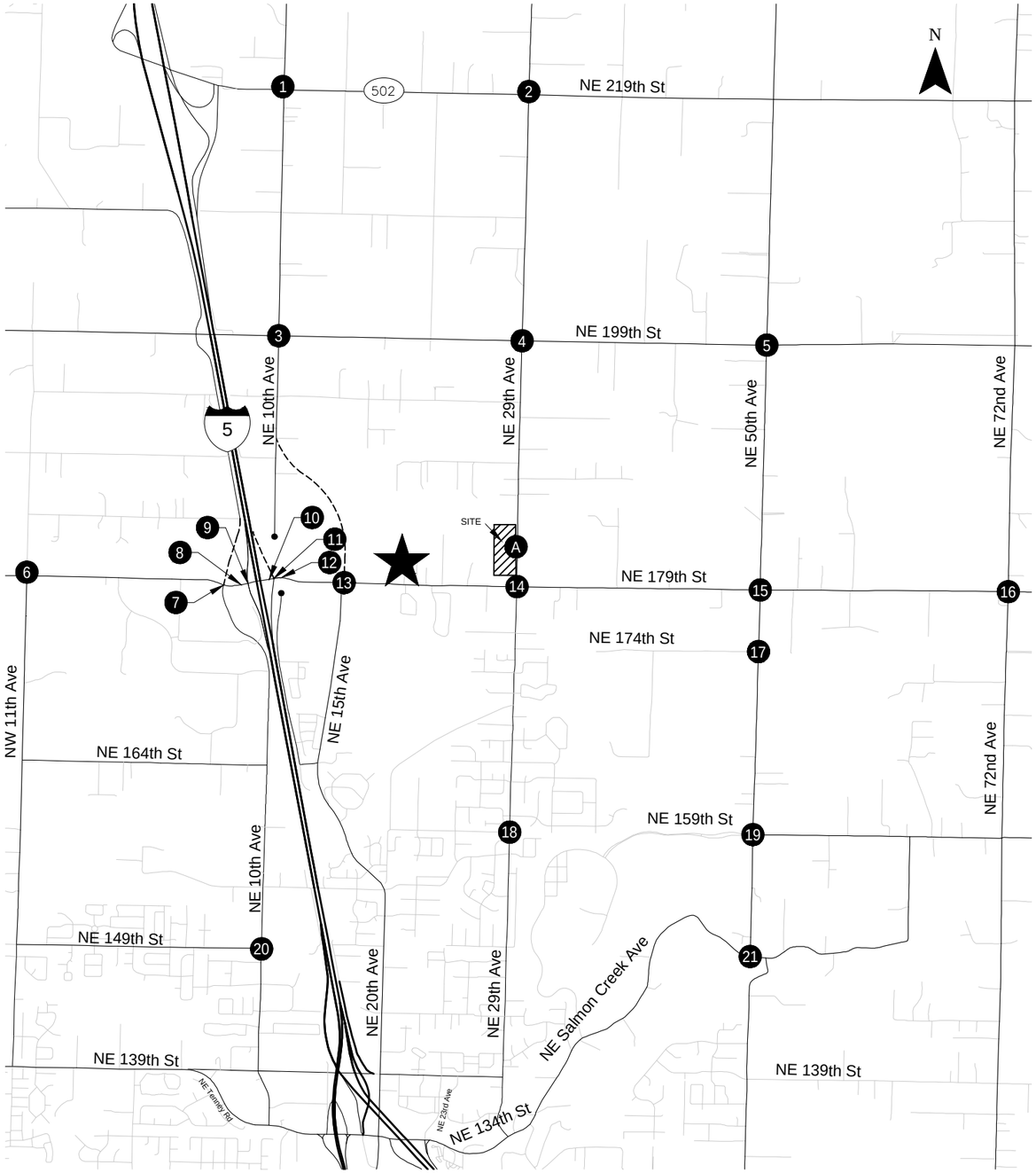
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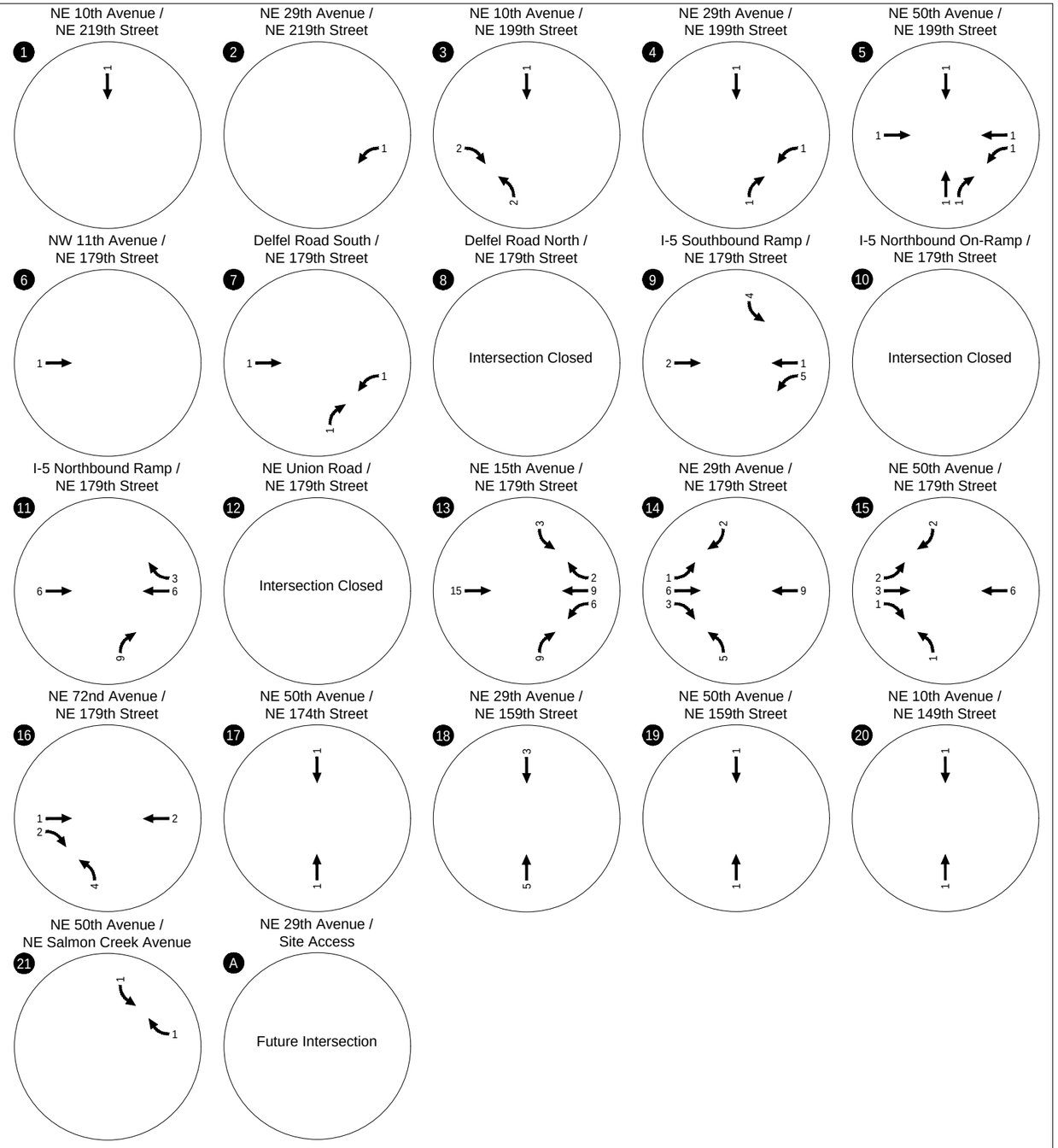
In-Process Trips: NE 179th Street Apartments - West, Weekday AM Peak Hour
Clark County, Washington

Figure
E11-1

KITTELSON & ASSOCIATES

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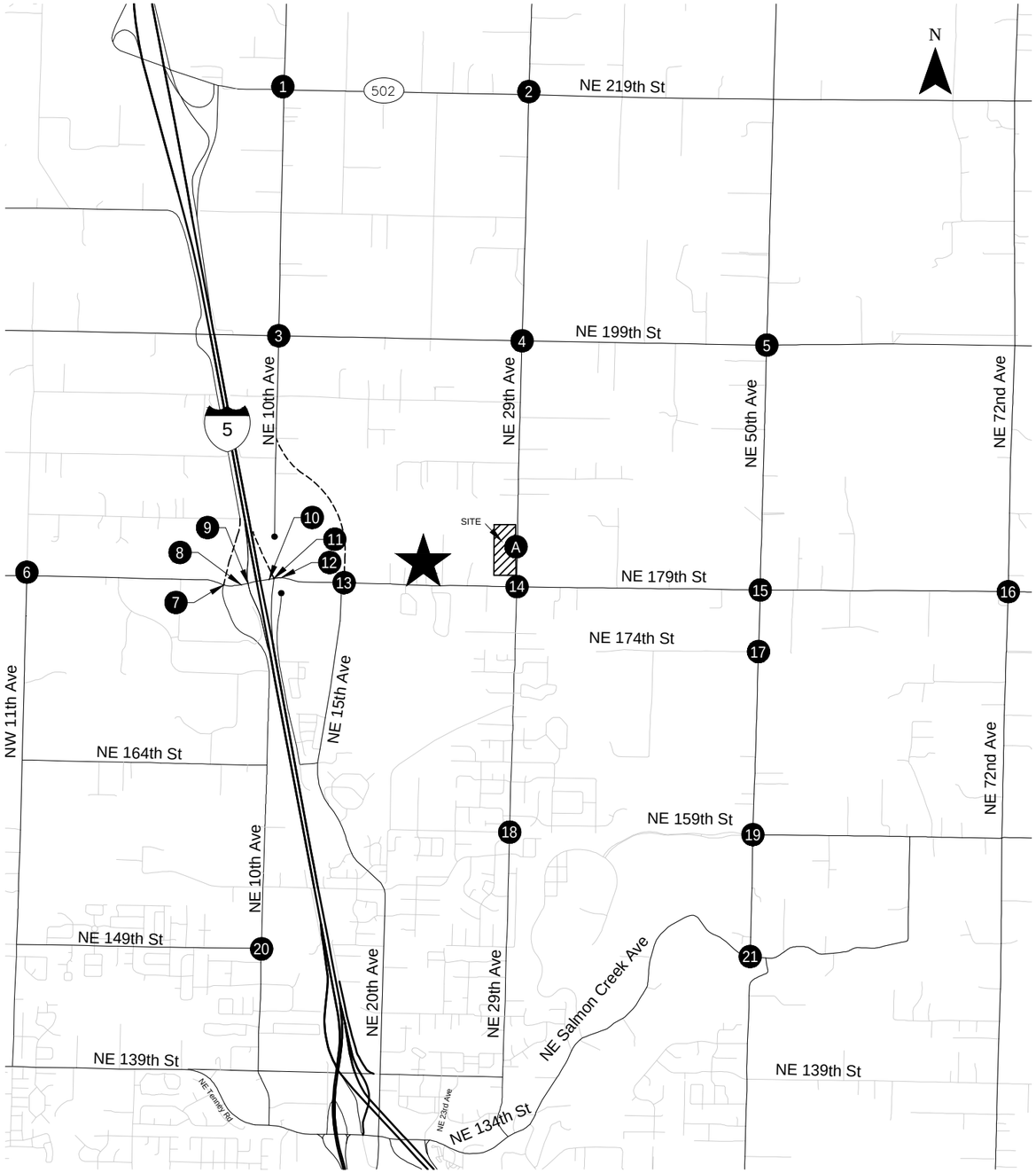
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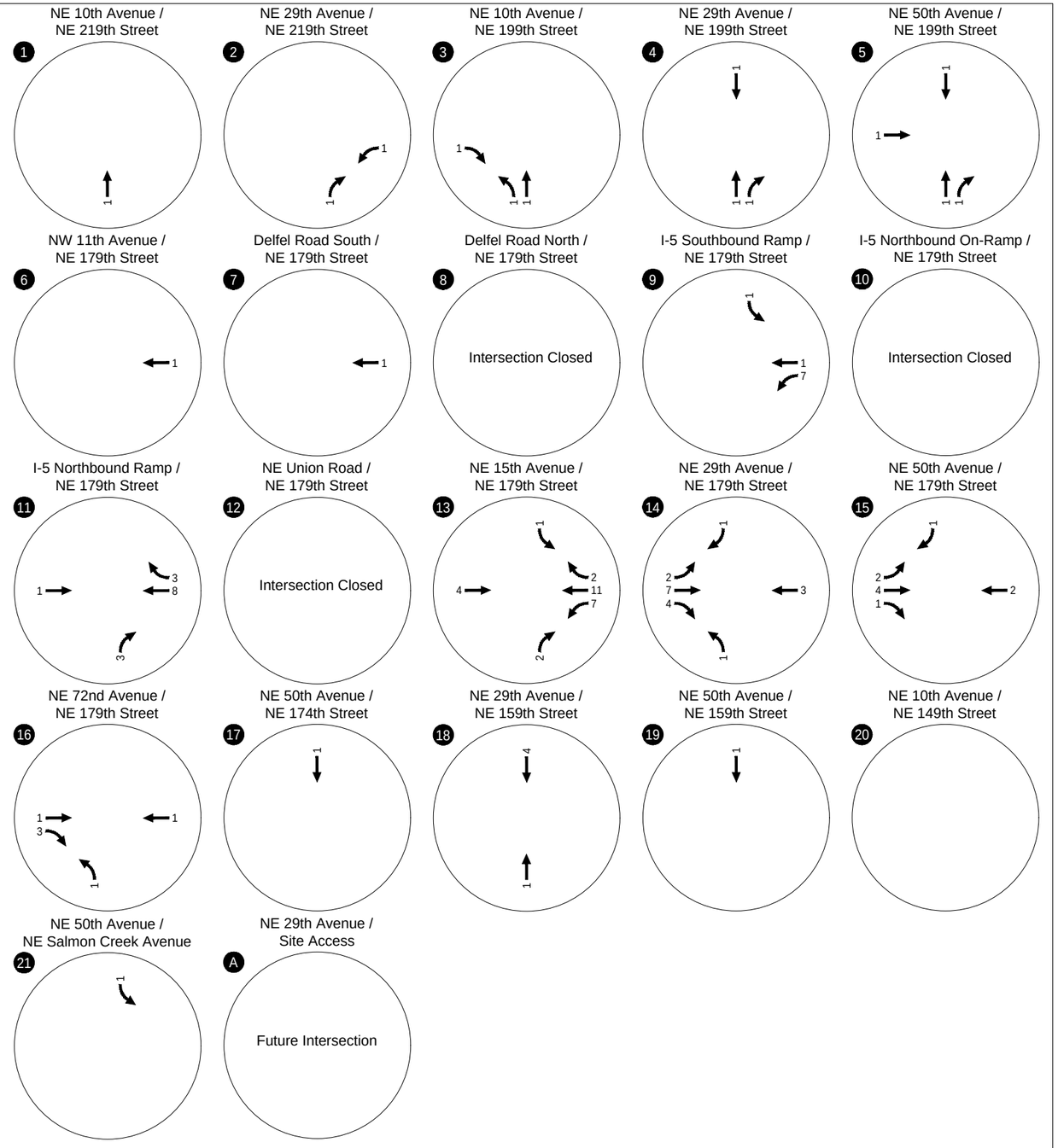
In-Process Trips: NE 179th Street Apartments - West, Weekday PM Peak Hour
Clark County, Washington

Figure
E11-2

KITTELSON & ASSOCIATES

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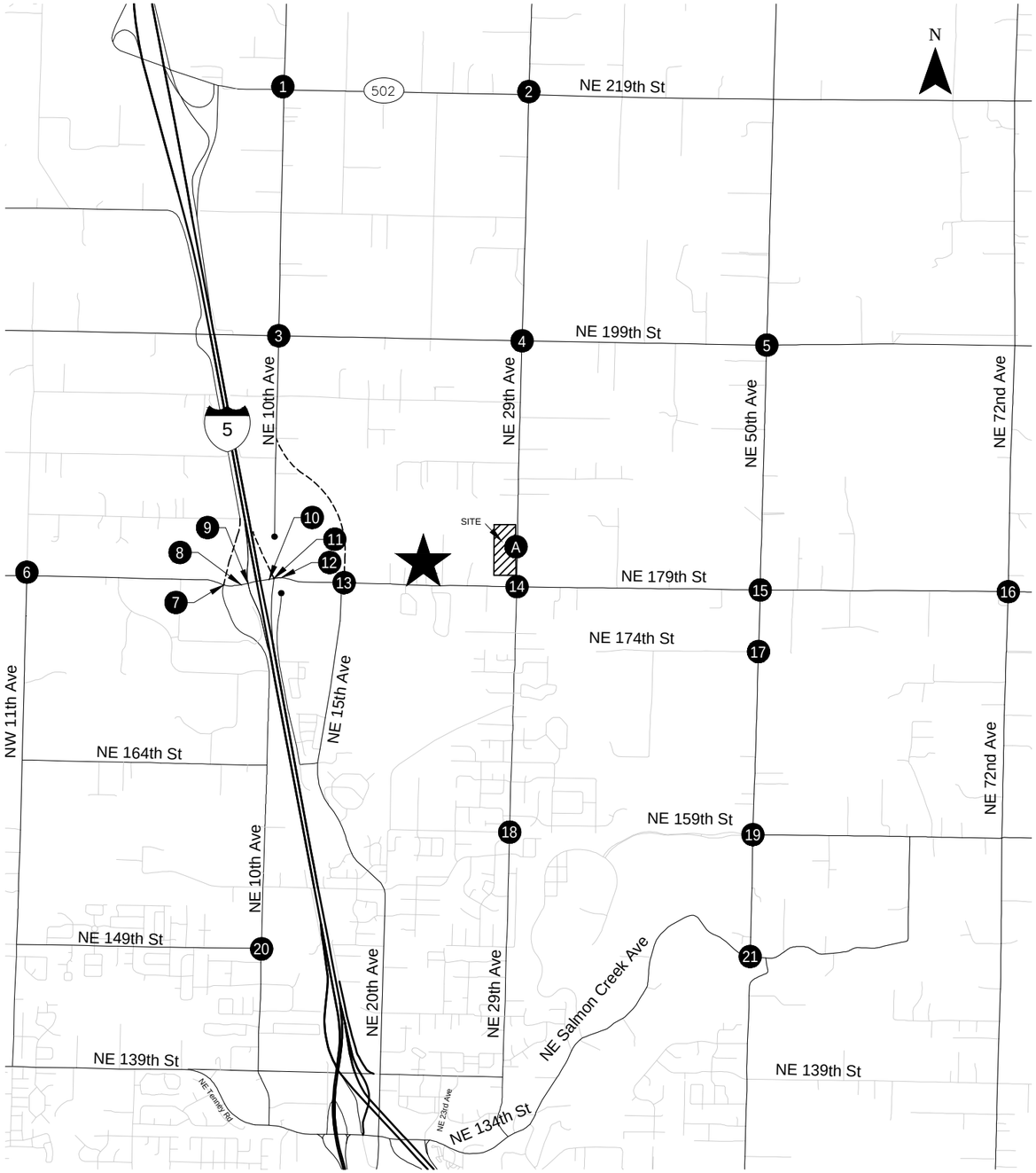
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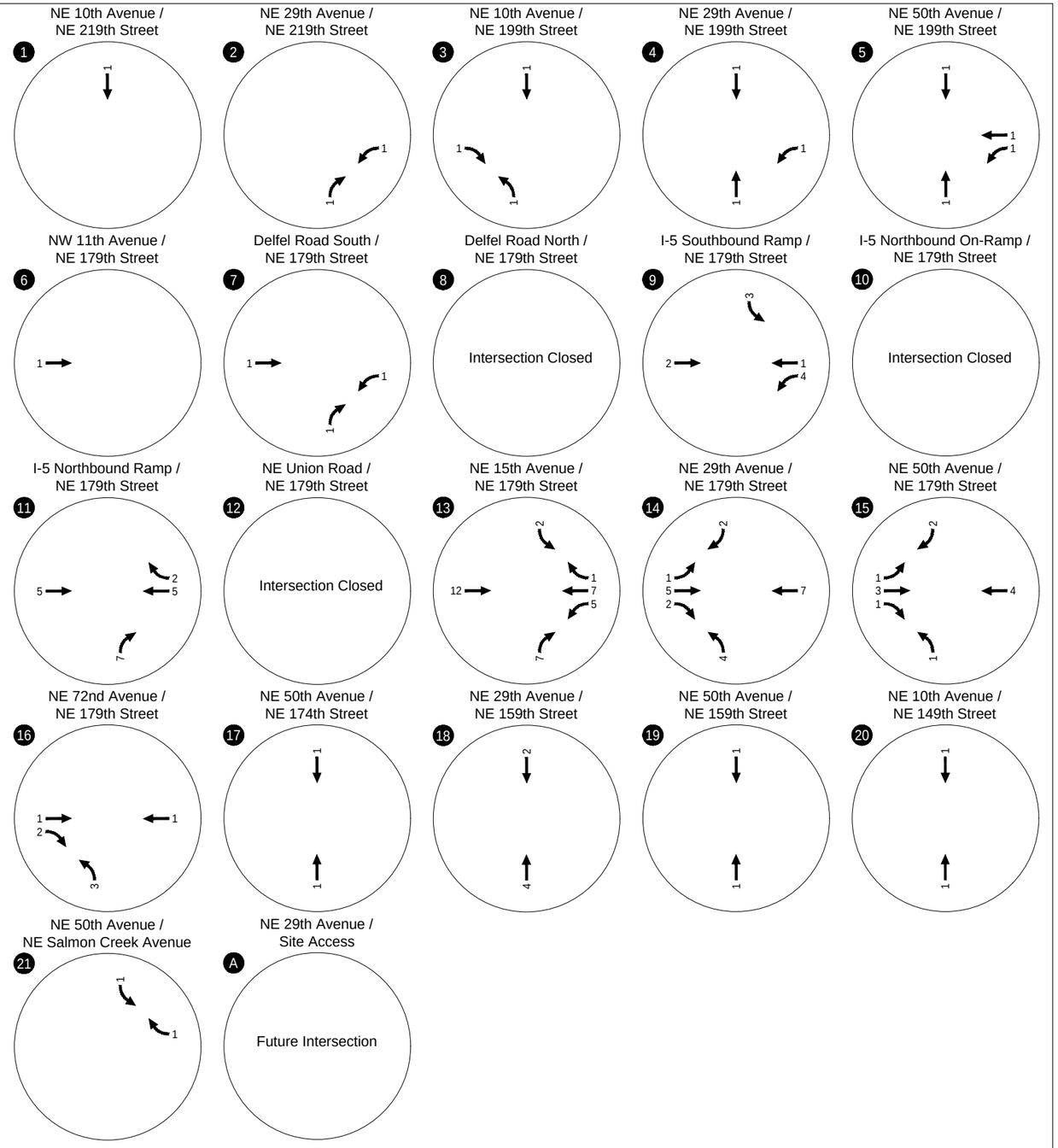
In-Process Trips: NE 179th Street Apartments - East, Weekday AM Peak Hour
Clark County, Washington

Figure
E12-1

KITTELSON & ASSOCIATES

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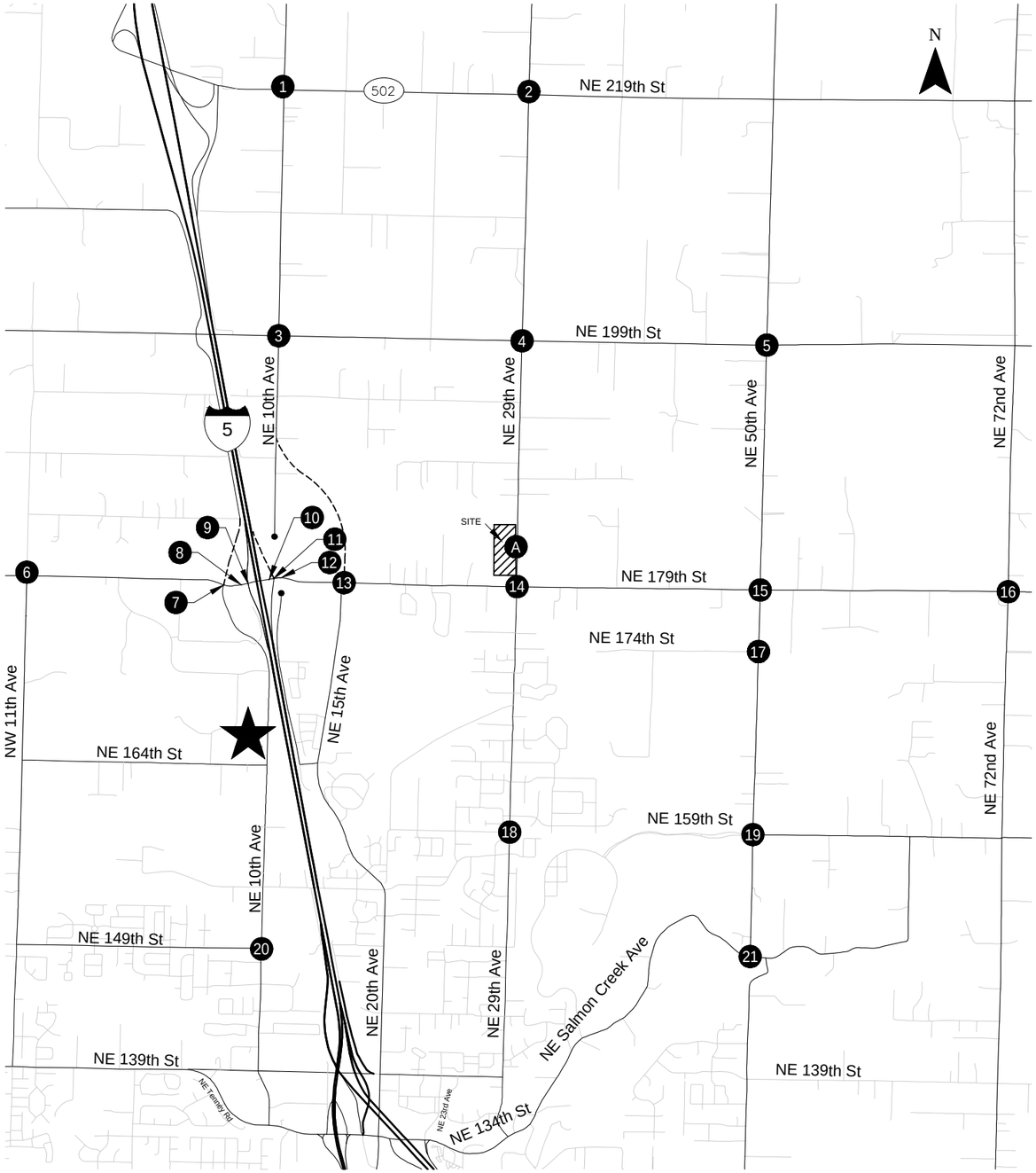
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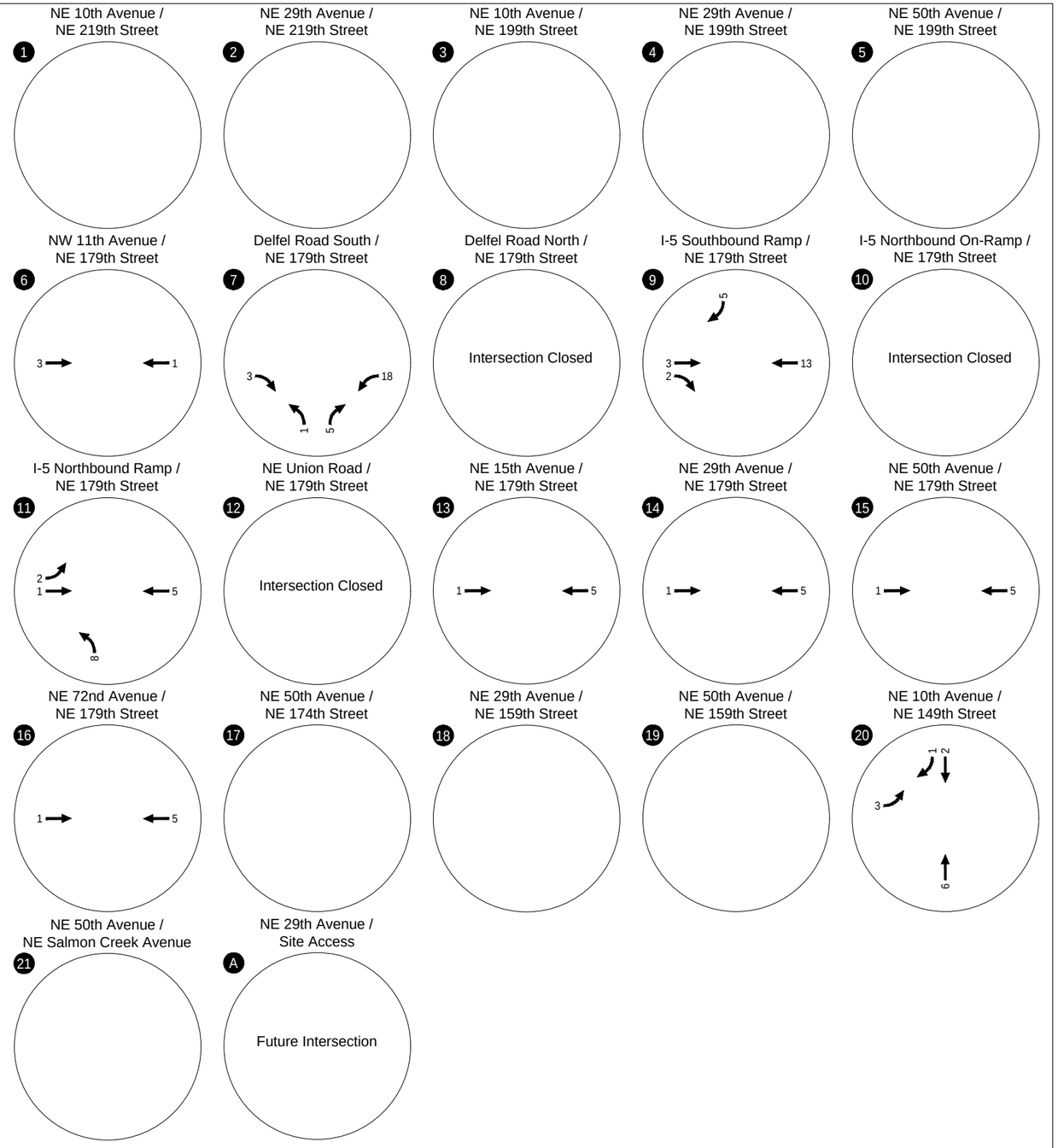
In-Process Trips: NE 179th Street Apartments - East, Weekday PM Peak Hour
Clark County, Washington

