Traffic Impact Study

ABB Expansion

Albuquerque, New Mexico

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Prepared for:

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T R A F F I C I M P A C T S T U D Y

ABB Expansion

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1.0 EXECUTIVE SUMMARY

This report has been prepared to document the results of a Traffic Impact Study (TIS) for the expansion of the ABB facility located on the north side of Bluewater Road between Airport Drive (East) and Coors Boulevard at 6625 Bluewater Road in Albuquerque, New Mexico. ABB Expansion is proposed to expand the existing 92,658 square foot commercial building by 92,788 square feet for a total 185,446 square foot commercial building. Of note, there is an existing 10,351 square foot office building to remain. It is expected that ABB Expansion will be completed in 2025; therefore, analysis was conducted for the 2025 implementation year as well as the 2035 horizon year.

The purpose of this TIS is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The following intersections were incorporated into this traffic study based on the City of Albuquerque and New Mexico Department of Transportation (NMDOT) requested scope:

- Bluewater Road / Unser Boulevard (#1, Signalized)
- Bluewater Road / Airport Drive (West) (#2, Unsignalized)
- Bluewater Road / Airport Drive (East) (#3, Unsignalized)
- Bluewater Road / Camino Azul (#4, Unsignalized)
- Bluewater Road / Coors Boulevard (#5, Signalized)

In addition, the two existing full movement accesses along the north side of Bluewater Road to remain were evaluated.

Regional access to ABB Expansion will be provided by Interstate 40 (I-40). Primary access will be provided by Unser Boulevard and Coors Boulevard. Direct access will be provided by the existing gated west full movement access (#6) on the north side of Bluewater Road approximately 750 feet west of Camino Azul, measured center-to-center, and a guard controlled full movement access (#7) along the north side of Bluewater Road approximately 280 feet west of Camino Azul, measured center-to-center.

The site currently has 469 employees and with the ABB expansion, it is anticipated that the site will increase by 55 new employees initially and then could see a potential increase to 80 new employees (25 more employees than the initial increase) in 5 to 10 years after the expansion (but in the same initial building expansion space). However, the trip generation in the traffic impact study for this project was evaluated with user-specific data and 100 new employees (ratio of 469 existing employees to 569 future employees) to provide a conservative analysis. The additional 100 employees (for a total of 569 employees) accounts for an increase of approximately 21 percent with 40 additional morning peak hour trips and an increase of 34 afternoon peak hour trips.

Based on the analysis presented in this report, Kimley-Horn believes ABB Expansion will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following recommendations:

- With completion of the ABB Expansion project, access will be provided by the existing gated west full movement access (#6) on the north side of Bluewater Road approximately 750 feet west of Camino Azul, measured center-to-center, and a guard controlled full movement access (#7) along the north side of Bluewater Road approximately 280 feet west of Camino Azul, measured center-to-center. It is recommended that a R1-1 “STOP” sign be installed on the exiting approaches exiting the development.

- By 2025, it is recommended that the westbound left turn lane at the Bluewater Road / Unser Boulevard (#1) intersection be extended from 125 feet to 200 feet of length and tie-in with the existing two-way left turn lane. Additionally, the eastbound left turn lane at this intersection may need to be extended from 100 feet to 125 feet. Of note, project traffic does not contribute to this eastbound left turn movement and both of these improvements are based existing vehicle queues and are independent of this project.

- The eastbound left turn lane at the Bluewater Road and Coors Boulevard (#5) intersection is recommended to be restriped to a maximum length of 275 feet due to the back-to-back left turn lane to the west. This improvement is based on existing vehicle queues and is independent of this project.

- It should be noted that all deficient turn lane storage lengths are deficient with the existing traffic volumes. As previously stated, project traffic does not contribute to the eastbound left turn movement at the Bluewater Road/Unser Boulevard (#1) intersection. Project traffic only contributes to four (4) of the 118 (3.4%) westbound left turn movements during the 2025 implementation year peak hour at the Bluewater Road/Unser Boulevard (#1) intersection. Likewise, project traffic only contributes to 10 of the 277 (3.6%) eastbound left turn movements during the 2025 implementation year peak hour at the Bluewater Road/Coors Boulevard (#5) intersection.

- Any onsite or offsite improvements should be incorporated into the Civil Drawings and conform to standards of the City of Albuquerque and NMDOT and the Manual on Uniform Traffic Control Devices (MUTCD) – 2009 Edition.

2.0 INTRODUCTION

Kimley-Horn has prepared this report to document the results of a Traffic Impact Study (TIS) for the expansion of the ABB facility located on the north side of Bluewater Road between Airport Drive (East) and Coors Boulevard at 6625 Bluewater Road in Albuquerque, New Mexico. A vicinity map illustrating the ABB Expansion development location is shown in **Figure 1**. ABB Expansion is proposed to expand the existing 92,658 square foot commercial building by 92,788 square feet for a total 185,446 square foot commercial building. Of note, there is an existing 10,351 square foot office building to remain. A conceptual site plan is attached in **Appendix A**. It is expected that ABB Expansion will be completed in the next few years; therefore, analysis was conducted for the 2025 implementation year as well as the 2035 horizon year.

The purpose of this traffic study is to identify project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The following intersections were incorporated into this traffic study based on the City of Albuquerque and New Mexico Department of Transportation (NMDOT) requested scope:

- Bluewater Road / Unser Boulevard (#1, Signalized)
- Bluewater Road / Airport Drive (West) (#2, Unsignalized)
- Bluewater Road / Airport Drive (East) (#3, Unsignalized)
- Bluewater Road / Camino Azul (#4, Unsignalized)
- Bluewater Road / Coors Boulevard (#5, Signalized)

In addition, the two existing full movement accesses along the north side of Bluewater Road to remain were evaluated. The TIS scoping memorandums for NMDOT and the City of Albuquerque is included in **Appendix B**.

Regional access to ABB Expansion will be provided by Interstate 40 (I-40). Primary access will be provided by Unser Boulevard and Coors Boulevard. Direct access will be provided by the existing gated west full movement access (#6) on the north side of Bluewater Road approximately 750 feet west of Camino Azul, measured center-to-center, and a guard controlled full movement access (#7) along the north side of Bluewater Road approximately 280 feet west of Camino Azul, measured center-to-center.

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NORTH
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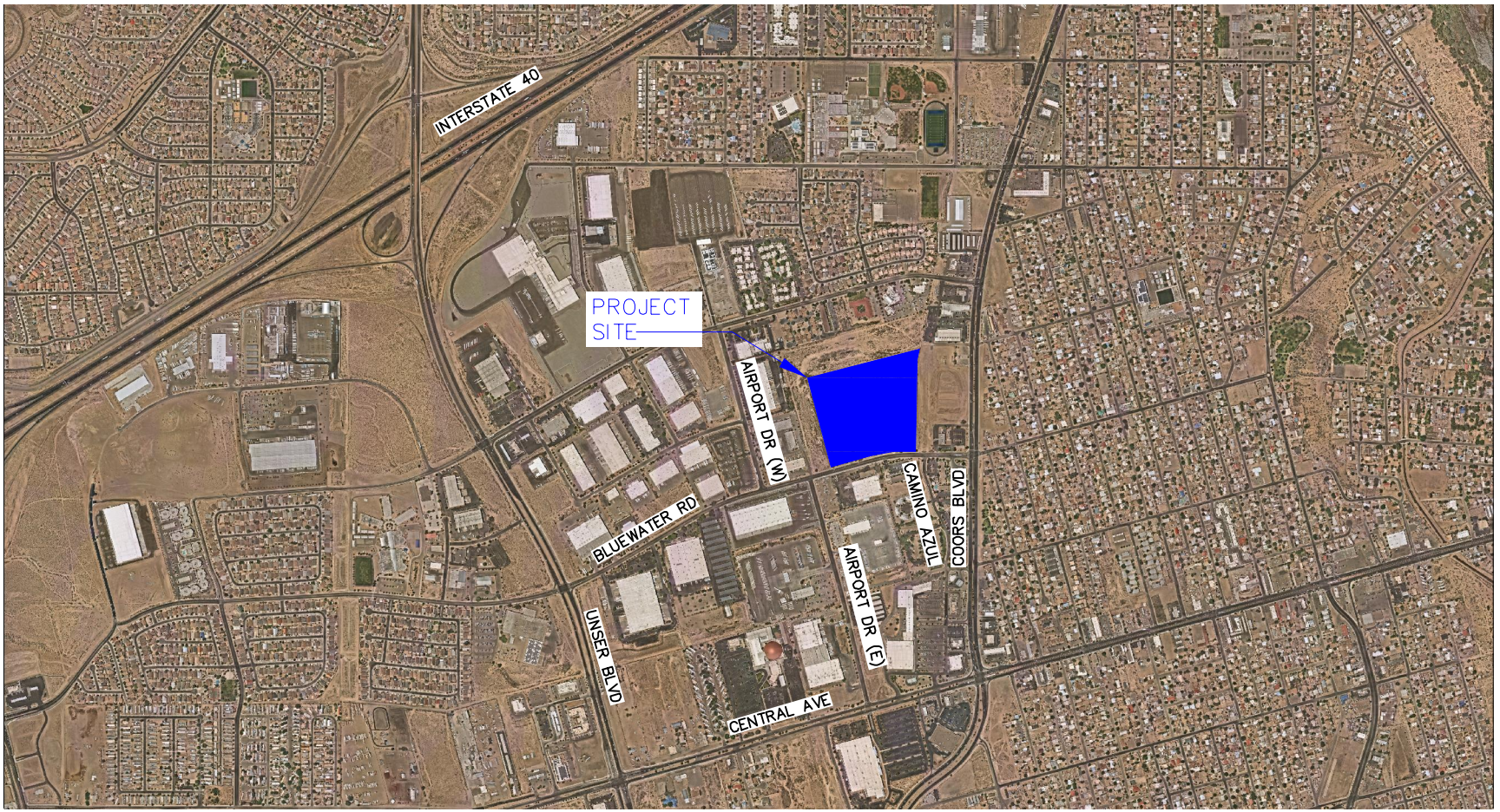

FIGURE 1
ABB EXPANSION
ALBUQUERQUE, NEW MEXICO
VICINITY MAP

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3.1 Existing Study Area

The existing site is comprised of ABB facility with manufacturing and office space. To the north of the project site is multifamily and single-family housing. South of the project site are multifamily homes and warehouse uses. To the west of the project site are warehouses and some commercial uses. To the east of the site is a bank and single-family homes.

3.2 Existing Roadway Network

Unser Boulevard extends north/south with two through lanes in each direction and a raised median. The posted speed limit near the site is 40 miles per hour northbound and 45 miles per hour southbound. The Mid-Region Council of Governments (MRCOG) and NMDOT classify Unser Boulevard as a principal arterial.

Bluewater Road extends in the east/west direction with one travel lane in each direction with and without a two-way left turn lane (TWLTL). It has a posted speed limit ranging from 25 miles per hour to 40 miles per hour. MRCOG and NMDOT classify Bluewater Road as a major collector.

Airport Drive (West) extends north/south and provides one lane of travel in each direction. The posted speed limit along the roadway is 25 miles per hour. MRCOG and NMDOT classify Airport Drive (West) as a major collector.

Airport Drive (East) extends in the north/south direction as a two-lane road. The posted speed limit along the roadway is 30 miles per hour. MRCOG and NMDOT classify Airport Drive (East) as a major collector.

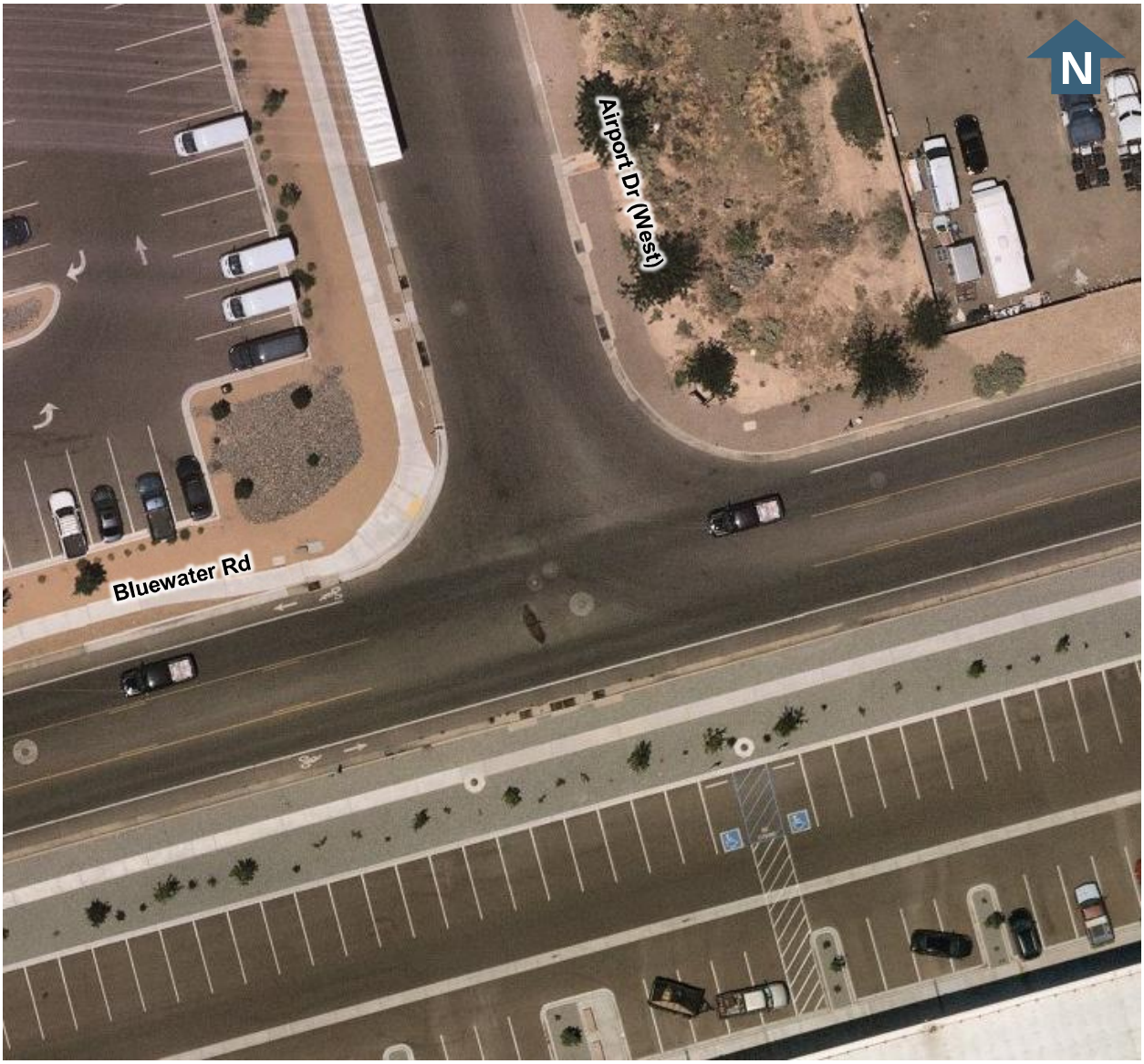
Camino Azul extends north/south and provides one lane of travel in each direction. The posted speed limit along the roadway is 25 miles per hour.

Coors Boulevard (SH-448) extends north/south with three through lanes in each direction and a raised median. The posted speed limit near the site is 45 miles per hour. MRCOG and NMDOT classify Coors Boulevard as a principal arterial.

The signalized intersection of Bluewater Road / Unser Boulevard (#1) operates with protected-permitted left turn phasing on the northbound, southbound, and eastbound approaches and permitted-only left turn phasing on the westbound approach. The northbound and southbound approaches provide one left turn lane, two through lanes, and one channelized right turn lane. The eastbound approach consists of one left turn lane and a shared through/right turn lane. The westbound approach provides one left turn lane, one through lane, and one right turn lane. An aerial photo of the existing intersection configuration is below (north is up - typical).

Bluewater Road / Unser Boulevard (#1)

The unsignalized ‘T’-intersection of Bluewater Road / Airport Drive (West) (#2) operates with stop control on the southbound Airport Drive (West) approach. The southbound approach is unstriped and was assumed to consist of a shared left/right turn lane. The eastbound approach provides a two-way left turn lane and one through lane. The westbound approach consists of a shared through/right turn lane. An aerial photo of the existing intersection configuration is below.



Bluewater Road / Airport Drive (West) (#2)

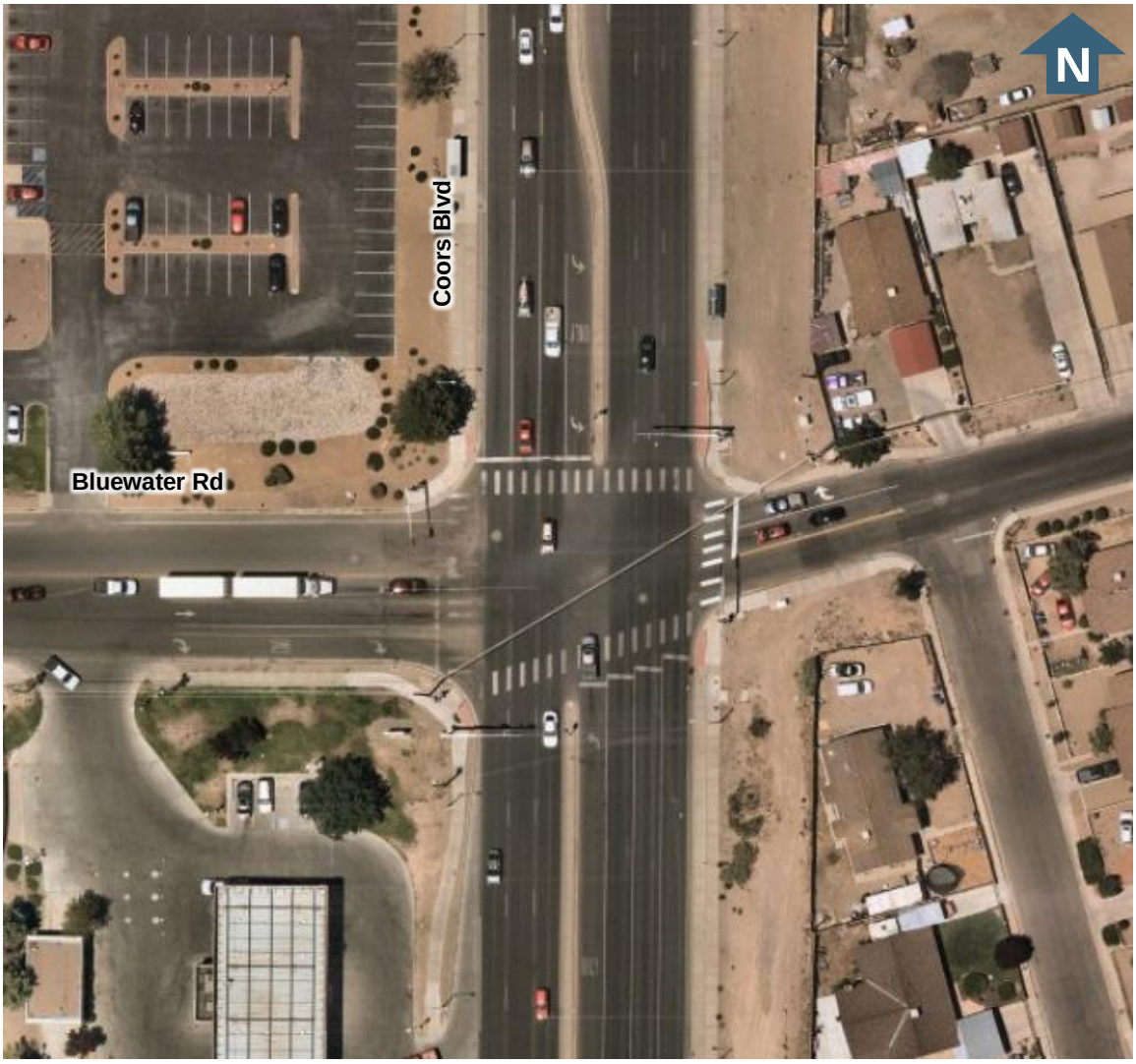
The unsignalized intersection of Bluewater Road / Airport Drive (East) (#3) operates with stop control on the northbound and southbound Airport Drive (East) approaches. The southbound and northbound approaches are unstriped and were assumed to consist of one shared lane for all movements with the north leg providing access to an existing commercial site. The eastbound and westbound approaches provide a two-way left turn lane and a shared through/right turn lane. An aerial photo of the existing intersection configuration is below.

Bluewater Road & Airport Drive (East) (#3)

The unsignalized ‘T’-intersection of Bluewater Road / Camino Azul (#4) operates with stop control on the northbound Camino Azul approach. The northbound approach consists of one left turn lane and a right turn lane. The eastbound approach provides a shared through/right turn lane. The westbound approach consists of one left turn lane and one through lane. An aerial photo of the existing intersection configuration is below.

Bluewater Road & Camino Azul (#4)

The signalized intersection of Bluewater Road / Coors Boulevard (#5) operates with protected-permitted left turn phasing on the northbound, southbound, and eastbound approaches and permitted-only left turn phasing on the westbound approach. The northbound and southbound approaches provide one left turn lane and three through lanes with the outside lane being a shared through/right turn lane. The eastbound approach consists of one left turn lane, one through lane, and one right turn lane. The westbound approach provides a shared left turn/through lane and a right turn lane. An aerial photo of the existing intersection configuration is below.



Bluewater Rd / Coors Blvd (#5)

The intersection lane configuration and control for the study area intersections are shown in **Figure 2**.

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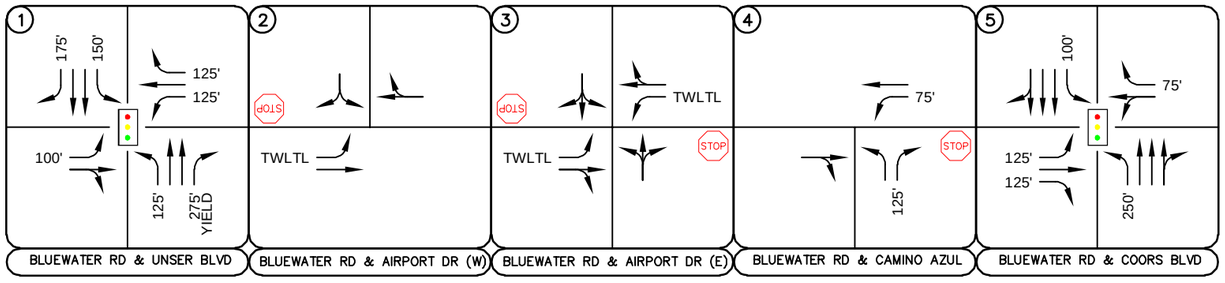

FIGURE 2
ABB EXPANSION
ALBUQUERQUE, NEW MEXICO
EXISTING GEOMETRY AND CONTROL

LEGEND
- X — Study Area Key Intersection
- Signalized Intersection
- STOP — Stop Controlled Approach
- SPEED LIMIT XX — Roadway Speed Limit
- 100' — Turn Lane Length (feet)

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3.3 Existing Traffic Conditions

Existing turning movement counts were conducted at the study intersections and the existing accesses on Wednesday, October 11, 2023 during the weekday morning and afternoon peak hours. The counts were conducted during the morning and afternoon peak hours of adjacent street traffic in 15-minute intervals from 6:00 AM to 9:00 AM and 3:00 PM to 6:00 PM on this count date. The existing intersection traffic volumes are shown in **Figure 3** with count sheets provided in **Appendix C**.

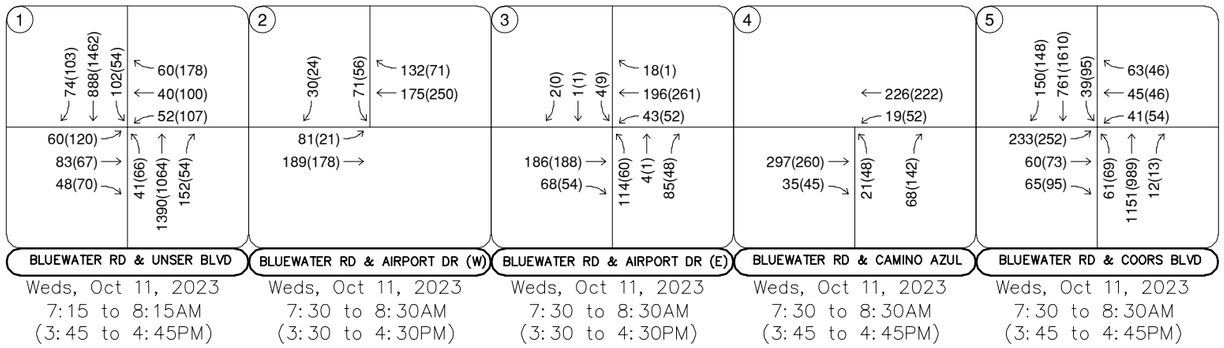
Other traffic data was also field collected at the Bluewater Road / Coors Boulevard (#5) intersection, provided in **Appendix C**, for use in operational analyses, as specified in the NMDOT District Three Traffic Requirements document dated November 25, 2019, and include the following:

- Vehicles turning right on a red light
- Heavy vehicle percentage
- Number of pedestrians and bicyclists
- Lane utilization estimates for multiple lane movement groups
- Arrivals on green

3.4 Unspecified Development Traffic Growth

According to historical traffic counts from the MRCOG, the area surrounding the site is expected to have an average annual growth rate of three percent. Historical traffic counts and growth rate calculations are provided in **Appendix D**. This annual growth rate was used to estimate 2025 implementation year traffic volume projections at the key intersections. The calculated background traffic volumes for 2025 are shown in **Figure 4**.

According to traffic projections from the MRCOG Metropolitan Transportation Plan traffic model, the area surrounding the site is expected to have an average 24-year growth factor of 1.12. This growth factor equates to an annual growth rate of 0.5 percent. Future traffic volume projections and growth rate calculations are provided in **Appendix D**. To be conservative, a one percent annual growth rate was used to calculate future traffic volumes at the study area intersections. This annual growth rate was used to estimate 2035 horizon year traffic volume projections at the key intersections. The calculated background traffic volumes for 2035 are shown in **Figure 5**.



LEGEND

(X) Study Area Key Intersection

XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes

XX,X00 Estimated Daily Traffic Volume

FIGURE 3
ABB EXPANSION
ALBUQUERQUE, NEW MEXICO
2023 EXISTING TRAFFIC VOLUMES

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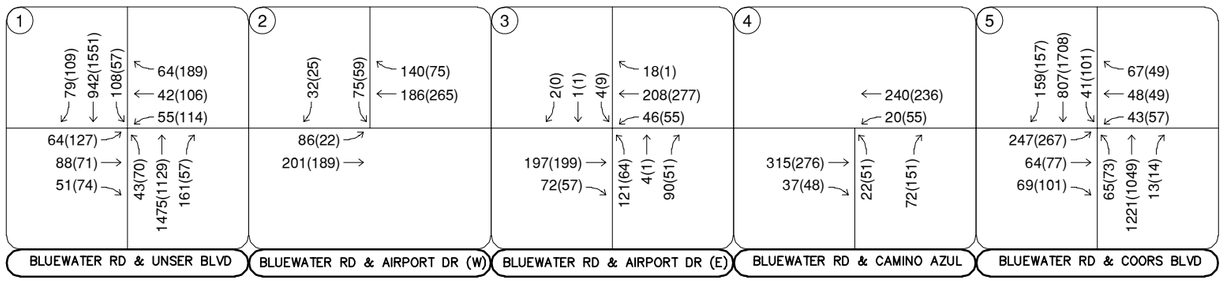


LEGEND

(X) Study Area Key Intersection

XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes

XX,X00 Estimated Daily Traffic Volume

FIGURE 4
ABB EXPANSION
ALBUQUERQUE, NEW MEXICO
2025 IMPLEMENTATION YEAR BACKGROUND TRAFFIC VOLUMES

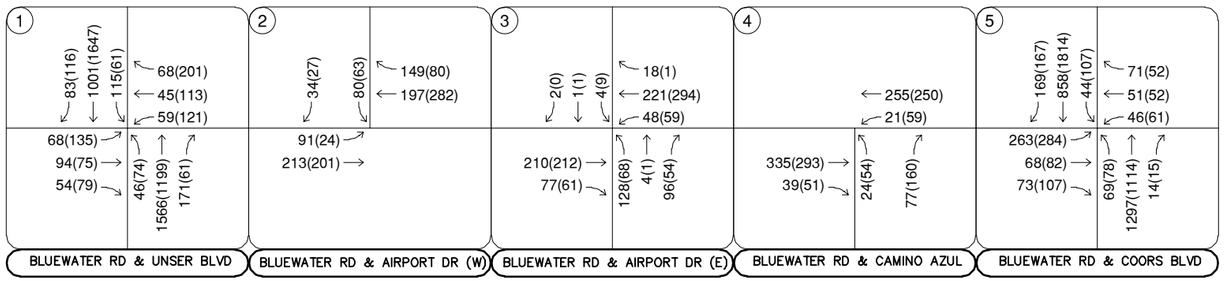


FIGURE 5
ABB EXPANSION
ALBUQUERQUE, NEW MEXICO
2035 HORIZON YEAR BACKGROUND TRAFFIC VOLUMES

LEGEND

(X) Study Area Key Intersection

XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes

XX,X00 Estimated Daily Traffic Volume

4.1 Trip Generation

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*[1] published by the Institute of Transportation Engineers (ITE). However, a methodology different than ITE Trip Generation Manual was utilized to determine project trip generation due to there currently being an existing site location with a known number of existing employees. Further, based on Section 9: Use of Local Data to Estimate Trip Generation in the *ITE Trip Generation Handbook*, 3rd Edition states that local data should be collected and used to estimate trip generation if local circumstances indicate a study site may have different trip-making characteristics than the baseline sites for which data were collected and reported in the Manual. As such, site specific data based on existing driveway traffic volume counts were used to estimate the number of daily and peak hour trips that can be attributed to the proposed expansion of the existing ABB facility.

With the existing driveway count traffic volumes, a growth factor needed to be applied based on either the proposed number of new employees compared to existing, or the proposed new building area compared to existing. Based on Section 4.2.4: Selection of an Appropriate Independent Variable in the *ITE Trip Generation Handbook*, selection of the appropriate independent variable should be based on which variable is most directly causal for the variation in trips generated by a land use and data should not be used if the independent variable does not match the characteristics of a study site or has high variability in site characteristics. It is believed that using site specific data and total number of employees as the independent variable is most accurate methodology to calculate trip generation for this site as the employees on-site more accurately represent the actual trips generated. It is also believed that trip generation should not be based on the building square footage increase and site-specific data because although the building size is increasing by approximately 90 percent, the employees which are the main variables for trip generation at this site are not expected to increase by 90 percent. The ITE Trip

[1] Institute of Transportation Engineers, *Trip Generation Manual*, Eleventh Edition, Washington DC, 2022.

Generation Manual has an R^2 value ranging from 0.62 and 0.64 for both the AM and PM peak hours associated with building area for manufacturing use while the R^2 value ranges from 0.83 and 0.90 for both the AM and PM peak hours with the number of employees as the independent variable. This results in a high variability and less reliability with building area as the independent variable and a much lower variability and higher reliability with the number of employees being the independent variable. Further, ITE Trip Generation Handbook (Section 4.2.4) states that data is less reliable when the standard deviation is greater than 55 percent of the weighted average rate. The standard deviation for manufacturing building area ranges from 93 percent to 103 percent while the standard deviation for the number of employees ranges from 17 and 18 percent. For these reasons, it is believed that the independent variable for the trip generation of this project should be based on the number of employees.

The current site with a total of 469 employees generates 186 morning peak hour trips and 161 afternoon peak hour trips based on peak hour turning movement counts conducted at both accesses along Bluewater Road on Wednesday, October 11, 2023. It is estimated that this site generates approximately 1,426 daily weekday trips based on a 11.3% K-factor (obtained from ITE Land Use Code 140) applied to the afternoon peak hour trips.

The site currently has 469 employees and with the ABB expansion, it is anticipated that the site will increase by 55 new employees initially and then could see a potential increase to 80 new employees (25 more employees than the initial increase) in 5 to 10 years after the expansion (but in the same initial building expansion space). However, the trip generation in the TIS for this project was evaluated with user-specific data and 100 new employees (ratio of 469 existing employees to 569 future employees) to provide a conservative analysis. The additional 100 employees (for a total of 569 employees) accounts for an increase of approximately 21 percent with 40 additional morning peak hour trips and an increase of 34 afternoon peak hour trips. Of note, with expansion of the site the shift hours are anticipated to remain the same.

The trip generation characteristics of the site are summarized in **Table 1** while summaries of trip generation calculations are included in **Appendix E**.