Figure
E12-2

KITTELSON & ASSOCIATES

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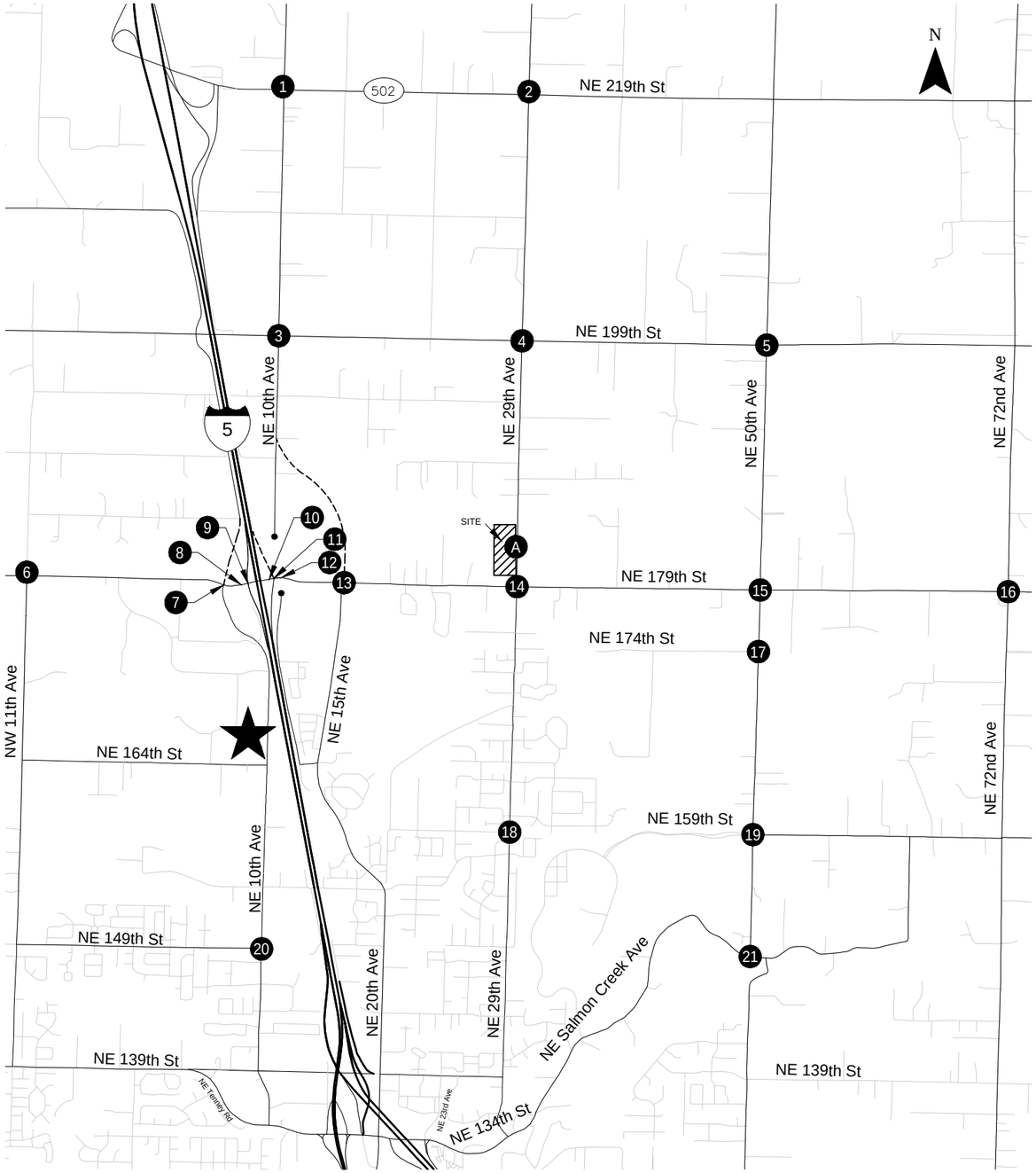
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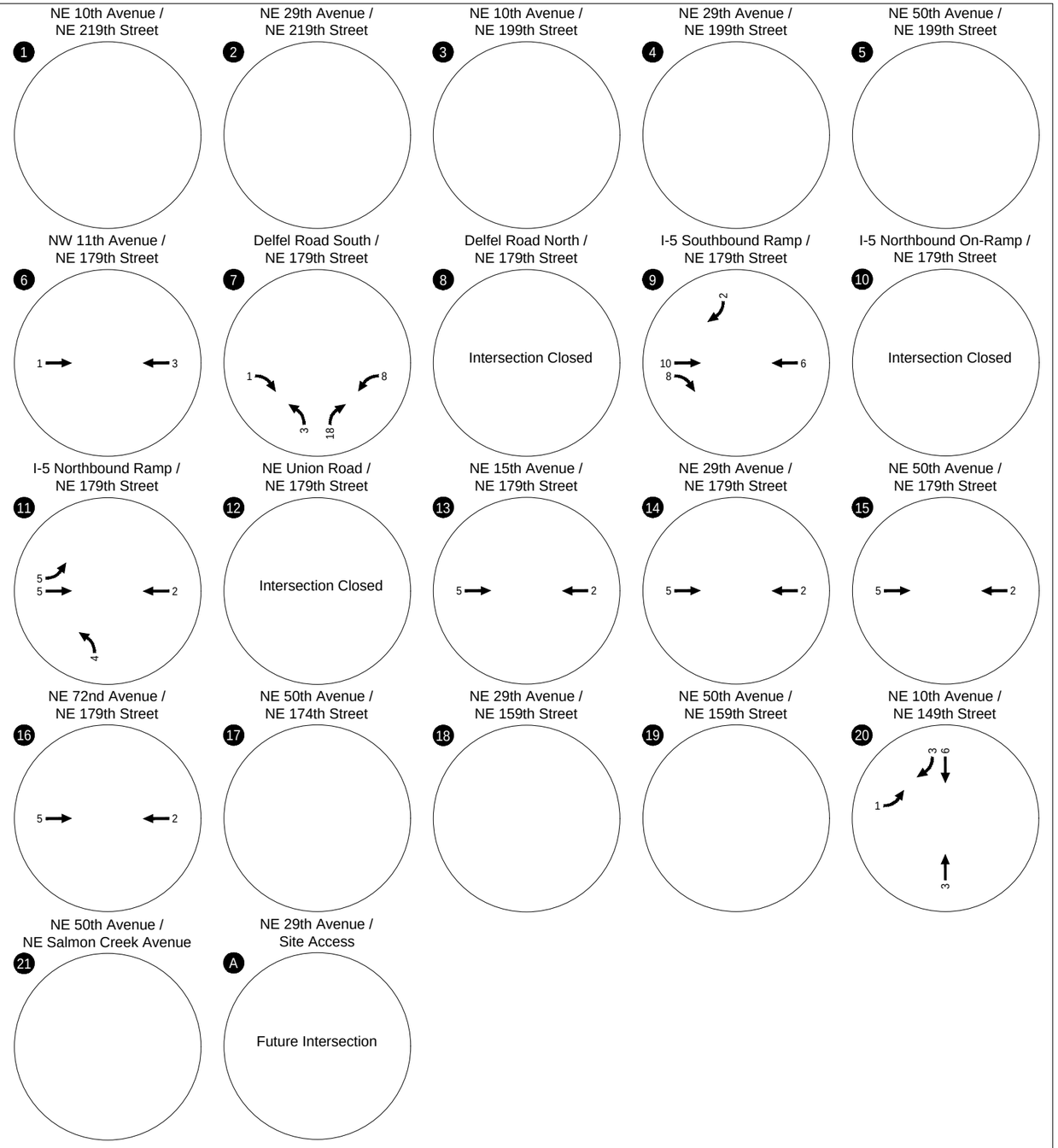
In-Process Trips: Summit Body & Equipment, Weekday AM Peak Hour
Clark County, Washington

Figure
E13-1

KITTELSON & ASSOCIATES

C:\KAI Applications\Autodesk\TEMPAcPublish_10460\27393_NE29thAveCottages_Figures_NP_2022-06-30.dwg Jun 30, 2022 - 10:53am - nick Layout Tab: E13-1_IP_Summit





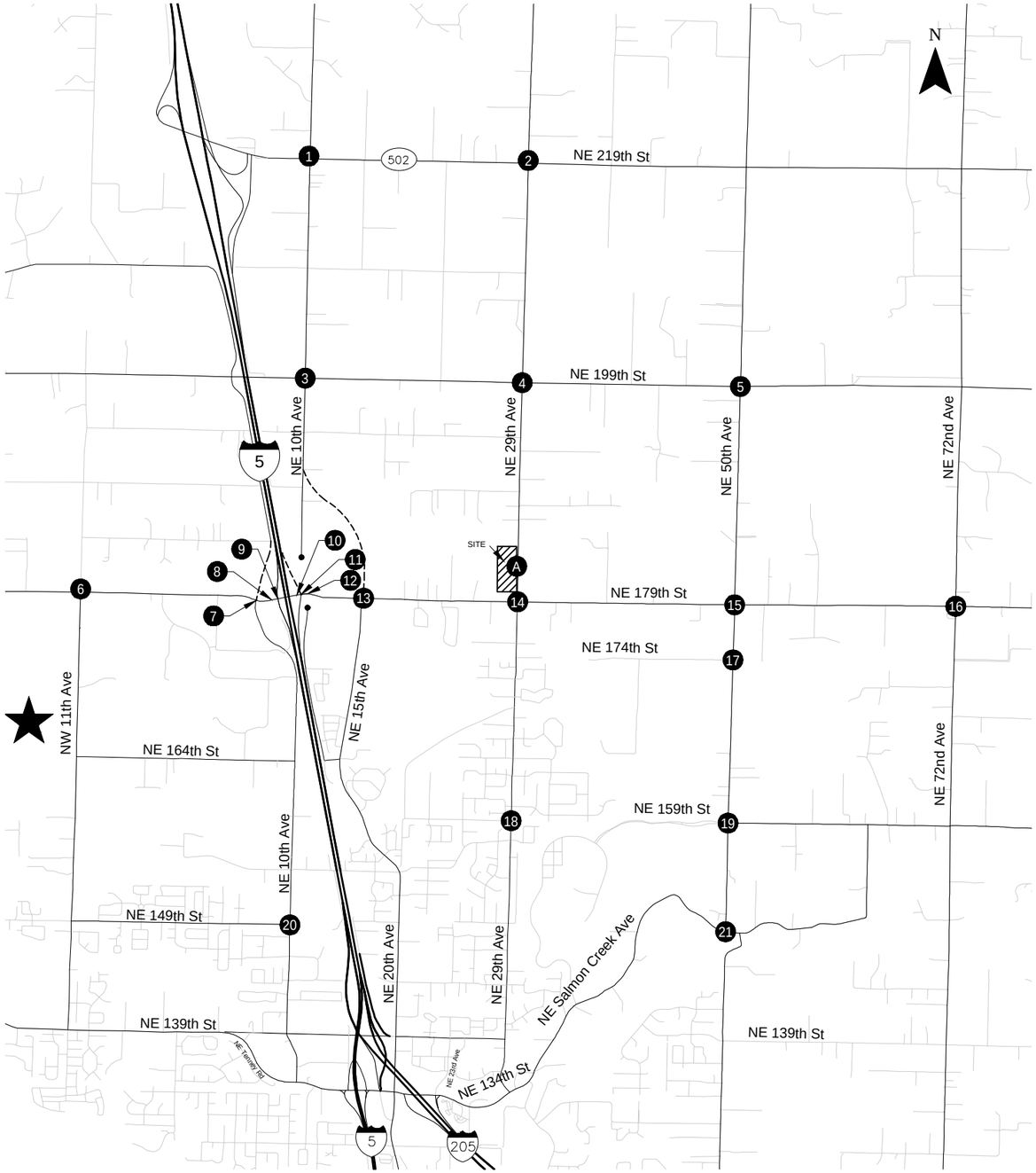
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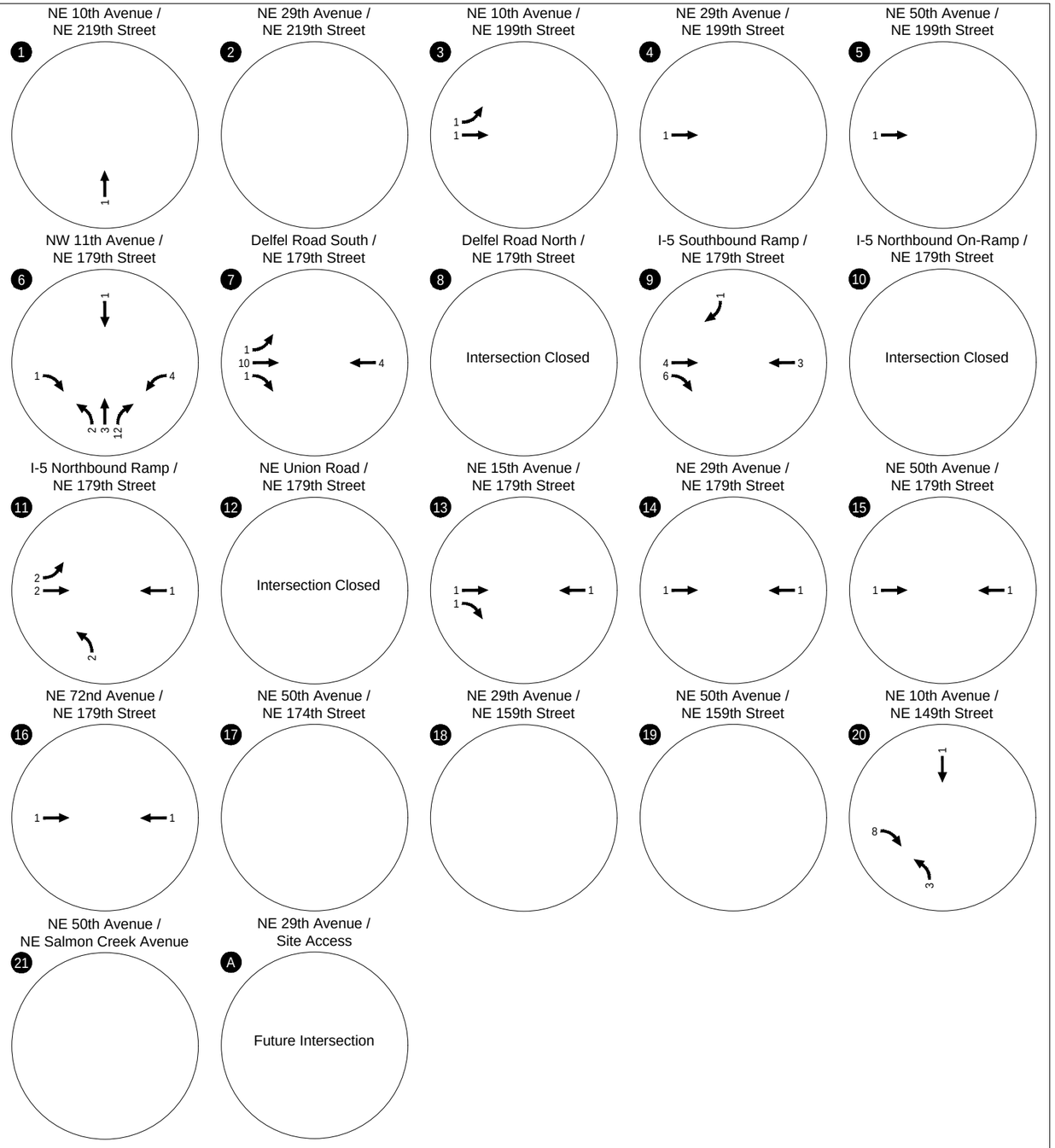
In-Process Trips: Summit Body & Equipment, Weekday PM Peak Hour
Clark County, Washington

Figure
E13-2

KITTELSON & ASSOCIATES

C:\KAI Applications\Autodesk\TEMPAcPublish_10460\27393_NE29thAveCottages_Figures_NP_2022-06-30.dwg Jun 30, 2022 - 10:54am - nick Layout Tab: E13-2_IP_Summit





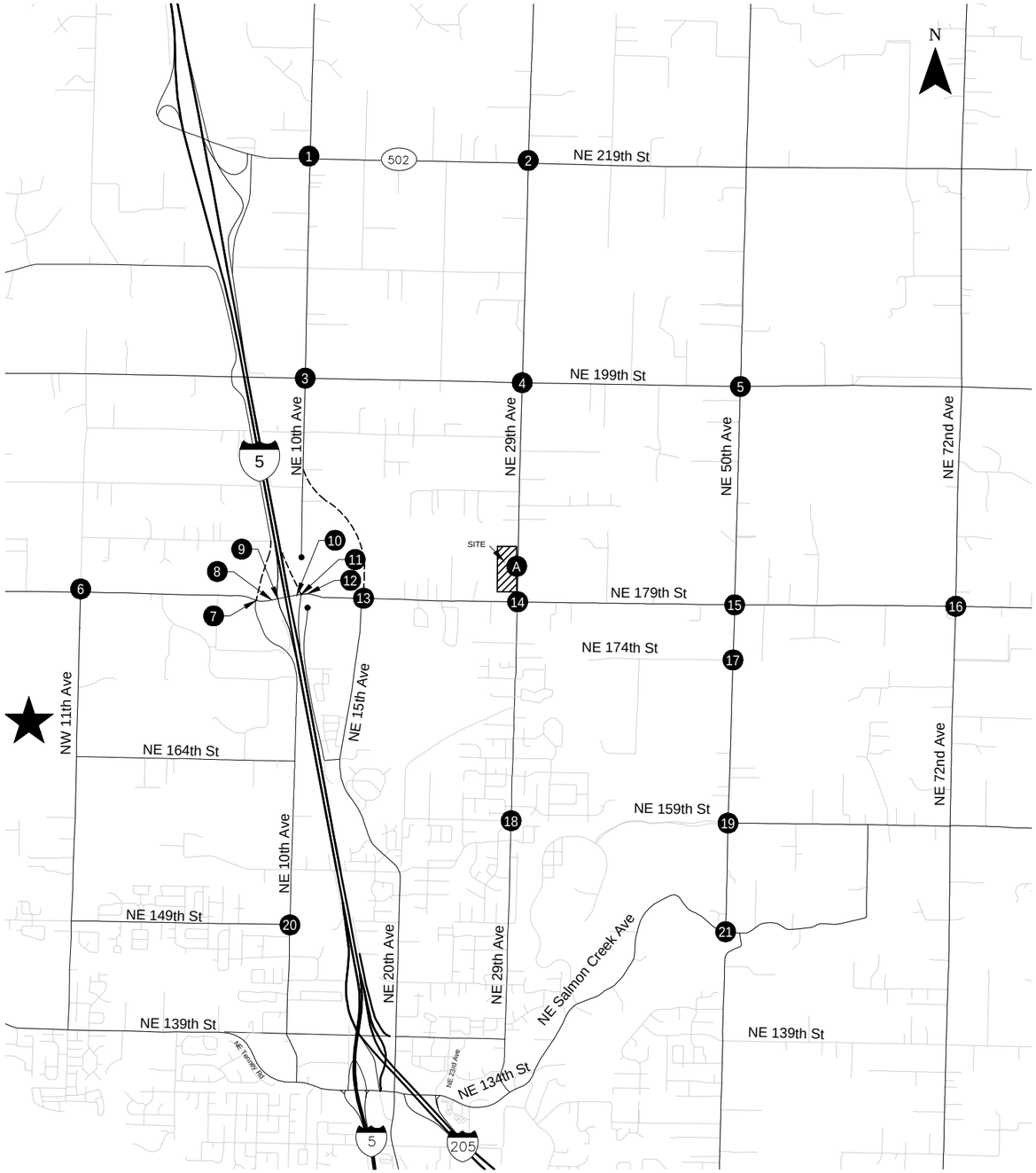
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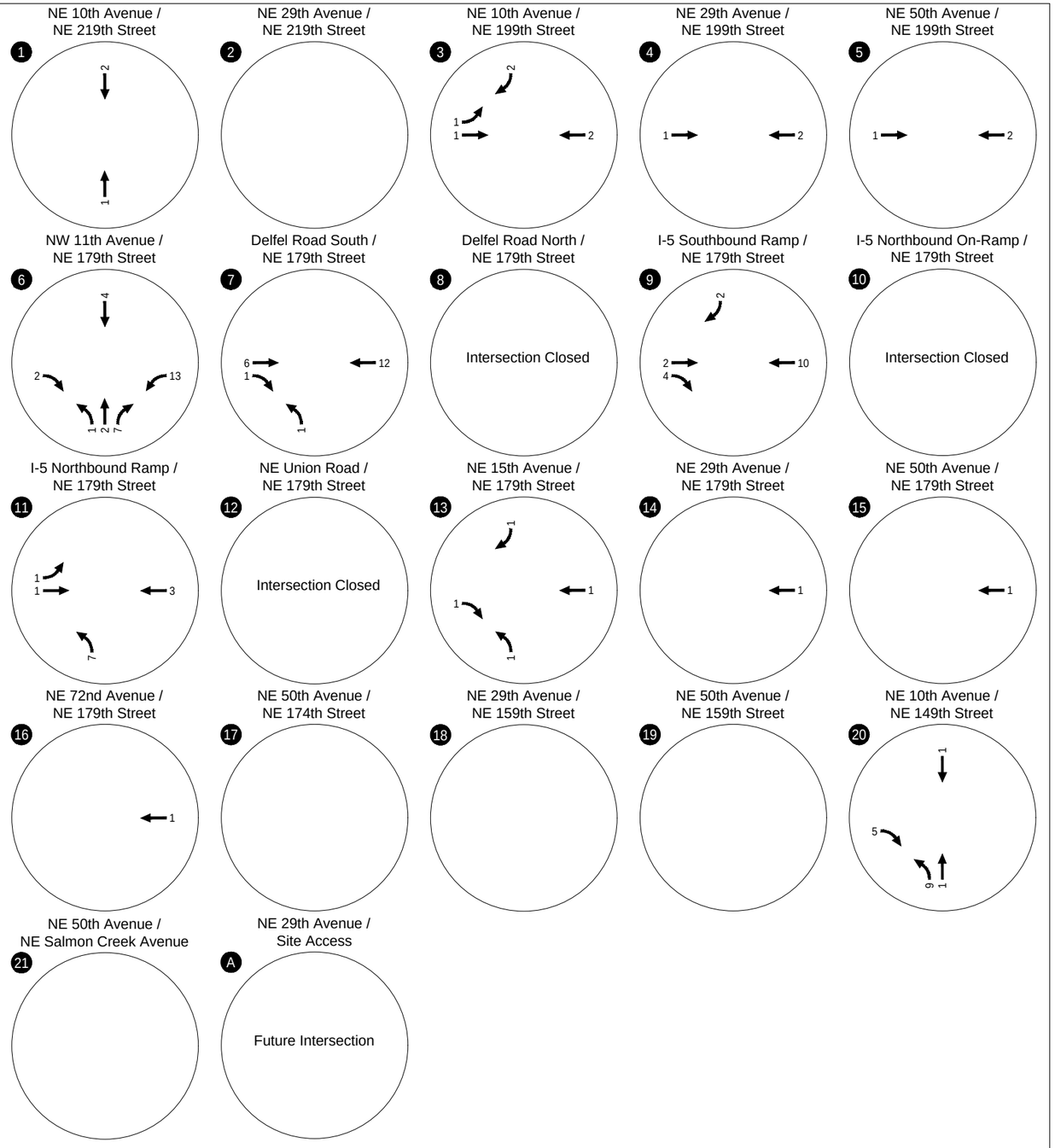
In-Process Trips: Trails at Whipple Creek, Weekday AM Peak Hour
Clark County, Washington

Figure
E14-1

KITTELSON & ASSOCIATES

C:\KAI Applications\Autodesk\TEMPAcPublish_10460\27393_NE29thAveCottages_Figures_NP_2022-06-30.dwg Jun 30, 2022 - 10:54am - nick Layout Tab: E14-1_IP_Trails





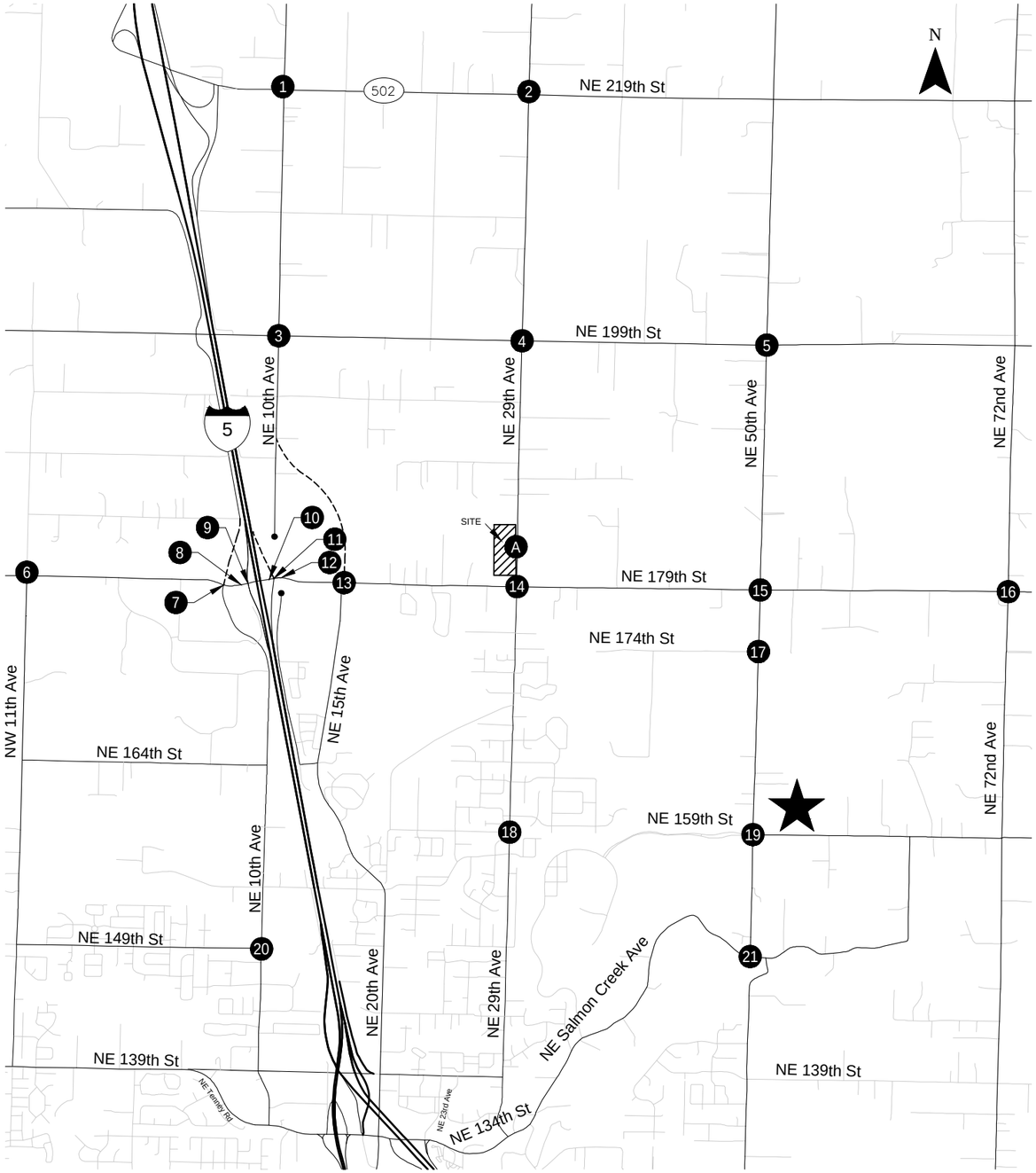
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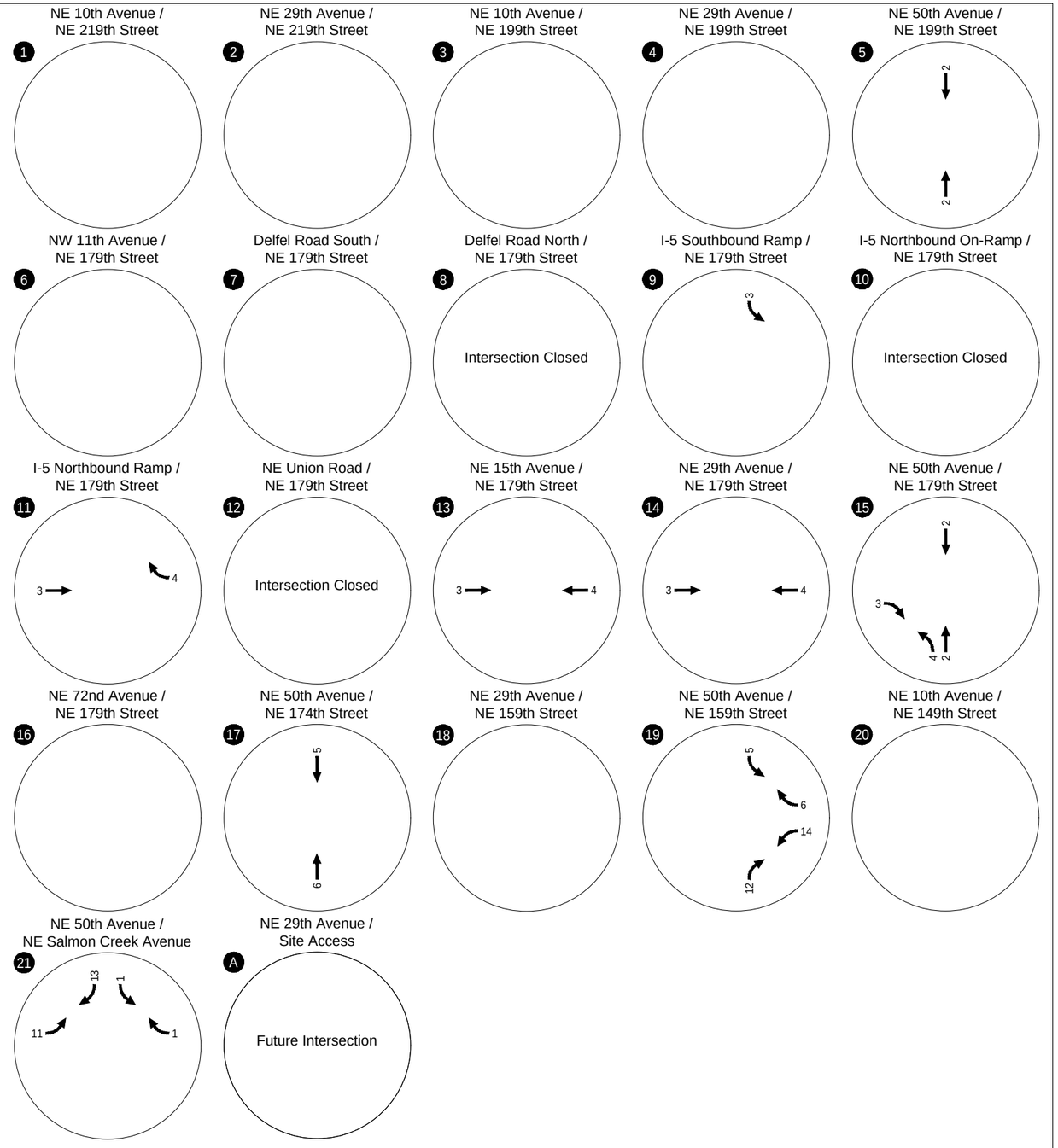
In-Process Trips: Trails at Whipple Creek, Weekday PM Peak Hour
Clark County, Washington

Figure
E14-2

KITTELSON & ASSOCIATES

C:\KAI Applications\Autodesk\TEMPAcPublish_10460\27393_NE29thAveCottages_Figures_NP_2022-06-30.dwg Jun 30, 2022 - 10:54am - nick Layout Tab: E14-2_IP_Trails