Table 1 – ABB Expansion Traffic Generation

Land Use	Weekday Vehicle Trips						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Existing Site (103,009 Square Feet, 469 Employees) Driveway Count Trip Generation							
Manufacturing	*1,426	102	84	186	9	152	161
ABB Expansion Trip Generation Scenarios							
ITE 140, 11th Edition (Number of New Employees)							
Manufacturing Expansion Trips (100 New Employees)	252	23	9	32	11	20	31
Site Specific (Existing Driveway Counts Factored by New Employee Ratio from Existing)							
Manufacturing Expansion Trips (100 New Employees Ratio)	*306	22	18	40	2	32	34

* = Estimated by Hourly K-Factor of 11.3% from ITE Trip Generation Equations for Manufacturing

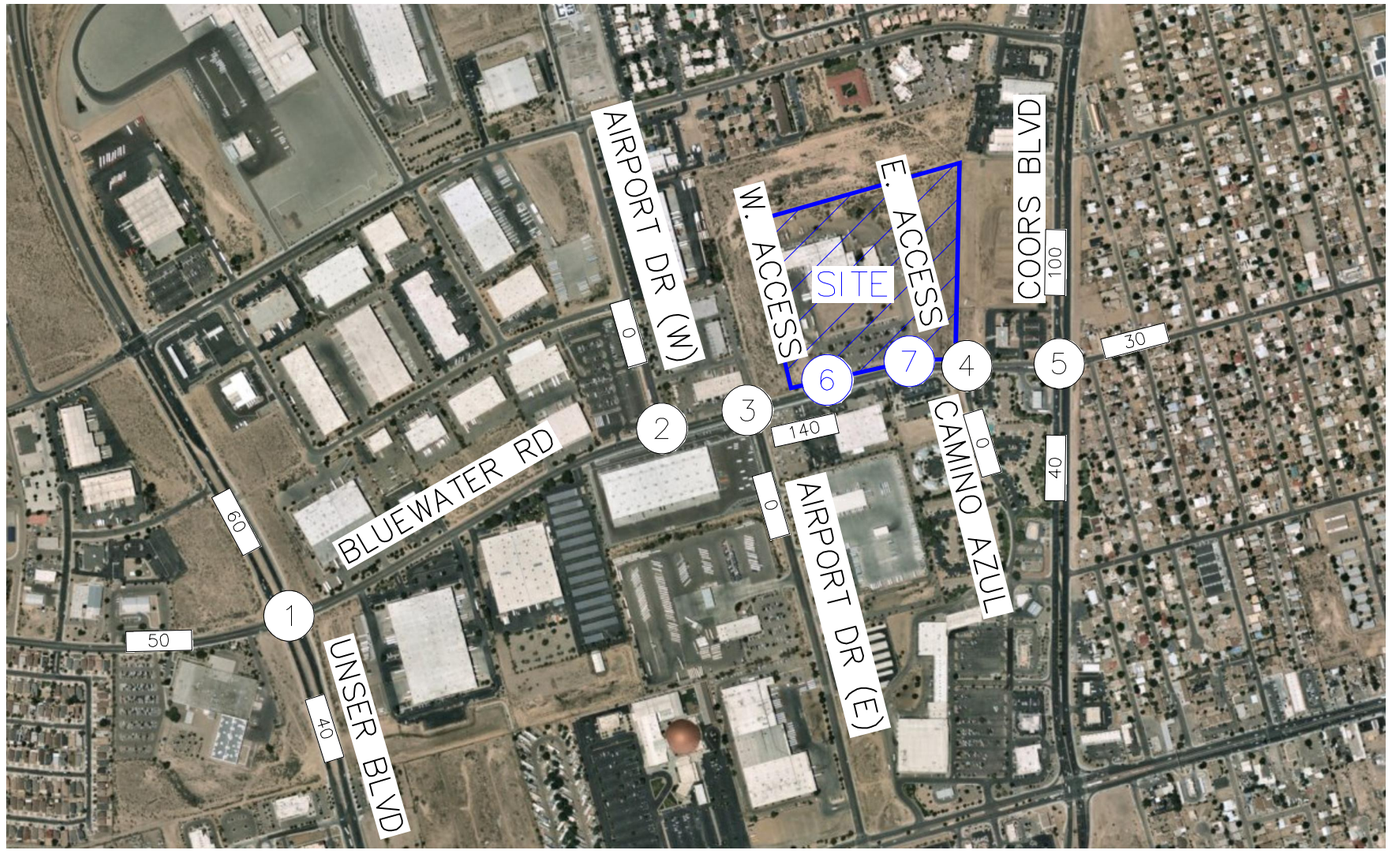
As seen in the table above, user-specific trip generation data for this project is more conservative than utilizing ITE Trip Generation Manual equations.

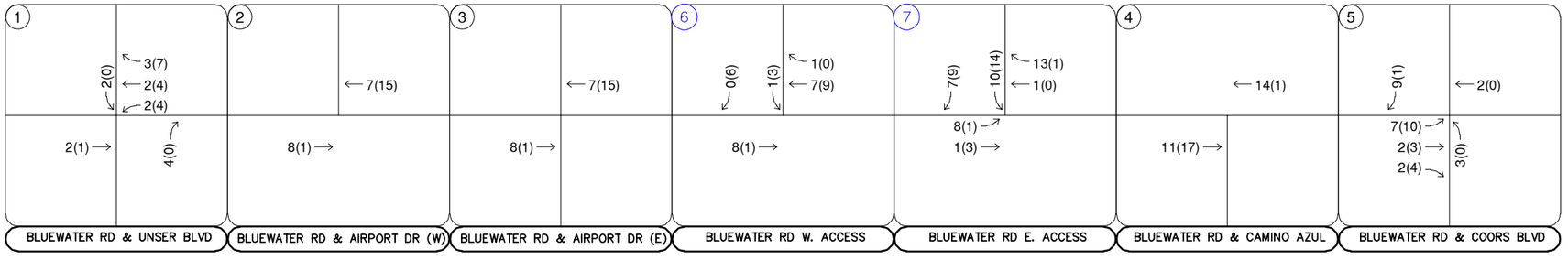
4.2 Traffic Assignment

The traffic generated for the ABB Expansion based on site specific date shown in **Table 1** was distributed and assigned to the roadway network based on the ratio of existing traffic volumes entering/exiting the project site. It was assumed that all project trips would utilize the intersections of Bluewater Road/Unser Boulevard (#1) and Bluewater Road/Coors Boulevard (#5) to travel to and from the site. Traffic ABB expansion trip assignment is shown in **Figure 6.**

4.3 Total (Background Plus Project) Traffic

Site traffic volumes were added to the background volumes to represent estimated traffic conditions for the 2025 implementation year and the 2035 horizon year. These total traffic volumes for the study area are illustrated for 2025 and 2035 in **Figures 7** and **8**, respectively.





LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

FIGURE 6
ABB EXPANSION
ALBUQUERQUE, NEW MEXICO
PROJECT TRAFFIC ASSIGNMENT (EXPANSION TRAFFIC ONLY)

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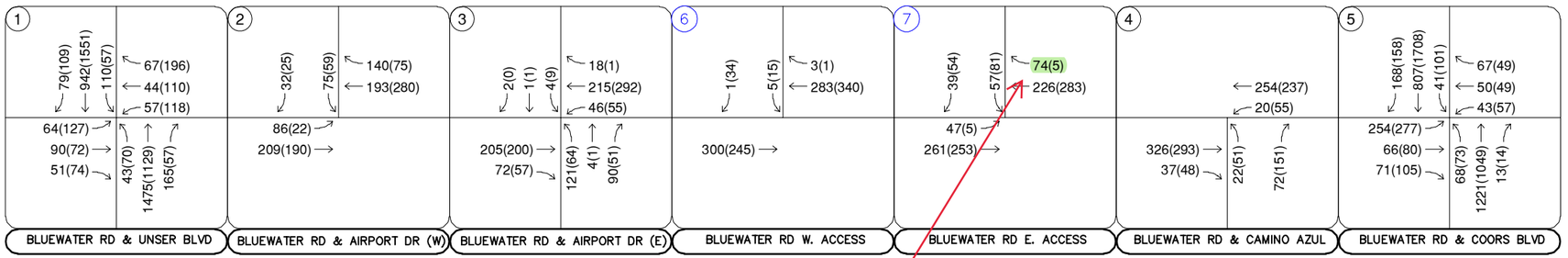

East access meets RT lane warrant 40 mph in AM, ***DPM TABLE 7.4.67 Turn Lane Warrants.***

LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

FIGURE 7
ABB EXPANSION
ALBUQUERQUE, NEW MEXICO
2025 IMPLEMENTATION YEAR TOTAL TRAFFIC VOLUMES

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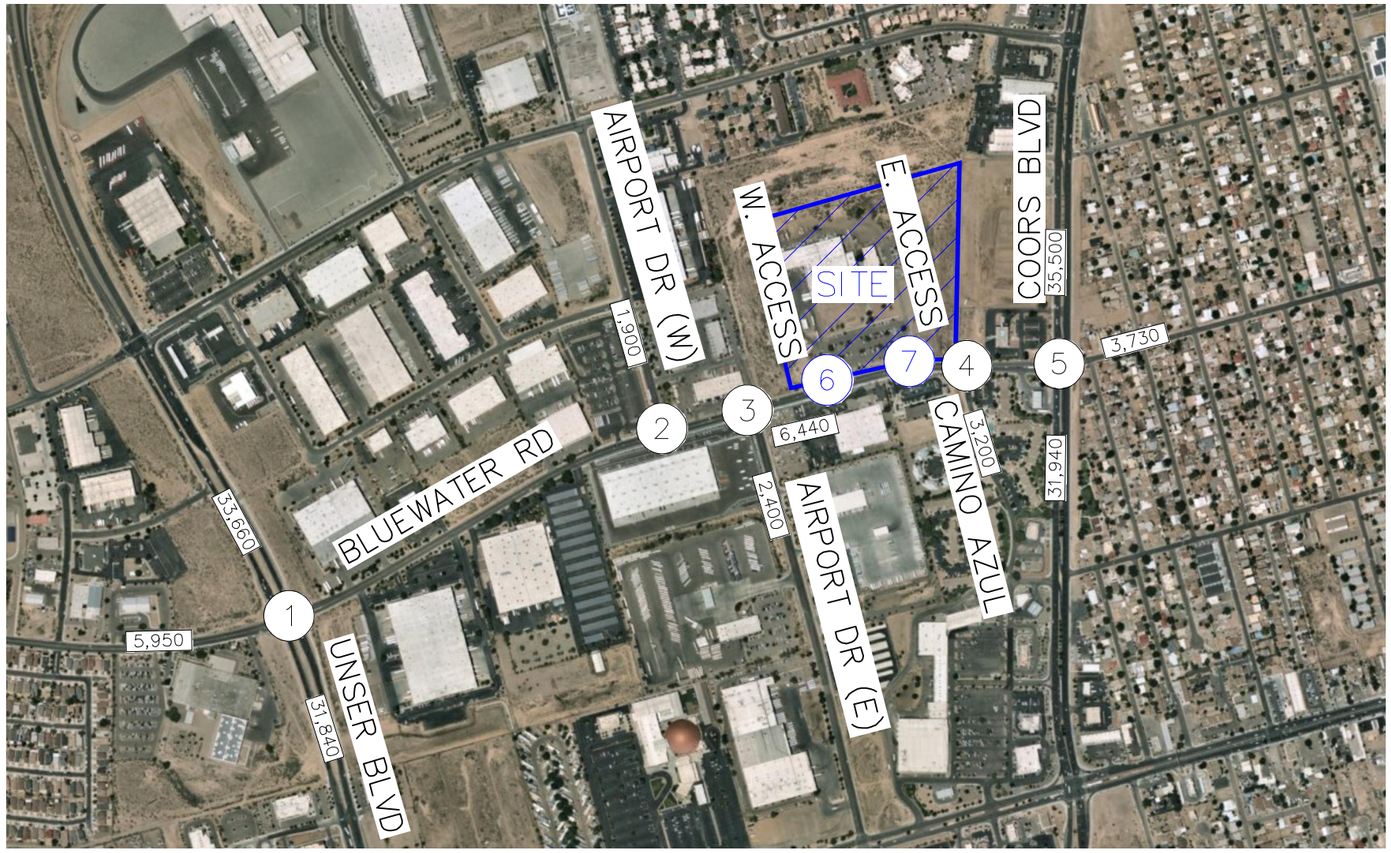
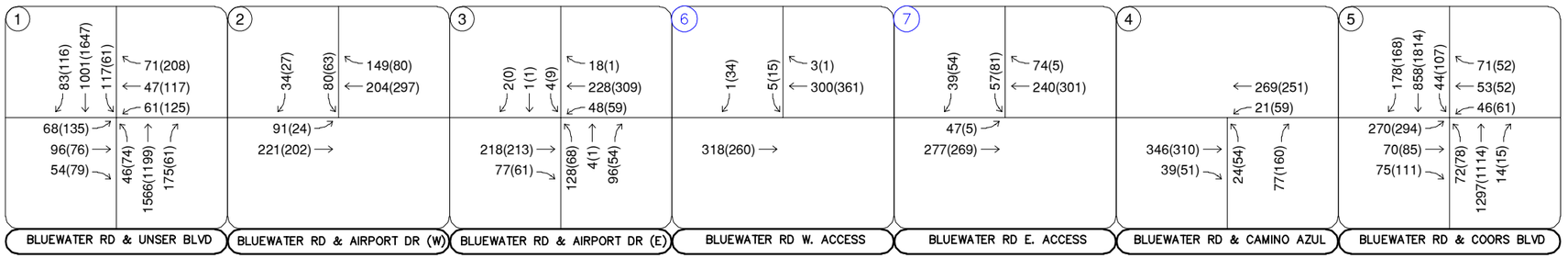




LEGEND

- (X) Study Area Key Intersection
- (X) Project Access Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume

FIGURE 8
ABB EXPANSION
ALBUQUERQUE, NEW MEXICO
2035 HORIZON YEAR TOTAL TRAFFIC VOLUMES

Kimley-Horn's analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies in the 2025 and 2035 development horizons at the identified key intersections. The acknowledged source for determining overall capacity is the *Highway Capacity Manual (HCM)*[2].

5.1 Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). For intersections and roadways in this study area, the City of Albuquerque recommends LOS D-E for principal arterials and C-D for major collectors in employment centers. The NMDOT State Access Management Manual (SAMM) recommends that Urban Principal Arterials operating at LOS D and LOS F shall not be accepted for individual movements. **Table 2** shows the LOS definitions for signalized and unsignalized intersections.

Table 2 – Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Definitions provided from the Highway Capacity Manual, Sixth Edition, Transportation Research Board, 2016.

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. Under the unsignalized analysis, the LOS for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS for a two-way stop-controlled intersection is not defined for the

[2] Transportation Research Board, *Highway Capacity Manual*, Sixth Edition, Washington DC, 2016.

intersection as a whole. LOS for signalized intersections are defined for each approach and for the overall intersection.

5.2 Key Intersection Operational Analysis

The existing year analysis is based on the lane geometry and intersection control shown in **Figure 2** and the traffic volumes shown in **Figure 3.** Existing peak hour factors were utilized in the existing year, 2025 implementation year, and the 2035 horizon year. The signalized intersection analysis utilizes the existing signal timings and phasing. Signal timings are provided in **Appendix F**. Synchro traffic analysis software was used to analyze the signalized and unsignalized key intersections for HCM LOS with the exception of the Bluewater Road / Coors Boulevard (#5) intersection which was analyzed using Highway Capacity Software Version 7 (HCS7), per NMDOT standards. Calculations for the operational LOS at the key intersections for the study area are provided in **Appendix G**.

Bluewater Road / Unser Boulevard (#1)

The signalized intersection of Bluewater Road / Unser Boulevard (#1) operates with protected-permitted left turn phasing on the northbound, southbound, and eastbound approaches and permitted-only left turn phasing on the westbound approach. The intersection operates acceptably at LOS C during both peak hours under existing conditions although the westbound right turn movement is operating at LOS F with a volume to capacity (v/c) ratio greater than one during the afternoon peak hour. To improve the westbound right turn movement and decrease the v/c ratio to less than one during the afternoon peak hour it is recommended that the signal be optimized by 2025 by adding three seconds of green time to the westbound approach and decreasing the green time for the eastbound left turn movement by three seconds. With project traffic and optimized signal timings during the afternoon peak hour, this intersection is anticipated to operate at an acceptable LOS through the 2035 horizon year. A northbound right turn lane, southbound left turn lane, westbound left turn lane, and westbound right turn lane exist and are warranted at this intersection based on existing traffic volumes and City of Albuquerque standards. **Table 3** provides the results of the LOS analysis conducted at this intersection.

Table 3 – Bluewater Road & Unser Boulevard (#1) LOS Results

Scenario	AM Peak Hour			PM Peak Hour		
	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C
2023 Existing	**30.8**	**C**	**-**	**29.7**	**C**	**-**
Eastbound Approach	48.7	D	-	48.2	D	-
Eastbound Left	47.9	D	0.33	50.1	D	0.57
Eastbound Through/Right	49.1	D	0.58	46.6	D	0.43
Westbound Approach	43.0	D	-	76.3	E	-
Westbound Left	55.8	E	0.41	57.8	E	0.58
Westbound Through	54.1	D	0.34	55.5	E	0.51
Westbound Right	24.5	C	0.62	99.1	F	1.08
Northbound Approach	34.1	C	-	19.5	B	-
Northbound Left	14.5	B	0.07	33.7	C	0.19
Northbound Through	34.7	C	0.88	18.6	B	0.55
Northbound Right	0.0	A	0.00	0.0	A	0.00
Southbound Approach	21.5	C	-	22.9	C	-
Southbound Left	31.4	C	0.20	18.5	B	0.12
Southbound Through	21.4	C	0.54	24.2	C	0.76
Southbound Right	9.2	A	0.10	6.9	A	0.12
2025 Background	**33.7**	**C**	-	**31.0**	**C**	**-**
Eastbound Approach	48.1	D	-	48.1	D	-
Eastbound Left	47.2	D	0.34	50.6	D	0.59
Eastbound Through/Right	48.5	D	0.58	46.0	D	0.44
Westbound Approach	42.8	D	-	77.2	E	-