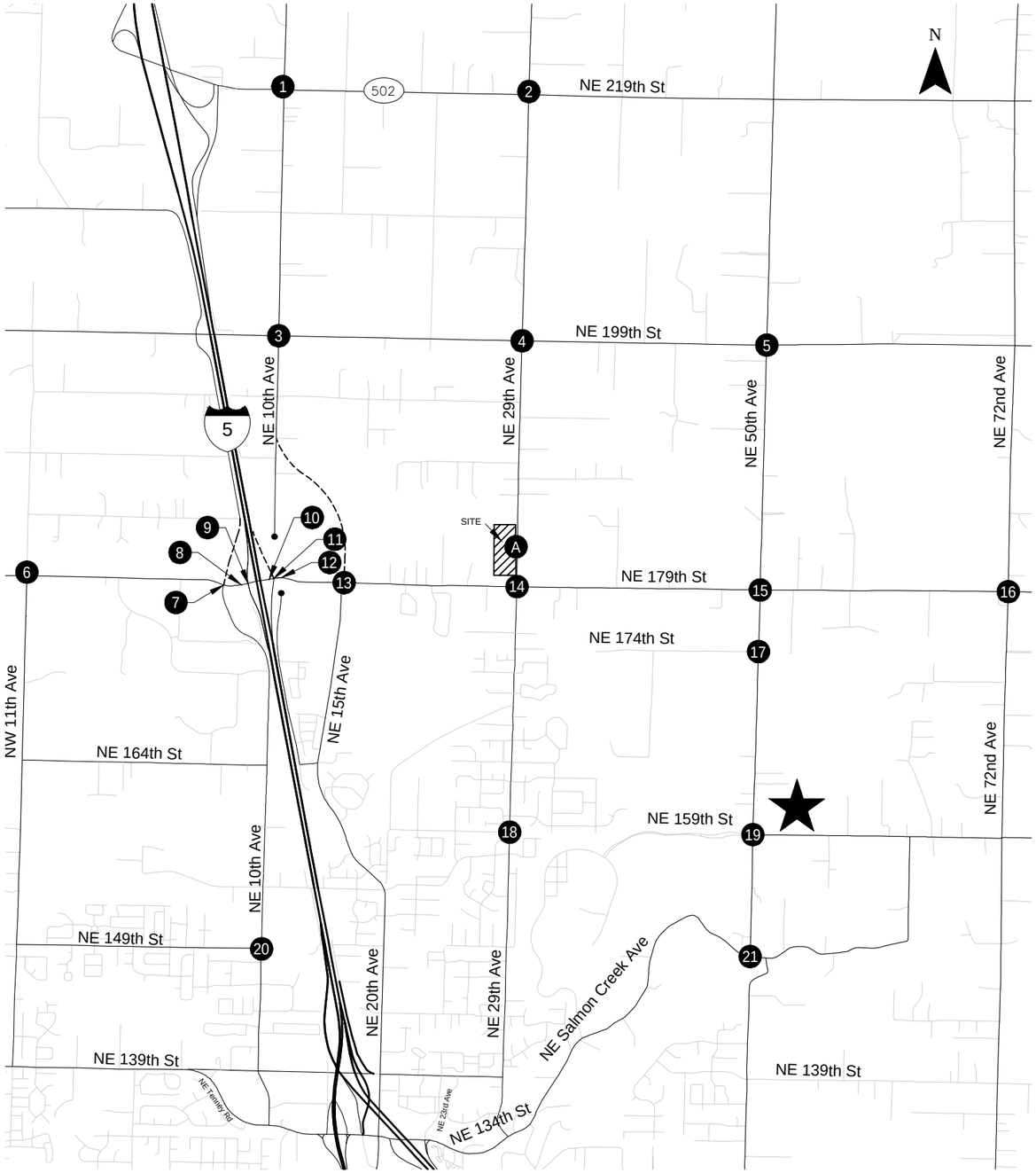
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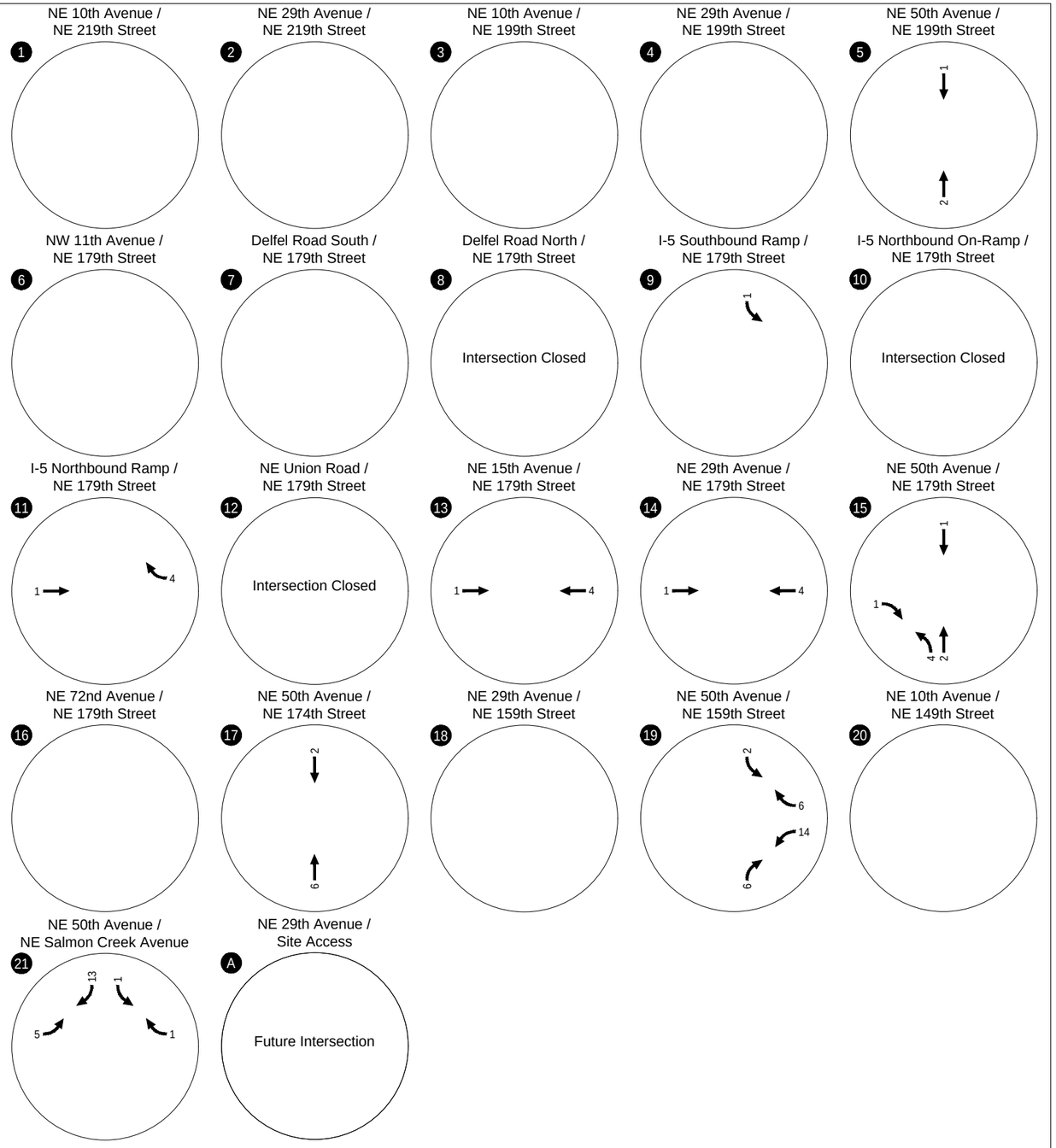
In-Process Trips: DSHS NE 50th Clark County Behavioral Health, Weekday AM Peak Hour
Clark County, Washington

Figure
E15-1

KITTELSON & ASSOCIATES

C:\KAI Applications\Autodesk\TEMPAcPublish_10460\27393_NE29thAveCottages_Figures_NP_2022-06-30.dwg Jun 30, 2022 - 10:54am - nick Layout Tab: E15-1_IP_DSHS





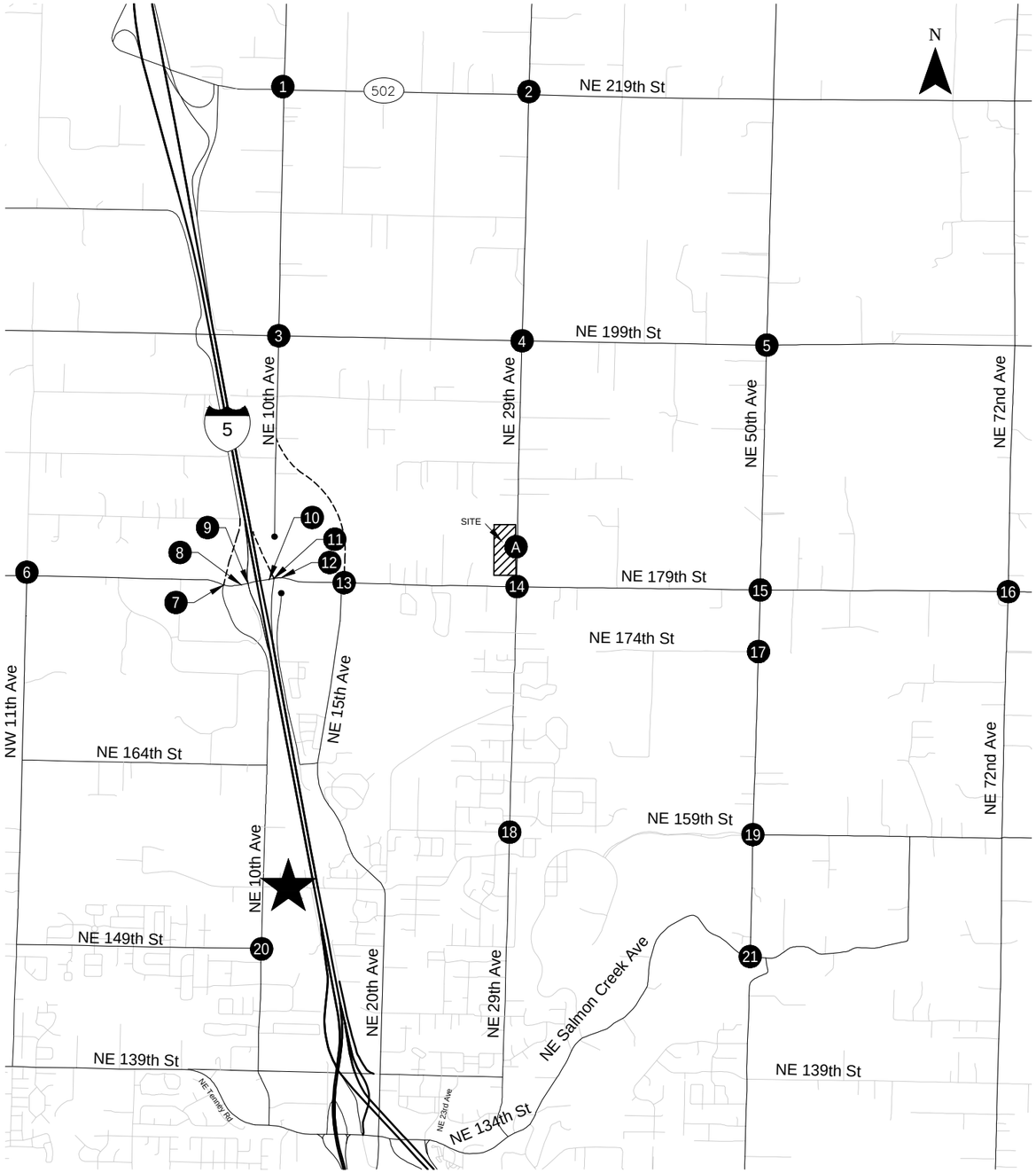
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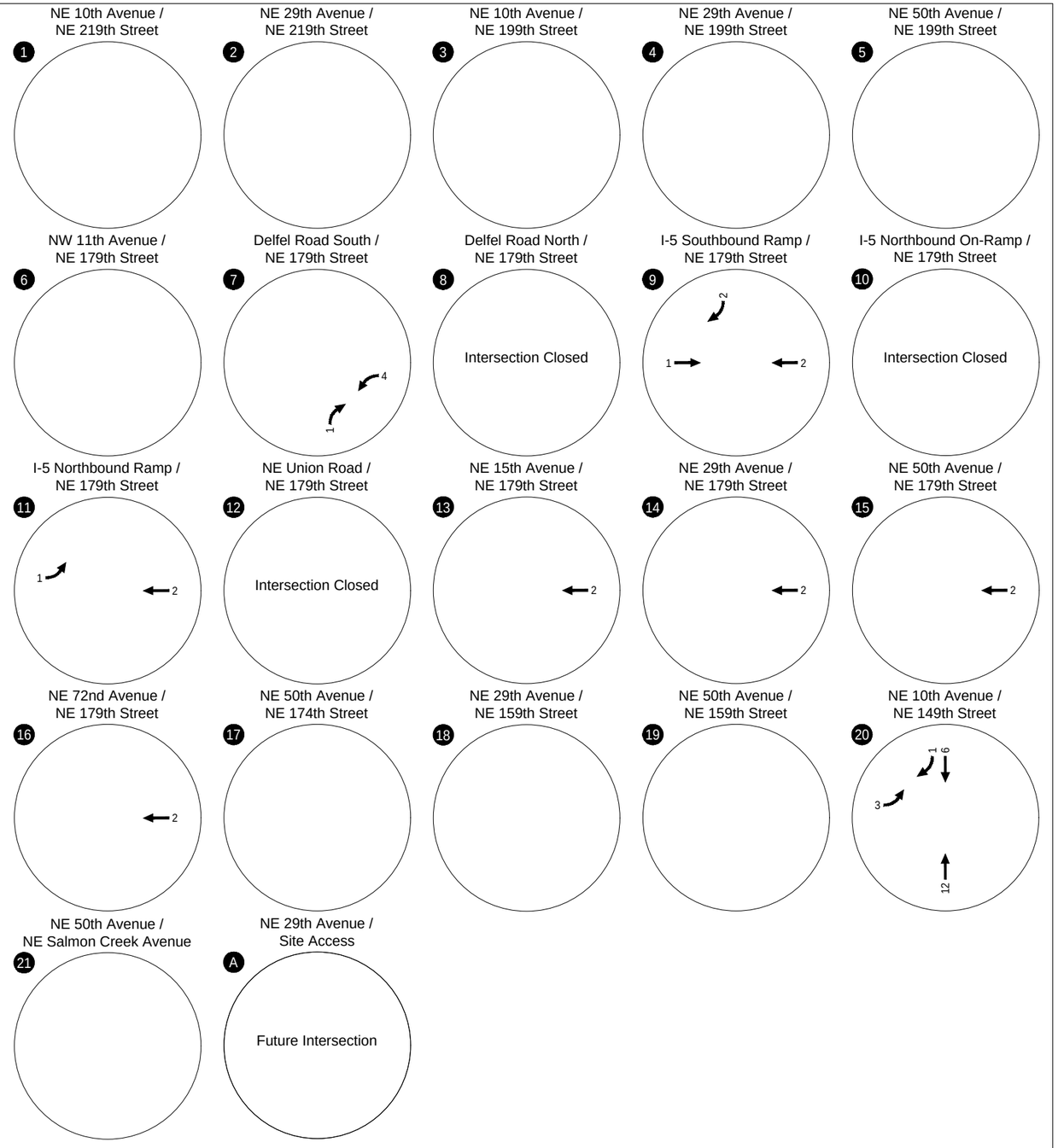
In-Process Trips: DSHS NE 50th Clark County Behavioral Health, Weekday PM Peak Hour
Clark County, Washington

Figure
E15-2

KITTELSON & ASSOCIATES

C:\KAI Applications\Autodesk\TEMPAcPublish_10460\27393_NE29thAveCottages_Figures_NP_2022-06-30.dwg Jun 30, 2022 - 10:54am - nick Layout Tab: E15-2_IP_DSHS





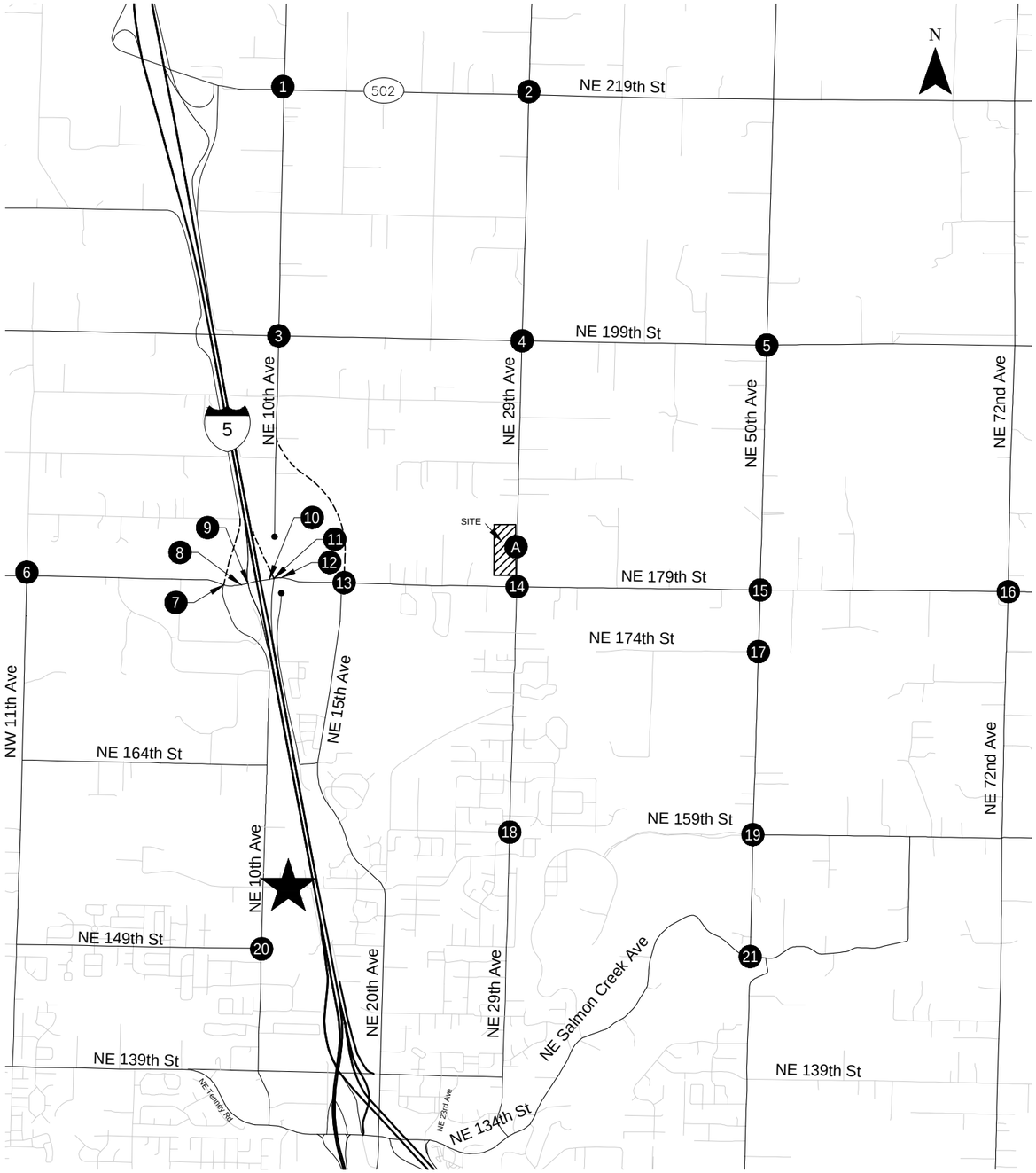
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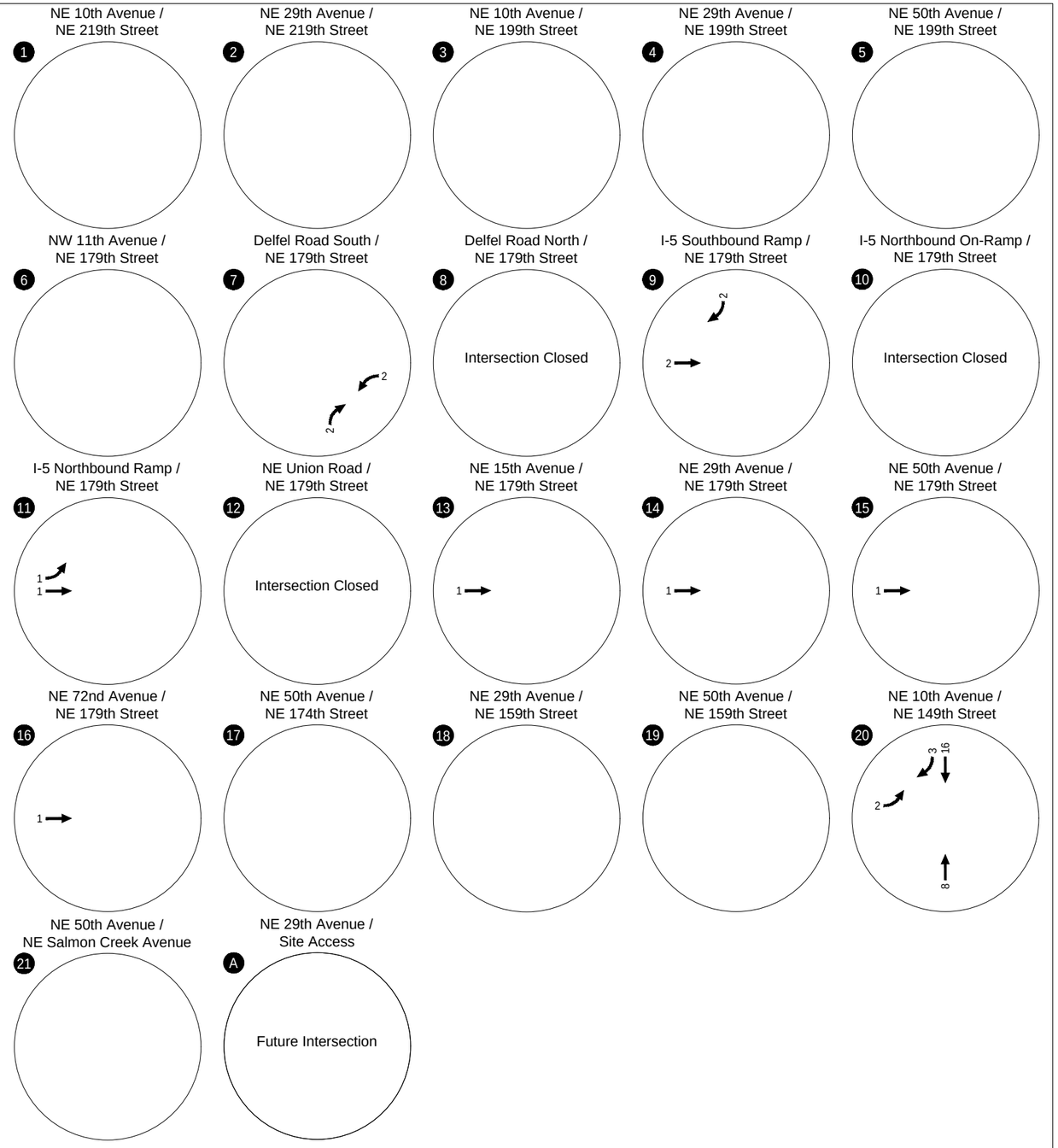
In-Process Trips: Majestic Industrial Centre, Weekday AM Peak Hour
Clark County, Washington

Figure
E16-1

KITTELSON & ASSOCIATES

C:\KAI Applications\Autodesk\TEMPAcPublish_10460\27393_NE29thAveCottages_Figures_NP_2022-06-30.dwg Jun 30, 2022 - 10:54am - nick Layout Tab: E16-1_IP_Majestic





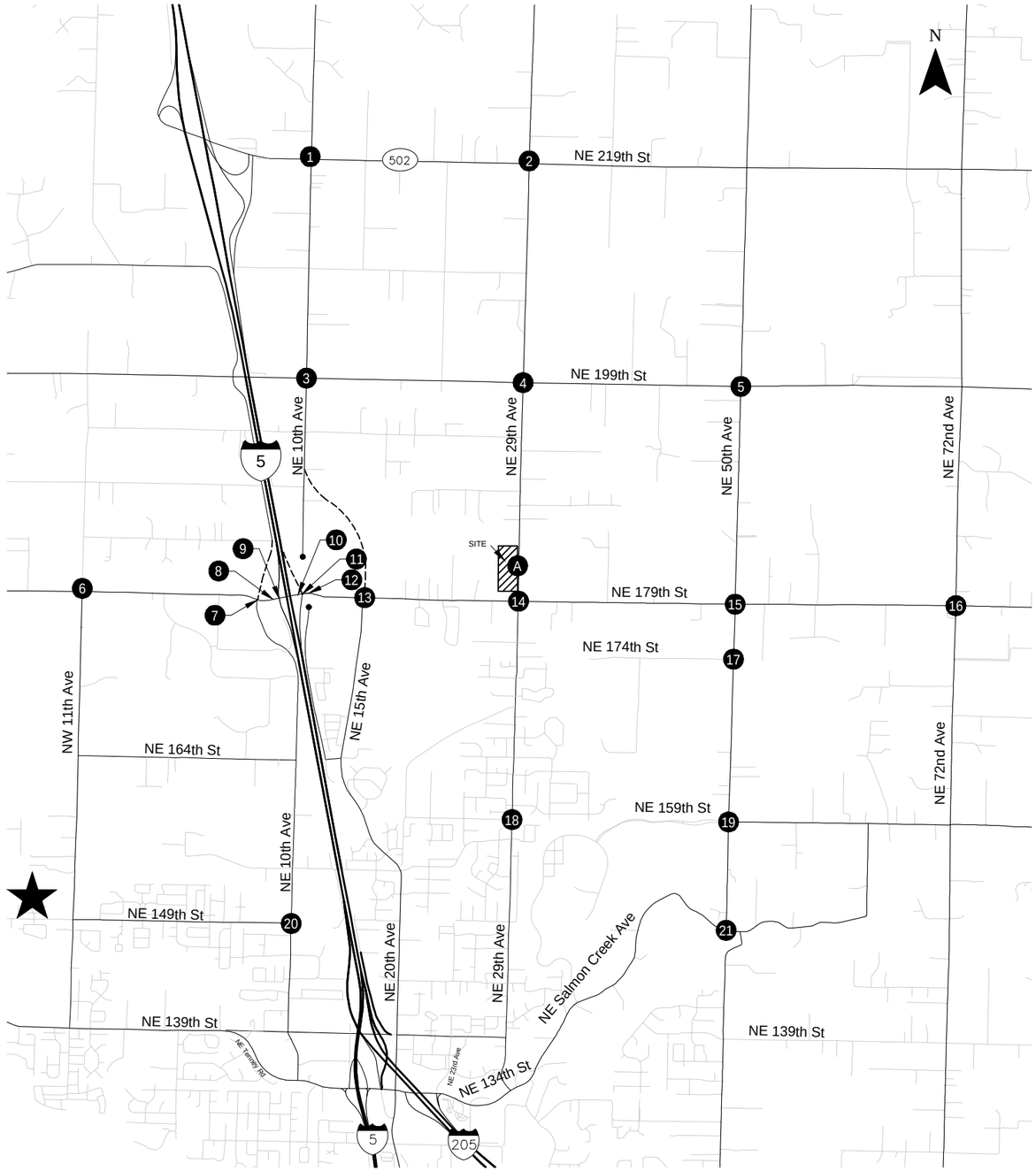
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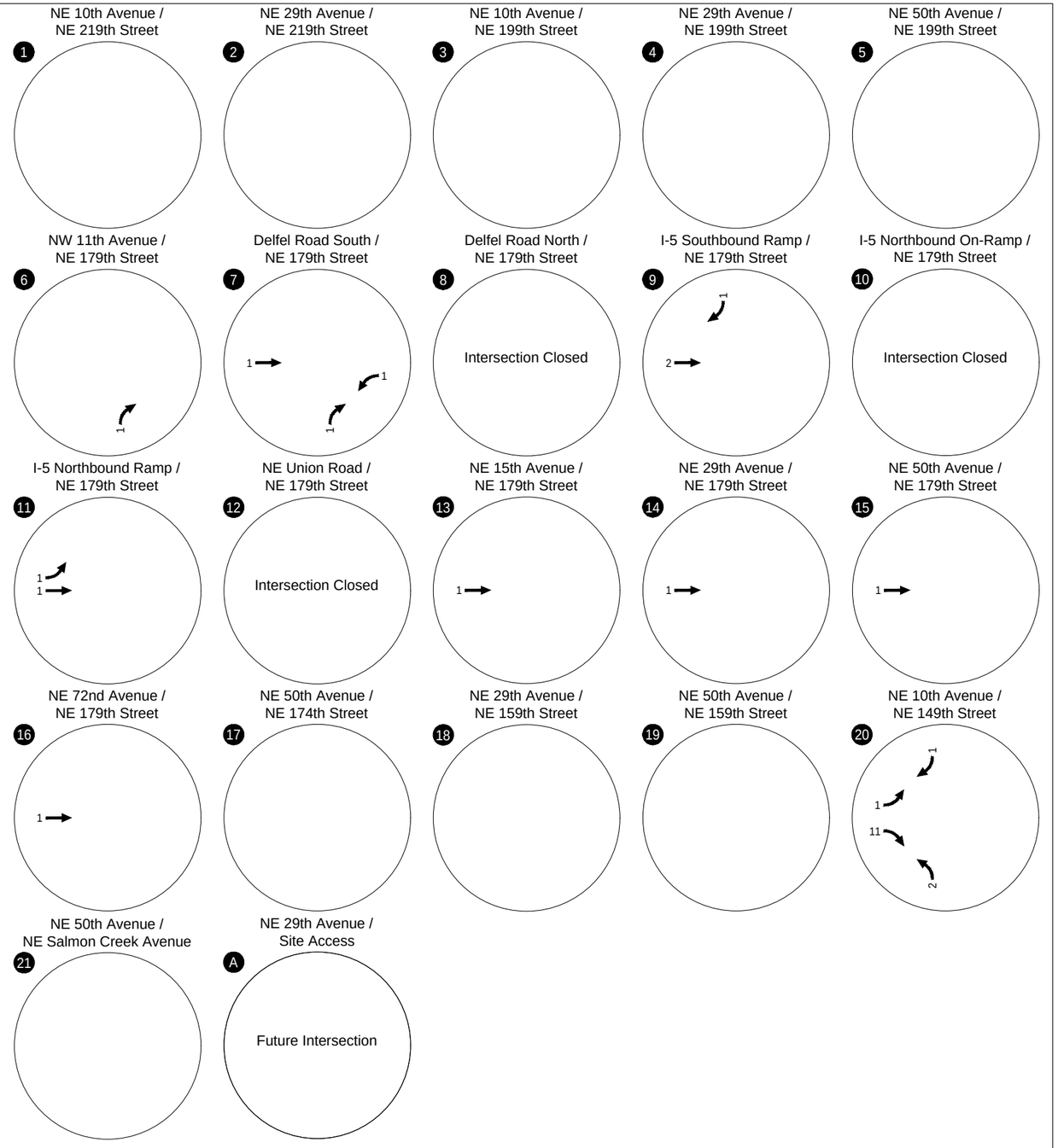
In-Process Trips: Majestic Industrial Centre, Weekday PM Peak Hour
Clark County, Washington

Figure
E16-2

KITTELSON & ASSOCIATES

C:\KAI Applications\Autodesk\TEMPAcPublish_10460\27393_NE29thAveCottages_Figures_NP_2022-06-30.dwg Jun 30, 2022 - 10:54am - nick Layout Tab: E16-2_IP_Majestic





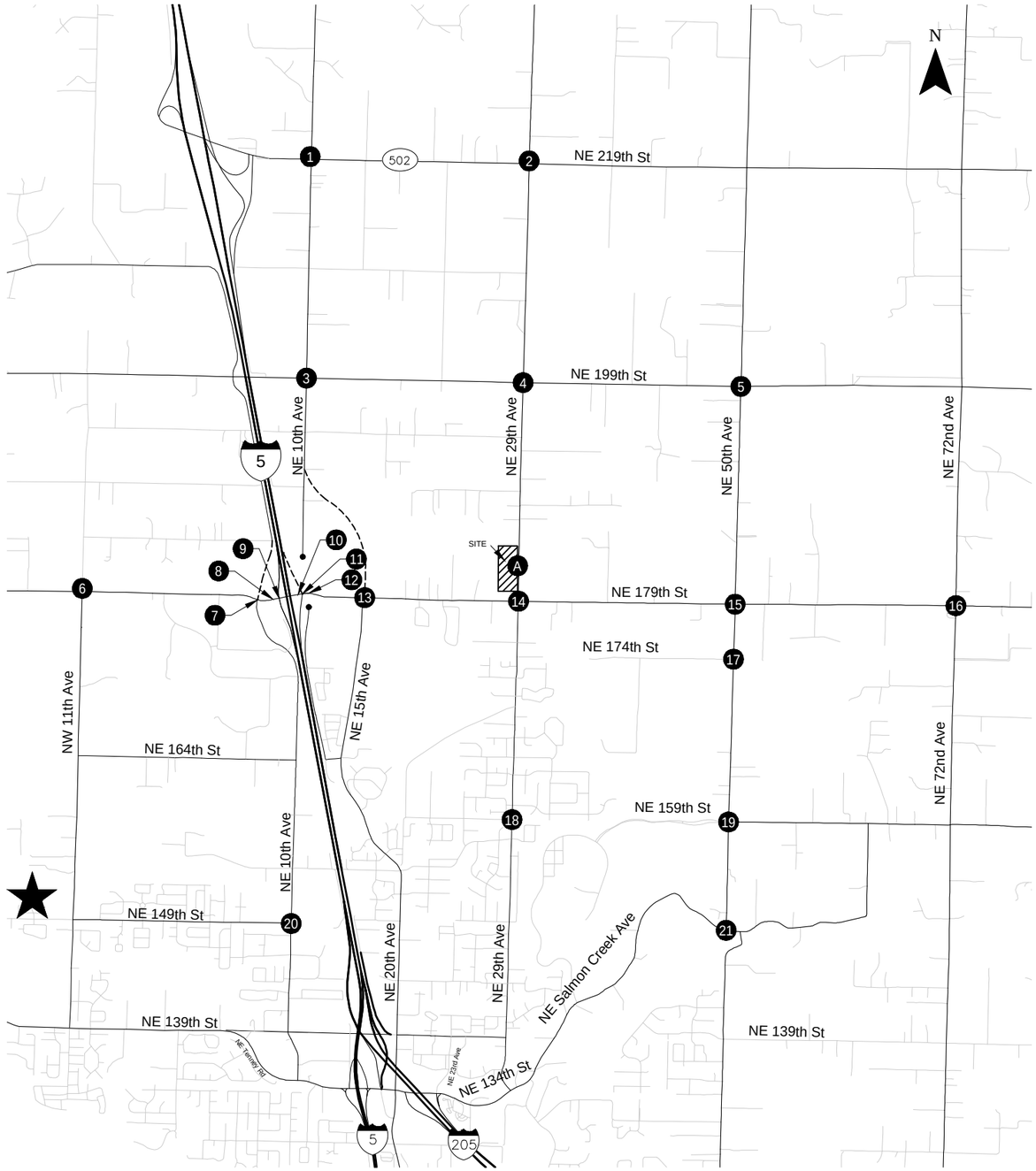
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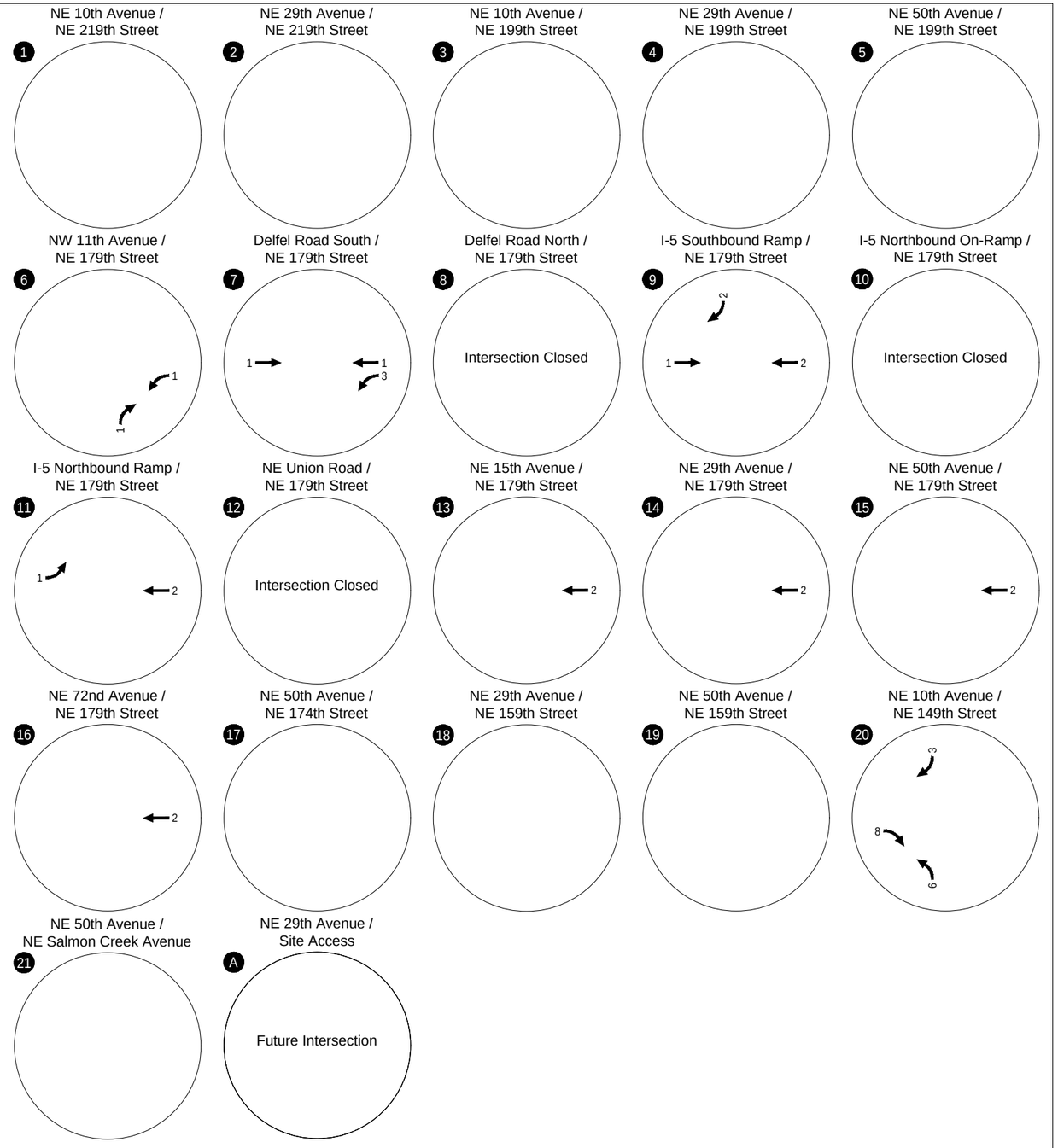
In-Process Trips: Martin's Meadow Subdivision, Weekday AM Peak Hour
Clark County, Washington

Figure
E17-1

KITTELSON & ASSOCIATES

C:\KAI Applications\Autodesk\TEMP\AcPublish_10460\27393_NE29thAveCottages_Figures_NP_2022-06-30.dwg Jun 30, 2022 - 10:54am - nick Layout Tab: E17-1_IP_MartinMeadow





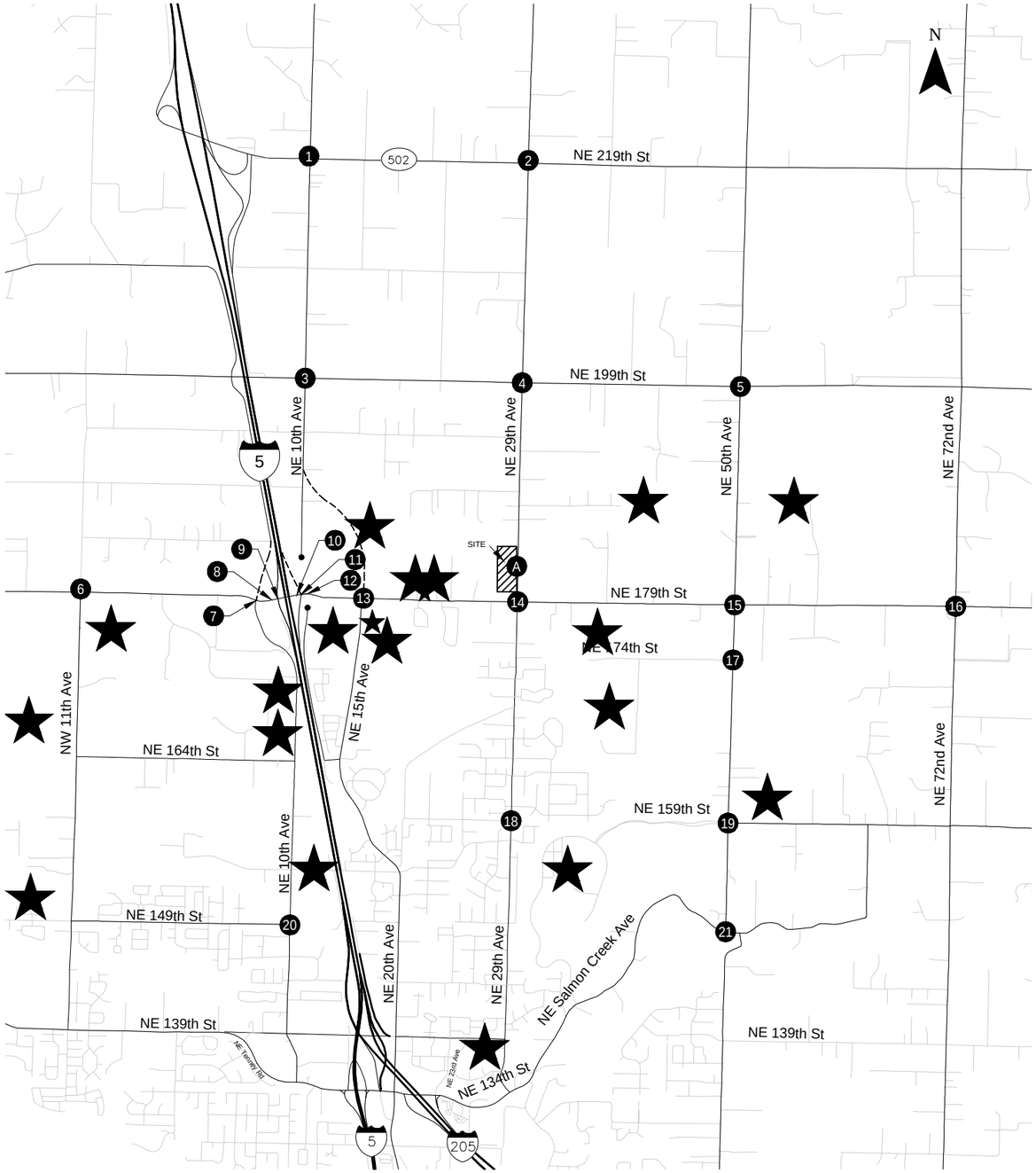
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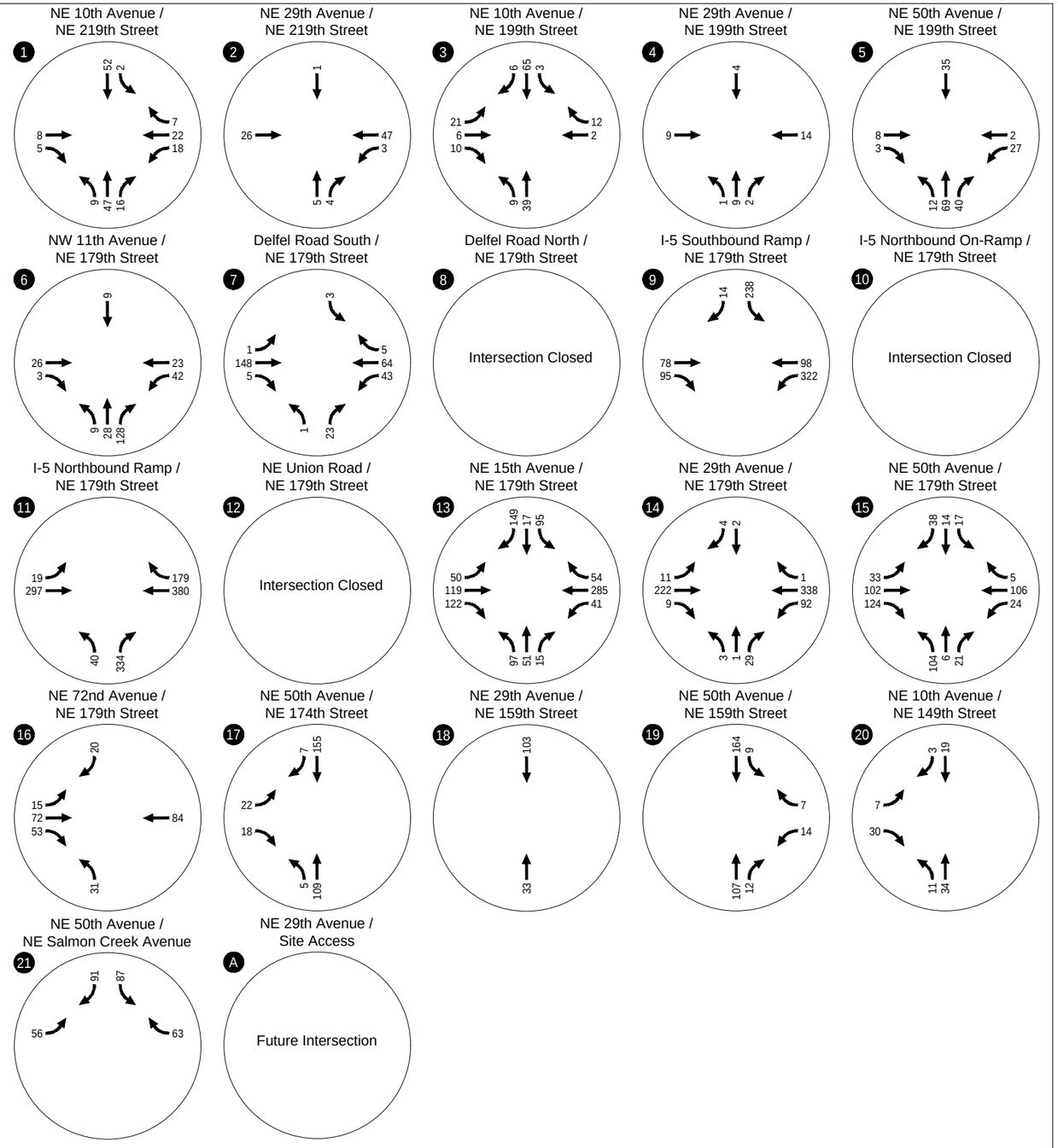
In-Process Trips: Martin's Meadow Subdivision, Weekday PM Peak Hour
Clark County, Washington

Figure
E17-2

KITTELSON & ASSOCIATES

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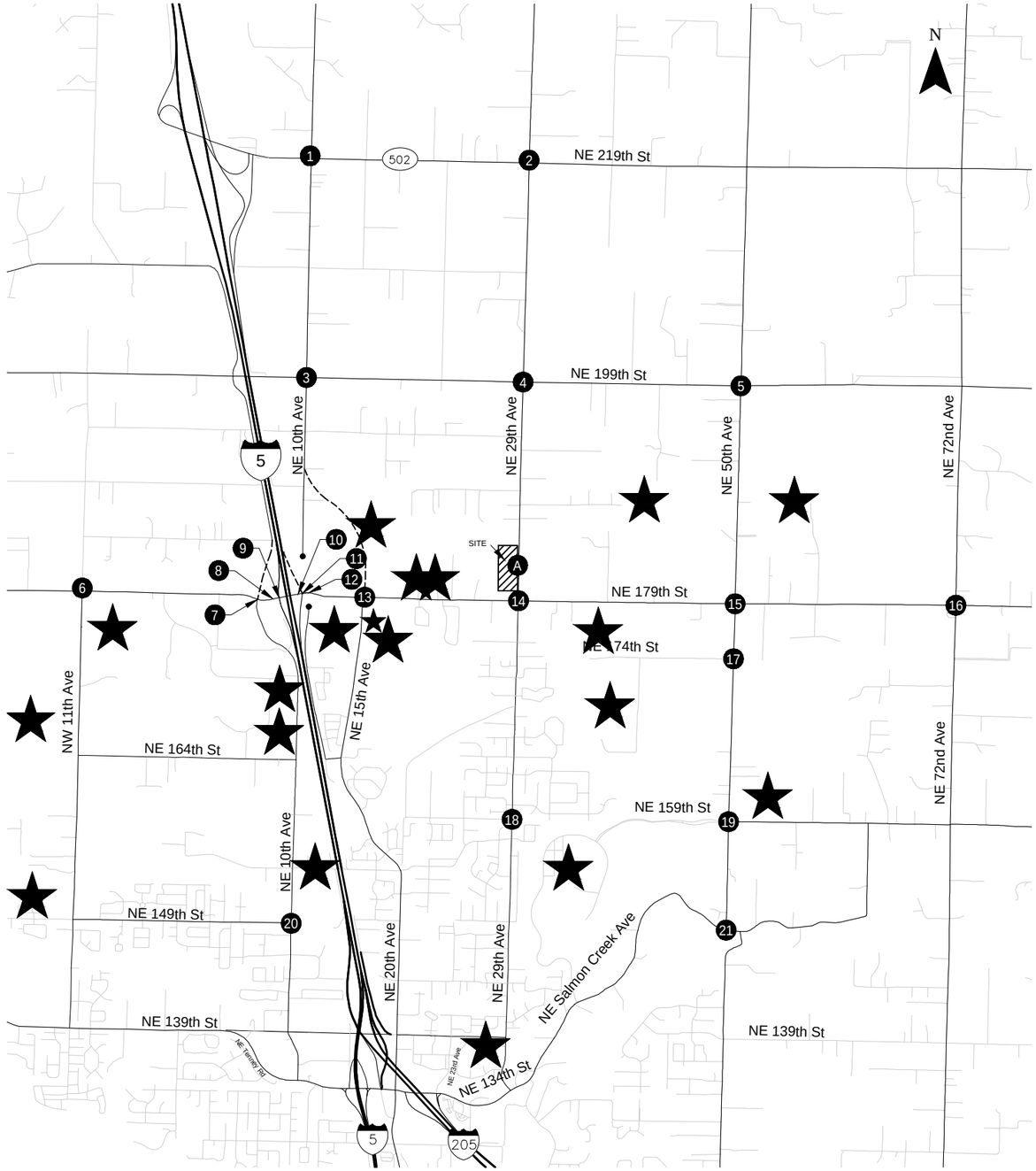
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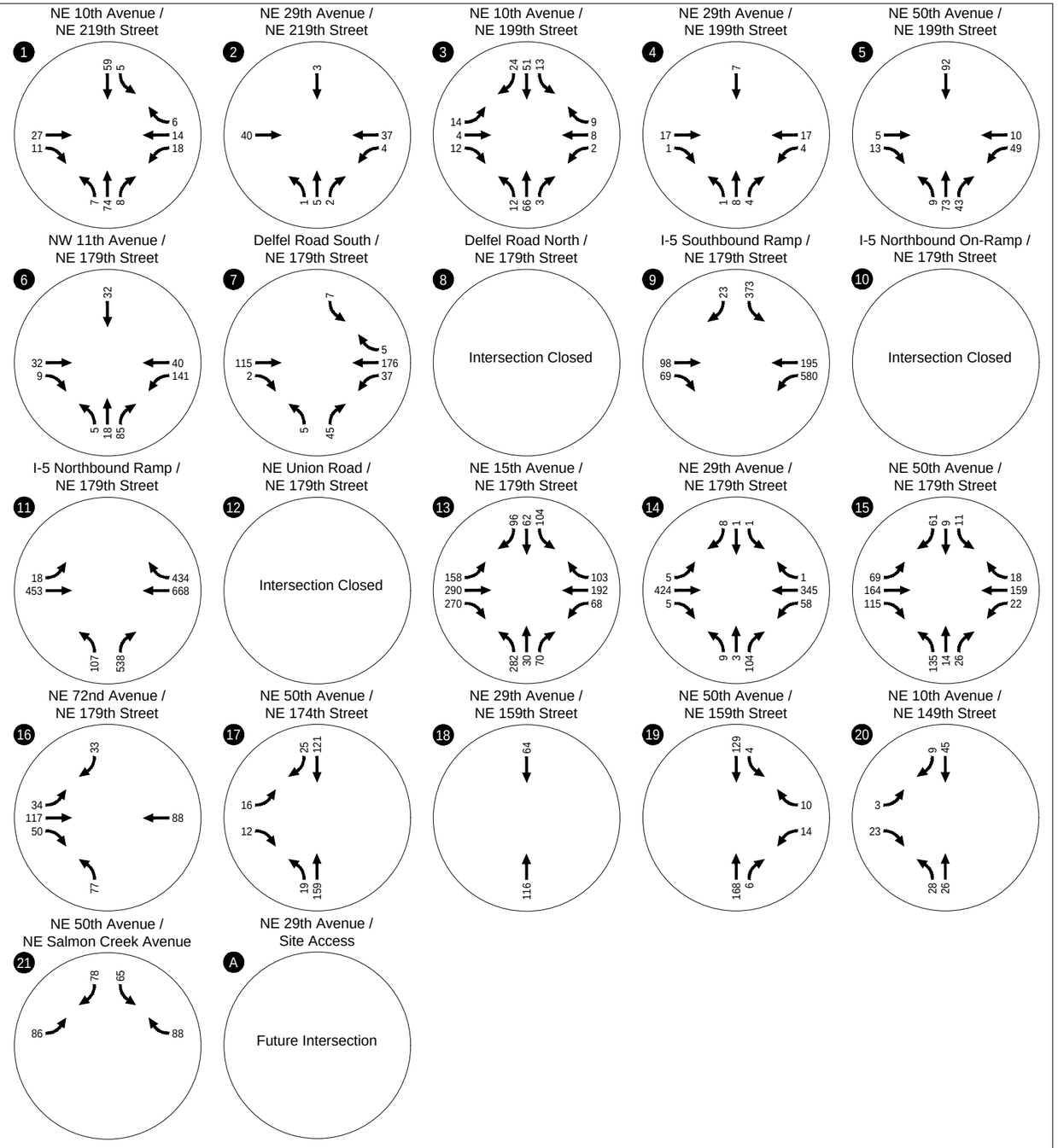
In-Process Trips: Total, Weekday AM Peak Hour
Clark County, Washington

Figure
E18-1

KITTELSON & ASSOCIATES

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★ - LOCATION OF IN-PROCESS DEVELOPMENT

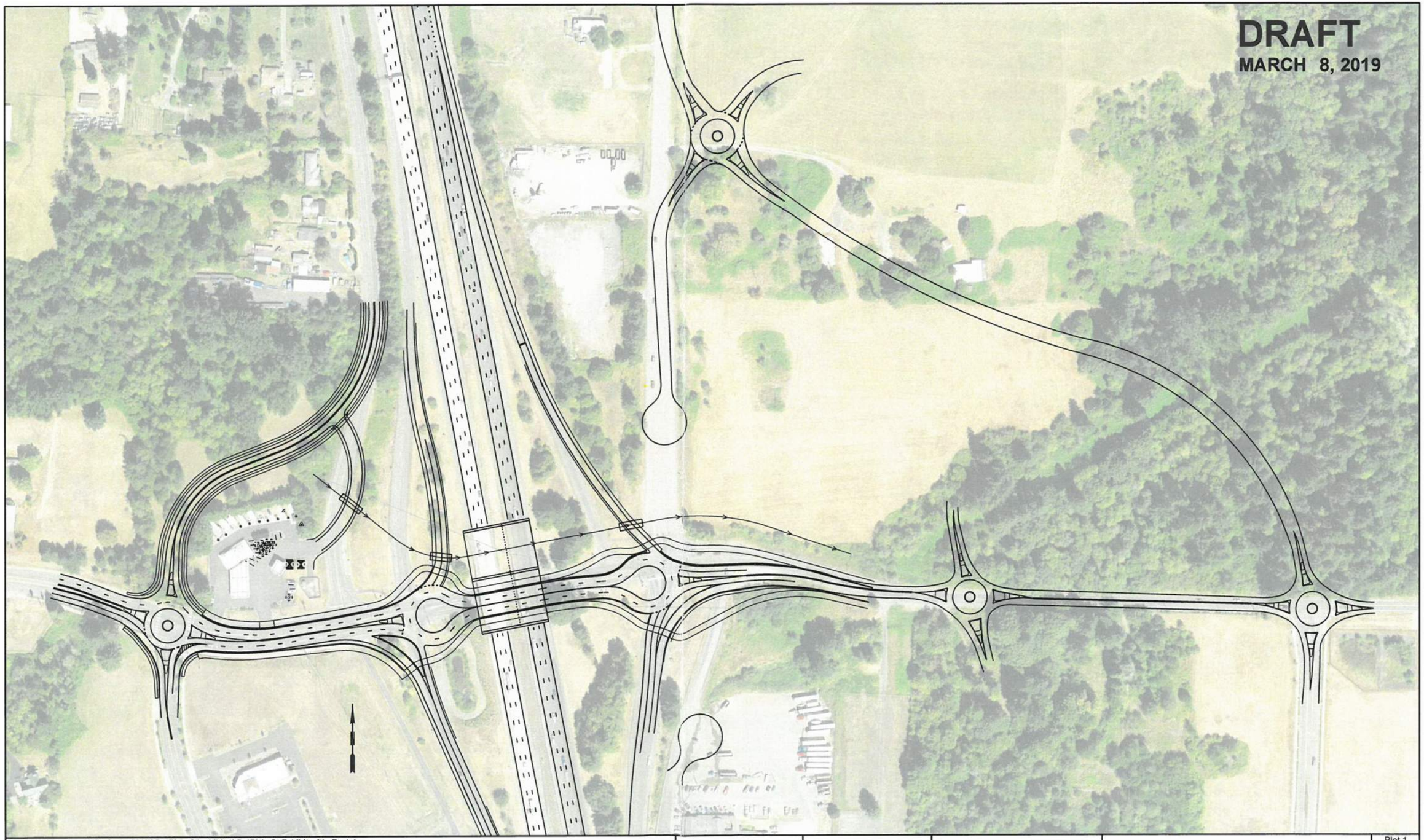
In-Process Trips: Total, Weekday PM Peak Hour
Clark County, Washington

Figure
E18-2

KITTELSON & ASSOCIATES

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DRAFT
MARCH 8, 2019



FILE NAME	H:\Projects 2019\I-5 179th St\exhibits\I-5 179th St Exhibit with East.dgn				REGION NO.	STATE	FED.AID PROJ.NO.		Plot 1
TIME	10:04:53 AM				10	WASH			PLAN REF NO
DATE	3/8/2019				JOB NUMBER				
PLOTTED BY	burkem								
DESIGNED BY	MADDIE BURKE				CONTRACT NO.		LOCATION NO.		SHEET OF SHEETS
ENTERED BY	MADDIE BURKE								
CHECKED BY									
PROJ. ENGR.									
REGIONAL ADM.		REVISION	DATE	BY					

P.E. STAMP BOX — DATE

P.E. STAMP BOX — DATE

Washington State
Department of Transportation

I-5 179TH ST INTERCHANGE PROJECT
INTERCHANGE LAYOUT CONCEPT

DRAFT

Appendix F 2025 Background Traffic Conditions Worksheets

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	89	498	37	4	55	845	96	41	92	51	72	104
Future Volume (vph)	89	498	37	4	55	845	96	41	92	51	72	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95		0.97	1.00	1.00	0.97	1.00
Frt	1.00	1.00	0.85		1.00	0.98		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1719	3252	1568		1665	3300		2736	1652	1292	3400	1827
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1719	3252	1568		1665	3300		2736	1652	1292	3400	1827
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	96	535	40	4	59	909	103	44	99	55	77	112
RTOR Reduction (vph)	0	0	20	0	0	4	0	0	0	48	0	0
Lane Group Flow (vph)	96	535	20	0	63	1008	0	44	99	7	77	112
Heavy Vehicles (%)	5%	11%	3%	0%	9%	7%	14%	28%	15%	25%	3%	4%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	1	6		3	8		7	4
Permitted Phases			2							8		
Actuated Green, G (s)	11.6	51.0	51.0		8.2	47.6		6.0	13.3	13.3	8.0	15.3
Effective Green, g (s)	11.6	51.0	51.0		8.2	47.6		6.0	13.3	13.3	8.0	15.3
Actuated g/C Ratio	0.11	0.50	0.50		0.08	0.47		0.06	0.13	0.13	0.08	0.15
Clearance Time (s)	6.0	6.0	6.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	196	1634	787		134	1547		161	216	169	267	275
v/s Ratio Prot	c0.06	c0.16			0.04	c0.31		0.02	0.06		c0.02	c0.06
v/s Ratio Perm			0.01							0.01		
v/c Ratio	0.49	0.33	0.03		0.47	0.65		0.27	0.46	0.04	0.29	0.41
Uniform Delay, d1	42.2	15.0	12.7		44.6	20.6		45.7	40.8	38.5	44.1	39.0
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.1	0.0		2.6	1.0		0.9	1.5	0.1	0.6	1.0
Delay (s)	44.1	15.2	12.7		47.2	21.6		46.6	42.3	38.6	44.7	40.0
Level of Service	D	B	B		D	C		D	D	D	D	D
Approach Delay (s)		19.2				23.1			42.2			39.7
Approach LOS		B				C			D			D

Intersection Summary			
HCM 2000 Control Delay	26.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	101.5	Sum of lost time (s)	21.0
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	187
Future Volume (vph)	187
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1524
Flt Permitted	1.00
Satd. Flow (perm)	1524
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	201
RTOR Reduction (vph)	171
Lane Group Flow (vph)	30
Heavy Vehicles (%)	6%
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	15.3
Effective Green, g (s)	15.3
Actuated g/C Ratio	0.15
Clearance Time (s)	5.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	229
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.13
Uniform Delay, d1	37.3
Progression Factor	1.00
Incremental Delay, d2	0.3
Delay (s)	37.6
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	12	28	609	12	1	48	876	4	25	14	45	4
Future Volume (vph)	12	28	609	12	1	48	876	4	25	14	45	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	6.0	4.5		4.5	6.0	4.5	4.5	6.0	6.0	4.5
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (prot)		1805	3252	1369		1721	3312	1077	1656	1696	1455	1805
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (perm)		1805	3252	1369		1721	3312	1077	1656	1696	1455	1805
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.95	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	13	30	655	13	1	52	942	4	27	15	48	4
RTOR Reduction (vph)	0	0	0	7	0	0	0	2	0	0	40	0
Lane Group Flow (vph)	0	43	655	6	0	53	942	2	27	15	8	4
Heavy Vehicles (%)	0%	0%	11%	18%	0%	5%	9%	50%	9%	12%	11%	0%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	NA	Perm	Prot
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6			8	
Actuated Green, G (s)		4.5	29.8	33.8		7.0	32.3	33.2	4.0	12.1	12.1	0.9
Effective Green, g (s)		4.5	29.8	33.8		7.0	32.3	33.2	4.0	12.1	12.1	0.9
Actuated g/C Ratio		0.06	0.42	0.48		0.10	0.46	0.47	0.06	0.17	0.17	0.01
Clearance Time (s)		4.5	6.0	4.5		4.5	6.0	4.5	4.5	6.0	6.0	4.5
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		114	1368	653		170	1510	505	93	289	248	22
v/s Ratio Prot		0.02	0.20	0.00		c0.03	c0.28	0.00	c0.02	c0.01		0.00
v/s Ratio Perm				0.00				0.00			0.01	
v/c Ratio		0.38	0.48	0.01		0.31	0.62	0.00	0.29	0.05	0.03	0.18
Uniform Delay, d1		31.8	14.9	9.7		29.7	14.6	10.0	32.0	24.6	24.5	34.6
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.1	0.3	0.0		1.1	0.8	0.0	1.7	0.1	0.1	4.0
Delay (s)		33.9	15.1	9.7		30.7	15.4	10.0	33.8	24.6	24.5	38.5
Level of Service		C	B	A		C	B	B	C	C	C	D
Approach Delay (s)			16.2				16.2			27.3		
Approach LOS			B				B			C		

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	70.8	Sum of lost time (s)	21.0
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	15	77
Future Volume (vph)	15	77
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.0	
Lane Util. Factor	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1640	
Flt Permitted	1.00	
Satd. Flow (perm)	1640	
Peak-hour factor, PHF	0.93	0.93
Adj. Flow (vph)	16	83
RTOR Reduction (vph)	72	0
Lane Group Flow (vph)	27	0
Heavy Vehicles (%)	8%	0%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	9.0	
Effective Green, g (s)	9.0	
Actuated g/C Ratio	0.13	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	208	
v/s Ratio Prot	c0.02	
v/s Ratio Perm		
v/c Ratio	0.13	
Uniform Delay, d1	27.4	
Progression Factor	1.00	
Incremental Delay, d2	0.3	
Delay (s)	27.7	
Level of Service	C	
Approach Delay (s)	28.1	
Approach LOS	C	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	54	39	108	59	33	126	92	79	18	131	90
Future Volume (veh/h)	72	54	39	108	59	33	126	92	79	18	131	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1722	1722	1722	1752	1678	1678	1693	1722	1722
Adj Flow Rate, veh/h	96	72	52	144	79	44	168	123	105	24	175	120
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	7	7	7	12	12	12	10	15	15	14	12	12
Cap, veh/h	232	155	88	277	123	57	213	304	259	46	232	159
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.13	0.36	0.36	0.03	0.24	0.24
Sat Flow, veh/h	536	651	368	695	517	239	1668	836	713	1612	952	653
Grp Volume(v), veh/h	220	0	0	267	0	0	168	0	228	24	0	295
Grp Sat Flow(s),veh/h/ln	1555	0	0	1452	0	0	1668	0	1549	1612	0	1605
Q Serve(g_s), s	0.0	0.0	0.0	2.3	0.0	0.0	4.9	0.0	5.5	0.7	0.0	8.5
Cycle Q Clear(g_c), s	5.9	0.0	0.0	8.2	0.0	0.0	4.9	0.0	5.5	0.7	0.0	8.5
Prop In Lane	0.44		0.24	0.54		0.16	1.00		0.46	1.00		0.41
Lane Grp Cap(c), veh/h	475	0	0	457	0	0	213	0	563	46	0	391
V/C Ratio(X)	0.46	0.00	0.00	0.58	0.00	0.00	0.79	0.00	0.41	0.52	0.00	0.75
Avail Cap(c_a), veh/h	1375	0	0	1296	0	0	896	0	1275	898	0	1324
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	0.0	17.4	0.0	0.0	21.0	0.0	11.8	23.8	0.0	17.4
Incr Delay (d2), s/veh	0.7	0.0	0.0	1.2	0.0	0.0	2.5	0.0	0.5	3.4	0.0	3.0
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	1.9	0.0	0.0	2.5	0.0	0.0	1.7	0.0	1.4	0.3	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.3	0.0	0.0	18.6	0.0	0.0	23.5	0.0	12.3	27.3	0.0	20.4
LnGrp LOS	B	A	A	B	A	A	C	A	B	C	A	C
Approach Vol, veh/h		220			267			396			319	
Approach Delay, s/veh		17.3			18.6			17.0			20.9	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	24.4		17.6	13.7	18.4		17.6				
Change Period (Y+Rc), s	* 6.3	* 6.3		* 5.8	* 7.3	* 6.3		* 5.8				
Max Green Setting (Gmax), s	* 28	* 41		* 43	* 27	* 41		* 43				
Max Q Clear Time (g_c+I1), s	2.7	7.5		7.9	6.9	10.5		10.2				
Green Ext Time (p_c), s	0.0	1.3		1.3	0.2	1.6		1.7				