Table 3 – Bluewater Road & Unser Boulevard (#1) LOS Results

Scenario	AM Peak Hour			PM Peak Hour		
	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C
Westbound Left	55.6	E	0.42	57.4	E	0.60
Westbound Through	53.7	D	0.35	54.8	D	0.51
Westbound Right	24.8	C	0.62	101.7	F	1.08
Northbound Approach	39.3	D	-	20.5	C	-
Northbound Left	16.1	B	0.08	40.3	D	0.22
Northbound Through	40.0	D	0.93	19.3	B	0.58
Northbound Right	0.0	A	0.00	0.0	A	0.00
Southbound Approach	22.2	C	-	24.7	C	-
Southbound Left	33.4	C	0.22	20.7	C	0.14
Southbound Through	22.1	C	0.57	26.1	C	0.80
Southbound Right	9.1	A	0.11	6.9	A	0.13
2025 Background Plus Project	**33.7**	**C**	**-**	**31.4**	**C**	**-**
Eastbound Approach	47.9	D	-	47.7	D	-
Eastbound Left	46.9	D	0.34	50.2	D	0.59
Eastbound Through/Right	48.3	D	0.58	45.6	D	0.44
Westbound Approach	42.7	D	-	78.8	E	-
Westbound Left	55.5	E	0.43	57.2	E	0.61
Westbound Through	53.4	D	0.35	54.5	D	0.52
Westbound Right	24.8	C	0.62	105.5	F	1.09
Northbound Approach	39.3	D	-	20.5	C	-
Northbound Left	16.3	B	0.08	40.6	D	0.23
Northbound Through	40.0	D	0.93	19.3	B	0.58
Northbound Right	0.0	A	0.00	0.0	A	0.00
Southbound Approach	22.3	C	-	24.7	C	-
Southbound Left	33.7	C	0.23	21.0	C	0.14
Southbound Through	22.1	C	0.57	26.1	C	0.80
Southbound Right	9.1	A	0.11	6.9	A	0.13
2025 Background Plus Project #	**-**	**-**	**-**	**29.1**	**C**	**-**
Eastbound Approach	**-**	**-**	**-**	51.7	D	-
Eastbound Left	**-**	**-**	**-**	57.8	E	0.66
Eastbound Through/Right	**-**	**-**	**-**	46.4	D	0.45
Westbound Approach	**-**	**-**	**-**	56.3	E	-
Westbound Left	**-**	**-**	**-**	57.2	E	0.61
Westbound Through	**-**	**-**	**-**	52.3	D	0.45
Westbound Right	**-**	**-**	**-**	58.1	E	0.95
Northbound Approach	**-**	**-**	**-**	20.5	C	-
Northbound Left	-	-	-	39.9	D	0.22
Northbound Through	-	-	-	19.3	B	0.58
Northbound Right	-	-	-	0.0	A	0.00
Southbound Approach	-	-	-	24.7	C	-
Southbound Left	-	-	-	20.5	C	0.13
Southbound Through	-	-	-	26.1	C	0.80
Southbound Right	-	-	-	8.0	A	0.13
2035 Background	**39.1**	**D**	**-**	**32.7**	**C**	**-**

Table 3 – Bluewater Road & Unser Boulevard (#1) LOS Results

Scenario	AM Peak Hour			PM Peak Hour		
	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C
Eastbound Approach	47.4	D	-	48.6	D	-
Eastbound Left	46.4	D	0.34	52.0	D	0.63
Eastbound Through/Right	47.8	D	0.59	45.5	D	0.45
Westbound Approach	42.6	D	-	78.7	E	-
Westbound Left	55.4	E	0.44	57.0	E	0.62
Westbound Through	52.9	D	0.34	54.2	D	0.52
Westbound Right	24.7	C	0.60	105.7	F	1.08
Northbound Approach	49.5	D	-	21.5	C	-
Northbound Left	18.2	B	0.09	45.9	D	0.26
Northbound Through	50.4	D	0.99	20.0	B	0.62
Northbound Right	0.0	A	0.00	0.0	A	0.00
Southbound Approach	23.0	C	-	27.1	C	-
Southbound Left	35.1	D	0.26	23.5	C	0.16
Southbound Through	22.8	C	0.61	28.6	C	0.85
Southbound Right	9.1	A	0.11	7.0	A	0.14
2035 Background Plus Project	**39.1**	**D**	**-**	**33.2**	**C**	**-**
Eastbound Approach	47.1	D	-	48.1	D	-
Eastbound Left	46.1	D	0.34	51.5	D	0.63
Eastbound Through/Right	47.6	D	0.59	45.1	D	0.45
Westbound Approach	42.5	D	-	81.2	F	-
Westbound Left	55.3	E	0.44	56.8	E	0.62
Westbound Through	52.7	D	0.34	53.9	D	0.52
Westbound Right	24.7	C	0.61	111.1	F	1.09
Northbound Approach	49.5	D	-	21.5	C	-
Northbound Left	18.4	B	0.09	46.3	D	0.26
Northbound Through	50.4	D	0.99	20.0	B	0.62
Northbound Right	0.0	A	0.00	0.0	A	0.00
Southbound Approach	23.1	C	-	27.1	C	-
Southbound Left	35.3	D	0.26	23.7	C	0.16
Southbound Through	22.8	C	0.61	28.6	C	0.85
Southbound Right	9.1	A	0.11	7.0	A	0.14
2035 Background Plus Project #	**-**	**-**	**-**	**30.5**	**C**	**-**
Eastbound Approach	-	-	-	51.6	D	-
Eastbound Left	-	-	-	58.7	E	0.68
Eastbound Through/Right	-	-	-	45.4	D	0.45
Westbound Approach	-	-	-	56.2	E	-
Westbound Left	-	-	-	56.8	E	0.62
Westbound Through	-	-	-	51.2	D	0.45
Westbound Right	-	-	-	58.6	E	0.94
Northbound Approach	-	-	-	21.5	C	-
Northbound Left	-	-	-	46.0	D	0.26
Northbound Through	-	-	-	20.0	B	0.62
Northbound Right	-	-	-	0.0	A	0.00
Southbound Approach	-	-	-	27.1	C	-

Table 3 – Bluewater Road & Unser Boulevard (#1) LOS Results

Scenario	AM Peak Hour			PM Peak Hour		
	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C
Southbound Left	-	-	-	23.6	C	0.16
Southbound Through	-	-	-	28.6	C	0.85
Southbound Right	-	-	-	8.0	A	0.14

 # = Optimized Signal Timing

Bluewater Road / Airport Drive (West) (#2)

The unsignalized 'T'-intersection of Bluewater Road / Airport Drive (West) (#2) operates with stop control on the southbound Airport Drive (West) approach. The intersection movements operate acceptably at LOS B or better during both peak hours under existing conditions. With project traffic, all movements are anticipated to continue operating at an acceptable LOS through the 2035 horizon year. Therefore, no improvements or modifications are anticipated to be needed at this intersection based on the addition of project traffic and this operational LOS analysis. **Table 4** provides the results of the LOS analysis conducted at this intersection.

Table 4 – Bluewater Road / Airport Drive (West) (#2) LOS Results

Scenario	AM Peak Hour			PM Peak Hour		
	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C
2023 Existing						
Eastbound Left	8.1	A	0.071	8.2	A	0.024
Southbound Approach	12.5	B	0.186	12.4	B	0.176
2025 Background						
Eastbound Left	8.2	A	0.077	8.3	A	0.026
Southbound Approach	12.9	B	0.204	12.8	B	0.192
2025 Background Plus Project						
Eastbound Left	8.2	A	0.078	8.4	A	0.026
Southbound Approach	13.1	B	0.207	13.0	B	0.194
2035 Background						
Eastbound Left	8.3	A	0.083	8.4	A	0.029
Southbound Approach	13.4	B	0.224	13.3	B	0.213
2035 Background Plus Project						
Eastbound Left	8.3	A	0.084	8.5	A	0.029
Southbound Approach	13.6	B	0.228	13.4	B	0.215

Bluewater Road / Airport Drive (East) (#3)

The unsignalized intersection of Bluewater Road / Airport Drive (East) (#3) operates with stop control on the northbound and southbound Airport Drive (East) approaches. The intersection movements operate acceptably at LOS B or better during both peak hours under existing conditions. With project traffic, all movements are anticipated to continue operating at an acceptable LOS through the 2035 horizon year. Therefore, no improvements or modifications are anticipated to be needed at this intersection based on the addition of project traffic and this operational level of service analysis. **Table 5** provides the results of the LOS analysis conducted at this intersection.

Table 5 – Bluewater Road / Airport Drive (East) (#3) LOS Results

Scenario	AM Peak Hour			PM Peak Hour		
	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C
2023 Existing						
Northbound Approach	12.8	B	0.323	12.8	B	0.234
Eastbound Left	0.0	A	0.000	0.0	A	0.000
Westbound Left	7.9	A	0.036	8.0	A	0.053
Southbound Approach	11.1	B	0.013	12.9	B	0.027
2025 Background						
Northbound Approach	13.3	B	0.351	13.4	B	0.257
Eastbound Left	0.0	A	0.000	0.0	A	0.000
Westbound Left	8.0	A	0.039	8.1	A	0.057
Southbound Approach	11.3	B	0.013	13.3	B	0.029
2025 Background Plus Project						
Northbound Approach	13.5	B	0.357	13.6	B	0.261
Eastbound Left	0.0	A	0.000	0.0	A	0.000
Westbound Left	8.0	A	0.040	8.1	A	0.057
Southbound Approach	11.4	B	0.013	13.4	B	0.029
2035 Background						
Northbound Approach	14.0	B	0.384	14.0	B	0.283
Eastbound Left	0.0	A	0.000	0.0	A	0.000
Westbound Left	8.0	A	0.042	8.2	A	0.063
Southbound Approach	11.6	B	0.014	13.7	B	0.030
2035 Background Plus Project						
Northbound Approach	14.1	B	0.386	14.2	B	0.288
Eastbound Left	0.0	A	0.000	0.0	A	0.000
Westbound Left	8.0	A	0.042	8.2	A	0.063
Southbound Approach	11.6	B	0.014	13.9	B	0.031

Bluewater Road / Camino Azul (#4)

The unsignalized 'T'-intersection of Bluewater Road / Camino Azul (#4) operates with stop control on the northbound Camino Azul approach. The intersection movements operate acceptably at LOS B or better during both peak hours under existing conditions. With project traffic, all movements are anticipated to continue operating at an acceptable LOS through the 2035 horizon year. Therefore, no improvements or modifications are anticipated to be needed at this intersection based on the addition of project traffic and this operational LOS analysis. **Table 6** provides the results of the LOS analysis conducted at this intersection.

Table 6 – Bluewater Road / Camino Azul (#4) LOS Results

Scenario	AM Peak Hour			PM Peak Hour		
	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C
2023 Existing						
Northbound Left	11.0	B	0.037	12.4	B	0.110
Northbound Right	10.7	B	0.105	12.0	B	0.257
Westbound Left	8.1	A	0.017	8.2	A	0.055
2025 Background						
Northbound Left	11.2	B	0.040	12.8	B	0.121
Northbound Right	11.0	B	0.115	12.5	B	0.281
Westbound Left	8.1	A	0.018	8.3	A	0.060
2025 Background Plus Project						
Northbound Left	11.3	B	0.040	13.0	B	0.124
Northbound Right	11.1	B	0.116	12.7	B	0.289
Westbound Left	8.1	A	0.019	8.4	A	0.061
2035 Background						
Northbound Left	11.4	B	0.044	13.2	B	0.134
Northbound Right	11.2	B	0.126	12.9	B	0.307
Westbound Left	8.2	A	0.020	8.4	A	0.065
2035 Background Plus Project						
Northbound Left	11.5	B	0.045	13.4	B	0.136
Northbound Right	11.3	B	0.128	13.3	B	0.316
Westbound Left	8.2	A	0.020	8.5	A	0.067

Bluewater Road / Coors Blvd (#5)

The signalized intersection of Bluewater Road and Coors Boulevard (#5) operates with protected-permitted left turn phasing on the northbound, southbound, and eastbound approaches and permitted-only left turn phasing on the westbound approach. The intersection operates acceptably at LOS C or during both peak hours under existing conditions although the eastbound left turn movement is operating at LOS F with a V/C ratio greater than one during the afternoon peak hour. To improve the eastbound left turn movement and decrease the V/C ratio to less than one during the afternoon peak hour it is recommended that the signal be optimized by 2025 by adding six seconds of green time to the eastbound approach and decreasing the green time for the northbound and southbound approaches by six seconds. With project traffic and optimized signal timings during the afternoon peak hour, this intersection is anticipated to operate at an acceptable level of service through the 2025 implementation year.

To have all movements operating at an acceptable LOS and with a V/C ratio less than one for the 2035 horizon signal timings may need to be optimized for the afternoon peak hour. For the afternoon peak hour, it is recommended that the signal be optimized by adding 10 seconds of green time to the eastbound approach and decreasing the green time for the northbound and southbound approaches by 10 seconds. With these signal modifications, this intersection is anticipated to operate acceptably through the 2035 horizon year.

A northbound left turn lane exists and is warranted at this intersection based on existing traffic volumes and NMDOT standards. Additionally, a southbound right turn lane is warranted at this intersection based on NMDOT standards. Although a southbound right turn lane is warranted at this intersection this is a deficiency based on existing traffic volumes. Based on coordination with NMDOT, it is believed that right turn lanes cause more pedestrian-vehicle conflicts and right turn lanes should be implemented when needed operationally. With a southbound right turn lane, delays at this intersection are anticipated to improve by less than one second during both the morning and afternoon peak hours. Therefore, it is not recommended that a southbound right turn lane be designated at this intersection. **Table 7** provides the results of the LOS analysis conducted at this intersection.

Table 7 – Bluewater Road / Coors Blvd (#5) LOS Results

Scenario	AM Peak Hour			PM Peak Hour		
	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C
2023 Existing	**13.7**	**B**	**-**	**20.6**	**C**	**-**
Eastbound Approach	42.6	D	-	109.5	F	-
Eastbound Left	46.0	D	0.767	147.3	F	1.134
Eastbound Through	35.1	D	0.148	4.8	A	0.211
Eastbound Right	34.8	C	0.119	45.3	D	0.260
Westbound Approach	25.7	C	-	35.4	D	-
Westbound Through/Left	32.5	C	0.591	39.8	D	0.640
Westbound Right	5.4	A	0.288	4.0	A	0.117
Northbound Approach	12.4	B	-	12.6	B	-
Northbound Left	3.6	A	0.139	6.7	A	0.315
Northbound Through	12.5	B	0.456	12.9	B	0.304
Northbound Right	13.2	B	0.456	13.3	B	0.304
Southbound Approach	4.0	A	-	5.0	A	-
Southbound Left	3.3	A	0.164	1.8	A	0.233
Southbound Through	3.9	A	0.272	4.9	A	0.516
Southbound Right	4.3	A	0.274	5.9	A	0.518
2025 Background	**14.0**	**B**	**-**	**22.8**	**C**	**-**
Eastbound Approach	46.9	D	-	124.5	F	-
Eastbound Left	52.2	D	0.823	171.6	F	1.201
Eastbound Through	35.1	D	0.157	44.7	D	0.218
Eastbound Right	34.9	C	0.130	45.3	D	0.275
Westbound Approach	26.3	C	-	35.2	D	-
Westbound Through/Left	32.5	C	0.605	39.8	D	0.653
Westbound Right	9.2	A	0.312	6.1	A	0.135
Northbound Approach	11.3	B	-	12.8	B	-
Northbound Left	4.1	A	0.155	6.5	A	0.340
Northbound Through	11.6	B	0.372	13.1	B	0.321
Northbound Right	12.1	B	0.372	13.5	B	0.322
Southbound Approach	4.0	A	-	5.8	A	-
Southbound Left	2.1	A	0.135	8.8	A	0.267
Southbound Through	4.0	A	0.290	5.3	A	0.556
Southbound Right	4.4	A	0.292	6.4	A	0.559
2025 Background Plus Project	**14.4**	**B**	**-**	**24.6**	**C**	**-**
Eastbound Approach	49.1	D	-	135.1	F	-
Eastbound Left	55.4	E	0.846	188.6	F	1.246
Eastbound Through	35.1	D	0.161	44.8	D	0.226
Eastbound Right	34.9	C	0.136	45.4	D	0.288
Westbound Approach	26.4	C	-	35.1	D	-
Westbound Through/Left	32.6	C	0.611	39.8	D	0.652
Westbound Right	9.2	A	0.307	6.1	A	0.135
Northbound Approach	11.3	B	-	12.8	B	-
Northbound Left	3.8	A	0.162	6.5	A	0.340
Northbound Through	11.6	B	0.372	13.1	B	0.321

Table 7 – Bluewater Road / Coors Blvd (#5) LOS Results

Scenario	AM Peak Hour			PM Peak Hour		
	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C
Northbound Right	12.1	B	0.372	13.5	B	0.322
Southbound Approach	4.1	A	-	5.8	A	-
Southbound Left	2.2	A	0.135	8.8	A	0.267
Southbound Through	4.1	A	0.295	5.3	A	0.557
Southbound Right	4.5	A	0.297	6.5	A	0.560
2025 Background Plus Project #	-	-	-	**16.8**	**B**	**-**
Eastbound Approach	-	-	-	63.3	E	-
Eastbound Left	-	-	-	75.6	E	0.928
Eastbound Through	-	-	-	42.3	D	0.184
Eastbound Right	-	-	-	43.2	D	0.260
Westbound Approach	-	-	-	35.0	C	-
Westbound Through/Left	-	-	-	39.9	D	0.656
Westbound Right	-	-	-	4.4	A	0.135
Northbound Approach	-	-	-	14.2	B	-
Northbound Left	-	-	-	8.1	A	0.359
Northbound Through	-	-	-	14.4	B	0.346
Northbound Right	-	-	-	14.9	B	0.346
Southbound Approach	-	-	-	6.7	A	-
Southbound Left	-	-	-	10.0	A	0.284
Southbound Through	-	-	-	6.1	A	0.598
Southbound Right	-	-	-	7.5	A	0.602
2035 Background	**15.0**	**B**	**-**	**28.3**	**C**	**-**
Eastbound Approach	52.5	D	-	167.9	F	-
Eastbound Left	60.3	E	0.878	240.7	F	1.371
Eastbound Through	35.0	C	0.164	45.0	D	0.237
Eastbound Right	34.8	C	0.140	45.7	D	0.301
Westbound Approach	26.1	C	-	34.8	C	-
Westbound Through/Left	32.6	C	0.619	39.9	D	0.667
Westbound Right	9.3	A	0.330	6.1	A	0.149
Northbound Approach	11.7	B	-	12.8	B	-
Northbound Left	4.1	A	0.173	7.2	A	0.388
Northbound Through	11.9	B	0.397	13.0	B	0.337
Northbound Right	12.5	B	0.397	13.5	B	0.337
Southbound Approach	4.3	A	-	6.5	A	-
Southbound Left	4.3	A	0.156	17.7	B	0.307
Southbound Through	4.1	A	0.311	5.5	A	0.588
Southbound Right	4.6	A	0.313	6.8	A	0.593
2035 Background Plus Project	**15.5**	**B**	**-**	**30.4**	**C**	**-**
Eastbound Approach	55.5	E	-	180.0	F	-
Eastbound Left	64.7	E	0.901	260.6	F	1.419
Eastbound Through	35.0	C	0.168	45.1	D	0.245
Eastbound Right	34.8	C	0.145	45.9	D	0.314
Westbound Approach	26.2	C	-	34.8	C	-
Westbound Through/Left	32.6	C	0.625	39.8	D	0.667

Table 7 – Bluewater Road / Coors Blvd (#5) LOS Results

Scenario	AM Peak Hour			PM Peak Hour		
	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C
Westbound Right	9.2	A	0.325	6.1	A	0.149
Northbound Approach	11.8	B	-	12.8	B	-
Northbound Left	5.2	A	0.182	7.3	A	0.388
Northbound Through	11.9	B	0.398	13.1	B	0.337
Northbound Right	12.5	B	0.398	13.5	B	0.337
Southbound Approach	4.3	A	-	6.5	A	-
Southbound Left	4.4	A	0.156	17.7	B	0.307
Southbound Through	4.1	A	0.315	5.5	A	0.589
Southbound Right	4.6	A	0.317	6.9	A	0.594
2035 Background Plus Project #	-	-	-	**17.5**	**B**	**-**
Eastbound Approach	-	-	-	57.5	E	-
Eastbound Left	-	-	-	67.0	E	0.897
Eastbound Through	-	-	-	41.2	D	0.180
Eastbound Right	-	-	-	41.9	D	0.230
Westbound Approach	-	-	-	42.0	D	-
Westbound Through/Left	-	-	-	48.9	D	0.701
Westbound Right	-	-	-	3.5	A	0.159
Northbound Approach	-	-	-	15.1	B	-
Northbound Left	-	-	-	10.4	B	0.423
Northbound Through	-	-	-	15.2	B	0.378
Northbound Right	-	-	-	15.8	B	0.378
Southbound Approach	-	-	-	8.2	A	-
Southbound Left	-	-	-	21.0	C	0.340
Southbound Through	-	-	-	6.9	A	0.660
Southbound Right	-	-	-	8.9	A	0.666

 # = Optimized Signal Timing

Project Accesses

With completion of the ABB Expansion project, access will be provided by the existing gated west full movement access (#6) on the north side of Bluewater Road approximately 750 feet west of Camino Azul, measured center-to-center, and a guard controlled full movement access (#7) along the north side of Bluewater Road approximately 280 feet west of Camino Azul, measured center-to-center. It is recommended that a R1-1 "STOP" sign be installed on the exiting approaches exiting the development. **Table 8** provides the results of the LOS for these project street accesses. As shown in the table, the project street access intersections along Bluewater Road are anticipated to have all movements operating with acceptable LOS B or better during the peak hours in both the 2025 implementation year and the 2035 horizon year. Of note, an eastbound left turn lane exists and is warranted at the Bluewater Road East Access (#7). Additionally, a westbound right turn lane is warranted at this access (#7). However, based on the characteristics of this two-lane roadway without right turn lanes at any adjacent accesses and the low number of westbound through vehicles it is not recommended that a westbound right turn lane be designated at this access.

Table 8 – Project Access Level of Service Results

Scenario	2025 Total						2035 Total					
	AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C	Delay (sec/veh)	LOS	V/C
Bluewater Rd W. Access (#6)												
Eastbound Left	0.0	A	0.000	0.0	A	0.000	0.0	A	0.000	0.0	A	0.000
Southbound Approach	10.5	B	0.010	11.2	B	0.104	10.6	B	0.010	11.4	B	0.107
Bluewater Rd E. Access (#7)												
Eastbound Left	8.0	A	0.041	8.1	A	0.006	8.0	A	0.041	8.2	A	0.006
Southbound Approach	11.3	B	0.154	13.4	B	0.311	11.4	B	0.157	13.8	B	0.321

5.3 Vehicle Queuing Analysis

A vehicle queuing analysis was conducted for the study area intersections. The queuing analysis was performed using Synchro and HCS presenting the results of the 95th percentile HCM queue lengths. Results are shown in the following **Table 9** with calculations provided within the LOS operational sheets of **Appendix F**.

Table 9 – Turn Lane Queuing Analysis Results

Intersection Turn Lane	Existing Turn Lane Length (Feet)	2023 Exist. Calculated Queue (feet)	2025 Calculated Queue (feet)	2025 Recommended Length (feet)	2035 Calculated Queue (feet)	2035 Recommended Length (feet)
Bluewater Rd/Unser Blvd (#1)						
Eastbound Left	100'	**168'**	**108'**	**125'**	125'	125'
Westbound Left	125'	**163'**	**180'**	**200'/TWLTL**	190'	200'/TWLTL
Westbound Right	125'	**303'**	**265'**	125'	**283'**	125'
Northbound Left	125'	80'	95'	125'	103'	125'
Northbound Right	275'	0'	0'	275'	0'	275'
Southbound Left	150'	110'	120'	150'	133'	150'
Southbound Right	175'	68'	73'	175'	78'	175'
Bluewater Rd/Airport Rd (W) (#2)						
Eastbound Left	TWLTL	5'	8'	TWLTL	8'	TWLTL
Bluewater Rd/Airport Rd (E) (#3)						
Eastbound Left	TWLTL	0'	0'	TWLTL	0'	TWLTL
Westbound Left	TWLTL	5'	5'	TWLTL	5'	TWLTL
Bluewater Rd/Camino Azul (#4)						
Westbound Left	75'	5'	5'	75'	5'	75'
Northbound Right	125'	25'	30'	125'	35'	125'
Bluewater Rd/Coors Blvd (#5)						
Eastbound Left	125'	**353'**	**408'**	**275'**	**413'**	275'
Eastbound Right	125'	100'	115'	125'	123'	125'
Westbound Right	75'	23'	45'	75'	30'	75'
Northbound Left	250'	20'	25'	250'	33'	250'
Southbound Left	250'	8'	30'	250'	58'	250'
Bluewater Rd W. Access (#6)						
Eastbound Left	TWLTL	0'	0'	TWLTL	0'	TWLTL
Bluewater Rd E. Access (#7)						
Eastbound Left	TWLTL	0'	3'	TWLTL	3'	TWLTL

TWLTL = Two-Way Left Turn Lane; **Red** Text = Storage Deficiency; **Blue** Text = Recommendation

All queues are anticipated to remain within the existing or recommended turn lane lengths through 2035 except the westbound right turn queue at the Bluewater Road / Unser Boulevard (#1) intersection and the eastbound left turn queue at the Bluewater Road / Coors Boulevard (#5) intersection. This westbound right turn lane at the Bluewater Road and Unser Boulevard (#1) intersection cannot be extended due to the constraint with access to the east.

The eastbound left turn lane at the Bluewater Road / Coors Boulevard (#5) intersection is recommended to be restriped to a maximum length of 275 feet due to the back-to-back left turn lane to the west. This improvement is based on existing vehicle queues and is independent of this project.

By 2025, it is recommended that the westbound left turn lane at the Bluewater Road / Unser Boulevard (#1) intersection be extended from 125 feet to 200 feet of length and tie-in with the

existing two-way left turn lane. Additionally, the eastbound left turn lane at this intersection may need to be extended from 100 feet to 125 feet. Of note, project traffic does not contribute to this eastbound left turn movement and both of these improvements are based existing vehicle queues and are independent of this project.

Of note, all deficient turn lane storage lengths are deficient with the existing traffic volumes. As previously stated, project traffic does not contribute to the eastbound left turn movement at the Bluewater Road/Unser Boulevard (#1) intersection. Project traffic only contributes to four (4) of the 118 (3.4%) westbound left turn movements during the 2025 implementation year peak hour at the Bluewater Road/Unser Boulevard (#1) intersection. Likewise, project traffic only contributes to 10 of the 277 (3.6%) eastbound left turn movements during the 2025 implementation year peak hour at the Bluewater Road/Coors Boulevard (#5) intersection.

5.4 Safety Analysis

Crash data were obtained for the existing study area intersections from NMDOT and MRCOG for the most recent five-year period (2017 – 2021) for which crash data were available. The crash data can be found in **Appendix H**.

Crash data obtained for the study area intersections in their existing conditions are summarized in **Table 10** based on crash severity and in **Table 11** based on crash type.

Table 10 – Crash Data by Severity

Intersection Name	Total Crashes	Crash Severity					
		Property Damage Only		Injury		Fatal	
		#	%	#	%	#	%
Bluewater Rd & Unser Blvd (S)	102	63	62%	39	38%	0	0%
Bluewater Rd & Airport Dr (TWSC)	15	11	73%	4	27%	0	0%
Bluewater Rd & Camino Azul (TWSC)	10	9	90%	1	10%	0	0%
Bluewater Rd & Coors Blvd (S)	130	80	62%	49	38%	1	1%
Total	**257**	**163**	**63%**	**93**	**36%**	**1**	**0%**

A total of 257 crashes were recorded at study area intersections in the most recent five-year period. The 257 crashes resulted in 163 property damage only crashes (63%), 93 injury crashes (36%), and one fatal crash (<1%).

Table 11 – Crash Data by Type

Intersection Name	Total Crashes	Crash Type					
		Vehicle Only		Pedestrian		Bicyclist	
		#	%	#	%	#	%
Bluewater Rd & Unser Blvd	102	100	98%	0	0%	2	2%
Bluewater Rd & Airport Dr	15	15	100%	0	0%	0	0%
Bluewater Rd & Camino Azul	10	10	100%	0	0%	0	0%
Bluewater Rd & Coors Blvd	130	126	97%	4	3%	0	0%
Total	**257**	**251**	**98%**	**4**	**2%**	**2**	**1%**

The 257 crashes resulted in 251 vehicle only crashes (98%), four pedestrian involved crashes (2%), and two bicyclists involved crashes (1%).

Interactive Highway Safety Design Model (IHSDM) software was used to analyze and predict crashes in the existing conditions and proposed site conditions. This analysis was in accordance with the *Highway Safety Manual* Predictive Method.

The predicted crashes at the study intersections are summarized in **Table 12**. The IHSDM calculations were not rounded to the nearest whole number or complete crash to better show the small changes in crashes between analysis scenarios. The IHSDM output reports are provided in **Appendix H**.

Table 12 – Predicted Crashes

Intersection Name	Predicted Crashes (Crashes/Yr)	
	2025 Background	2025 Total
Bluewater Rd & Unser Blvd	3.9971	4.0192
Bluewater Rd & Airport Dr (W)	0.4712	0.4813
Bluewater Rd & Airport Dr (E)	0.6608	0.6723
Bluewater Rd & Camino Azul	0.3715	0.3797
Bluewater Rd & Coors Blvd	4.3035	4.3320
Bluewater Rd W. Access	0.2632	0.2914
Bluewater Rd E. Access	0.4218	0.4612

The proposed site conditions for both 2025 background and 2025 total scenarios does not include any geometric changes to the existing study intersections. Without any geometric changes to the study intersections, there is a general very minimal increase in the predicted crashes due to increased traffic volumes related to the proposed ABB expansion.

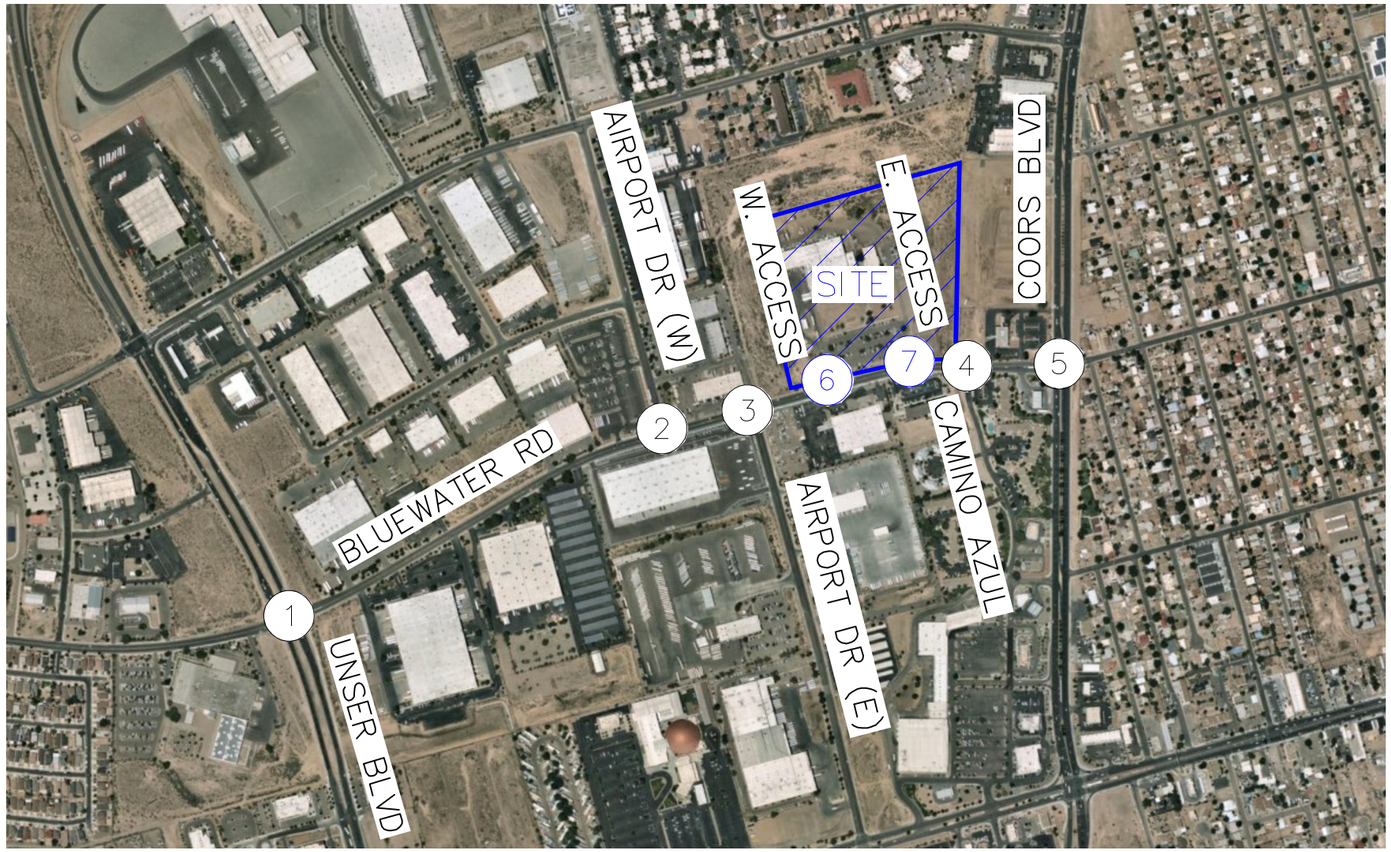
5.5 Pedestrian and Transit Analysis

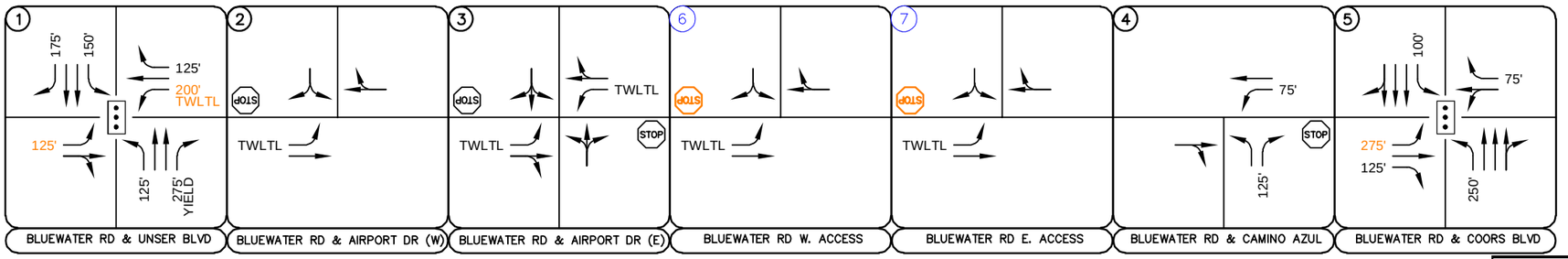
Currently sidewalks are provided along both sides of Unser Boulevard, Camino Azul, Airport Drive (East), and Coors Boulevard in the site vicinity. A sidewalk is provided along the entire south side of Bluewater Road and along the north side of Bluewater Road with some gaps. A sidewalk is provided along the entirety of the west side of Airport Drive (West) and along the east side of Airport Drive (West) starting approximately 275 feet north of Bluewater Road. Bicycle lanes are currently provided along both sides of Bluewater Road between Unser Boulevard and Coors Boulevard. Of the studied roadways on-street parking is only available on Airport Drive (West).