Intersection Summary	
HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	107	4	50	141	26	15	55	31	20	67	29
Future Vol, veh/h	48	107	4	50	141	26	15	55	31	20	67	29
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	0	9	0	4	5	0	8	5	4	0	5	0
Mvmt Flow	64	143	5	67	188	35	20	73	41	27	89	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.4	11.5	9.9	9.9
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	30%	23%	17%
Vol Thru, %	54%	67%	65%	58%
Vol Right, %	31%	3%	12%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	159	217	116
LT Vol	15	48	50	20
Through Vol	55	107	141	67
RT Vol	31	4	26	29
Lane Flow Rate	135	212	289	155
Geometry Grp	1	1	1	1
Degree of Util (X)	0.204	0.304	0.408	0.228
Departure Headway (Hd)	5.444	5.165	5.081	5.316
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	659	695	712	676
Service Time	3.479	3.195	3.081	3.35
HCM Lane V/C Ratio	0.205	0.305	0.406	0.229
HCM Control Delay	9.9	10.4	11.5	9.9
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.8	1.3	2	0.9

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	154	18	79	155	14	29	91	58	41	101	10
Future Vol, veh/h	4	154	18	79	155	14	29	91	58	41	101	10
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	2	7	4	4	8	7	5	6	5	8	11
Mvmt Flow	5	195	23	100	196	18	37	115	73	52	128	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	11.7	14	12	11.8
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	2%	32%	27%
Vol Thru, %	51%	88%	62%	66%
Vol Right, %	33%	10%	6%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	178	176	248	152
LT Vol	29	4	79	41
Through Vol	91	154	155	101
RT Vol	58	18	14	10
Lane Flow Rate	225	223	314	192
Geometry Grp	1	1	1	1
Degree of Util (X)	0.359	0.348	0.49	0.318
Departure Headway (Hd)	5.743	5.627	5.616	5.944
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	622	635	637	602
Service Time	3.813	3.697	3.678	4.015
HCM Lane V/C Ratio	0.362	0.351	0.493	0.319
HCM Control Delay	12	11.7	14	11.8
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.6	1.6	2.7	1.4

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	136	4	71	106	18	10	40	149	30	22	8
Future Vol, veh/h	4	136	4	71	106	18	10	40	149	30	22	8
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	25	4	0	8	15	19	0	0	5	15	25	14
Mvmt Flow	5	162	5	85	126	21	12	48	177	36	26	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.3	10.5	9.7	9.3
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	3%	36%	50%
Vol Thru, %	20%	94%	54%	37%
Vol Right, %	75%	3%	9%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	199	144	195	60
LT Vol	10	4	71	30
Through Vol	40	136	106	22
RT Vol	149	4	18	8
Lane Flow Rate	237	171	232	71
Geometry Grp	1	1	1	1
Degree of Util (X)	0.302	0.255	0.324	0.109
Departure Headway (Hd)	4.589	5.352	5.022	5.512
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	777	665	708	643
Service Time	2.661	3.439	3.104	3.608
HCM Lane V/C Ratio	0.305	0.257	0.328	0.11
HCM Control Delay	9.7	10.3	10.5	9.3
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	1.3	1	1.4	0.4

MOVEMENT SUMMARY

Site: 107 [NE Delfel Rd/NE179th St - 2025 Background AM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE Delfel Rd												
3	L2	4	50.0	0.018	18.0	LOS B	0.1	1.8	0.58	0.69	0.58	34.5
8	T1	4	0.0	0.018	5.8	LOS A	0.1	1.8	0.58	0.69	0.58	35.4
18	R2	94	17.0	0.118	6.0	LOS A	0.5	13.5	0.56	0.69	0.56	35.8
Approach		101	17.6	0.118	6.4	LOS A	0.5	13.5	0.56	0.69	0.56	35.7
East: NE 179th St												
1	L2	151	10.0	0.163	10.5	LOS B	0.9	23.9	0.09	0.55	0.09	36.8
6	T1	205	12.0	0.163	2.7	LOS A	0.9	24.6	0.09	0.40	0.09	38.3
16	R2	110	15.0	0.163	3.5	LOS A	0.9	24.6	0.09	0.32	0.09	37.4
Approach		465	12.1	0.163	5.4	LOS A	0.9	24.6	0.09	0.43	0.09	37.6
North: NE Delfel Rd												
7	L2	337	2.0	0.357	11.9	LOS B	1.4	36.3	0.43	0.74	0.43	35.0
4	T1	4	0.0	0.357	4.1	LOS A	1.4	36.3	0.43	0.74	0.43	34.5
14	R2	12	11.0	0.357	5.1	LOS A	1.4	36.3	0.43	0.74	0.43	33.1
Approach		353	2.3	0.357	11.5	LOS B	1.4	36.3	0.43	0.74	0.43	34.9
West: NE 179th St												
5	L2	6	0.0	0.215	12.8	LOS B	1.2	32.2	0.61	0.57	0.61	37.9
2	T1	422	7.0	0.215	5.1	LOS A	1.3	34.8	0.60	0.54	0.60	37.3
12	R2	10	67.0	0.215	8.2	LOS A	1.3	34.8	0.60	0.51	0.60	34.6
Approach		437	8.2	0.215	5.2	LOS A	1.3	34.8	0.60	0.54	0.60	37.2
All Vehicles		1357	8.7	0.357	7.0	LOS A	1.4	36.3	0.38	0.56	0.38	36.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 109 [I-5 Southbound Ramp/NE 179th St - 2025 Background AM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE 179th St												
1	L2	723	5.0	0.525	10.2	LOS B	0.0	0.0	0.00	0.65	0.00	35.7
6	T1	323	12.0	0.307	3.5	LOS A	0.0	0.0	0.00	0.32	0.00	39.1
Approach		1047	7.2	0.525	8.2	LOS A	0.0	0.0	0.00	0.55	0.00	36.7
North: I-5 SB Off-ramp												
7	L2	359	8.0	0.303	14.3	LOS B	1.3	34.6	0.62	0.86	0.63	34.2
4	T1	1	0.0	0.303	6.0	LOS A	1.3	34.6	0.62	0.83	0.62	35.1
14	R2	123	11.0	0.303	7.3	LOS A	1.3	34.6	0.62	0.83	0.62	33.6
Approach		483	8.7	0.303	12.5	LOS B	1.3	34.6	0.62	0.85	0.62	34.1
West: NE 179th St												
2	T1	237	9.0	0.304	12.8	LOS B	2.3	60.8	0.92	0.87	0.92	34.0
12	R2	543	4.0	0.337	3.3	LOS A	0.0	0.0	0.00	0.40	0.00	37.8
Approach		780	5.5	0.337	6.2	LOS A	2.3	60.8	0.28	0.54	0.28	36.5
All Vehicles		2310	6.9	0.525	8.4	LOS A	2.3	60.8	0.22	0.61	0.23	36.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 111 [I-5 Northbound Ramp/NE 179th St - 2025 Background AM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: I-5 NB Off-ramp												
3	L2	188	12.0	0.083	11.7	LOS B	0.3	7.8	0.41	0.71	0.41	34.4
8	T1	1	0.0	0.083	4.4	LOS A	0.3	7.8	0.40	0.70	0.40	34.4
18	R2	669	6.0	0.423	3.5	LOS A	0.0	0.0	0.00	0.40	0.00	36.5
Approach		858	7.3	0.423	5.3	LOS A	0.3	7.8	0.09	0.47	0.09	35.9
East: NE 179th St												
6	T1	906	4.0	0.542	5.4	LOS A	3.3	86.3	0.55	0.55	0.58	35.8
16	R2	293	5.0	0.542	5.6	LOS A	3.3	86.0	0.54	0.58	0.56	34.0
Approach		1199	4.2	0.542	5.5	LOS A	3.3	86.3	0.55	0.56	0.57	35.4
West: NE 179th St												
5	L2	127	9.0	0.208	10.3	LOS B	0.0	0.0	0.00	0.50	0.00	37.9
2	T1	497	7.0	0.208	2.9	LOS A	0.0	0.0	0.00	0.36	0.00	38.2
Approach		623	7.4	0.208	4.4	LOS A	0.0	0.0	0.00	0.39	0.00	38.1
All Vehicles		2680	6.0	0.542	5.2	LOS A	3.3	86.3	0.27	0.49	0.29	36.2

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 113 [NE 15th Ave/NE179th St - 2025 Background AM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 15th Ave												
3	L2	274	10.0	0.294	12.5	LOS B	1.3	35.7	0.57	0.80	0.57	34.0
8	T1	59	3.0	0.218	5.8	LOS A	0.9	23.6	0.56	0.66	0.56	37.1
18	R2	112	9.0	0.218	6.3	LOS A	0.9	23.6	0.56	0.66	0.56	35.6
Approach		445	8.8	0.294	10.0	LOS B	1.3	35.7	0.56	0.74	0.56	34.8
East: NE 179th St												
1	L2	122	2.0	0.426	12.7	LOS B	2.1	53.8	0.59	0.69	0.63	36.2
6	T1	570	6.0	0.426	5.8	LOS A	2.1	54.6	0.58	0.63	0.62	36.3
16	R2	121	3.0	0.426	5.8	LOS A	2.1	54.6	0.58	0.58	0.61	35.4
Approach		813	5.0	0.426	6.8	LOS A	2.1	54.6	0.58	0.63	0.62	36.2
North: NE 15th Ave												
7	L2	176	3.0	0.299	14.1	LOS B	1.4	34.7	0.68	0.88	0.68	34.2
4	T1	20	3.0	0.299	6.9	LOS A	1.4	34.7	0.68	0.88	0.68	33.8
14	R2	378	3.0	0.438	7.3	LOS A	2.5	64.9	0.73	0.87	0.81	35.4
Approach		573	3.0	0.438	9.4	LOS A	2.5	64.9	0.71	0.87	0.77	34.9
West: NE 179th St												
5	L2	258	3.0	0.205	11.4	LOS B	1.2	31.4	0.48	0.65	0.48	34.7
2	T1	233	7.0	0.205	4.7	LOS A	1.2	31.4	0.50	0.48	0.50	37.1
12	R2	334	8.0	0.234	4.1	LOS A	1.4	37.6	0.34	0.45	0.34	36.5
Approach		824	6.2	0.234	6.5	LOS A	1.4	37.6	0.43	0.52	0.43	36.1
All Vehicles		2656	5.6	0.438	7.8	LOS A	2.5	64.9	0.56	0.67	0.58	35.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 114 [NE 29th Ave/NE179th St - 2025 Background AM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 29th Ave												
3	L2	52	5.0	0.092	11.3	LOS B	0.3	8.8	0.43	0.66	0.43	35.1
8	T1	54	2.0	0.092	5.5	LOS A	0.3	9.0	0.43	0.64	0.43	35.6
18	R2	73	9.0	0.092	5.6	LOS A	0.3	9.0	0.43	0.59	0.43	35.4
Approach		178	5.7	0.092	7.2	LOS A	0.3	9.0	0.43	0.62	0.43	35.3
East: NE 179th St												
1	L2	151	5.0	0.314	10.5	LOS B	1.5	39.7	0.32	0.56	0.32	35.8
6	T1	573	5.0	0.314	4.8	LOS A	1.5	39.7	0.32	0.49	0.32	36.4
16	R2	8	60.0	0.314	6.3	LOS A	1.5	40.1	0.32	0.45	0.32	34.0
Approach		731	5.6	0.314	6.0	LOS A	1.5	40.1	0.32	0.50	0.32	36.2
North: NE 29th Ave												
7	L2	11	22.0	0.097	13.2	LOS B	0.4	9.2	0.52	0.63	0.52	35.4
4	T1	91	3.0	0.097	6.0	LOS A	0.4	9.3	0.52	0.64	0.52	36.1
14	R2	62	4.0	0.097	6.1	LOS A	0.4	9.3	0.51	0.64	0.51	35.3
Approach		164	4.7	0.097	6.5	LOS A	0.4	9.3	0.52	0.64	0.52	35.8
West: NE 179th St												
5	L2	41	4.0	0.230	10.9	LOS B	1.0	26.2	0.38	0.53	0.38	36.4
2	T1	396	10.0	0.230	5.0	LOS A	1.0	26.5	0.38	0.51	0.38	36.5
12	R2	41	12.0	0.230	5.2	LOS A	1.0	26.5	0.38	0.49	0.38	35.4
Approach		477	9.7	0.230	5.5	LOS A	1.0	26.5	0.38	0.51	0.38	36.4
All Vehicles		1549	6.8	0.314	6.1	LOS A	1.5	40.1	0.37	0.53	0.37	36.1

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 115 [NE 50th Ave/NE179th St - 2025 Background AM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 50th Ave												
3	L2	161	5.0	0.151	11.0	LOS B	0.6	16.2	0.41	0.70	0.41	34.0
8	T1	53	10.0	0.105	5.8	LOS A	0.4	10.9	0.42	0.56	0.42	36.4
18	R2	35	9.0	0.105	5.8	LOS A	0.4	10.9	0.42	0.56	0.42	35.3
Approach		249	6.6	0.151	9.2	LOS A	0.6	16.2	0.41	0.65	0.41	34.6
East: NE 179th St												
1	L2	57	0.0	0.161	10.7	LOS B	0.7	17.3	0.37	0.57	0.37	36.0
6	T1	252	11.0	0.161	5.4	LOS A	0.7	18.0	0.38	0.54	0.38	36.0
16	R2	19	17.0	0.161	5.7	LOS A	0.7	18.0	0.38	0.51	0.38	34.9
Approach		328	9.4	0.161	6.3	LOS A	0.7	18.0	0.38	0.54	0.38	36.0
North: NE 50th Ave												
7	L2	28	0.0	0.121	11.3	LOS B	0.5	12.1	0.45	0.59	0.45	36.1
4	T1	131	8.0	0.121	5.5	LOS A	0.5	12.3	0.45	0.59	0.45	36.1
14	R2	73	7.0	0.121	5.7	LOS A	0.5	12.3	0.44	0.58	0.44	35.4
Approach		232	6.7	0.121	6.3	LOS A	0.5	12.3	0.44	0.59	0.44	35.9
West: NE 179th St												
5	L2	48	36.0	0.237	11.7	LOS B	1.0	28.9	0.37	0.53	0.37	35.3
2	T1	249	9.0	0.237	4.9	LOS A	1.0	28.0	0.37	0.53	0.37	36.5
12	R2	190	10.0	0.237	5.0	LOS A	1.0	28.0	0.36	0.52	0.36	35.6
Approach		488	12.1	0.237	5.6	LOS A	1.0	28.9	0.36	0.53	0.36	36.1
All Vehicles		1298	9.4	0.237	6.6	LOS A	1.0	28.9	0.39	0.56	0.39	35.7

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	156	117	97	180	8	60	292	54	11	680	51
Future Volume (veh/h)	23	156	117	97	180	8	60	292	54	11	680	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1826	1826	1826	1722	1767	1767	1307	1826	1826
Adj Flow Rate, veh/h	25	170	127	105	196	9	65	317	59	12	739	55
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, %	7	7	7	5	5	5	12	9	9	40	5	5
Cap, veh/h	67	257	180	161	255	11	82	727	135	18	783	58
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.05	0.50	0.50	0.01	0.47	0.47
Sat Flow, veh/h	70	942	659	372	936	39	1640	1448	270	1245	1678	125
Grp Volume(v), veh/h	322	0	0	310	0	0	65	0	376	12	0	794
Grp Sat Flow(s),veh/h/ln	1671	0	0	1347	0	0	1640	0	1718	1245	0	1803
Q Serve(g_s), s	0.0	0.0	0.0	4.1	0.0	0.0	3.2	0.0	11.3	0.8	0.0	34.1
Cycle Q Clear(g_c), s	14.0	0.0	0.0	18.1	0.0	0.0	3.2	0.0	11.3	0.8	0.0	34.1
Prop In Lane	0.08		0.39	0.34		0.03	1.00		0.16	1.00		0.07
Lane Grp Cap(c), veh/h	504	0	0	427	0	0	82	0	863	18	0	841
V/C Ratio(X)	0.64	0.00	0.00	0.73	0.00	0.00	0.79	0.00	0.44	0.66	0.00	0.94
Avail Cap(c_a), veh/h	934	0	0	817	0	0	586	0	863	445	0	888
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.6	0.0	0.0	27.8	0.0	0.0	38.1	0.0	12.9	39.8	0.0	20.7
Incr Delay (d2), s/veh	1.4	0.0	0.0	2.4	0.0	0.0	15.1	0.0	0.3	34.0	0.0	17.7
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	5.6	0.0	0.0	5.8	0.0	0.0	1.5	0.0	3.7	0.4	0.0	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	0.0	0.0	30.2	0.0	0.0	53.3	0.0	13.2	73.8	0.0	38.3
LnGrp LOS	C	A	A	C	A	A	D	A	B	E	A	D
Approach Vol, veh/h		322			310			441			806	
Approach Delay, s/veh		27.9			30.2			19.1			38.8	
Approach LOS		C			C			B			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	28.1	9.2	43.9	28.1	6.3	46.8
Change Period (Y+Rc), s	* 6	* 5.1	* 6	* 6	* 5.1	* 6
Max Green Setting (Gmax), s	* 44	* 29	* 40	* 44	* 29	* 40
Max Q Clear Time (g_c+I1), s	20.1	5.2	36.1	16.0	2.8	13.3
Green Ext Time (p_c), s	2.1	0.1	1.8	2.2	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	30	0	39	0	0	0	8	205	0	0	341	26
Future Vol, veh/h	30	0	39	0	0	0	8	205	0	0	341	26
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	-	-	-2	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	3	0	8	0	0	0	12	3	0	0	5	54
Mvmt Flow	35	0	46	0	0	0	9	241	0	0	401	31

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	676	676	417	699	691	241	432	0	0	241	0	0
Stage 1	417	417	-	259	259	-	-	-	-	-	-	-
Stage 2	259	259	-	440	432	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.28	7.1	6.5	6.2	4.22	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.372	3.5	4	3.3	2.308	-	-	2.2	-	-
Pot Cap-1 Maneuver	366	378	623	357	370	803	1076	-	-	1337	-	-
Stage 1	611	595	-	750	697	-	-	-	-	-	-	-
Stage 2	744	697	-	600	586	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	363	374	623	328	366	803	1076	-	-	1337	-	-
Mov Cap-2 Maneuver	363	374	-	328	366	-	-	-	-	-	-	-
Stage 1	605	595	-	743	690	-	-	-	-	-	-	-
Stage 2	737	690	-	556	586	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.1	0	0.3	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1076	-	-	475	-	1337	-	-
HCM Lane V/C Ratio	0.009	-	-	0.171	-	-	-	-
HCM Control Delay (s)	8.4	0	-	14.1	0	0	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	-	0	-	-

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	10	7	116	327	29
Future Vol, veh/h	11	10	7	116	327	29
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	0	0	67	7	2	0
Mvmt Flow	14	12	9	143	404	36
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	10.2	11.3
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	6%	52%	0%
Vol Thru, %	94%	0%	92%
Vol Right, %	0%	48%	8%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	123	21	356
LT Vol	7	11	0
Through Vol	116	0	327
RT Vol	0	10	29
Lane Flow Rate	152	26	440
Geometry Grp	1	1	1
Degree of Util (X)	0.234	0.036	0.506
Departure Headway (Hd)	5.541	5.052	4.146
Convergence, Y/N	Yes	Yes	Yes
Cap	650	709	875
Service Time	3.556	3.081	2.154
HCM Lane V/C Ratio	0.234	0.037	0.503
HCM Control Delay	10.2	8.3	11.3
HCM Lane LOS	B	A	B
HCM 95th-tile Q	0.9	0.1	2.9

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	3	0	4	58	11	30	6	234	32	35	352	11
Future Vol, veh/h	3	0	4	58	11	30	6	234	32	35	352	11
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	-	-	-	-	-	-	120	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	2	0	10	0	4	0	4	4	10
Mvmt Flow	3	0	5	66	13	34	7	266	36	40	400	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	809	803	407	787	791	284	413	0	0	302	0	0
Stage 1	487	487	-	298	298	-	-	-	-	-	-	-
Stage 2	322	316	-	489	493	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.3	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.39	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	301	319	648	309	324	736	1157	-	-	1248	-	-
Stage 1	566	554	-	711	671	-	-	-	-	-	-	-
Stage 2	694	659	-	561	550	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	270	307	648	298	312	736	1157	-	-	1248	-	-
Mov Cap-2 Maneuver	270	307	-	298	312	-	-	-	-	-	-	-
Stage 1	563	536	-	707	667	-	-	-	-	-	-	-
Stage 2	646	655	-	539	532	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.1	19.1	0.2	0.7
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1157	-	-	405	366	1248	-	-
HCM Lane V/C Ratio	0.006	-	-	0.02	0.307	0.032	-	-
HCM Control Delay (s)	8.1	-	-	14.1	19.1	8	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.3	0.1	-	-

MOVEMENT SUMMARY

Site: 120 [NE 10th Ave/NE 149th St - 2025 Background AM]

Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 10th Ave												
3	L2	88	11.0	0.054	6.1	LOS A	0.0	0.0	0.00	0.60	0.00	34.4
8	T1	97	8.0	0.055	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	40.0
Approach		184	9.4	0.055	2.9	NA	0.0	0.0	0.00	0.28	0.00	37.1
North: NE 10th Ave												
4	T1	92	24.0	0.234	14.9	LOS B	0.8	24.3	0.48	1.01	0.49	30.9
14	R2	11	33.0	0.234	10.5	LOS B	0.8	24.3	0.48	1.01	0.49	30.7
Approach		103	25.0	0.234	14.4	LOS B	0.8	24.3	0.48	1.01	0.49	30.9
West: NE 149th St												
5	L2	33	0.0	0.045	10.2	LOS B	0.2	5.0	0.47	0.85	0.47	32.9
12	R2	412	2.0	0.261	6.0	LOS A	0.0	0.0	0.00	0.59	0.00	34.8
Approach		446	1.9	0.261	6.3	LOS A	0.2	5.0	0.04	0.61	0.04	34.7
All Vehicles		733	7.0	0.261	6.6	NA	0.8	24.3	0.09	0.58	0.09	34.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	159	51	53	119	160	253
Future Vol, veh/h	159	51	53	119	160	253
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	120
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	11	6	12	6	3
Mvmt Flow	175	56	58	131	176	278

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	189	0	-	0	530	124
Stage 1	-	-	-	-	124	-
Stage 2	-	-	-	-	406	-
Critical Hdwy	4.13	-	-	-	6.46	6.23
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.227	-	-	-	3.554	3.327
Pot Cap-1 Maneuver	1379	-	-	-	503	924
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	664	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1379	-	-	-	437	924
Mov Cap-2 Maneuver	-	-	-	-	437	-
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	664	-

Approach	EB	WB	SB
HCM Control Delay, s	6	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1379	-	-	-	437	924
HCM Lane V/C Ratio	0.127	-	-	-	0.402	0.301
HCM Control Delay (s)	8	0	-	-	18.7	10.6
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1.9	1.3



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	187	1081	63	4	67	617	94	62	180	67	1	113
Future Volume (vph)	187	1081	63	4	67	617	94	62	180	67	1	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95		0.97	1.00	1.00		0.97
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	1.00	0.85		1.00	0.98		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	1687	3438	1455		1635	3319		3127	1759	1509		3214
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00		0.95
Satd. Flow (perm)	1687	3438	1455		1635	3319		3127	1759	1509		3214
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	193	1114	65	4	69	636	97	64	186	69	1	116
RTOR Reduction (vph)	0	0	34	0	0	5	0	0	0	58	0	0
Lane Group Flow (vph)	193	1114	31	0	73	728	0	64	186	11	0	117
Confl. Peds. (#/hr)								1				
Heavy Vehicles (%)	7%	5%	11%	0%	11%	7%	4%	12%	8%	7%	5%	9%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	Prot
Protected Phases	5	2		1	1	6		3	8		7	7
Permitted Phases			2							8		
Actuated Green, G (s)	19.4	56.2	56.2		11.1	47.9		6.7	19.6	19.6		10.1
Effective Green, g (s)	19.4	56.2	56.2		11.1	47.9		6.7	19.6	19.6		10.1
Actuated g/C Ratio	0.16	0.48	0.48		0.09	0.41		0.06	0.17	0.17		0.09
Clearance Time (s)	6.0	6.0	6.0		5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	277	1637	692		153	1347		177	292	250		275
v/s Ratio Prot	c0.11	c0.32			0.04	0.22		0.02	c0.11			c0.04
v/s Ratio Perm			0.02							0.01		
v/c Ratio	0.70	0.68	0.04		0.48	0.54		0.36	0.64	0.05		0.43
Uniform Delay, d1	46.5	23.9	16.5		50.7	26.7		53.6	45.9	41.3		51.2
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Incremental Delay, d2	7.4	1.2	0.0		2.3	0.4		1.3	4.5	0.1		1.1
Delay (s)	53.9	25.1	16.6		53.0	27.1		54.9	50.4	41.4		52.3
Level of Service	D	C	B		D	C		D	D	D		D
Approach Delay (s)		28.8				29.5			49.3			
Approach LOS		C				C			D			

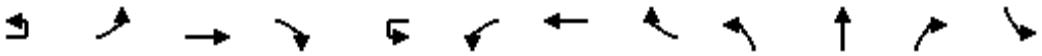
Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	118.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	123	150
Future Volume (vph)	123	150
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	5.0	5.0
Lane Util. Factor	1.00	1.00
Frpb, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1810	1548
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1810	1548
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	127	155
RTOR Reduction (vph)	0	125
Lane Group Flow (vph)	127	30
Confl. Peds. (#/hr)		1
Heavy Vehicles (%)	5%	3%
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Actuated Green, G (s)	23.0	23.0
Effective Green, g (s)	23.0	23.0
Actuated g/C Ratio	0.19	0.19
Clearance Time (s)	5.0	5.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	352	301
v/s Ratio Prot	c0.07	
v/s Ratio Perm		0.02
v/c Ratio	0.36	0.10
Uniform Delay, d1	41.1	39.0
Progression Factor	1.00	1.00
Incremental Delay, d2	0.6	0.1
Delay (s)	41.8	39.2
Level of Service	D	D
Approach Delay (s)	43.8	
Approach LOS	D	

Intersection Summary



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	13	78	1172	32	4	50	748	13	23	29	64	10
Future Volume (vph)	13	78	1172	32	4	50	748	13	23	29	64	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	6.0	4.5		4.5	6.0	4.5	4.5	6.0	6.0	4.5
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (prot)		1760	3438	1568		1772	3374	1615	1719	1667	1583	1805
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (perm)		1760	3438	1568		1772	3374	1615	1719	1667	1583	1805
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	13	80	1208	33	4	52	771	13	24	30	66	10
RTOR Reduction (vph)	0	0	0	12	0	0	0	6	0	0	59	0
Lane Group Flow (vph)	0	93	1208	21	0	56	771	7	24	30	7	10
Heavy Vehicles (%)	0%	3%	5%	3%	0%	2%	7%	0%	5%	14%	2%	0%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	NA	Perm	Prot
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6			8	
Actuated Green, G (s)		10.7	56.8	62.5		7.3	53.4	56.0	5.7	10.6	10.6	2.6
Effective Green, g (s)		10.7	56.8	62.5		7.3	53.4	56.0	5.7	10.6	10.6	2.6
Actuated g/C Ratio		0.11	0.58	0.64		0.07	0.54	0.57	0.06	0.11	0.11	0.03
Clearance Time (s)		4.5	6.0	4.5		4.5	6.0	4.5	4.5	6.0	6.0	4.5
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		191	1986	996		131	1832	920	99	179	170	47
v/s Ratio Prot		c0.05	c0.35	0.00		0.03	0.23	0.00	c0.01	c0.02		0.01
v/s Ratio Perm				0.01				0.00			0.00	
v/c Ratio		0.49	0.61	0.02		0.43	0.42	0.01	0.24	0.17	0.04	0.21
Uniform Delay, d1		41.2	13.5	6.6		43.5	13.3	9.1	44.2	39.8	39.3	46.8
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.0	0.5	0.0		2.2	0.2	0.0	1.3	0.4	0.1	2.3
Delay (s)		43.2	14.0	6.6		45.7	13.5	9.1	45.5	40.3	39.4	49.1
Level of Service		D	B	A		D	B	A	D	D	D	D
Approach Delay (s)			15.9				15.5			40.8		
Approach LOS			B				B			D		

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	98.3	Sum of lost time (s)	21.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	18	34
Future Volume (vph)	18	34
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.0	
Lane Util. Factor	1.00	
Frt	0.90	
Flt Protected	1.00	
Satd. Flow (prot)	1674	
Flt Permitted	1.00	
Satd. Flow (perm)	1674	
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	19	35
RTOR Reduction (vph)	32	0
Lane Group Flow (vph)	22	0
Heavy Vehicles (%)	7%	0%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	7.5	
Effective Green, g (s)	7.5	
Actuated g/C Ratio	0.08	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	127	
v/s Ratio Prot	0.01	
v/s Ratio Perm		
v/c Ratio	0.17	
Uniform Delay, d1	42.5	
Progression Factor	1.00	
Incremental Delay, d2	0.6	
Delay (s)	43.1	
Level of Service	D	
Approach Delay (s)	44.1	
Approach LOS	D	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	60	23	78	80	37	207	266	203	31	130	107
Future Volume (veh/h)	69	60	23	78	80	37	207	266	203	31	130	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1885	1841	1841	1900	1781	1781
Adj Flow Rate, veh/h	80	70	27	91	93	43	241	309	236	36	151	124
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
Percent Heavy Veh, %	6	6	6	6	6	6	1	4	4	0	8	8
Cap, veh/h	218	153	48	206	150	59	303	381	291	71	234	192
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.17	0.39	0.39	0.04	0.26	0.26
Sat Flow, veh/h	581	794	248	539	780	308	1795	968	739	1810	905	743
Grp Volume(v), veh/h	177	0	0	227	0	0	241	0	545	36	0	275
Grp Sat Flow(s),veh/h/ln	1624	0	0	1626	0	0	1795	0	1708	1810	0	1648
Q Serve(g_s), s	0.0	0.0	0.0	1.6	0.0	0.0	6.3	0.0	14.0	1.0	0.0	7.3
Cycle Q Clear(g_c), s	4.5	0.0	0.0	6.1	0.0	0.0	6.3	0.0	14.0	1.0	0.0	7.3
Prop In Lane	0.45		0.15	0.40		0.19	1.00		0.43	1.00		0.45
Lane Grp Cap(c), veh/h	419	0	0	415	0	0	303	0	672	71	0	425
V/C Ratio(X)	0.42	0.00	0.00	0.55	0.00	0.00	0.80	0.00	0.81	0.50	0.00	0.65
Avail Cap(c_a), veh/h	1409	0	0	1438	0	0	1002	0	1423	1021	0	1376
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.8	0.0	0.0	18.4	0.0	0.0	19.6	0.0	13.3	23.1	0.0	16.2
Incr Delay (d2), s/veh	0.7	0.0	0.0	1.1	0.0	0.0	1.8	0.0	2.4	2.0	0.0	1.7
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	0.0	0.0	2.1	0.0	0.0	2.3	0.0	4.0	0.4	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	0.0	0.0	19.5	0.0	0.0	21.4	0.0	15.7	25.1	0.0	17.9
LnGrp LOS	B	A	A	B	A	A	C	A	B	C	A	B
Approach Vol, veh/h		177			227			786			311	
Approach Delay, s/veh		18.5			19.5			17.4			18.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	25.6		15.2	14.9	19.0		15.2				
Change Period (Y+Rc), s	* 6.3	* 6.3		* 5.8	6.6	* 6.3		* 5.8				
Max Green Setting (Gmax), s	* 28	* 41		* 43	27.4	* 41		* 43				
Max Q Clear Time (g_c+I1), s	3.0	16.0		6.5	8.3	9.3		8.1				
Green Ext Time (p_c), s	0.0	3.4		1.0	0.3	1.5		1.4				

Intersection Summary	
HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	263	12	28	171	9	19	76	58	14	42	8
Future Vol, veh/h	10	263	12	28	171	9	19	76	58	14	42	8
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, %	0	3	0	5	4	0	0	0	0	0	0	0
Mvmt Flow	12	306	14	33	199	10	22	88	67	16	49	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	12	10.9	10.2	9.4
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	4%	13%	22%
Vol Thru, %	50%	92%	82%	66%
Vol Right, %	38%	4%	4%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	285	208	64
LT Vol	19	10	28	14
Through Vol	76	263	171	42
RT Vol	58	12	9	8
Lane Flow Rate	178	331	242	74
Geometry Grp	1	1	1	1
Degree of Util (X)	0.261	0.456	0.347	0.117
Departure Headway (Hd)	5.279	4.949	5.165	5.639
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	680	732	699	635
Service Time	3.315	2.958	3.175	3.681
HCM Lane V/C Ratio	0.262	0.452	0.346	0.117
HCM Control Delay	10.2	12	10.9	9.4
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1	2.4	1.6	0.4

Intersection	
Intersection Delay, s/veh	18.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	277	26	83	165	21	24	152	84	18	137	12
Future Vol, veh/h	20	277	26	83	165	21	24	152	84	18	137	12
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, %	11	1	0	6	0	5	0	3	0	0	0	9
Mvmt Flow	23	322	30	97	192	24	28	177	98	21	159	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	21.9	18.1	17	14.1
HCM LOS	C	C	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	6%	31%	11%
Vol Thru, %	58%	86%	61%	82%
Vol Right, %	32%	8%	8%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	260	323	269	167
LT Vol	24	20	83	18
Through Vol	152	277	165	137
RT Vol	84	26	21	12
Lane Flow Rate	302	376	313	194
Geometry Grp	1	1	1	1
Degree of Util (X)	0.543	0.673	0.57	0.372
Departure Headway (Hd)	6.461	6.448	6.556	6.905
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	556	556	547	518
Service Time	4.54	4.521	4.633	4.995
HCM Lane V/C Ratio	0.543	0.676	0.572	0.375
HCM Control Delay	17	21.9	18.1	14.1
HCM Lane LOS	C	C	C	B
HCM 95th-tile Q	3.2	5	3.5	1.7

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	138	15	175	164	22	9	30	113	21	41	9
Future Vol, veh/h	14	138	15	175	164	22	9	30	113	21	41	9
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, %	0	7	0	3	3	5	25	0	4	11	0	0
Mvmt Flow	16	157	17	199	186	25	10	34	128	24	47	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	14.7	10.7	9.9
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	8%	48%	30%
Vol Thru, %	20%	83%	45%	58%
Vol Right, %	74%	9%	6%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	152	167	361	71
LT Vol	9	14	175	21
Through Vol	30	138	164	41
RT Vol	113	15	22	9
Lane Flow Rate	173	190	410	81
Geometry Grp	1	1	1	1
Degree of Util (X)	0.268	0.274	0.576	0.133
Departure Headway (Hd)	5.589	5.191	5.059	5.949
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	643	693	718	602
Service Time	3.628	3.224	3.059	3.993
HCM Lane V/C Ratio	0.269	0.274	0.571	0.135
HCM Control Delay	10.7	10.2	14.7	9.9
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.1	1.1	3.7	0.5

MOVEMENT SUMMARY

Site: 107 [NE Delfel Rd/NE179th St - 2025 Background PM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE Delfel Rd												
3	L2	20	8.0	0.053	13.3	LOS B	0.2	4.8	0.49	0.70	0.49	35.9
8	T1	13	0.0	0.053	5.1	LOS A	0.2	4.8	0.49	0.70	0.49	35.6
18	R2	149	1.0	0.137	4.8	LOS A	0.6	13.9	0.46	0.58	0.46	36.4
Approach		182	1.7	0.137	5.7	LOS A	0.6	13.9	0.46	0.60	0.46	36.3
East: NE 179th St												
1	L2	145	7.0	0.255	10.7	LOS B	1.5	37.9	0.22	0.47	0.22	37.8
6	T1	437	2.0	0.255	2.9	LOS A	1.5	38.0	0.21	0.40	0.21	38.2
16	R2	176	4.0	0.255	3.6	LOS A	1.5	38.0	0.20	0.34	0.20	37.2
Approach		758	3.4	0.255	4.5	LOS A	1.5	38.0	0.21	0.40	0.21	37.9
North: NE Delfel Rd												
7	L2	204	7.0	0.258	12.5	LOS B	1.0	25.2	0.49	0.79	0.49	34.8
4	T1	4	0.0	0.258	4.5	LOS A	1.0	25.2	0.49	0.79	0.49	34.5
14	R2	9	9.0	0.258	5.5	LOS A	1.0	25.2	0.49	0.79	0.49	33.1
Approach		218	6.9	0.258	12.1	LOS B	1.0	25.2	0.49	0.79	0.49	34.7
West: NE 179th St												
5	L2	26	6.0	0.144	12.1	LOS B	0.8	19.8	0.50	0.51	0.50	37.6
2	T1	308	3.0	0.144	4.1	LOS A	0.8	20.7	0.49	0.45	0.49	37.6
12	R2	11	0.0	0.144	4.6	LOS A	0.8	20.7	0.48	0.42	0.48	36.3
Approach		345	3.1	0.144	4.7	LOS A	0.8	20.7	0.49	0.46	0.49	37.6
All Vehicles		1503	3.7	0.258	5.8	LOS A	1.5	38.0	0.34	0.49	0.34	37.1

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 109 [I-5 Southbound Ramp/NE 179th St - 2025 Background PM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE 179th St												
1	L2	911	5.0	0.661	10.2	LOS B	0.0	0.0	0.00	0.65	0.00	35.7
6	T1	567	6.0	0.467	3.5	LOS A	0.0	0.0	0.00	0.32	0.00	39.2
Approach		1478	5.4	0.661	7.6	LOS A	0.0	0.0	0.00	0.53	0.00	36.9
North: I-5 SB Off-ramp												
7	L2	506	10.0	0.467	18.1	LOS B	2.6	70.4	0.74	0.98	0.98	32.3
4	T1	4	50.0	0.467	13.1	LOS B	2.6	70.4	0.74	0.97	0.97	32.7
14	R2	118	9.0	0.467	10.3	LOS B	2.6	70.4	0.74	0.97	0.97	31.8
Approach		628	10.1	0.467	16.6	LOS B	2.6	70.4	0.74	0.98	0.98	32.3
West: NE 179th St												
2	T1	306	6.0	0.838	91.1	LOS F	11.9	311.9	1.00	1.60	2.71	15.8
12	R2	378	6.0	0.239	3.3	LOS A	0.0	0.0	0.00	0.40	0.00	37.8
Approach		685	6.0	0.838	42.5	LOS D	11.9	311.9	0.45	0.93	1.21	23.1
All Vehicles		2791	6.6	0.838	18.2	LOS B	11.9	311.9	0.28	0.73	0.52	31.4

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 111 [I-5 Northbound Ramp/NE 179th St - 2025 Background PM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: I-5 NB Off-ramp												
3	L2	397	5.0	0.170	12.0	LOS B	0.6	16.5	0.48	0.77	0.48	34.4
8	T1	1	0.0	0.170	4.8	LOS A	0.6	16.5	0.46	0.75	0.46	34.2
18	R2	1300	2.0	0.792	3.6	LOS A	0.0	0.0	0.00	0.40	0.00	36.6
Approach		1698	2.7	0.792	5.6	LOS A	0.6	16.5	0.11	0.48	0.11	35.9
East: NE 179th St												
6	T1	1129	2.0	0.850	11.2	LOS B	10.8	276.7	0.89	1.11	1.36	33.0
16	R2	582	3.0	0.850	11.0	LOS B	10.8	276.7	0.89	1.09	1.32	31.5
Approach		1711	2.3	0.850	11.2	LOS B	10.8	276.7	0.89	1.10	1.34	32.4
West: NE 179th St												
5	L2	136	3.0	0.281	10.2	LOS B	0.0	0.0	0.00	0.46	0.00	38.4
2	T1	702	9.0	0.281	2.9	LOS A	0.0	0.0	0.00	0.36	0.00	38.1
Approach		838	8.0	0.281	4.1	LOS A	0.0	0.0	0.00	0.37	0.00	38.1
All Vehicles		4247	3.6	0.850	7.5	LOS A	10.8	276.7	0.40	0.71	0.59	34.9

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 113 [NE 15th Ave/NE179th St - 2025 Background PM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 15th Ave												
3	L2	507	3.0	0.750	19.8	LOS B	6.5	166.0	0.92	1.14	1.42	31.3
8	T1	31	3.0	0.559	11.4	LOS B	3.3	85.3	0.84	0.98	1.09	34.3
18	R2	240	5.0	0.559	11.8	LOS B	3.3	85.3	0.84	0.98	1.09	33.0
Approach		778	3.6	0.750	17.0	LOS B	6.5	166.0	0.89	1.09	1.31	31.9
East: NE 179th St												
1	L2	170	2.0	0.483	15.4	LOS B	2.6	66.6	0.76	0.94	0.92	34.6
6	T1	332	3.0	0.483	8.0	LOS A	2.8	71.7	0.76	0.88	0.91	35.3
16	R2	185	3.0	0.483	7.9	LOS A	2.8	71.7	0.76	0.84	0.90	34.7
Approach		687	2.8	0.483	9.8	LOS A	2.8	71.7	0.76	0.88	0.91	35.0
North: NE 15th Ave												
7	L2	169	3.0	0.360	14.8	LOS B	1.9	49.0	0.75	0.89	0.79	34.4
4	T1	65	3.0	0.360	7.6	LOS A	1.9	49.0	0.75	0.89	0.79	34.0
14	R2	282	3.0	0.357	7.2	LOS A	2.0	51.3	0.75	0.84	0.76	35.3
Approach		516	3.0	0.360	9.8	LOS A	2.0	51.3	0.75	0.87	0.77	34.8
West: NE 179th St												
5	L2	636	3.0	0.526	12.4	LOS B	4.2	106.8	0.69	0.74	0.69	34.1
2	T1	549	6.0	0.526	6.3	LOS A	4.2	106.8	0.71	0.65	0.75	36.3
12	R2	491	2.0	0.344	4.4	LOS A	2.4	59.9	0.47	0.52	0.47	36.2
Approach		1676	3.7	0.526	8.1	LOS A	4.2	107.7	0.63	0.64	0.65	35.4
All Vehicles		3657	3.4	0.750	10.5	LOS B	6.5	166.0	0.73	0.81	0.85	34.4

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 114 [NE 29th Ave/NE179th St - 2025 Background PM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 29th Ave												
3	L2	62	7.0	0.183	12.5	LOS B	0.7	18.1	0.55	0.73	0.55	34.9
8	T1	99	1.0	0.183	6.4	LOS A	0.7	18.4	0.55	0.72	0.55	35.2
18	R2	155	3.0	0.183	6.2	LOS A	0.7	18.4	0.54	0.69	0.54	35.3
Approach		316	3.2	0.183	7.5	LOS A	0.7	18.4	0.54	0.71	0.54	35.2
East: NE 179th St												
1	L2	87	0.0	0.272	10.7	LOS B	1.3	33.2	0.39	0.56	0.39	36.1
6	T1	501	6.0	0.272	5.2	LOS A	1.3	33.6	0.39	0.51	0.39	36.2
16	R2	8	0.0	0.272	5.1	LOS A	1.3	33.6	0.38	0.48	0.38	35.4
Approach		597	5.0	0.272	6.0	LOS A	1.3	33.6	0.39	0.52	0.39	36.2
North: NE 29th Ave												
7	L2	8	0.0	0.051	11.6	LOS B	0.2	4.6	0.48	0.58	0.48	36.2
4	T1	43	0.0	0.051	5.5	LOS A	0.2	4.7	0.48	0.59	0.48	36.1
14	R2	44	0.0	0.051	5.6	LOS A	0.2	4.7	0.47	0.61	0.47	35.6
Approach		96	0.0	0.051	6.1	LOS A	0.2	4.7	0.47	0.60	0.47	35.9
West: NE 179th St												
5	L2	73	0.0	0.352	10.4	LOS B	1.8	45.6	0.31	0.48	0.31	36.8
2	T1	711	4.0	0.352	4.5	LOS A	1.8	46.0	0.31	0.46	0.31	36.9
12	R2	60	6.0	0.352	4.7	LOS A	1.8	46.0	0.31	0.44	0.31	35.8
Approach		843	3.8	0.352	5.0	LOS A	1.8	46.0	0.31	0.46	0.31	36.8
All Vehicles		1852	3.9	0.352	5.8	LOS A	1.8	46.0	0.38	0.53	0.38	36.2

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 115 [NE 50th Ave/NE179th St - 2025 Background PM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 50th Ave												
3	L2	189	6.0	0.218	11.9	LOS B	0.9	23.4	0.50	0.78	0.50	33.8
8	T1	154	3.0	0.218	5.9	LOS A	0.9	23.4	0.49	0.59	0.49	36.2
18	R2	67	6.0	0.218	5.9	LOS A	0.9	23.4	0.49	0.59	0.49	35.1
Approach		410	4.9	0.218	8.7	LOS A	0.9	23.4	0.50	0.68	0.50	34.8
East: NE 179th St												
1	L2	51	5.0	0.222	11.5	LOS B	0.9	24.4	0.48	0.61	0.48	35.7
6	T1	333	6.0	0.222	5.8	LOS A	0.9	24.7	0.48	0.58	0.48	35.9
16	R2	39	7.0	0.222	5.9	LOS A	0.9	24.7	0.47	0.56	0.47	34.9
Approach		423	6.0	0.222	6.5	LOS A	0.9	24.7	0.48	0.58	0.48	35.8
North: NE 50th Ave												
7	L2	19	18.0	0.099	12.4	LOS B	0.4	9.9	0.49	0.61	0.49	35.5
4	T1	68	2.0	0.099	5.6	LOS A	0.4	9.9	0.49	0.61	0.49	35.9
14	R2	89	12.0	0.101	6.1	LOS A	0.4	10.7	0.49	0.65	0.49	35.2
Approach		176	8.8	0.101	6.6	LOS A	0.4	10.7	0.49	0.63	0.49	35.5
West: NE 179th St												
5	L2	109	4.0	0.296	10.5	LOS B	1.5	37.5	0.31	0.52	0.31	36.3
2	T1	423	3.0	0.296	4.5	LOS A	1.5	37.5	0.31	0.50	0.31	36.7
12	R2	156	13.0	0.296	4.8	LOS A	1.5	38.6	0.32	0.47	0.32	35.6
Approach		688	5.4	0.296	5.5	LOS A	1.5	38.6	0.31	0.50	0.31	36.4
All Vehicles		1697	5.8	0.296	6.6	LOS A	1.5	38.6	0.42	0.58	0.42	35.7

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	288	113	53	155	6	128	645	100	10	376	52
Future Volume (veh/h)	76	288	113	53	155	6	128	645	100	10	376	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1752	1752	1752	1841	1870	1870	1411	1856	1856
Adj Flow Rate, veh/h	81	306	120	56	165	6	136	686	106	11	400	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, %	2	2	2	10	10	10	4	2	2	33	3	3
Cap, veh/h	119	367	137	124	333	11	172	730	113	18	601	83
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.10	0.46	0.46	0.01	0.38	0.38
Sat Flow, veh/h	216	1080	402	222	981	33	1753	1582	244	1344	1597	220
Grp Volume(v), veh/h	507	0	0	227	0	0	136	0	792	11	0	455
Grp Sat Flow(s),veh/h/ln	1698	0	0	1236	0	0	1753	0	1826	1344	0	1816
Q Serve(g_s), s	13.9	0.0	0.0	0.0	0.0	0.0	7.0	0.0	38.0	0.8	0.0	19.2
Cycle Q Clear(g_c), s	25.7	0.0	0.0	11.8	0.0	0.0	7.0	0.0	38.0	0.8	0.0	19.2
Prop In Lane	0.16		0.24	0.25		0.03	1.00		0.13	1.00		0.12
Lane Grp Cap(c), veh/h	622	0	0	469	0	0	172	0	843	18	0	684
V/C Ratio(X)	0.81	0.00	0.00	0.48	0.00	0.00	0.79	0.00	0.94	0.61	0.00	0.67
Avail Cap(c_a), veh/h	992	0	0	784	0	0	665	0	911	510	0	906
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.4	0.0	0.0	23.4	0.0	0.0	40.7	0.0	23.6	45.2	0.0	23.9
Incr Delay (d2), s/veh	2.9	0.0	0.0	0.8	0.0	0.0	7.9	0.0	16.5	29.6	0.0	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	10.6	0.0	0.0	3.8	0.0	0.0	3.2	0.0	17.9	0.4	0.0	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	0.0	0.0	24.2	0.0	0.0	48.6	0.0	40.1	74.9	0.0	25.0
LnGrp LOS	C	A	A	C	A	A	D	A	D	E	A	C
Approach Vol, veh/h		507			227			928			466	
Approach Delay, s/veh		31.2			24.2			41.3			26.2	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	37.3	14.1	40.7	37.3	6.3	48.5
Change Period (Y+Rc), s	* 6	* 5.1	* 6	* 6	* 5.1	* 6
Max Green Setting (Gmax), s	* 52	* 35	* 46	* 52	* 35	* 46
Max Q Clear Time (g_c+I1), s	13.8	9.0	21.2	27.7	2.8	40.0
Green Ext Time (p_c), s	1.6	0.3	2.5	3.6	0.0	2.5

Intersection Summary	
HCM 6th Ctrl Delay	33.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	22	0	21	0	0	0	33	356	0	0	211	31
Future Vol, veh/h	22	0	21	0	0	0	33	356	0	0	211	31
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	-	-	-2	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	10	0	0	0	3	3	0	0	1	0
Mvmt Flow	28	0	27	0	0	0	42	456	0	0	271	40

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	831	831	291	845	851	456	311	0	0	456	0	0
Stage 1	291	291	-	540	540	-	-	-	-	-	-	-
Stage 2	540	540	-	305	311	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.3	7.1	6.5	6.2	4.13	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.39	3.5	4	3.3	2.227	-	-	2.2	-	-
Pot Cap-1 Maneuver	291	307	730	285	299	609	1244	-	-	1115	-	-
Stage 1	721	675	-	530	524	-	-	-	-	-	-	-
Stage 2	530	524	-	709	662	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	281	293	730	265	286	609	1244	-	-	1115	-	-
Mov Cap-2 Maneuver	281	293	-	265	286	-	-	-	-	-	-	-
Stage 1	689	675	-	506	500	-	-	-	-	-	-	-
Stage 2	506	500	-	683	662	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.4	0	0.7	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1244	-	-	402	-	1115	-	-
HCM Lane V/C Ratio	0.034	-	-	0.137	-	-	-	-
HCM Control Delay (s)	8	0	-	15.4	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	-	0	-	-

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	10	14	393	212	16
Future Vol, veh/h	18	10	14	393	212	16
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	19	11	15	423	228	17
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.5	11.7	9.3
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	3%	64%	0%
Vol Thru, %	97%	0%	93%
Vol Right, %	0%	36%	7%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	407	28	228
LT Vol	14	18	0
Through Vol	393	0	212
RT Vol	0	10	16
Lane Flow Rate	438	30	245
Geometry Grp	1	1	1
Degree of Util (X)	0.516	0.044	0.299
Departure Headway (Hd)	4.248	5.264	4.384
Convergence, Y/N	Yes	Yes	Yes
Cap	853	680	821
Service Time	2.248	3.299	2.401
HCM Lane V/C Ratio	0.513	0.044	0.298
HCM Control Delay	11.7	8.5	9.3
HCM Lane LOS	B	A	A
HCM 95th-tile Q	3	0.1	1.3

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	13	10	11	42	3	28	6	331	53	17	237	11
Future Vol, veh/h	13	10	11	42	3	28	6	331	53	17	237	11
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	120	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	4	33	6	0	3	5	17	4	0
Mvmt Flow	15	12	13	50	4	33	7	394	63	20	282	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	787	801	292	785	776	427	295	0	0	458	0	0
Stage 1	329	329	-	441	441	-	-	-	-	-	-	-
Stage 2	458	472	-	344	335	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.14	6.83	6.26	4.1	-	-	4.27	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.14	5.83	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.14	5.83	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.536	4.297	3.354	2.2	-	-	2.353	-	-
Pot Cap-1 Maneuver	312	320	752	308	295	619	1278	-	-	1028	-	-
Stage 1	688	650	-	591	528	-	-	-	-	-	-	-
Stage 2	587	562	-	667	591	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	287	312	750	287	288	618	1278	-	-	1027	-	-
Mov Cap-2 Maneuver	287	312	-	287	288	-	-	-	-	-	-	-
Stage 1	685	638	-	587	525	-	-	-	-	-	-	-
Stage 2	549	559	-	629	580	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.9	18.1	0.1	0.6
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1278	-	-	370	361	1027	-	-
HCM Lane V/C Ratio	0.006	-	-	0.109	0.241	0.02	-	-
HCM Control Delay (s)	7.8	-	-	15.9	18.1	8.6	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.9	0.1	-	-

MOVEMENT SUMMARY

Site: 120 [NE 10th Ave/NE 149th St - 2025 Background PM]

Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 10th Ave												
3	L2	377	3.0	0.214	6.0	LOS A	0.0	0.0	0.00	0.60	0.00	34.7
8	T1	97	2.0	0.052	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	40.0
Approach		473	2.8	0.214	4.7	NA	0.0	0.0	0.00	0.47	0.00	35.7
North: NE 10th Ave												
4	T1	133	1.0	0.357	16.2	LOS C	1.6	40.9	0.63	1.04	0.80	30.8
14	R2	29	0.0	0.357	12.7	LOS B	1.6	40.9	0.63	1.04	0.80	30.9
Approach		162	0.8	0.357	15.5	LOS C	1.6	40.9	0.63	1.04	0.80	30.8
West: NE 149th St												
5	L2	14	11.0	0.033	14.9	LOS B	0.1	3.5	0.63	0.91	0.63	30.7
12	R2	266	2.0	0.168	6.0	LOS A	0.0	0.0	0.00	0.59	0.00	34.8
Approach		280	2.4	0.168	6.4	LOS A	0.1	3.5	0.03	0.61	0.03	34.6
All Vehicles		915	2.3	0.357	7.2	NA	1.6	40.9	0.12	0.62	0.15	34.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	230	134	75	150	126	173
Future Vol, veh/h	230	134	75	150	126	173
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	120
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	0	7	5	3
Mvmt Flow	250	146	82	163	137	188

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	245	0	-	0	810	164
Stage 1	-	-	-	-	164	-
Stage 2	-	-	-	-	646	-
Critical Hdwy	4.11	-	-	-	6.45	6.23
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.209	-	-	-	3.545	3.327
Pot Cap-1 Maneuver	1327	-	-	-	345	878
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	516	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1327	-	-	-	274	878
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	516	-

Approach	EB	WB	SB
HCM Control Delay, s	5.3	0	18.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1327	-	-	-	274	878
HCM Lane V/C Ratio	0.188	-	-	-	0.5	0.214
HCM Control Delay (s)	8.3	0	-	-	30.6	10.2
HCM Lane LOS	A	A	-	-	D	B
HCM 95th %tile Q(veh)	0.7	-	-	-	2.6	0.8

Appendix G 2025 Total Traffic Conditions Worksheets



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	89	498	37	4	55	845	97	41	92	51	72	104
Future Volume (vph)	89	498	37	4	55	845	97	41	92	51	72	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95		0.97	1.00	1.00	0.97	1.00
Frt	1.00	1.00	0.85		1.00	0.98		1.00	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1719	3252	1568		1665	3300		2736	1652	1292	3400	1827
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1719	3252	1568		1665	3300		2736	1652	1292	3400	1827
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	96	535	40	4	59	909	104	44	99	55	77	112
RTOR Reduction (vph)	0	0	20	0	0	4	0	0	0	48	0	0
Lane Group Flow (vph)	96	535	20	0	63	1009	0	44	99	7	77	112
Heavy Vehicles (%)	5%	11%	3%	0%	9%	7%	14%	28%	15%	25%	3%	4%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	NA
Protected Phases	5	2		1	1	6		3	8		7	4
Permitted Phases			2							8		
Actuated Green, G (s)	11.6	51.2	51.2		8.2	47.8		6.0	13.3	13.3	8.0	15.3
Effective Green, g (s)	11.6	51.2	51.2		8.2	47.8		6.0	13.3	13.3	8.0	15.3
Actuated g/C Ratio	0.11	0.50	0.50		0.08	0.47		0.06	0.13	0.13	0.08	0.15
Clearance Time (s)	6.0	6.0	6.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	196	1637	789		134	1551		161	216	168	267	274
v/s Ratio Prot	c0.06	c0.16			0.04	c0.31		0.02	0.06		c0.02	c0.06
v/s Ratio Perm			0.01							0.01		
v/c Ratio	0.49	0.33	0.03		0.47	0.65		0.27	0.46	0.04	0.29	0.41
Uniform Delay, d1	42.3	15.0	12.7		44.7	20.6		45.8	40.9	38.6	44.2	39.1
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.1	0.0		2.6	1.0		0.9	1.5	0.1	0.6	1.0
Delay (s)	44.2	15.1	12.7		47.3	21.6		46.7	42.4	38.7	44.8	40.1
Level of Service	D	B	B		D	C		D	D	D	D	D
Approach Delay (s)		19.1				23.1			42.3			39.8
Approach LOS		B				C			D			D

Intersection Summary			
HCM 2000 Control Delay	26.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	101.7	Sum of lost time (s)	21.0
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Traffic Volume (vph)	187
Future Volume (vph)	187
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.0
Lane Util. Factor	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1524
Flt Permitted	1.00
Satd. Flow (perm)	1524
Peak-hour factor, PHF	0.93
Adj. Flow (vph)	201
RTOR Reduction (vph)	171
Lane Group Flow (vph)	30
Heavy Vehicles (%)	6%
Turn Type	Perm
Protected Phases	
Permitted Phases	4
Actuated Green, G (s)	15.3
Effective Green, g (s)	15.3
Actuated g/C Ratio	0.15
Clearance Time (s)	5.0
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	229
v/s Ratio Prot	
v/s Ratio Perm	0.02
v/c Ratio	0.13
Uniform Delay, d1	37.4
Progression Factor	1.00
Incremental Delay, d2	0.3
Delay (s)	37.7
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	12	28	609	12	1	49	876	4	26	14	48	4
Future Volume (vph)	12	28	609	12	1	49	876	4	26	14	48	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	6.0	4.5		4.5	6.0	4.5	4.5	6.0	6.0	4.5
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (prot)		1805	3252	1369		1721	3312	1077	1656	1696	1455	1805
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (perm)		1805	3252	1369		1721	3312	1077	1656	1696	1455	1805
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.95	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	13	30	655	13	1	53	942	4	28	15	52	4
RTOR Reduction (vph)	0	0	0	7	0	0	0	2	0	0	43	0
Lane Group Flow (vph)	0	43	655	6	0	54	942	2	28	15	9	4
Heavy Vehicles (%)	0%	0%	11%	18%	0%	5%	9%	50%	9%	12%	11%	0%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	NA	Perm	Prot
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6			8	
Actuated Green, G (s)		4.5	29.8	33.9		7.1	32.4	33.3	4.1	12.2	12.2	0.9
Effective Green, g (s)		4.5	29.8	33.9		7.1	32.4	33.3	4.1	12.2	12.2	0.9
Actuated g/C Ratio		0.06	0.42	0.48		0.10	0.46	0.47	0.06	0.17	0.17	0.01
Clearance Time (s)		4.5	6.0	4.5		4.5	6.0	4.5	4.5	6.0	6.0	4.5
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		114	1364	653		172	1511	505	95	291	250	22
v/s Ratio Prot		0.02	0.20	0.00		c0.03	c0.28	0.00	c0.02	c0.01		0.00
v/s Ratio Perm				0.00				0.00			0.01	
v/c Ratio		0.38	0.48	0.01		0.31	0.62	0.00	0.29	0.05	0.04	0.18
Uniform Delay, d1		31.9	15.0	9.7		29.7	14.7	10.0	32.1	24.6	24.5	34.7
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.1	0.3	0.0		1.1	0.8	0.0	1.7	0.1	0.1	4.0
Delay (s)		34.0	15.2	9.7		30.7	15.5	10.0	33.8	24.6	24.6	38.6
Level of Service		C	B	A		C	B	B	C	C	C	D
Approach Delay (s)			16.3				16.3			27.3		
Approach LOS			B				B			C		

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	71.0	Sum of lost time (s)	21.0
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	15	77
Future Volume (vph)	15	77
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.0	
Lane Util. Factor	1.00	
Frt	0.87	
Flt Protected	1.00	
Satd. Flow (prot)	1640	
Flt Permitted	1.00	
Satd. Flow (perm)	1640	
Peak-hour factor, PHF	0.93	0.93
Adj. Flow (vph)	16	83
RTOR Reduction (vph)	72	0
Lane Group Flow (vph)	27	0
Heavy Vehicles (%)	8%	0%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	9.0	
Effective Green, g (s)	9.0	
Actuated g/C Ratio	0.13	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	207	
v/s Ratio Prot	c0.02	
v/s Ratio Perm		
v/c Ratio	0.13	
Uniform Delay, d1	27.5	
Progression Factor	1.00	
Incremental Delay, d2	0.3	
Delay (s)	27.8	
Level of Service	C	
Approach Delay (s)	28.2	
Approach LOS	C	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	55	39	108	61	33	126	92	79	18	131	90
Future Volume (veh/h)	72	55	39	108	61	33	126	92	79	18	131	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1722	1722	1722	1752	1678	1678	1693	1722	1722
Adj Flow Rate, veh/h	96	73	52	144	81	44	168	123	105	24	175	120
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh, %	7	7	7	12	12	12	10	15	15	14	12	12
Cap, veh/h	231	157	88	276	126	57	213	303	259	46	232	159
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.13	0.36	0.36	0.03	0.24	0.24
Sat Flow, veh/h	533	655	366	689	524	237	1668	836	713	1612	952	653
Grp Volume(v), veh/h	221	0	0	269	0	0	168	0	228	24	0	295
Grp Sat Flow(s),veh/h/ln	1553	0	0	1451	0	0	1668	0	1549	1612	0	1605
Q Serve(g_s), s	0.0	0.0	0.0	2.3	0.0	0.0	4.9	0.0	5.5	0.7	0.0	8.5
Cycle Q Clear(g_c), s	6.0	0.0	0.0	8.3	0.0	0.0	4.9	0.0	5.5	0.7	0.0	8.5
Prop In Lane	0.43		0.24	0.54		0.16	1.00		0.46	1.00		0.41
Lane Grp Cap(c), veh/h	476	0	0	459	0	0	213	0	562	46	0	391
V/C Ratio(X)	0.46	0.00	0.00	0.59	0.00	0.00	0.79	0.00	0.41	0.53	0.00	0.75
Avail Cap(c_a), veh/h	1371	0	0	1293	0	0	893	0	1271	895	0	1319
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.6	0.0	0.0	17.4	0.0	0.0	21.1	0.0	11.9	23.9	0.0	17.5
Incr Delay (d2), s/veh	0.7	0.0	0.0	1.2	0.0	0.0	2.5	0.0	0.5	3.4	0.0	3.0
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	1.9	0.0	0.0	2.5	0.0	0.0	1.7	0.0	1.4	0.3	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.3	0.0	0.0	18.6	0.0	0.0	23.6	0.0	12.3	27.3	0.0	20.5
LnGrp LOS	B	A	A	B	A	A	C	A	B	C	A	C
Approach Vol, veh/h		221			269			396			319	
Approach Delay, s/veh		17.3			18.6			17.1			21.0	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.7	24.4		17.8	13.7	18.4		17.8
Change Period (Y+Rc), s	* 6.3	* 6.3		* 5.8	* 7.3	* 6.3		* 5.8
Max Green Setting (Gmax), s	* 28	* 41		* 43	* 27	* 41		* 43
Max Q Clear Time (g_c+I1), s	2.7	7.5		8.0	6.9	10.5		10.3
Green Ext Time (p_c), s	0.0	1.3		1.3	0.2	1.6		1.7