ABQ Ride route 155 runs northbound and southbound along Coors Boulevard with stops on the east and west sides of Coors Boulevard just north of Bluewater Road. There are currently no bulb outs at these bus stops. Therefore, the buses are required to stop in the outside through lanes. The ABQ Ride route 155 runs from 5:45 AM to 10:16 PM on weekdays, 7:44 AM to 8:38 PM on Saturdays, and 9:15 AM to 5:26 PM on Sundays. With buses arriving at the stops approximately every 40 minutes on average.

5.6 Improvement Summary

Based on the results of the intersection operational and vehicle queuing analysis, the key intersection recommended improvements and control are shown in **Figure 10**.





LEGEND

- Study Area Key Intersection
- Project Access Intersection
- Signalized Intersection
- Stop Controlled Approach
- Improvement
- 100' Turn Lane Length (feet)

FIGURE 9
ABB EXPANSION
ALBUQUERQUE, NEW MEXICO
RECOMMENDED GEOMETRY AND CONTROL

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, Kimley-Horn believes ABB Expansion will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network, the proposed project development, and expected traffic volumes resulted in the following recommendations:

- With completion of the ABB Expansion project, access will be provided by the existing gated west full movement access (#6) on the north side of Bluewater Road approximately 750 feet west of Camino Azul, measured center-to-center, and a guard controlled full movement access (#7) along the north side of Bluewater Road approximately 280 feet west of Camino Azul, measured center-to-center. It is recommended that a R1-1 “STOP” sign be installed on the exiting approaches exiting the development.

- By 2025, it is recommended that the westbound left turn lane at the Bluewater Road / Unser Boulevard (#1) intersection be extended from 125 feet to 200 feet of length and tie-in with the existing two-way left turn lane. Additionally, the eastbound left turn lane at this intersection may need to be extended from 100 feet to 125 feet. Of note, project traffic does not contribute to this eastbound left turn movement and both of these improvements are based existing vehicle queues and are independent of this project.

- The eastbound left turn lane at the Bluewater Road and Coors Boulevard (#5) intersection is recommended to be restriped to a maximum length of 275 feet due to the back-to-back left turn lane to the west. This improvement is based on existing vehicle queues and is independent of this project.

- It should be noted that all deficient turn lane storage lengths are deficient with the existing traffic volumes. As previously stated, project traffic does not contribute to the eastbound left turn movement at the Bluewater Road/Unser Boulevard (#1) intersection. Project traffic only contributes to four (4) of the 118 (3.4%) westbound left turn movements during the 2025 implementation year peak hour at the Bluewater Road/Unser Boulevard (#1) intersection. Likewise, project traffic only contributes to 10 of the 277 (3.6%) eastbound left turn movements

during the 2025 implementation year peak hour at the Bluewater Road/Coors Boulevard (#5) intersection.

- Any onsite or offsite improvements should be incorporated into the Civil Drawings and conform to standards of the City of Albuquerque and NMDOT and the Manual on Uniform Traffic Control Devices (MUTCD) – 2009 Edition.

APPENDICES

APPENDIX A

Conceptual Site Plan

THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN AND ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN AND ASSOCIATES, INC.

GRAPHIC SCALE IN FEET
0 50 100 200

NORTH

ZONING: R-MH
LAND USE: MULTI-FAMILY

ZONING: NR-BP
LAND USE: EDUCATIONAL

ZONING: NR-BP
LAND USE: INSTITUTIONAL/MEDICAL

10.0' SETBACK

PROPERTY LINE

EX. SANITARY SEWER ESMT
(10/31/1972, D5-62)

EX. 7.0' UTILITY ESMT
(10/31/1972, D5-62)

FEMA FLOODZONE PER PANEL
35001C0329H, BFE 5102'

EX. 90.0' PUBLIC DRAINAGE ESMT (10/27/1986, C31-190)

EX. 50.0' PRIVATE ACCESS ESMT (12/15/2004, 2004C-388)

PROPERTY LINE

EX. 20.0' UTILITY & DRAINAGE ESMT (1/30/1978, C11-13)

PROPERTY LINE

EXISTING COMMERCIAL BUILDING
AREA = 92,658 GSF

EXISTING OFFICE BUILDING
AREA = 10,351 GSF

10.0' SETBACK

PROPOSED IMPROVEMENTS

PROP. BUILDING EXPANSION
AREA =92,788 GSF

FFE=5106.30

EX. 40.0' ACCESS & UTILITY ESMT (10/27/1993, 93C-308)

EX. 7.0' UTILITY ESMT
(10/31/1972, D5-62)

EX. 11.0' STRIP RESERVED FOR STREET WIDENING (10/31/1972, D5-62)

EX. INGRESS/EGRESS TO REMAIN

BLUEWATER ROAD NW
(PUBLIC ROW WIDTH VARIES)

20.0' SETBACK

EX. INGRESS/EGRESS TO REMAIN

PROPERTY LINE

ZONING: MX-M
LAND USE: VACANT

PROPERTY LINE

ZONING: NR-BP
LAND USE: COMMERCIAL SERVICES

MAJOR AMENDMENT TO GOVERNING SITE PLAN DRB-95-146 (OCT 4, 2023). ~93,000 GSF EXPANSION OF EXISTING MANUFACTURING WAREHOUSE AND EXPANSION OF EXISTING PARKING LOT. IMPROVEMENT INLCUDE ADDITIONAL ONSITE PAVEMENT, BUILDING AREA, BICYCLE PARKING, SIDEWALK, STORMWATER DETENTION, UTILITIES, LANDSCAPE AREA, AND CONCRETE LOADING PADS

VICINITY MAP - ZONE ATLAS PAGES: K-10-Z & J-10-Z

SITE DEVELOPMENT DATA

LEGAL DESCRIPTION:
- TRACT A ATRISCO BUSINESS PARK UNIT 1 CONTAINING 39.775 ACRES

LAND AREA:
- 39.775 ACRES

ZONING: NR-BP: NON-RESIDENTIAL / BUSINESS PARK
PERMISSIVE PRIMARY USE AS LIGHT MANUFACTURING

BUILDING AREAS:
- EXISTING – ±103,000 SF
- PROPOSED – ±92,800 SF
- TOTAL = ±195,800 SF

DESIGN GUIDELINES:
- THE PROJECT HAS BEEN DEVELOPED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE INTEGRATED DEVELOPMENT ORDINANCE (IDO). EFFECTIVE 7/17/2023.

SET BACKS (IDO TABLE 2-5-3):
- FRONT: 20 FEET
- SIDE: 10 FEET
- REAR: 10 FEET

1

BUILDING HEIGHT (IDO TABLE 2-5-3):
- ALLOWABLE MAX: 65 FEET
- EXISTING MAX HEIGHT: 28 FEET
- PROPOSED MAX HEIGHT: 32 FEET

1

PROJECT DESCRIPTION

COUNTY: BERNALILLO COUNTY

ADDRESS: 6625 BLUEWATER ROAD NW, ALBUQUERQUE, NM 87121

OWNER: AMERACE CORPORATION

PROJECT DESCRIPTION:
- THE PROJECT IS CONSTRUCTING A NEW 90,000 SF BUILDING WITH ASSOCIATED PARKING. A NEW FIRE MAIN EXTENSION WILL ALSO BE CONSTRUCTED FOR THE NEW BUILDING. THE EXISTING SITE HAS 103,000 SF OF BUILDING COVERAGE. THE PROPOSED SITE WILL HAVE 192,000 SF OF BUILDING COVERAGE.

SITE IMPROVEMENTS:
- THE PROJECT WILL PROVIDE LANDSCAPE IMPROVEMENTS TO MEET AT LEAST CODE MINIMUM
- EGRESS AND INGRESS POINTS WILL REMAIN THE SAME
- A FIRE ACCESS LANE WILL BE PROVIDED FOR THE PROJECT.
- A NEW 90,000 SF BUILDING IS PROPOSED FOR THE PROJECT.
- EXISTING PARKING SPACES THAT OVERLAP THE NEW BUILDING LOCATION WILL BE RELOCATED ON THE EASTERN PORTION OF THE PROJECT.

PARKING CALCULATIONS

BUILDING USE =	LIGHT MANUFACTURING
PARKING REQUIREMENTS =	1 SPACES / 1,000 SF GFA
REQUIRED PARKING SPACES =	193
REQUIRED ADA PARKING =	5
REQUIRED BICYCLE PARKING =	20
REQUIRED LOADING SPACES =	2
EXISTING PARKING SPACES =	260
EXISTING ADA PARKING SPACES =	8
EXISTING MOTORCYCLE SPACES =	4
PROPOSED PARKING =	439
PROPOSED ADA PARKING =	9
PROPOSED BICYCLE PARKING =	20
PROPOSED MOTORCYCLE PARKING =	6
PROPOSED EV CHARGING STALLS =	4
PROPOSED LOADING SPACES =	2

1

LEGEND

PROPOSED IMPROVEMENTS

EXISTING CONSTRUCTION TO REMAIN AND BE PROTECTED

REFER TO DETAILED SITE PLAN (SHEET 2) FOR DETAILED CALLOUTS

NO.	REVISION	BY	DATE	APPR.

Kimley»Horn
© 2023 KIMLEY-HORN AND ASSOCIATES, INC.
6200 South Syracuse Way, Suite 300
Greenwood Village, Colorado 80111 (303) 228-2300

DESIGNED BY: MEJ
DRAWN BY: MEJ
CHECKED BY: SAL
DATE: 03/10/2023

LEGAL DESCRIPTION:
TRACT A ATRISCO BUSINESS PARK UNIT 1 CONTAINING 39.775 ACRES

ABB ABQ ADDITION
6625 BLUEWATER ROAD NW
MAJOR AMENDMENT
OVERALL SITE PLAN

PRELIMINARY
FOR REVIEW ONLY
NOT FOR CONSTRUCTION
Kimley»Horn
Kimley-Horn and Associates, Inc.

PROJECT NO.
096523009

SHEET
1

APPENDIX B

NMDOT & City of Albuquerque Scoping Memorandums

Site Threshold Analysis (STA)

According to NMAC 18.31.6.16, a traffic engineering evaluation shall be required for all land development proposals that may directly or indirectly impact a state highway facility. A Site Threshold Analysis (STA) is required of all developing or re-developing properties that directly or indirectly access a state roadway. The STA examines existing roadway volumes and anticipated site trip generation for the purpose of determining if additional analyses are required as defined by the District Traffic Engineer or designee. If the site characteristics and the trip generation estimate for a proposed development are greater than 100 trips in a peak hour, then requirements for a Traffic Impact Analysis (TIA) may be required as determined by the District Traffic Engineer or designee. See TIA outline for that scope.

The STA shall warrant one or all of the following conditions:

- May or may not warrant an additional traffic analysis.
- May or may not warrant off-site improvements.
- May require a TIA, which may or may not require off-site improvements.

If additional analysis is required based on the results of the STA, the District Traffic Engineer or designee, should indicate to the applicant the level of analysis that is required.

Permit Applicant Information

Applicant Name: Kimley-Horn and Associates

Business Name: ABB

Business Address: 6625 Bluewater Road NW (Street Address:) Albuquerque (City:) NM (State:) 87121 (Zip Code:)

Site Information (Attach Site Plan to include length of roadway frontage):

Site Description: Expansion of existing manufacturing facility

Site Address: 6625 Bluewater Road NW (Street Address:) Albuquerque (City:) NM (State:) 87121 (Zip Code:)

NMDOT Roadway: NM-345/NM-45 Milepost: MP0.4/MP13.2 Roadway ADT: NM345: 30,900 / NM45:32,600

Site Information (commercial, retail, industrial, residential, etc):

Manufacturing

Building Size (SF): Existing: 91,570 SF/Expansion: 89,631 SF Parcel Size (acre): 23 acres

Trip Generation:

ITE Trip Generation Land Use Category:

AM Peak Hour Trips Enter: 49 New Site / 91 Total Exit: 15 New Site / 29 Total

PM Peak Hour Trips Enter: 19 New Site / 43 Total Exit: 41 New Site / 97 Total

Exceeds Threshold for TIA (100 or more peak hour total trips): **Yes** ☑ **No** ☐

Exceeds 100 trips with the combination of the existing site plus proposed expansion. The expansion trips only do not exceed 100 trips (64 trips).

SCOPE OF TRAFFIC IMPACT STUDY (TIS)

TO: Madison Jurewicz
Kimley-Horn and Associates
380 Interlocken Crescent, Suite 100
Broomfield, CO 80021

MEETING DATE: October 2, 2023

ATTENDEES: Madison Jurewicz, Jeff Planck, Keith Christian - Consultant Team; Matthew Grush - COA Transportation Development Review; Margaret Haynes - NMDOT Assistant Traffic Engineer

PROJECT: **ABB ABQ Addition** – J-10-Z 6625 Bluewater Rd. NW

REQUESTED CITY ACTION: ___ Zone Change ___ Site Development Plan

___ Subdivision ___ Building Permit ___ Sector Plan ___ Sector Plan Amendment

___ Curb Cut Permit ___ Conditional Use ___ Annexation _X_ Site Plan Amendment

ASSOCIATED APPLICATION: A 93,000 gsf expansion of an existing manufacturing warehouse at 6625 Bluewater Road. Improvements will include building expansion, additional onsite parking, and drive aisles. The site totals 39.78 acres and is used for manufacturing.

SCOPE OF REPORT:
The Traffic Impact Study should follow the standard report format, which is outlined in the DPM. The following supplemental information is provided for the preparation of this specific study.

1. Trip Generation - Use Trip Generation Manual, 11th Edition.
   Local data may be used for certain land use types as determined by staff.
   Consultant to provide.

2. Appropriate study area:
   Signalized Intersections;
   a. Bluewater/Coors Blvd NW
   b. Bluewater/Unser Blvd NW

   Unsignalized Intersections;
   a. Bluewater/Airport Drive NW (2 locations)
   b. Bluewater/Camino Azul NW

   Driveway Intersections: all site drives. (2 locations)

3. Intersection turning movement counts
   Study Time – 6-9 a.m. peak hour, 3-6 p.m. peak hour
   Consultant to provide for all intersections listed above.

4. Type of intersection progression and factors to be used.

Type III arrival type (see "Highway Capacity Manual, current edition" or equivalent as approved by staff). Unless otherwise justified, peak hour factors and % heavy commercial should be taken directly from the MRCOG turning movement data provided or as calculated from current count data by consultant.

- Request data from MRCOG

5. Boundaries of area to be used for trip distribution.

   City Wide - residential, office or industrial;
   x mile radius – commercial;
   Interstate or to be determined by consultant - motel/hotel
   APS district boundary mapping for each school and bus routes

6. Basis for trip distribution.

Residential – Use inverse relationship based upon distance and employment. Use employment data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Office/Industrial - Use inverse relationship based upon distance and population. Use population data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

- Existing development driveway counts will and adjacent intersection counts will primarily be used for determining the trip distribution

Commercial - Use relationship based upon population. Use population data from 2040 Socioeconomic Forecasts, MRCOG – See MRCOG website for most current data.

Residential - $Ts = (Tt) (Se / D) / (Se / D)$
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Se = Subarea Employment
D = Distance from Development to Subarea

Office/Industrial - $Ts = (Tt) (Sp / D) / (Sp / D)$ (summarize count; don't need to calculate these)
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Sp = Subarea Population
D = Distance from Development to Subarea

Commercial -
$Ts = (Tt) (Sp) / (Sp)$
Ts = Development to Individual Subarea Trips
Tt = Total Trips
Sp = Subarea Population

7. Traffic Assignment. Logical routing on the major street system.

8. Proposed developments which have been approved but not constructed that are to be Included in the analyses. Projects in the area include: (City to provide relevant studies to include as background traffic)
   a. **None**, the major development at Meridian and Airport is open for business.

9. Method of intersection capacity analysis - planning or operational (see "Highway Capacity Manual 6th edition" or equivalent [i.e. HCS, Synchro, Teapac, etc.] as approved by staff). Must use latest version of design software and/or current edition of design manual. HCS for intersections along Coors; all others utilize Synchro
   Implementation Year:

10. Traffic conditions for analysis:
    a. Existing analysis **x** yes __ no - year (2023);
    b. Phase implementation year(s) without proposed development – N/A
    c. Phase implementation year(s) with proposed development – N/A
    d. Project completion year without proposed development – 2025
    e. Project completion year with proposed development – 2025
    f. Other – NMDOT may have 10-year horizon requirement based on expected trips

11. Background traffic growth.
    Method: use 10-year historical growth based on standard data from the MRCOG Traffic Flow Maps. Minimum growth rate to be used is 1/2%.

12. Planned (programmed) traffic improvements.
    List planned CIP improvements in study area and projected project implementation year:
    a. Project – Location (Implementation Year) Unknown at this time and unexpected there are any

13. Items to be included in the study:
    a. Intersection analysis.
    b. Signal progression - An analysis is required if the driveway analysis indicates a traffic signal is possibly warranted. Analysis Method: Request signal timings from City
    c. Arterial LOS analysis; No
    d. Recommended street, intersection and signal improvements.
    e. Site design features such as turning lanes, median cuts, queuing requirements and site circulation, including driveway signalization and visibility.
    f. Transportation system impacts.
    g. Other mitigating measures.
    h. Accident analyses _X_ yes __ no; Location(s): 5-year trend analysis; request data from NMDOT (form is online, fill-out and submit), highlight bike and pedestrian crashes and trends; Crash Data Request data filters | NMDOT Statewide Traffic Reporting System (nmtrafficrecords.com) i.e. right turn lanes and ped conflicts
    i. Weaving analyses __ yes _X_ no; Location(s):

14. Other:

SUBMITTAL REQUIREMENTS:

1. Number of copies of report required
   a. 1 paper copy (no longer required; NMDOT prefers draft paper copy)
   b. 1 digital copy
2. Submittal Fee – $1300 for up to 3 reviews plus technology fee

The Traffic Impact Study for this development proposal, project name, shall be performed in accordance with the above criteria. If there are any questions regarding the above items, please contact me at 505-924-3362.