Intersection Summary	
HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	48	107	5	51	141	26	17	59	33	20	68	29
Future Vol, veh/h	48	107	5	51	141	26	17	59	33	20	68	29
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	0	9	0	4	5	0	8	5	4	0	5	0
Mvmt Flow	64	143	7	68	188	35	23	79	44	27	91	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.6	11.7	10.1	10
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	30%	23%	17%
Vol Thru, %	54%	67%	65%	58%
Vol Right, %	30%	3%	12%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	109	160	218	117
LT Vol	17	48	51	20
Through Vol	59	107	141	68
RT Vol	33	5	26	29
Lane Flow Rate	145	213	291	156
Geometry Grp	1	1	1	1
Degree of Util (X)	0.221	0.309	0.412	0.232
Departure Headway (Hd)	5.47	5.21	5.102	5.355
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	655	691	706	671
Service Time	3.505	3.239	3.13	3.39
HCM Lane V/C Ratio	0.221	0.308	0.412	0.232
HCM Control Delay	10.1	10.6	11.7	10
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	0.8	1.3	2	0.9

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	156	18	79	156	14	29	91	58	41	101	10
Future Vol, veh/h	4	156	18	79	156	14	29	91	58	41	101	10
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	0	2	7	4	4	8	7	5	6	5	8	11
Mvmt Flow	5	197	23	100	197	18	37	115	73	52	128	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	11.8	14.1	12.1	11.8
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	2%	32%	27%
Vol Thru, %	51%	88%	63%	66%
Vol Right, %	33%	10%	6%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	178	178	249	152
LT Vol	29	4	79	41
Through Vol	91	156	156	101
RT Vol	58	18	14	10
Lane Flow Rate	225	225	315	192
Geometry Grp	1	1	1	1
Degree of Util (X)	0.36	0.352	0.492	0.318
Departure Headway (Hd)	5.756	5.632	5.622	5.955
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	622	635	637	600
Service Time	3.825	3.702	3.685	4.028
HCM Lane V/C Ratio	0.362	0.354	0.495	0.32
HCM Control Delay	12.1	11.8	14.1	11.8
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.6	1.6	2.7	1.4

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	136	4	72	107	18	10	40	149	30	22	8
Future Vol, veh/h	4	136	4	72	107	18	10	40	149	30	22	8
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	25	4	0	8	15	19	0	0	5	15	25	14
Mvmt Flow	5	162	5	86	127	21	12	48	177	36	26	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.3	10.6	9.7	9.3
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	3%	37%	50%
Vol Thru, %	20%	94%	54%	37%
Vol Right, %	75%	3%	9%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	199	144	197	60
LT Vol	10	4	72	30
Through Vol	40	136	107	22
RT Vol	149	4	18	8
Lane Flow Rate	237	171	235	71
Geometry Grp	1	1	1	1
Degree of Util (X)	0.302	0.255	0.327	0.109
Departure Headway (Hd)	4.595	5.355	5.023	5.518
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	775	663	708	642
Service Time	2.666	3.442	3.105	3.614
HCM Lane V/C Ratio	0.306	0.258	0.332	0.111
HCM Control Delay	9.7	10.3	10.6	9.3
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	1.3	1	1.4	0.4

MOVEMENT SUMMARY

Site: 107 [NE Delfel Rd/NE179th St - 2025 Total AM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE Delfel Rd												
3	L2	4	50.0	0.018	18.0	LOS B	0.1	1.8	0.58	0.69	0.58	34.5
8	T1	4	0.0	0.018	5.8	LOS A	0.1	1.8	0.58	0.69	0.58	35.4
18	R2	94	17.0	0.118	6.0	LOS A	0.5	13.5	0.56	0.69	0.56	35.8
Approach		101	17.6	0.118	6.4	LOS A	0.5	13.5	0.56	0.69	0.56	35.7
East: NE 179th St												
1	L2	152	10.0	0.164	10.5	LOS B	0.9	24.1	0.09	0.55	0.09	36.8
6	T1	207	12.0	0.164	2.7	LOS A	0.9	24.8	0.09	0.40	0.09	38.3
16	R2	110	15.0	0.164	3.5	LOS A	0.9	24.8	0.09	0.32	0.09	37.4
Approach		469	12.1	0.164	5.4	LOS A	0.9	24.8	0.09	0.43	0.09	37.6
North: NE Delfel Rd												
7	L2	337	2.0	0.358	11.9	LOS B	1.4	36.4	0.44	0.75	0.44	35.0
4	T1	4	0.0	0.358	4.1	LOS A	1.4	36.4	0.44	0.75	0.44	34.5
14	R2	12	11.0	0.358	5.1	LOS A	1.4	36.4	0.44	0.75	0.44	33.1
Approach		353	2.3	0.358	11.6	LOS B	1.4	36.4	0.44	0.75	0.44	34.9
West: NE 179th St												
5	L2	6	0.0	0.215	12.8	LOS B	1.2	32.2	0.61	0.57	0.61	37.9
2	T1	422	7.0	0.215	5.1	LOS A	1.3	34.9	0.60	0.54	0.60	37.3
12	R2	10	67.0	0.215	8.2	LOS A	1.3	34.9	0.60	0.51	0.60	34.6
Approach		437	8.2	0.215	5.3	LOS A	1.3	34.9	0.60	0.54	0.60	37.2
All Vehicles		1360	8.7	0.358	7.0	LOS A	1.4	36.4	0.38	0.57	0.38	36.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 109 [I-5 Southbound Ramp/NE 179th St - 2025 Total AM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE 179th St												
1	L2	733	5.0	0.531	10.2	LOS B	0.0	0.0	0.00	0.65	0.00	35.7
6	T1	327	12.0	0.310	3.5	LOS A	0.0	0.0	0.00	0.32	0.00	39.1
Approach		1060	7.2	0.531	8.2	LOS A	0.0	0.0	0.00	0.55	0.00	36.7
North: I-5 SB Off-ramp												
7	L2	361	8.0	0.306	14.4	LOS B	1.3	35.2	0.63	0.86	0.63	34.2
4	T1	1	0.0	0.306	6.1	LOS A	1.3	35.2	0.62	0.84	0.62	35.1
14	R2	123	11.0	0.306	7.4	LOS A	1.3	35.2	0.62	0.84	0.62	33.6
Approach		485	8.7	0.306	12.6	LOS B	1.3	35.2	0.63	0.85	0.63	34.0
West: NE 179th St												
2	T1	237	9.0	0.284	13.1	LOS B	2.2	58.3	0.92	0.87	0.92	33.8
12	R2	543	4.0	0.337	3.3	LOS A	0.0	0.0	0.00	0.40	0.00	37.8
Approach		780	5.5	0.337	6.3	LOS A	2.2	58.3	0.28	0.54	0.28	36.4
All Vehicles		2324	6.9	0.531	8.5	LOS A	2.2	58.3	0.23	0.61	0.23	36.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 111 [I-5 Northbound Ramp/NE 179th St - 2025 Total AM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: I-5 NB Off-ramp												
3	L2	188	12.0	0.083	11.7	LOS B	0.3	7.8	0.41	0.72	0.41	34.4
8	T1	1	0.0	0.083	4.4	LOS A	0.3	7.8	0.40	0.70	0.40	34.4
18	R2	672	6.0	0.426	3.5	LOS A	0.0	0.0	0.00	0.40	0.00	36.5
Approach		861	7.3	0.426	5.3	LOS A	0.3	7.8	0.09	0.47	0.09	35.9
East: NE 179th St												
6	T1	919	4.0	0.551	5.5	LOS A	3.5	89.3	0.56	0.56	0.59	35.8
16	R2	299	5.0	0.551	5.7	LOS A	3.4	89.0	0.55	0.59	0.57	34.0
Approach		1218	4.2	0.551	5.5	LOS A	3.5	89.3	0.55	0.57	0.58	35.4
West: NE 179th St												
5	L2	127	9.0	0.209	10.3	LOS B	0.0	0.0	0.00	0.50	0.00	37.9
2	T1	499	7.0	0.209	2.9	LOS A	0.0	0.0	0.00	0.36	0.00	38.2
Approach		626	7.4	0.209	4.4	LOS A	0.0	0.0	0.00	0.39	0.00	38.1
All Vehicles		2704	5.9	0.551	5.2	LOS A	3.5	89.3	0.28	0.49	0.29	36.2

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 113 [NE 15th Ave/NE179th St - 2025 Total AM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 15th Ave												
3	L2	274	10.0	0.295	12.5	LOS B	1.3	35.8	0.57	0.80	0.57	34.0
8	T1	59	3.0	0.219	5.8	LOS A	0.9	23.9	0.56	0.66	0.56	37.1
18	R2	113	9.0	0.219	6.3	LOS A	0.9	23.9	0.56	0.66	0.56	35.6
Approach		447	8.8	0.295	10.0	LOS B	1.3	35.8	0.57	0.74	0.57	34.8
East: NE 179th St												
1	L2	123	2.0	0.437	12.7	LOS B	2.2	56.2	0.60	0.70	0.64	36.2
6	T1	590	6.0	0.437	5.9	LOS A	2.2	57.1	0.59	0.64	0.63	36.3
16	R2	121	3.0	0.437	5.9	LOS A	2.2	57.1	0.58	0.59	0.62	35.4
Approach		834	5.0	0.437	6.9	LOS A	2.2	57.1	0.59	0.64	0.63	36.2
North: NE 15th Ave												
7	L2	176	3.0	0.303	14.2	LOS B	1.4	35.3	0.69	0.88	0.69	34.2
4	T1	20	3.0	0.303	7.0	LOS A	1.4	35.3	0.69	0.88	0.69	33.8
14	R2	378	3.0	0.443	7.4	LOS A	2.6	66.2	0.74	0.88	0.83	35.3
Approach		573	3.0	0.443	9.5	LOS A	2.6	66.2	0.72	0.88	0.78	34.9
West: NE 179th St												
5	L2	258	3.0	0.206	11.4	LOS B	1.2	31.7	0.48	0.65	0.48	34.8
2	T1	238	6.0	0.206	4.7	LOS A	1.2	31.7	0.50	0.48	0.50	37.1
12	R2	334	2.0	0.220	4.0	LOS A	1.3	33.8	0.33	0.45	0.33	36.7
Approach		830	3.5	0.220	6.5	LOS A	1.3	33.8	0.42	0.52	0.42	36.1
All Vehicles		2684	4.7	0.443	7.8	LOS A	2.6	66.2	0.56	0.67	0.59	35.6

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 114 [NE 29th Ave/NE179th St - 2025 Total AM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 29th Ave												
3	L2	52	5.0	0.095	11.3	LOS B	0.4	9.1	0.44	0.66	0.44	35.1
8	T1	58	2.0	0.095	5.5	LOS A	0.4	9.4	0.44	0.64	0.44	35.6
18	R2	73	9.0	0.095	5.6	LOS A	0.4	9.4	0.44	0.59	0.44	35.3
Approach		182	5.6	0.095	7.2	LOS A	0.4	9.4	0.44	0.63	0.44	35.3
East: NE 179th St												
1	L2	151	5.0	0.319	10.6	LOS B	1.6	40.3	0.33	0.56	0.33	35.8
6	T1	573	5.0	0.319	4.9	LOS A	1.6	40.3	0.33	0.50	0.33	36.3
16	R2	10	60.0	0.319	6.5	LOS A	1.5	40.7	0.33	0.46	0.33	33.9
Approach		733	5.7	0.319	6.1	LOS A	1.6	40.7	0.33	0.51	0.33	36.2
North: NE 29th Ave												
7	L2	19	22.0	0.122	13.3	LOS B	0.5	11.9	0.53	0.66	0.53	35.2
4	T1	104	3.0	0.122	6.1	LOS A	0.5	12.0	0.53	0.66	0.53	36.0
14	R2	81	4.0	0.122	6.1	LOS A	0.5	12.0	0.52	0.66	0.52	35.3
Approach		204	5.1	0.122	6.8	LOS A	0.5	12.0	0.53	0.66	0.53	35.6
West: NE 179th St												
5	L2	47	4.0	0.237	11.0	LOS B	1.0	27.3	0.40	0.54	0.40	36.2
2	T1	396	10.0	0.237	5.1	LOS A	1.0	27.7	0.40	0.52	0.40	36.4
12	R2	41	12.0	0.237	5.3	LOS A	1.0	27.7	0.39	0.50	0.39	35.3
Approach		484	9.6	0.237	5.7	LOS A	1.0	27.7	0.40	0.52	0.40	36.3
All Vehicles		1603	6.8	0.319	6.2	LOS A	1.6	40.7	0.39	0.54	0.39	36.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 115 [NE 50th Ave/NE179th St - 2025 Total AM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 50th Ave												
3	L2	161	5.0	0.152	11.0	LOS B	0.6	16.2	0.41	0.70	0.41	33.9
8	T1	53	10.0	0.106	5.9	LOS A	0.4	10.9	0.42	0.56	0.42	36.4
18	R2	35	9.0	0.106	5.8	LOS A	0.4	10.9	0.42	0.56	0.42	35.2
Approach		249	6.6	0.152	9.2	LOS A	0.6	16.2	0.41	0.65	0.41	34.6
East: NE 179th St												
1	L2	57	0.0	0.162	10.7	LOS B	0.7	17.4	0.37	0.57	0.37	36.0
6	T1	254	11.0	0.162	5.4	LOS A	0.7	18.1	0.38	0.54	0.38	36.0
16	R2	19	17.0	0.162	5.7	LOS A	0.7	18.1	0.38	0.51	0.38	34.9
Approach		330	9.5	0.162	6.3	LOS A	0.7	18.1	0.38	0.54	0.38	36.0
North: NE 50th Ave												
7	L2	28	0.0	0.121	11.3	LOS B	0.5	12.2	0.45	0.59	0.45	36.1
4	T1	131	8.0	0.121	5.5	LOS A	0.5	12.4	0.45	0.59	0.45	36.1
14	R2	73	7.0	0.121	5.7	LOS A	0.5	12.4	0.44	0.58	0.44	35.4
Approach		232	6.7	0.121	6.3	LOS A	0.5	12.4	0.45	0.59	0.45	35.9
West: NE 179th St												
5	L2	48	36.0	0.241	11.7	LOS B	1.1	29.4	0.37	0.53	0.37	35.3
2	T1	256	9.0	0.241	4.9	LOS A	1.1	28.5	0.37	0.53	0.37	36.5
12	R2	191	10.0	0.241	5.0	LOS A	1.1	28.5	0.36	0.52	0.36	35.6
Approach		496	12.0	0.241	5.6	LOS A	1.1	29.4	0.37	0.52	0.37	36.1
All Vehicles		1308	9.4	0.241	6.6	LOS A	1.1	29.4	0.39	0.56	0.39	35.7

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	158	121	97	181	8	61	292	54	11	680	51
Future Volume (veh/h)	23	158	121	97	181	8	61	292	54	11	680	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1826	1826	1826	1722	1767	1767	1307	1826	1826
Adj Flow Rate, veh/h	25	172	132	105	197	9	66	317	59	12	739	55
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, %	7	7	7	5	5	5	12	9	9	40	5	5
Cap, veh/h	66	257	185	159	256	11	84	726	135	18	780	58
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.05	0.50	0.50	0.01	0.46	0.46
Sat Flow, veh/h	69	931	670	366	928	39	1640	1448	270	1245	1678	125
Grp Volume(v), veh/h	329	0	0	311	0	0	66	0	376	12	0	794
Grp Sat Flow(s),veh/h/ln	1670	0	0	1332	0	0	1640	0	1718	1245	0	1803
Q Serve(g_s), s	0.0	0.0	0.0	4.1	0.0	0.0	3.3	0.0	11.5	0.8	0.0	34.6
Cycle Q Clear(g_c), s	14.5	0.0	0.0	18.6	0.0	0.0	3.3	0.0	11.5	0.8	0.0	34.6
Prop In Lane	0.08		0.40	0.34		0.03	1.00		0.16	1.00		0.07
Lane Grp Cap(c), veh/h	508	0	0	426	0	0	84	0	861	18	0	838
V/C Ratio(X)	0.65	0.00	0.00	0.73	0.00	0.00	0.79	0.00	0.44	0.66	0.00	0.95
Avail Cap(c_a), veh/h	923	0	0	802	0	0	579	0	861	439	0	878
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	0.0	28.0	0.0	0.0	38.5	0.0	13.1	40.3	0.0	21.0
Incr Delay (d2), s/veh	1.4	0.0	0.0	2.4	0.0	0.0	14.8	0.0	0.3	34.2	0.0	18.4
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	5.8	0.0	0.0	5.9	0.0	0.0	1.6	0.0	3.7	0.4	0.0	16.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	0.0	0.0	30.4	0.0	0.0	53.4	0.0	13.4	74.4	0.0	39.5
LnGrp LOS	C	A	A	C	A	A	D	A	B	E	A	D
Approach Vol, veh/h		329			311			442			806	
Approach Delay, s/veh		28.2			30.4			19.4			40.0	
Approach LOS		C			C			B			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	28.7	9.3	44.2	28.7	6.3	47.2
Change Period (Y+Rc), s	* 6	* 5.1	* 6	* 6	* 5.1	* 6
Max Green Setting (Gmax), s	* 44	* 29	* 40	* 44	* 29	* 40
Max Q Clear Time (g_c+I1), s	20.6	5.3	36.6	16.5	2.8	13.5
Green Ext Time (p_c), s	2.1	0.1	1.6	2.2	0.0	2.1

Intersection Summary	
HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	30	0	39	0	0	0	8	205	0	0	342	26
Future Vol, veh/h	30	0	39	0	0	0	8	205	0	0	342	26
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	-	-	-2	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	3	0	8	0	0	0	12	3	0	0	5	54
Mvmt Flow	35	0	46	0	0	0	9	241	0	0	402	31

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	677	677	418	700	692	241	433	0	0	241	0	0
Stage 1	418	418	-	259	259	-	-	-	-	-	-	-
Stage 2	259	259	-	441	433	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.5	6.28	7.1	6.5	6.2	4.22	-	-	4.1	-	-
Critical Hdwy Stg 1	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4	3.372	3.5	4	3.3	2.308	-	-	2.2	-	-
Pot Cap-1 Maneuver	365	377	622	357	370	803	1075	-	-	1337	-	-
Stage 1	610	594	-	750	697	-	-	-	-	-	-	-
Stage 2	744	697	-	599	585	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	362	373	622	328	366	803	1075	-	-	1337	-	-
Mov Cap-2 Maneuver	362	373	-	328	366	-	-	-	-	-	-	-
Stage 1	604	594	-	743	690	-	-	-	-	-	-	-
Stage 2	737	690	-	555	585	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.2	0	0.3	0
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1075	-	-	474	-	1337	-	-
HCM Lane V/C Ratio	0.009	-	-	0.171	-	-	-	-
HCM Control Delay (s)	8.4	0	-	14.2	0	0	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	-	0	-	-

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	10	7	120	339	29
Future Vol, veh/h	11	10	7	120	339	29
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	0	0	67	7	2	0
Mvmt Flow	14	12	9	148	419	36
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	10.3	11.7
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	6%	52%	0%
Vol Thru, %	94%	0%	92%
Vol Right, %	0%	48%	8%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	127	21	368
LT Vol	7	11	0
Through Vol	120	0	339
RT Vol	0	10	29
Lane Flow Rate	157	26	454
Geometry Grp	1	1	1
Degree of Util (X)	0.242	0.037	0.524
Departure Headway (Hd)	5.556	5.095	4.154
Convergence, Y/N	Yes	Yes	Yes
Cap	648	703	872
Service Time	3.574	3.126	2.165
HCM Lane V/C Ratio	0.242	0.037	0.521
HCM Control Delay	10.3	8.3	11.7
HCM Lane LOS	B	A	B
HCM 95th-tile Q	0.9	0.1	3.1

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	3	0	4	58	11	30	6	234	32	35	353	11
Future Vol, veh/h	3	0	4	58	11	30	6	234	32	35	353	11
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	-	-	-	-	-	-	120	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	2	0	10	0	4	0	4	4	10
Mvmt Flow	3	0	5	66	13	34	7	266	36	40	401	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	810	804	408	788	792	284	414	0	0	302	0	0
Stage 1	488	488	-	298	298	-	-	-	-	-	-	-
Stage 2	322	316	-	490	494	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.12	6.5	6.3	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.12	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.518	4	3.39	2.2	-	-	2.236	-	-
Pot Cap-1 Maneuver	301	319	648	309	324	736	1156	-	-	1248	-	-
Stage 1	565	553	-	711	671	-	-	-	-	-	-	-
Stage 2	694	659	-	560	550	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	270	307	648	298	312	736	1156	-	-	1248	-	-
Mov Cap-2 Maneuver	270	307	-	298	312	-	-	-	-	-	-	-
Stage 1	562	535	-	707	667	-	-	-	-	-	-	-
Stage 2	646	655	-	538	532	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.1	19.1	0.2	0.7
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1156	-	-	405	366	1248	-	-
HCM Lane V/C Ratio	0.006	-	-	0.02	0.307	0.032	-	-
HCM Control Delay (s)	8.1	-	-	14.1	19.1	8	-	-
HCM Lane LOS	A	-	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	1.3	0.1	-	-

MOVEMENT SUMMARY

Site: 120 [NE 10th Ave/NE 149th St - 2025 Total AM]

Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 10th Ave												
3	L2	88	11.0	0.054	6.1	LOS A	0.0	0.0	0.00	0.60	0.00	34.4
8	T1	97	8.0	0.055	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	40.0
Approach		184	9.4	0.055	2.9	NA	0.0	0.0	0.00	0.28	0.00	37.1
North: NE 10th Ave												
4	T1	93	24.0	0.236	14.9	LOS B	0.8	24.7	0.49	1.01	0.50	30.9
14	R2	11	33.0	0.236	10.6	LOS B	0.8	24.7	0.49	1.01	0.50	30.7
Approach		104	25.0	0.236	14.4	LOS B	0.8	24.7	0.49	1.01	0.50	30.9
West: NE 149th St												
5	L2	33	0.0	0.045	10.2	LOS B	0.2	5.0	0.47	0.85	0.47	32.9
12	R2	412	2.0	0.261	6.0	LOS A	0.0	0.0	0.00	0.59	0.00	34.8
Approach		446	1.9	0.261	6.3	LOS A	0.2	5.0	0.04	0.61	0.04	34.7
All Vehicles		734	7.0	0.261	6.6	NA	0.8	24.7	0.09	0.58	0.09	34.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	8.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	159	51	53	119	161	253
Future Vol, veh/h	159	51	53	119	161	253
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	120
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	3	11	6	12	6	3
Mvmt Flow	175	56	58	131	177	278

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	189	0	-	0	530	124
Stage 1	-	-	-	-	124	-
Stage 2	-	-	-	-	406	-
Critical Hdwy	4.13	-	-	-	6.46	6.23
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.227	-	-	-	3.554	3.327
Pot Cap-1 Maneuver	1379	-	-	-	503	924
Stage 1	-	-	-	-	892	-
Stage 2	-	-	-	-	664	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1379	-	-	-	437	924
Mov Cap-2 Maneuver	-	-	-	-	437	-
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	664	-

Approach	EB	WB	SB
HCM Control Delay, s	6	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1379	-	-	-	437	924
HCM Lane V/C Ratio	0.127	-	-	-	0.405	0.301
HCM Control Delay (s)	8	0	-	-	18.7	10.6
HCM Lane LOS	A	A	-	-	C	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1.9	1.3

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	8	37	12	93	149	3
Future Vol, veh/h	8	37	12	93	149	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	2	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	8	5	0
Mvmt Flow	11	49	16	124	199	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	357	201	203	0	-	0
Stage 1	201	-	-	-	-	-
Stage 2	156	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	645	845	1381	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	877	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	637	845	1381	-	-	-
Mov Cap-2 Maneuver	637	-	-	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	877	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1381	-	799	-	-
HCM Lane V/C Ratio	0.012	-	0.075	-	-
HCM Control Delay (s)	7.6	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	187	1081	63	4	67	617	95	62	180	67	1	114
Future Volume (vph)	187	1081	63	4	67	617	95	62	180	67	1	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		5.0	5.0		5.0	5.0	5.0		5.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95		0.97	1.00	1.00		0.97
Frpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Frt	1.00	1.00	0.85		1.00	0.98		1.00	1.00	0.85		1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00		0.95
Satd. Flow (prot)	1687	3438	1455		1635	3319		3127	1759	1509		3214
Flt Permitted	0.95	1.00	1.00		0.95	1.00		0.95	1.00	1.00		0.95
Satd. Flow (perm)	1687	3438	1455		1635	3319		3127	1759	1509		3214
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	193	1114	65	4	69	636	98	64	186	69	1	118
RTOR Reduction (vph)	0	0	34	0	0	5	0	0	0	58	0	0
Lane Group Flow (vph)	193	1114	31	0	73	729	0	64	186	11	0	119
Confl. Peds. (#/hr)								1				
Heavy Vehicles (%)	7%	5%	11%	0%	11%	7%	4%	12%	8%	7%	5%	9%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Prot	NA	Perm	Prot	Prot
Protected Phases	5	2		1	1	6		3	8		7	7
Permitted Phases			2							8		
Actuated Green, G (s)	19.4	56.2	56.2		11.2	48.0		6.7	19.6	19.6		10.2
Effective Green, g (s)	19.4	56.2	56.2		11.2	48.0		6.7	19.6	19.6		10.2
Actuated g/C Ratio	0.16	0.48	0.48		0.09	0.41		0.06	0.17	0.17		0.09
Clearance Time (s)	6.0	6.0	6.0		5.0	5.0		5.0	5.0	5.0		5.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	276	1634	691		154	1347		177	291	250		277
v/s Ratio Prot	c0.11	c0.32			0.04	0.22		0.02	c0.11			c0.04
v/s Ratio Perm			0.02							0.01		
v/c Ratio	0.70	0.68	0.04		0.47	0.54		0.36	0.64	0.05		0.43
Uniform Delay, d1	46.6	24.1	16.6		50.7	26.7		53.7	46.0	41.4		51.2
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Incremental Delay, d2	7.5	1.2	0.0		2.3	0.4		1.3	4.6	0.1		1.1
Delay (s)	54.2	25.2	16.6		53.0	27.2		55.0	50.6	41.5		52.3
Level of Service	D	C	B		D	C		D	D	D		D
Approach Delay (s)		28.9				29.5			49.5			
Approach LOS		C				C			D			

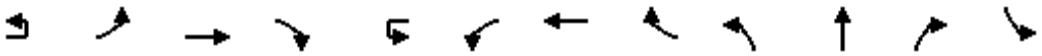
Intersection Summary			
HCM 2000 Control Delay	33.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	118.2	Sum of lost time (s)	21.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	123	150
Future Volume (vph)	123	150
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	5.0	5.0
Lane Util. Factor	1.00	1.00
Frpb, ped/bikes	1.00	0.99
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1810	1548
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1810	1548
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	127	155
RTOR Reduction (vph)	0	125
Lane Group Flow (vph)	127	30
Confl. Peds. (#/hr)		1
Heavy Vehicles (%)	5%	3%
Turn Type	NA	Perm
Protected Phases	4	
Permitted Phases		4
Actuated Green, G (s)	23.1	23.1
Effective Green, g (s)	23.1	23.1
Actuated g/C Ratio	0.20	0.20
Clearance Time (s)	5.0	5.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	353	302
v/s Ratio Prot	c0.07	
v/s Ratio Perm		0.02
v/c Ratio	0.36	0.10
Uniform Delay, d1	41.2	39.0
Progression Factor	1.00	1.00
Incremental Delay, d2	0.6	0.1
Delay (s)	41.8	39.2
Level of Service	D	D
Approach Delay (s)	43.9	
Approach LOS	D	

Intersection Summary



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	13	78	1172	33	4	53	748	13	24	29	66	10
Future Volume (vph)	13	78	1172	33	4	53	748	13	24	29	66	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	6.0	4.5		4.5	6.0	4.5	4.5	6.0	6.0	4.5
Lane Util. Factor		1.00	0.95	1.00		1.00	0.95	1.00	1.00	1.00	1.00	1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	1.00	0.85	1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (prot)		1760	3438	1568		1772	3374	1615	1719	1667	1583	1805
Flt Permitted		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95
Satd. Flow (perm)		1760	3438	1568		1772	3374	1615	1719	1667	1583	1805
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	13	80	1208	34	4	55	771	13	25	30	68	10
RTOR Reduction (vph)	0	0	0	12	0	0	0	6	0	0	61	0
Lane Group Flow (vph)	0	93	1208	22	0	59	771	7	25	30	7	10
Heavy Vehicles (%)	0%	3%	5%	3%	0%	2%	7%	0%	5%	14%	2%	0%
Turn Type	Prot	Prot	NA	pm+ov	Prot	Prot	NA	pm+ov	Prot	NA	Perm	Prot
Protected Phases	5	5	2	3	1	1	6	7	3	8		7
Permitted Phases				2				6			8	
Actuated Green, G (s)		10.7	56.9	62.6		7.4	53.6	56.2	5.7	10.7	10.7	2.6
Effective Green, g (s)		10.7	56.9	62.6		7.4	53.6	56.2	5.7	10.7	10.7	2.6
Actuated g/C Ratio		0.11	0.58	0.63		0.08	0.54	0.57	0.06	0.11	0.11	0.03
Clearance Time (s)		4.5	6.0	4.5		4.5	6.0	4.5	4.5	6.0	6.0	4.5
Vehicle Extension (s)		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		190	1983	995		132	1834	920	99	180	171	47
v/s Ratio Prot		c0.05	c0.35	0.00		0.03	0.23	0.00	c0.01	c0.02		0.01
v/s Ratio Perm				0.01				0.00			0.00	
v/c Ratio		0.49	0.61	0.02		0.45	0.42	0.01	0.25	0.17	0.04	0.21
Uniform Delay, d1		41.4	13.6	6.7		43.6	13.3	9.2	44.4	39.9	39.4	47.0
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		2.0	0.5	0.0		2.4	0.2	0.0	1.3	0.4	0.1	2.3
Delay (s)		43.4	14.1	6.7		46.0	13.5	9.2	45.8	40.3	39.5	49.3
Level of Service		D	B	A		D	B	A	D	D	D	D
Approach Delay (s)			16.0				15.7			41.0		
Approach LOS			B				B			D		

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	98.6	Sum of lost time (s)	21.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	18	34
Future Volume (vph)	18	34
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.0	
Lane Util. Factor	1.00	
Frt	0.90	
Flt Protected	1.00	
Satd. Flow (prot)	1674	
Flt Permitted	1.00	
Satd. Flow (perm)	1674	
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	19	35
RTOR Reduction (vph)	32	0
Lane Group Flow (vph)	22	0
Heavy Vehicles (%)	7%	0%
Turn Type	NA	
Protected Phases	4	
Permitted Phases		
Actuated Green, G (s)	7.6	
Effective Green, g (s)	7.6	
Actuated g/C Ratio	0.08	
Clearance Time (s)	6.0	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	129	
v/s Ratio Prot	0.01	
v/s Ratio Perm		
v/c Ratio	0.17	
Uniform Delay, d1	42.5	
Progression Factor	1.00	
Incremental Delay, d2	0.6	
Delay (s)	43.2	
Level of Service	D	
Approach Delay (s)	44.1	
Approach LOS	D	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	62	23	78	81	37	207	266	203	31	130	107
Future Volume (veh/h)	69	62	23	78	81	37	207	266	203	31	130	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811	1885	1841	1841	1900	1781	1781
Adj Flow Rate, veh/h	80	72	27	91	94	43	241	309	236	36	151	124
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
Percent Heavy Veh, %	6	6	6	6	6	6	1	4	4	0	8	8
Cap, veh/h	217	155	47	206	151	59	303	381	291	71	233	192
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.17	0.39	0.39	0.04	0.26	0.26
Sat Flow, veh/h	575	804	245	536	784	307	1795	968	739	1810	905	743
Grp Volume(v), veh/h	179	0	0	228	0	0	241	0	545	36	0	275
Grp Sat Flow(s),veh/h/ln	1624	0	0	1628	0	0	1795	0	1708	1810	0	1648
Q Serve(g_s), s	0.0	0.0	0.0	1.6	0.0	0.0	6.3	0.0	14.0	1.0	0.0	7.3
Cycle Q Clear(g_c), s	4.6	0.0	0.0	6.1	0.0	0.0	6.3	0.0	14.0	1.0	0.0	7.3
Prop In Lane	0.45		0.15	0.40		0.19	1.00		0.43	1.00		0.45
Lane Grp Cap(c), veh/h	419	0	0	416	0	0	303	0	672	71	0	425
V/C Ratio(X)	0.43	0.00	0.00	0.55	0.00	0.00	0.80	0.00	0.81	0.50	0.00	0.65
Avail Cap(c_a), veh/h	1409	0	0	1437	0	0	1001	0	1421	1020	0	1375
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.9	0.0	0.0	18.4	0.0	0.0	19.6	0.0	13.3	23.1	0.0	16.2
Incr Delay (d2), s/veh	0.7	0.0	0.0	1.1	0.0	0.0	1.8	0.0	2.4	2.0	0.0	1.7
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	0.0	0.0	2.1	0.0	0.0	2.3	0.0	4.1	0.4	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.5	0.0	0.0	19.5	0.0	0.0	21.4	0.0	15.7	25.2	0.0	17.9
LnGrp LOS	B	A	A	B	A	A	C	A	B	C	A	B
Approach Vol, veh/h		179			228			786			311	
Approach Delay, s/veh		18.5			19.5			17.5			18.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	25.6		15.3	14.9	19.0		15.3				
Change Period (Y+Rc), s	* 6.3	* 6.3		* 5.8	6.6	* 6.3		* 5.8				
Max Green Setting (Gmax), s	* 28	* 41		* 43	27.4	* 41		* 43				
Max Q Clear Time (g_c+I1), s	3.0	16.0		6.6	8.3	9.3		8.1				
Green Ext Time (p_c), s	0.0	3.4		1.1	0.3	1.5		1.4				

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	263	14	31	171	9	20	79	59	14	46	8
Future Vol, veh/h	10	263	14	31	171	9	20	79	59	14	46	8
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, %	0	3	0	5	4	0	0	0	0	0	0	0
Mvmt Flow	12	306	16	36	199	10	23	92	69	16	53	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	12.2	11.1	10.3	9.5
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	3%	15%	21%
Vol Thru, %	50%	92%	81%	68%
Vol Right, %	37%	5%	4%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	158	287	211	68
LT Vol	20	10	31	14
Through Vol	79	263	171	46
RT Vol	59	14	9	8
Lane Flow Rate	184	334	245	79
Geometry Grp	1	1	1	1
Degree of Util (X)	0.271	0.463	0.354	0.125
Departure Headway (Hd)	5.319	4.998	5.193	5.681
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	674	724	692	630
Service Time	3.355	2.998	3.223	3.723
HCM Lane V/C Ratio	0.273	0.461	0.354	0.125
HCM Control Delay	10.3	12.2	11.1	9.5
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.1	2.5	1.6	0.4

Intersection	
Intersection Delay, s/veh	18.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	278	26	83	168	21	24	152	84	18	137	12
Future Vol, veh/h	20	278	26	83	168	21	24	152	84	18	137	12
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, %	11	1	0	6	0	5	0	3	0	0	0	9
Mvmt Flow	23	323	30	97	195	24	28	177	98	21	159	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	22.1	18.3	17.1	14.2
HCM LOS	C	C	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	6%	31%	11%
Vol Thru, %	58%	86%	62%	82%
Vol Right, %	32%	8%	8%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	260	324	272	167
LT Vol	24	20	83	18
Through Vol	152	278	168	137
RT Vol	84	26	21	12
Lane Flow Rate	302	377	316	194
Geometry Grp	1	1	1	1
Degree of Util (X)	0.545	0.676	0.577	0.374
Departure Headway (Hd)	6.484	6.463	6.565	6.929
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	553	558	547	517
Service Time	4.562	4.54	4.646	5.02
HCM Lane V/C Ratio	0.546	0.676	0.578	0.375
HCM Control Delay	17.1	22.1	18.3	14.2
HCM Lane LOS	C	C	C	B
HCM 95th-tile Q	3.3	5.1	3.6	1.7

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	139	15	176	164	22	9	30	114	21	41	9
Future Vol, veh/h	14	139	15	176	164	22	9	30	114	21	41	9
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, %	0	7	0	3	3	5	25	0	4	11	0	0
Mvmt Flow	16	158	17	200	186	25	10	34	130	24	47	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	14.8	10.7	9.9
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	8%	49%	30%
Vol Thru, %	20%	83%	45%	58%
Vol Right, %	75%	9%	6%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	153	168	362	71
LT Vol	9	14	176	21
Through Vol	30	139	164	41
RT Vol	114	15	22	9
Lane Flow Rate	174	191	411	81
Geometry Grp	1	1	1	1
Degree of Util (X)	0.27	0.276	0.579	0.134
Departure Headway (Hd)	5.594	5.197	5.068	5.957
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	642	691	716	600
Service Time	3.637	3.234	3.068	4.006
HCM Lane V/C Ratio	0.271	0.276	0.574	0.135
HCM Control Delay	10.7	10.2	14.8	9.9
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.1	1.1	3.7	0.5

MOVEMENT SUMMARY

Site: 107 [NE Delfel Rd/NE179th St - 2025 Total PM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE Delfel Rd												
3	L2	20	8.0	0.053	13.3	LOS B	0.2	4.8	0.49	0.70	0.49	35.9
8	T1	13	0.0	0.053	5.1	LOS A	0.2	4.8	0.49	0.70	0.49	35.6
18	R2	151	1.0	0.138	4.8	LOS A	0.6	14.0	0.46	0.58	0.46	36.4
Approach		184	1.7	0.138	5.7	LOS A	0.6	14.0	0.47	0.60	0.47	36.3
East: NE 179th St												
1	L2	146	7.0	0.255	10.7	LOS B	1.5	38.1	0.22	0.47	0.22	37.8
6	T1	438	2.0	0.255	2.9	LOS A	1.5	38.2	0.21	0.40	0.21	38.2
16	R2	176	4.0	0.255	3.6	LOS A	1.5	38.2	0.20	0.34	0.20	37.2
Approach		760	3.4	0.255	4.6	LOS A	1.5	38.2	0.21	0.40	0.21	37.9
North: NE Delfel Rd												
7	L2	204	7.0	0.258	12.5	LOS B	1.0	25.2	0.49	0.79	0.49	34.8
4	T1	4	0.0	0.258	4.5	LOS A	1.0	25.2	0.49	0.79	0.49	34.5
14	R2	9	9.0	0.258	5.5	LOS A	1.0	25.2	0.49	0.79	0.49	33.1
Approach		218	6.9	0.258	12.1	LOS B	1.0	25.2	0.49	0.79	0.49	34.7
West: NE 179th St												
5	L2	26	6.0	0.145	12.1	LOS B	0.8	19.9	0.50	0.51	0.50	37.6
2	T1	310	3.0	0.145	4.1	LOS A	0.8	20.9	0.49	0.45	0.49	37.6
12	R2	11	0.0	0.145	4.6	LOS A	0.8	20.9	0.48	0.42	0.48	36.3
Approach		347	3.1	0.145	4.7	LOS A	0.8	20.9	0.49	0.46	0.49	37.6
All Vehicles		1509	3.7	0.258	5.8	LOS A	1.5	38.2	0.35	0.49	0.35	37.1

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 109 [I-5 Southbound Ramp/NE 179th St - 2025 Total PM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
East: NE 179th St												
1	L2	918	5.0	0.665	10.2	LOS B	0.0	0.0	0.00	0.65	0.00	35.7
6	T1	569	6.0	0.469	3.5	LOS A	0.0	0.0	0.00	0.32	0.00	39.2
Approach		1487	5.4	0.665	7.7	LOS A	0.0	0.0	0.00	0.53	0.00	36.9
North: I-5 SB Off-ramp												
7	L2	511	10.0	0.473	18.3	LOS B	2.7	72.2	0.75	0.98	1.00	32.3
4	T1	4	50.0	0.473	13.3	LOS B	2.7	72.2	0.74	0.97	0.98	32.7
14	R2	118	9.0	0.473	10.5	LOS B	2.7	72.2	0.74	0.97	0.98	31.8
Approach		633	10.1	0.473	16.8	LOS B	2.7	72.2	0.75	0.98	0.99	32.2
West: NE 179th St												
2	T1	309	6.0	0.879	99.2	LOS F	13.5	353.4	1.00	1.66	2.91	15.0
12	R2	378	6.0	0.239	3.3	LOS A	0.0	0.0	0.00	0.40	0.00	37.8
Approach		688	6.0	0.879	46.4	LOS D	13.5	353.4	0.45	0.96	1.31	22.2
All Vehicles		2807	6.6	0.879	19.2	LOS B	13.5	353.4	0.28	0.74	0.55	31.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 111 [I-5 Northbound Ramp/NE 179th St - 2025 Total PM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: I-5 NB Off-ramp												
3	L2	397	5.0	0.170	12.0	LOS B	0.6	16.6	0.48	0.77	0.48	34.4
8	T1	1	0.0	0.170	4.8	LOS A	0.6	16.6	0.47	0.75	0.47	34.2
18	R2	1312	2.0	0.799	3.7	LOS A	0.0	0.0	0.00	0.40	0.00	36.6
Approach		1710	2.7	0.799	5.6	LOS A	0.6	16.6	0.11	0.48	0.11	35.9
East: NE 179th St												
6	T1	1137	2.0	0.856	11.5	LOS D	11.1	284.5	0.90	1.12	1.38	32.8
16	R2	585	3.0	0.856	11.2	LOS D	11.1	284.5	0.89	1.10	1.35	31.3
Approach		1722	2.3	0.856	11.4	LOS B	11.1	284.5	0.90	1.12	1.37	32.3
West: NE 179th St												
5	L2	136	3.0	0.284	10.2	LOS B	0.0	0.0	0.00	0.46	0.00	38.4
2	T1	711	9.0	0.284	2.9	LOS A	0.0	0.0	0.00	0.36	0.00	38.1
Approach		847	8.0	0.284	4.1	LOS A	0.0	0.0	0.00	0.37	0.00	38.1
All Vehicles		4279	3.6	0.856	7.6	LOS A	11.1	284.5	0.41	0.72	0.60	34.8

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 113 [NE 15th Ave/NE179th St - 2025 Total PM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 15th Ave												
3	L2	299	3.0	0.447	15.2	LOS B	2.7	69.1	0.83	0.98	0.95	33.3
8	T1	31	3.0	0.538	10.9	LOS B	3.2	82.3	0.84	0.98	1.07	34.6
18	R2	241	5.0	0.538	11.3	LOS B	3.2	82.3	0.84	0.98	1.07	33.3
Approach		571	3.8	0.538	13.3	LOS B	3.2	82.3	0.83	0.98	1.01	33.3
East: NE 179th St												
1	L2	171	2.0	0.464	14.8	LOS B	2.6	67.2	0.75	0.90	0.87	34.8
6	T1	344	3.0	0.464	7.6	LOS A	2.8	71.4	0.75	0.85	0.86	35.4
16	R2	185	3.0	0.464	7.6	LOS A	2.8	71.4	0.75	0.81	0.85	34.9
Approach		700	2.8	0.464	9.3	LOS A	2.8	71.4	0.75	0.85	0.86	35.1
North: NE 15th Ave												
7	L2	169	3.0	0.306	13.3	LOS B	1.5	37.5	0.66	0.82	0.66	35.0
4	T1	65	3.0	0.306	6.1	LOS A	1.5	37.5	0.66	0.82	0.66	34.6
14	R2	282	3.0	0.311	6.1	LOS A	1.6	40.5	0.65	0.71	0.65	35.6
Approach		516	3.0	0.311	8.5	LOS A	1.6	40.5	0.66	0.76	0.66	35.3
West: NE 179th St												
5	L2	636	3.0	0.532	12.4	LOS B	4.2	107.8	0.68	0.74	0.69	34.2
2	T1	569	6.0	0.532	6.3	LOS A	4.2	107.8	0.71	0.66	0.75	36.3
12	R2	491	2.0	0.344	4.4	LOS A	2.4	59.9	0.47	0.52	0.47	36.2
Approach		1696	3.7	0.532	8.1	LOS A	4.2	109.6	0.63	0.65	0.65	35.4
All Vehicles		3482	3.4	0.538	9.3	LOS A	4.2	109.6	0.69	0.76	0.75	35.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 114 [NE 29th Ave/NE179th St - 2025 Total PM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 29th Ave												
3	L2	62	7.0	0.194	12.6	LOS B	0.8	19.4	0.56	0.73	0.56	34.9
8	T1	114	1.0	0.194	6.5	LOS A	0.8	19.8	0.56	0.72	0.56	35.3
18	R2	155	3.0	0.194	6.3	LOS A	0.8	19.8	0.55	0.70	0.55	35.2
Approach		331	3.1	0.194	7.5	LOS A	0.8	19.8	0.55	0.71	0.55	35.2
East: NE 179th St												
1	L2	87	0.0	0.282	10.9	LOS B	1.3	34.2	0.41	0.57	0.41	36.0
6	T1	501	6.0	0.282	5.3	LOS A	1.3	34.7	0.41	0.53	0.41	36.1
16	R2	17	0.0	0.282	5.2	LOS A	1.3	34.7	0.41	0.50	0.41	35.3
Approach		605	5.0	0.282	6.1	LOS A	1.3	34.7	0.41	0.53	0.41	36.1
North: NE 29th Ave												
7	L2	14	0.0	0.065	11.6	LOS B	0.2	6.0	0.48	0.60	0.48	36.1
4	T1	52	0.0	0.065	5.6	LOS A	0.2	6.1	0.48	0.60	0.48	36.0
14	R2	57	0.0	0.065	5.6	LOS A	0.2	6.1	0.48	0.62	0.48	35.5
Approach		122	0.0	0.065	6.3	LOS A	0.2	6.1	0.48	0.61	0.48	35.8
West: NE 179th St												
5	L2	94	0.0	0.364	10.5	LOS B	1.8	47.4	0.33	0.50	0.33	36.6
2	T1	711	4.0	0.364	4.6	LOS A	1.8	47.8	0.33	0.47	0.33	36.7
12	R2	60	6.0	0.364	4.7	LOS A	1.8	47.8	0.33	0.45	0.33	35.7
Approach		864	3.7	0.364	5.2	LOS A	1.8	47.8	0.33	0.47	0.33	36.7
All Vehicles		1922	3.8	0.364	6.0	LOS A	1.8	47.8	0.40	0.54	0.40	36.2

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 115 [NE 50th Ave/NE179th St - 2025 Total PM]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 50th Ave												
3	L2	190	6.0	0.219	11.9	LOS B	0.9	23.5	0.51	0.78	0.51	33.7
8	T1	154	3.0	0.219	5.9	LOS A	0.9	23.6	0.50	0.59	0.50	36.2
18	R2	67	6.0	0.219	6.0	LOS A	0.9	23.6	0.50	0.59	0.50	35.0
Approach		411	4.9	0.219	8.7	LOS A	0.9	23.6	0.50	0.68	0.50	34.8
East: NE 179th St												
1	L2	51	5.0	0.226	11.5	LOS B	1.0	24.9	0.48	0.61	0.48	35.7
6	T1	341	6.0	0.226	5.8	LOS A	1.0	25.2	0.48	0.58	0.48	35.9
16	R2	39	7.0	0.226	5.9	LOS A	1.0	25.2	0.48	0.56	0.48	34.9
Approach		431	6.0	0.226	6.5	LOS A	1.0	25.2	0.48	0.58	0.48	35.8
North: NE 50th Ave												
7	L2	19	18.0	0.099	12.4	LOS B	0.4	10.0	0.49	0.61	0.49	35.5
4	T1	68	2.0	0.099	5.6	LOS A	0.4	10.0	0.49	0.61	0.49	35.9
14	R2	89	12.0	0.102	6.1	LOS A	0.4	10.8	0.49	0.65	0.49	35.2
Approach		176	8.8	0.102	6.6	LOS A	0.4	10.8	0.49	0.63	0.49	35.5
West: NE 179th St												
5	L2	109	4.0	0.298	10.5	LOS B	1.5	37.9	0.31	0.52	0.31	36.3
2	T1	428	3.0	0.298	4.5	LOS A	1.5	37.9	0.31	0.50	0.31	36.7
12	R2	157	13.0	0.298	4.8	LOS A	1.5	39.1	0.32	0.47	0.32	35.6
Approach		693	5.4	0.298	5.5	LOS A	1.5	39.1	0.31	0.50	0.31	36.4
All Vehicles		1711	5.8	0.298	6.6	LOS A	1.5	39.1	0.42	0.58	0.42	35.7

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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 Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	289	116	53	157	6	133	645	100	10	376	52
Future Volume (veh/h)	76	289	116	53	157	6	133	645	100	10	376	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1752	1752	1752	1841	1870	1870	1411	1856	1856
Adj Flow Rate, veh/h	81	307	123	56	167	6	141	686	106	11	400	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, %	2	2	2	10	10	10	4	2	2	33	3	3
Cap, veh/h	118	367	140	123	336	11	177	728	113	18	595	82
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.10	0.46	0.46	0.01	0.37	0.37
Sat Flow, veh/h	214	1073	408	219	980	32	1753	1582	244	1344	1597	220
Grp Volume(v), veh/h	511	0	0	229	0	0	141	0	792	11	0	455
Grp Sat Flow(s),veh/h/ln	1696	0	0	1232	0	0	1753	0	1826	1344	0	1816
Q Serve(g_s), s	14.1	0.0	0.0	0.0	0.0	0.0	7.3	0.0	38.4	0.8	0.0	19.5
Cycle Q Clear(g_c), s	26.2	0.0	0.0	12.1	0.0	0.0	7.3	0.0	38.4	0.8	0.0	19.5
Prop In Lane	0.16		0.24	0.24		0.03	1.00		0.13	1.00		0.12
Lane Grp Cap(c), veh/h	625	0	0	470	0	0	177	0	841	18	0	677
V/C Ratio(X)	0.82	0.00	0.00	0.49	0.00	0.00	0.80	0.00	0.94	0.62	0.00	0.67
Avail Cap(c_a), veh/h	983	0	0	776	0	0	660	0	904	506	0	899
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	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	0.0	0.0	23.5	0.0	0.0	40.8	0.0	23.9	45.6	0.0	24.4
Incr Delay (d2), s/veh	3.1	0.0	0.0	0.8	0.0	0.0	7.9	0.0	16.9	29.7	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	0.0	0.0	3.9	0.0	0.0	3.4	0.0	18.1	0.4	0.0	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	0.0	0.0	24.2	0.0	0.0	48.7	0.0	40.8	75.3	0.0	25.6
LnGrp LOS	C	A	A	C	A	A	D	A	D	E	A	C
Approach Vol, veh/h		511			229			933			466	
Approach Delay, s/veh		31.6			24.2			42.0			26.8	
Approach LOS		C			C			D			C	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	37.8	14.5	40.6	37.8	6.3	48.8
Change Period (Y+Rc), s	* 6	* 5.1	* 6	* 6	* 5.1	* 6
Max Green Setting (Gmax), s	* 52	* 35	* 46	* 52	* 35	* 46
Max Q Clear Time (g_c+I1), s	14.1	9.3	21.5	28.2	2.8	40.4
Green Ext Time (p_c), s	1.6	0.3	2.5	3.6	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	22	0	21	0	0	0	33	357	0	0	212	31
Future Vol, veh/h	22	0	21	0	0	0	33	357	0	0	212	31
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	-	-	-2	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	10	0	0	0	3	3	0	0	1	0
Mvmt Flow	28	0	27	0	0	0	42	458	0	0	272	40

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	834	834	292	848	854	458	312	0	0	458	0	0
Stage 1	292	292	-	542	542	-	-	-	-	-	-	-
Stage 2	542	542	-	306	312	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.3	7.1	6.5	6.2	4.13	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.39	3.5	4	3.3	2.227	-	-	2.2	-	-
Pot Cap-1 Maneuver	290	306	729	284	298	607	1243	-	-	1114	-	-
Stage 1	720	675	-	528	523	-	-	-	-	-	-	-
Stage 2	528	523	-	708	661	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	280	292	729	264	285	607	1243	-	-	1114	-	-
Mov Cap-2 Maneuver	280	292	-	264	285	-	-	-	-	-	-	-
Stage 1	688	675	-	504	499	-	-	-	-	-	-	-
Stage 2	504	499	-	682	661	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.4	0	0.7	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1243	-	-	400	-	1114	-	-
HCM Lane V/C Ratio	0.034	-	-	0.138	-	-	-	-
HCM Control Delay (s)	8	0	-	15.4	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	-	0	-	-

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	10	14	407	220	16
Future Vol, veh/h	18	10	14	407	220	16
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	0	0	0	0	1	0
Mvmt Flow	19	11	15	438	237	17
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.6	12	9.4
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	3%	64%	0%
Vol Thru, %	97%	0%	93%
Vol Right, %	0%	36%	7%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	421	28	236
LT Vol	14	18	0
Through Vol	407	0	220
RT Vol	0	10	16
Lane Flow Rate	453	30	254
Geometry Grp	1	1	1
Degree of Util (X)	0.535	0.044	0.31
Departure Headway (Hd)	4.257	5.313	4.403
Convergence, Y/N	Yes	Yes	Yes
Cap	851	673	820
Service Time	2.257	3.35	2.418
HCM Lane V/C Ratio	0.532	0.045	0.31
HCM Control Delay	12	8.6	9.4
HCM Lane LOS	B	A	A
HCM 95th-tile Q	3.2	0.1	1.3

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	13	10	11	42	3	28	6	332	53	17	238	11
Future Vol, veh/h	13	10	11	42	3	28	6	332	53	17	238	11
Conflicting Peds, #/hr	0	0	3	3	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	120	-	-	120	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	4	33	6	0	3	5	17	4	0
Mvmt Flow	15	12	13	50	4	33	7	395	63	20	283	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	789	803	293	787	778	428	296	0	0	459	0	0
Stage 1	330	330	-	442	442	-	-	-	-	-	-	-
Stage 2	459	473	-	345	336	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.14	6.83	6.26	4.1	-	-	4.27	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.14	5.83	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.14	5.83	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.536	4.297	3.354	2.2	-	-	2.353	-	-
Pot Cap-1 Maneuver	311	319	751	307	294	618	1277	-	-	1027	-	-
Stage 1	687	649	-	591	527	-	-	-	-	-	-	-
Stage 2	586	562	-	666	590	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	286	311	749	286	287	617	1277	-	-	1026	-	-
Mov Cap-2 Maneuver	286	311	-	286	287	-	-	-	-	-	-	-
Stage 1	684	637	-	587	524	-	-	-	-	-	-	-
Stage 2	548	559	-	628	579	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16	18.2	0.1	0.5
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1277	-	-	368	360	1026	-	-
HCM Lane V/C Ratio	0.006	-	-	0.11	0.241	0.02	-	-
HCM Control Delay (s)	7.8	-	-	16	18.2	8.6	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.9	0.1	-	-

MOVEMENT SUMMARY

Site: 120 [NE 10th Ave/NE 149th St - 2025 Total PM]

Site Category: (None)
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: NE 10th Ave												
3	L2	377	3.0	0.214	6.0	LOS A	0.0	0.0	0.00	0.60	0.00	34.7
8	T1	98	2.0	0.053	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	40.0
Approach		474	2.8	0.214	4.7	NA	0.0	0.0	0.00	0.47	0.00	35.7
North: NE 10th Ave												
4	T1	134	1.0	0.360	16.2	LOS C	1.6	41.3	0.63	1.05	0.81	30.8
14	R2	29	0.0	0.360	12.7	LOS B	1.6	41.3	0.63	1.05	0.81	30.9
Approach		163	0.8	0.360	15.6	LOS C	1.6	41.3	0.63	1.05	0.81	30.8
West: NE 149th St												
5	L2	14	11.0	0.033	14.9	LOS B	0.1	3.5	0.63	0.91	0.63	30.7
12	R2	266	2.0	0.168	6.0	LOS A	0.0	0.0	0.00	0.59	0.00	34.8
Approach		280	2.4	0.168	6.4	LOS A	0.1	3.5	0.03	0.61	0.03	34.6
All Vehicles		917	2.3	0.360	7.2	NA	1.6	41.3	0.12	0.62	0.15	34.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Minor Road Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	230	134	75	151	127	173
Future Vol, veh/h	230	134	75	151	127	173
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	120
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	0	7	5	3
Mvmt Flow	250	146	82	164	138	188

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	246	0	-	0	810	164
Stage 1	-	-	-	-	164	-
Stage 2	-	-	-	-	646	-
Critical Hdwy	4.11	-	-	-	6.45	6.23
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.209	-	-	-	3.545	3.327
Pot Cap-1 Maneuver	1326	-	-	-	345	878
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	516	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1326	-	-	-	274	878
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	516	-

Approach	EB	WB	SB
HCM Control Delay, s	5.3	0	18.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1326	-	-	-	274	878
HCM Lane V/C Ratio	0.189	-	-	-	0.504	0.214
HCM Control Delay (s)	8.3	0	-	-	30.8	10.2
HCM Lane LOS	A	A	-	-	D	B
HCM 95th %tile Q(veh)	0.7	-	-	-	2.6	0.8

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	25	42	171	90	9
Future Vol, veh/h	5	25	42	171	90	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	2	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	1	0	0
Mvmt Flow	6	29	49	199	105	10

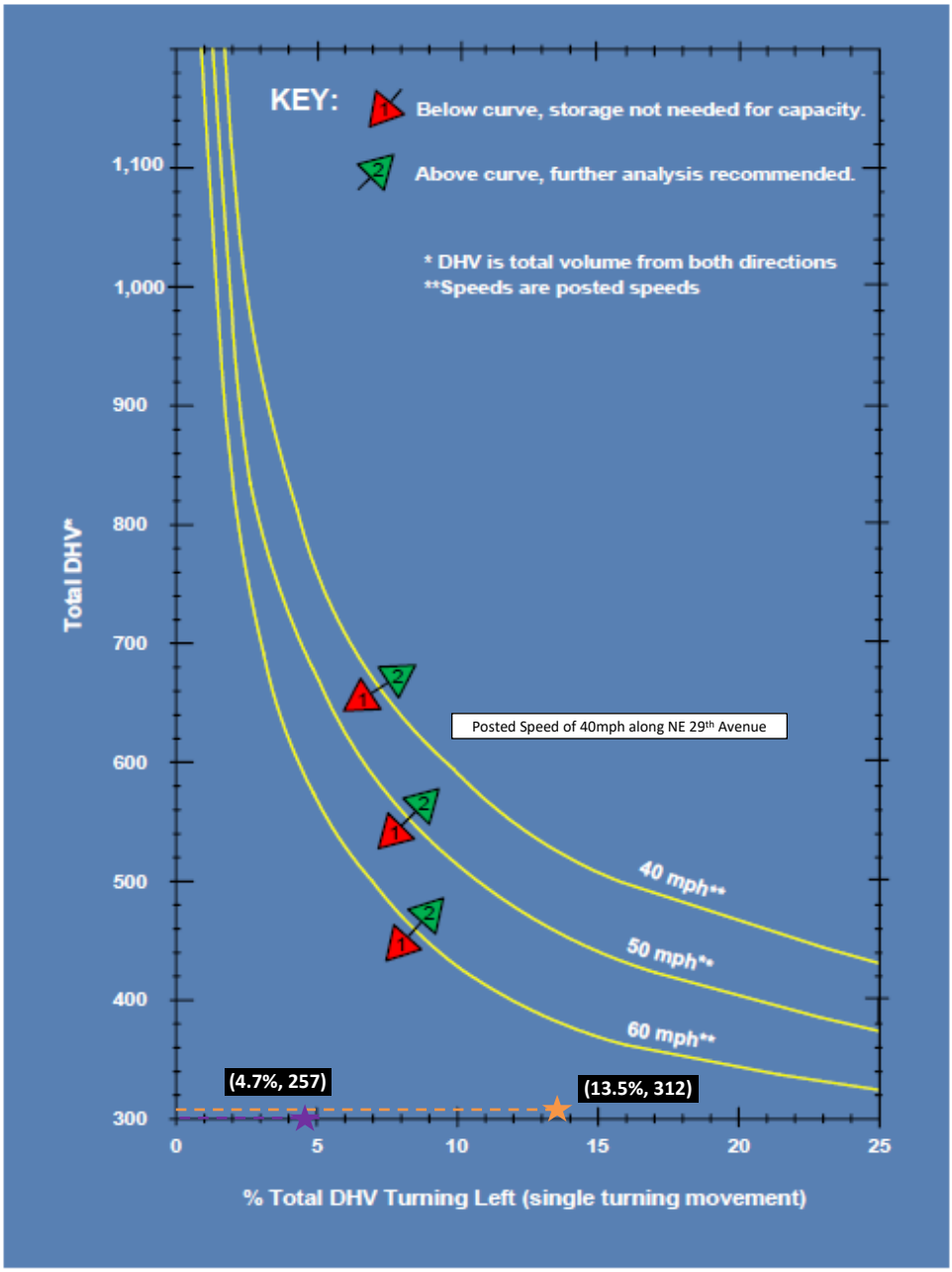
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	407	110	115	0	-	0
Stage 1	110	-	-	-	-	-
Stage 2	297	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	604	949	1487	-	-	-
Stage 1	920	-	-	-	-	-
Stage 2	758	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	582	949	1487	-	-	-
Mov Cap-2 Maneuver	582	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	758	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.4	1.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1487	-	859	-	-
HCM Lane V/C Ratio	0.033	-	0.041	-	-
HCM Control Delay (s)	7.5	0	9.4	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Appendix H Turn Lane Evaluation Worksheets

Exhibit 1310-7 Left-Turn Storage Guidelines: Two-Lane, Unsignalized

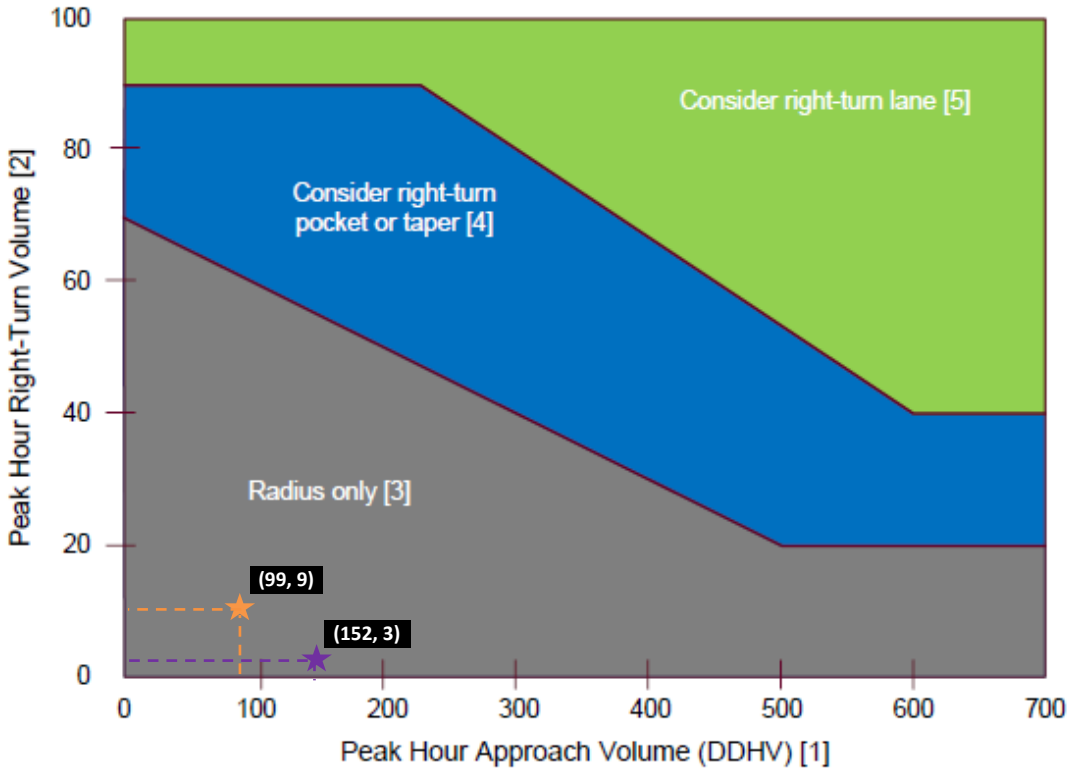


2025 Total Weekday AM

2025 Total Weekday PM

LEFT TURN LANE NEEDS: NE 29TH AVENUE / SITE ACCESS

Exhibit 1310-19 Right-Turn Lane Guidelines



Notes:

[1] For two-lane highways, use the peak hour DDHV (through + right-turn). For multilane, highways (posted speed 45 mph or above), use the right-lane peak hour approach volume (through + right-turn).

[2] When all three of the following conditions are met, reduce the right-turn DDHV by 20:
- The posted speed is 45 mph or below
- The right-turn volume is greater than 40 VPH
- The peak hour approach volume (DDHV) is less than 300 VPH

[3] For right-turn corner design, see Exhibit 1310-6.

[4] For right-turn pocket or taper design, see Exhibit 1310-20.

[5] For right-turn lane design, see Exhibit 1310-21.

★ 2025 Total Weekday AM

★ 2025 Total Weekday PM

RIGHT TURN LANE NEEDS: NE 29TH AVENUE / SITE ACCESS