MP P.E. 10/4/2023

Matt Grush, P.E. Date
Senior Engineer
City of Albuquerque, Planning
Transportation Development Section

via: email
C: TIS Task Force Attendees, file

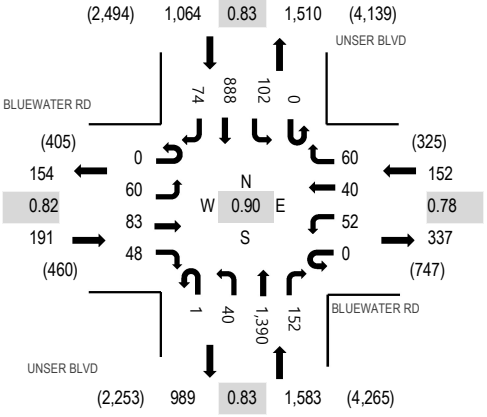
APPENDIX C

Intersection Count Sheets

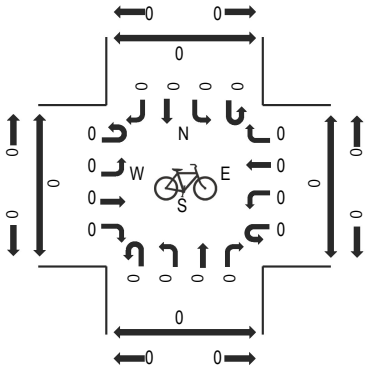
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 UNSER BLVD & BLUEWATER RD AM
Date: Wednesday, October 11, 2023
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

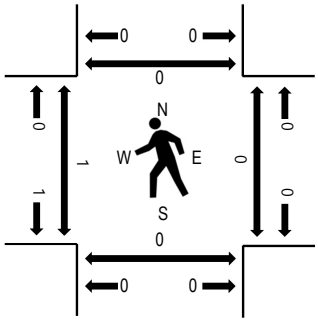
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

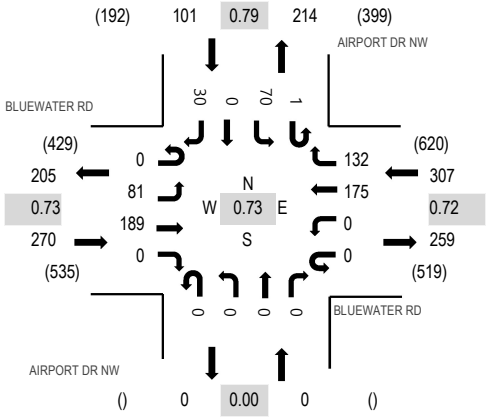
Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				UNSER BLVD Northbound				UNSER BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 AM	0	9	3	3	0	4	4	7	0	3	216	11	0	16	63	10	349	1,930	0	0	0	0
6:15 AM	0	13	3	9	0	2	2	7	0	5	279	11	0	11	77	5	424	2,238	0	0	0	0
6:30 AM	0	8	2	11	0	3	2	12	0	11	312	16	0	18	89	17	501	2,573	0	0	0	0
6:45 AM	0	13	12	13	0	4	1	8	0	21	355	31	0	22	137	39	656	2,770	0	0	0	0
7:00 AM	0	23	11	13	0	12	3	16	0	10	347	23	1	30	151	17	657	2,945	0	0	0	0
7:15 AM	0	14	15	11	0	8	4	11	0	10	459	29	0	15	170	13	759	2,990	1	0	0	0
7:30 AM	0	19	25	16	0	18	12	15	0	7	327	43	0	20	184	12	698	2,964	0	0	0	0
7:45 AM	0	9	29	12	0	15	13	21	1	10	329	51	0	33	277	31	831	2,850	0	0	0	0
8:00 AM	0	18	14	9	0	11	11	13	0	13	275	29	0	34	257	18	702	2,669	0	0	0	0
8:15 AM	0	15	17	9	0	2	3	18	0	12	366	36	0	23	217	15	733		0	0	0	0
8:30 AM	0	16	12	9	0	11	3	13	0	15	246	30	0	21	197	11	584		1	0	1	0
8:45 AM	0	17	14	14	0	6	6	24	0	18	288	20	0	17	208	18	650		2	0	0	0
Count Total	0	174	157	129	0	96	64	165	1	135	3,799	330	1	260	2,027	206	7,544		4	0	1	0
Peak Hour	0	60	83	48	0	52	40	60	1	40	1,390	152	0	102	888	74	2,990		1	0	0	0

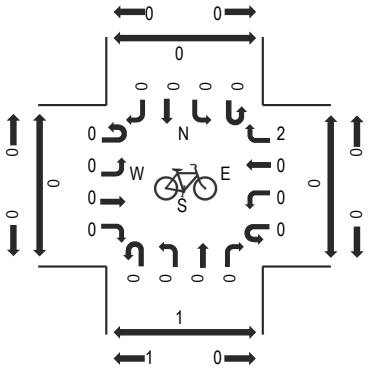
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 AIRPORT DR NW & BLUEWATER RD AM
Date: Wednesday, October 11, 2023
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

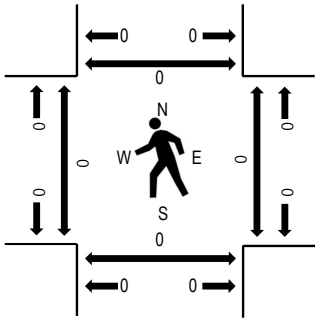
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

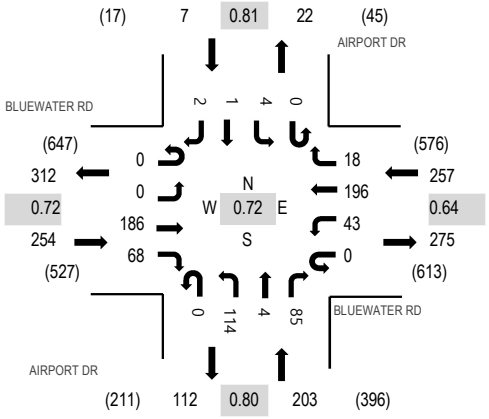
Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				AIRPORT DR NW Northbound				AIRPORT DR NW Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 AM	0	3	16	0	0	0	16	6	0	0	0	0	0	4	0	1	46	249	1	0	0	0
6:15 AM	0	4	18	0	0	0	14	13	0	0	0	0	0	3	0	5	57	307	0	0	0	0
6:30 AM	0	4	16	0	0	0	13	15	0	0	0	0	0	9	0	5	62	361	0	0	0	1
6:45 AM	0	4	18	0	0	0	36	13	0	0	0	0	0	9	0	4	84	482	0	0	0	0
7:00 AM	0	8	38	0	0	0	29	16	0	0	0	0	0	8	0	5	104	629	0	0	1	0
7:15 AM	0	12	30	0	0	0	23	29	0	0	0	0	0	15	0	2	111	660	0	0	0	0
7:30 AM	0	24	43	0	0	0	39	47	0	0	0	0	1	20	0	9	183	678	0	0	0	0
7:45 AM	0	24	69	0	0	0	70	36	0	0	0	0	0	24	0	8	231	609	0	0	0	0
8:00 AM	0	12	45	0	0	0	32	25	0	0	0	0	0	15	0	6	135	469	0	0	0	0
8:15 AM	0	21	32	0	0	0	34	24	0	0	0	0	0	11	0	7	129		0	0	0	0
8:30 AM	0	15	33	0	0	0	37	15	0	0	0	0	0	10	0	4	114		0	0	0	0
8:45 AM	0	17	29	0	0	0	27	11	0	0	0	0	0	4	0	3	91		0	0	0	1
Count Total	0	148	387	0	0	0	370	250	0	0	0	0	1	132	0	59	1,347		1	0	1	2
Peak Hour	0	81	189	0	0	0	175	132	0	0	0	0	1	70	0	30	678		0	0	0	0

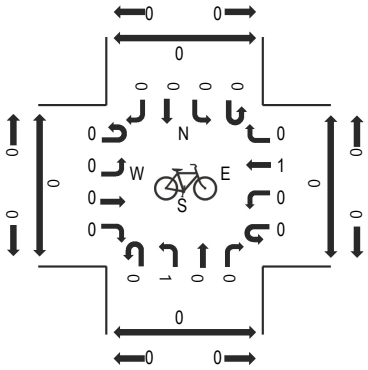
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 AIRPORT DR & BLUEWATER RD AM
Date: Wednesday, October 11, 2023
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

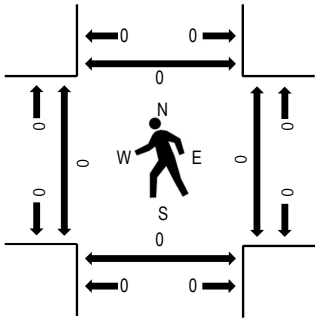
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

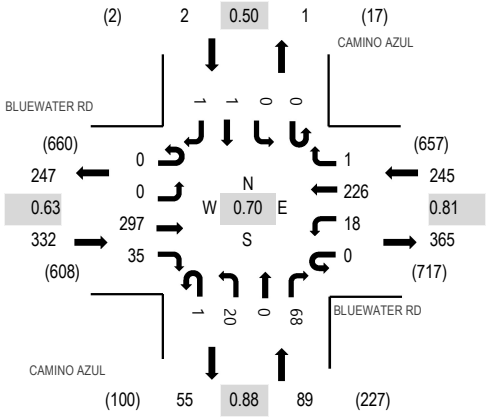
Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				AIRPORT DR Northbound				AIRPORT DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 AM	0	0	14	6	0	5	17	5	0	8	0	4	0	0	1	0	60	317	0	0	0	0
6:15 AM	0	0	14	5	0	7	19	1	0	7	0	5	0	0	0	0	58	387	0	0	1	0
6:30 AM	0	0	21	5	0	5	23	1	0	9	0	13	0	1	0	0	78	459	0	0	0	0
6:45 AM	0	0	34	3	0	8	52	1	0	8	1	13	0	1	0	0	121	563	0	0	0	0
7:00 AM	0	0	38	8	0	3	39	2	0	8	2	30	0	0	0	0	130	693	0	0	0	1
7:15 AM	0	1	33	12	0	8	28	3	0	23	0	21	0	0	0	1	130	717	0	0	0	0
7:30 AM	0	0	48	15	0	5	46	2	0	40	2	24	0	0	0	0	182	721	0	0	0	0
7:45 AM	0	0	64	25	0	20	71	9	0	35	1	26	0	0	0	0	251	663	0	0	0	0
8:00 AM	0	0	38	19	0	11	43	3	0	19	1	16	0	3	0	1	154	506	0	0	0	0
8:15 AM	0	0	36	9	0	7	36	4	0	20	0	19	0	1	1	1	134		0	0	0	0
8:30 AM	0	0	39	7	0	9	40	2	0	12	0	13	0	2	0	0	124		0	0	0	0
8:45 AM	0	0	30	3	0	4	34	3	0	7	1	8	0	4	0	0	94		0	1	0	1
Count Total	0	1	409	117	0	92	448	36	0	196	8	192	0	12	2	3	1,516		0	1	1	2
Peak Hour	0	0	186	68	0	43	196	18	0	114	4	85	0	4	1	2	721		0	0	0	0

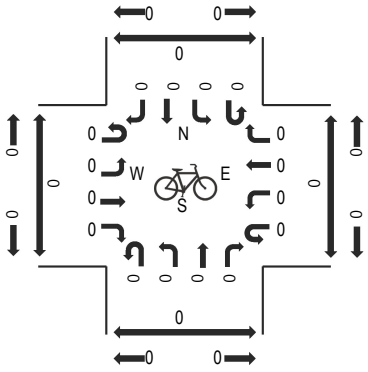
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 4 CAMINO AZUL & BLUEWATER RD AM
Date: Wednesday, October 11, 2023
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

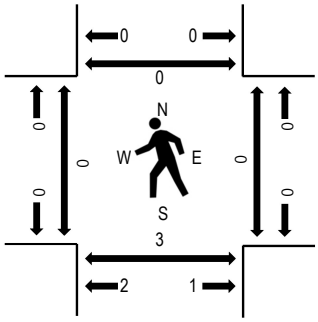
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

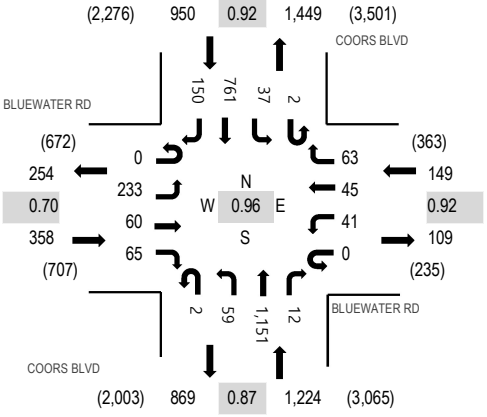
Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				CAMINO AZUL Northbound				CAMINO AZUL Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 AM	0	0	11	4	0	1	28	1	0	1	0	11	0	0	0	0	57	329	0	0	0	0
6:15 AM	0	0	13	1	0	1	33	4	0	3	0	6	0	0	0	0	61	409	0	0	0	0
6:30 AM	0	2	18	2	0	3	41	3	0	4	0	6	0	0	0	0	79	462	1	0	2	0
6:45 AM	0	0	39	3	0	3	68	4	0	5	0	10	0	0	0	0	132	544	2	0	0	0
7:00 AM	0	0	34	2	0	1	76	1	0	9	0	14	0	0	0	0	137	650	0	0	0	0
7:15 AM	0	0	44	3	0	2	45	1	0	5	0	14	0	0	0	0	114	650	0	0	0	0
7:30 AM	0	0	71	6	0	3	57	1	0	2	0	20	0	0	1	0	161	668	0	0	0	0
7:45 AM	0	0	120	12	0	6	78	0	1	4	0	17	0	0	0	0	238	637	0	0	1	0
8:00 AM	0	0	53	9	0	5	49	0	0	8	0	12	0	0	0	1	137	515	0	0	1	0
8:15 AM	0	0	53	8	0	4	42	0	0	6	0	19	0	0	0	0	132		0	0	1	0
8:30 AM	0	0	44	7	0	4	48	0	0	4	0	23	0	0	0	0	130		0	0	2	0
8:45 AM	0	0	45	4	0	4	40	0	0	3	0	20	0	0	0	0	116		0	0	2	0
Count Total	0	2	545	61	0	37	605	15	1	54	0	172	0	0	1	1	1,494		3	0	9	0
Peak Hour	0	0	297	35	0	18	226	1	1	20	0	68	0	0	1	1	668		0	0	3	0

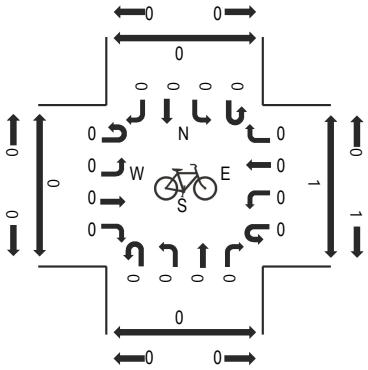
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 5 COORS BLVD & BLUEWATER RD AM
Date: Wednesday, October 11, 2023
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

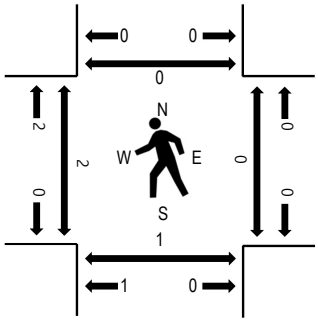
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

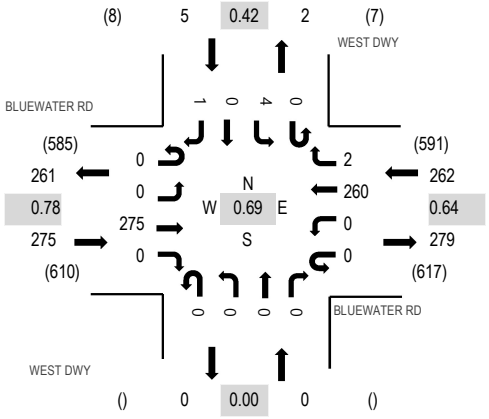
Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				COORS BLVD Northbound				COORS BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 AM	0	15	0	1	0	2	3	8	1	9	101	3	0	0	53	18	214	1,402	0	0	0	0
6:15 AM	0	21	2	0	0	5	4	5	0	8	178	0	0	3	71	22	319	1,711	0	0	0	1
6:30 AM	0	17	1	4	0	2	5	9	0	8	218	1	0	4	95	29	393	1,980	1	1	1	0
6:45 AM	0	30	9	4	0	6	9	10	2	25	209	4	0	6	116	46	476	2,286	0	0	0	0
7:00 AM	0	29	18	8	0	12	11	21	0	25	223	5	0	6	118	47	523	2,505	2	1	0	0
7:15 AM	0	39	7	10	0	9	9	20	0	11	277	7	0	13	157	29	588	2,607	1	0	0	0
7:30 AM	0	55	26	9	0	10	14	21	0	14	333	4	0	10	175	28	699	2,681	1	0	0	0
7:45 AM	0	79	14	35	0	8	18	13	0	16	264	3	0	9	181	55	695	2,643	0	0	0	0
8:00 AM	0	49	12	13	0	14	8	14	1	18	252	1	1	10	193	39	625	2,504	1	0	0	0
8:15 AM	0	50	8	8	0	9	5	15	1	11	302	4	1	8	212	28	662		0	0	1	0
8:30 AM	0	58	7	14	0	11	8	13	1	11	259	3	1	11	228	36	661		1	1	1	0
8:45 AM	0	38	9	8	0	11	8	13	0	12	240	0	0	7	185	25	556		0	0	2	0
Count Total	0	480	113	114	0	99	102	162	6	168	2,856	35	3	87	1,784	402	6,411		7	3	5	1
Peak Hour	0	233	60	65	0	41	45	63	2	59	1,151	12	2	37	761	150	2,681		2	0	1	0

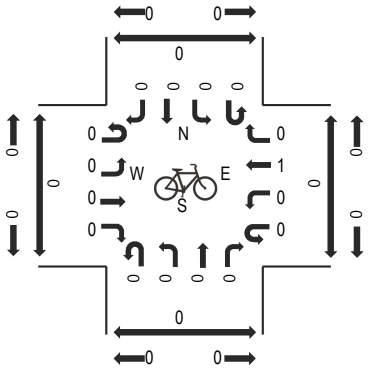
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 7 WEST DWY & BLUEWATER RD AM
Date: Wednesday, October 11, 2023
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

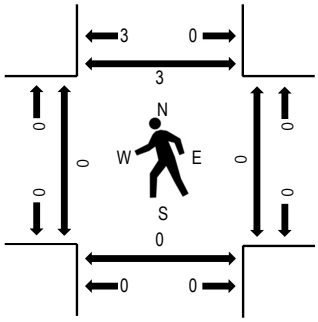
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

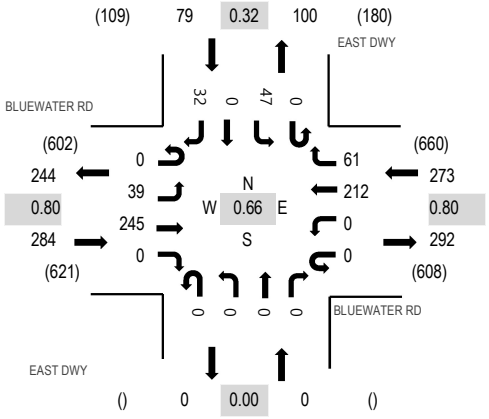
Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				WEST DWY Northbound				WEST DWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 AM	0	0	19	0	0	0	27	1	0	0	0	0	0	0	0	0	47	262	0	0	0	0
6:15 AM	0	0	14	0	0	0	27	0	0	0	0	0	0	0	0	0	41	329	0	0	0	0
6:30 AM	0	0	37	0	0	0	30	0	0	0	0	0	0	0	0	0	67	378	0	0	0	0
6:45 AM	0	0	46	0	0	0	61	0	0	0	0	0	0	0	0	0	107	440	0	0	0	0
7:00 AM	0	0	71	0	0	0	43	0	0	0	0	0	0	0	0	0	114	528	0	0	0	1
7:15 AM	0	0	51	0	0	0	39	0	0	0	0	0	0	0	0	0	90	530	0	0	0	0
7:30 AM	0	0	72	0	0	0	54	1	0	0	0	0	0	1	0	1	129	542	0	0	0	0
7:45 AM	0	0	92	0	0	0	102	0	0	0	0	0	0	1	0	0	195	518	0	0	0	3
8:00 AM	0	0	57	0	0	0	58	1	0	0	0	0	0	0	0	0	116	419	0	0	0	0
8:15 AM	0	0	54	0	0	0	46	0	0	0	0	0	0	2	0	0	102		0	0	0	0
8:30 AM	0	0	53	0	0	0	51	1	0	0	0	0	0	0	0	0	105		0	0	2	0
8:45 AM	0	0	44	0	0	0	46	3	0	0	0	0	0	3	0	0	96		0	0	1	1
Count Total	0	0	610	0	0	0	584	7	0	0	0	0	0	7	0	1	1,209		0	0	3	5
Peak Hour	0	0	275	0	0	0	260	2	0	0	0	0	0	4	0	1	542		0	0	0	3

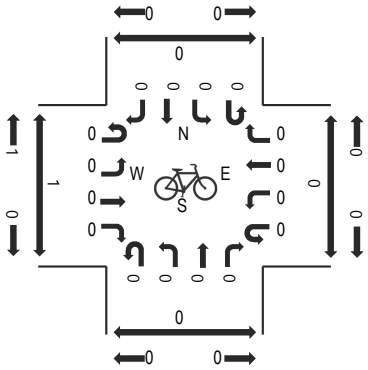
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 6 EAST DWY & BLUEWATER RD AM
Date: Wednesday, October 11, 2023
Peak Hour: 07:00 AM - 08:00 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

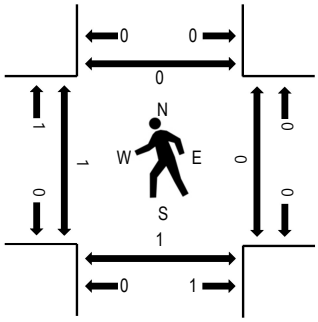
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

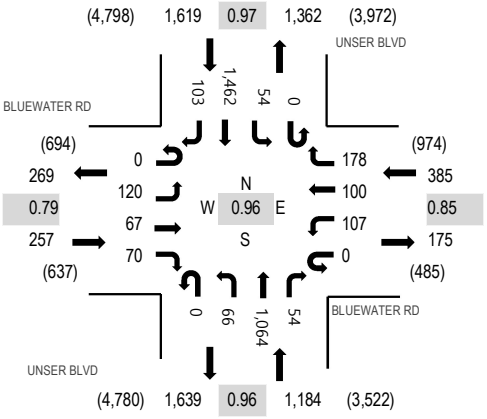
Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				EAST DWY Northbound				EAST DWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
6:00 AM	0	4	14	0	0	0	25	3	0	0	0	0	0	1	0	0	47	311	0	0	0	0
6:15 AM	1	4	13	0	1	0	30	6	0	0	0	0	0	0	0	0	55	416	0	0	1	0
6:30 AM	0	14	22	0	0	0	36	9	0	0	0	0	0	0	0	0	81	463	0	0	0	0
6:45 AM	0	13	37	0	0	0	59	14	0	0	0	0	0	5	0	0	128	522	0	0	0	0
7:00 AM	0	29	35	0	0	0	40	45	0	0	0	0	0	1	0	2	152	636	1	0	0	0
7:15 AM	0	5	47	0	0	0	43	7	0	0	0	0	0	0	0	0	102	613	0	0	0	0
7:30 AM	0	3	76	0	0	0	57	2	0	0	0	0	0	1	0	1	140	623	0	0	0	0
7:45 AM	0	2	87	0	0	0	72	7	0	0	0	0	0	45	0	29	242	589	0	0	1	0
8:00 AM	0	3	53	0	0	0	58	3	0	0	0	0	0	9	0	3	129	443	0	0	1	0
8:15 AM	1	0	59	0	0	0	43	4	0	0	0	0	0	2	0	3	112		0	0	0	0
8:30 AM	0	1	49	0	0	0	51	0	0	0	0	0	0	2	0	3	106		0	0	3	0
8:45 AM	0	0	49	0	0	0	44	1	0	0	0	0	1	0	0	1	96		0	0	3	0
Count Total	2	78	541	0	1	0	558	101	0	0	0	0	1	66	0	42	1,390		1	0	9	0
Peak Hour	0	39	245	0	0	0	212	61	0	0	0	0	0	47	0	32	636		1	0	1	0

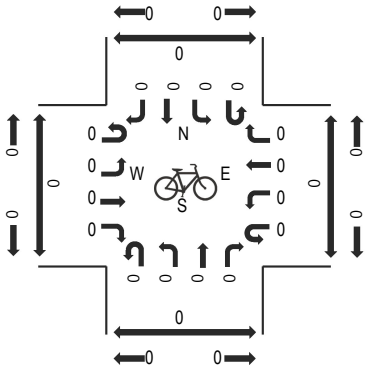
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 UNSER BLVD & BLUEWATER RD PM
Date: Wednesday, October 11, 2023
Peak Hour: 03:45 PM - 04:45 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

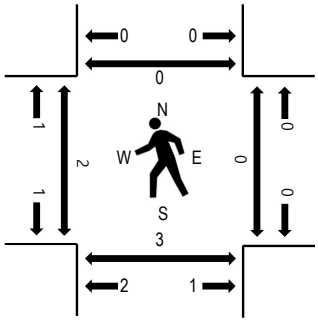
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

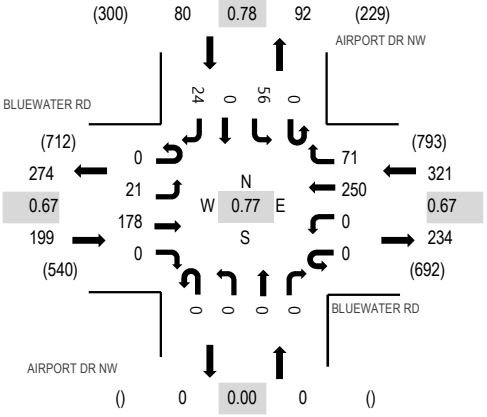
Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				UNSER BLVD Northbound				UNSER BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
3:00 PM	0	18	12	8	0	22	13	26	1	10	230	12	2	15	324	16	709	3,279	0	1	1	0
3:15 PM	0	19	10	12	0	23	11	39	0	13	295	17	0	8	356	28	831	3,363	0	0	0	0
3:30 PM	0	42	17	32	0	14	18	47	0	6	305	16	0	11	326	18	852	3,401	0	0	0	0
3:45 PM	0	26	23	12	0	37	28	48	0	10	274	20	0	12	378	19	887	3,445	0	0	0	0
4:00 PM	0	21	9	18	0	24	23	50	0	26	265	10	0	14	306	27	793	3,407	1	0	2	0
4:15 PM	0	36	19	31	0	22	25	26	0	20	253	12	0	12	376	37	869	3,437	1	0	0	0
4:30 PM	0	37	16	9	0	24	24	54	0	10	272	12	0	16	402	20	896	3,365	0	0	1	0
4:45 PM	0	16	12	9	0	16	18	46	0	12	284	11	0	13	390	22	849	3,269	0	0	0	0
5:00 PM	0	21	12	8	0	25	24	41	0	13	250	10	0	13	379	27	823	3,245	0	0	0	0
5:15 PM	0	25	15	9	0	17	26	32	1	15	250	10	0	7	366	24	797		1	0	0	0
5:30 PM	0	12	21	4	0	14	30	38	1	11	273	7	0	12	359	18	800		0	0	0	0
5:45 PM	0	14	15	17	0	8	21	20	1	10	265	9	0	25	399	21	825		0	0	0	0
Count Total	0	287	181	169	0	246	261	467	4	156	3,216	146	2	158	4,361	277	9,931		3	1	4	0
Peak Hour	0	120	67	70	0	107	100	178	0	66	1,064	54	0	54	1,462	103	3,445		2	0	3	0

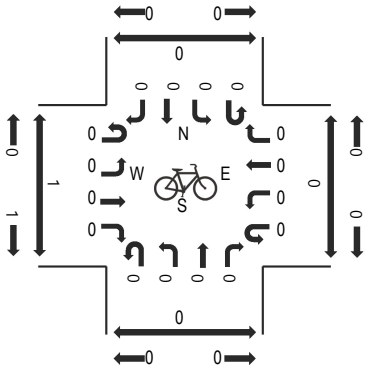
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 AIRPORT DR NW & BLUEWATER RD PM
Date: Wednesday, October 11, 2023
Peak Hour: 03:30 PM - 04:30 PM
Peak 15-Minutes: 03:45 PM - 04:00 PM

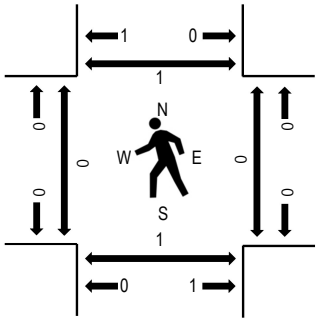
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

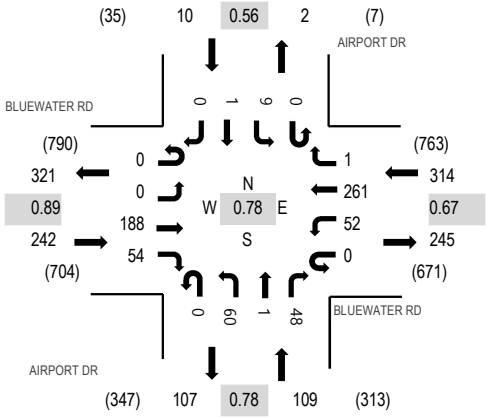
Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				AIRPORT DR NW Northbound				AIRPORT DR NW Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
3:00 PM	0	6	31	0	0	0	44	12	0	0	0	0	0	26	0	14	133	582	0	0	0	0
3:15 PM	0	8	34	0	0	0	38	12	0	0	0	0	0	12	0	9	113	585	0	0	0	0
3:30 PM	0	7	68	0	0	0	33	14	0	0	0	0	0	13	0	5	140	600	0	0	1	0
3:45 PM	0	5	38	0	0	0	101	27	0	0	0	0	0	17	0	8	196	599	0	0	0	1
4:00 PM	0	3	37	0	0	0	62	16	0	0	0	0	0	12	0	6	136	519	0	0	0	0
4:15 PM	0	6	35	0	0	0	54	14	0	0	0	0	0	14	0	5	128	545	0	0	0	0
4:30 PM	0	12	42	0	0	0	57	13	0	0	0	0	0	11	0	4	139	547	0	0	1	0
4:45 PM	0	6	24	0	0	0	48	11	0	0	0	0	0	23	0	4	116	535	0	0	0	0
5:00 PM	0	7	49	0	0	0	59	14	0	0	0	0	0	21	0	12	162	532	0	0	0	0
5:15 PM	0	1	33	0	0	0	49	7	0	0	0	0	0	33	0	7	130		0	0	0	0
5:30 PM	0	2	39	0	0	0	46	15	0	0	0	0	0	21	0	4	127		0	0	0	1
5:45 PM	0	4	43	0	0	0	40	7	0	0	0	0	0	16	0	3	113		0	0	0	0
Count Total	0	67	473	0	0	0	631	162	0	0	0	0	0	219	0	81	1,633		0	0	2	2
Peak Hour	0	21	178	0	0	0	250	71	0	0	0	0	0	56	0	24	600		0	0	1	1

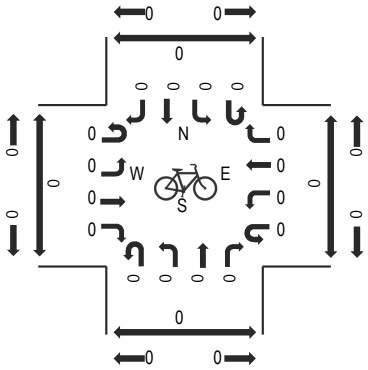
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 AIRPORT DR & BLUEWATER RD PM
Date: Wednesday, October 11, 2023
Peak Hour: 03:30 PM - 04:30 PM
Peak 15-Minutes: 03:45 PM - 04:00 PM

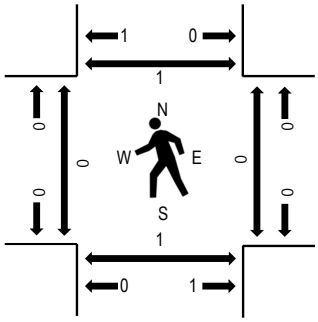
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

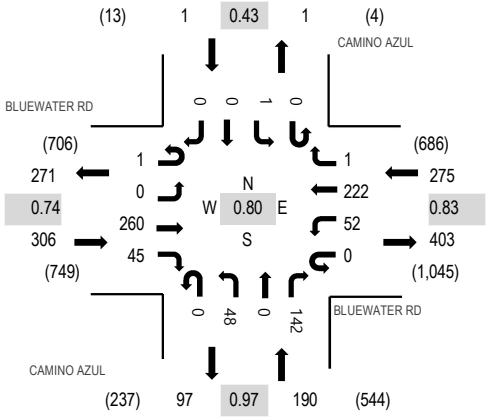
Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				AIRPORT DR Northbound				AIRPORT DR Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
3:00 PM	0	0	40	22	0	18	44	0	0	10	2	17	0	1	0	1	155	642	0	0	0	0
3:15 PM	0	0	39	7	0	6	39	0	0	11	0	12	0	1	0	0	115	646	0	0	0	0
3:30 PM	0	0	66	11	0	8	35	1	0	17	0	17	0	1	1	0	157	675	0	0	1	0
3:45 PM	0	0	45	17	0	16	110	0	0	13	0	12	0	2	0	0	215	671	0	0	0	1
4:00 PM	0	0	41	12	0	16	57	0	0	18	0	10	0	5	0	0	159	591	0	0	0	0
4:15 PM	0	0	36	14	0	12	59	0	0	12	1	9	0	1	0	0	144	599	0	0	0	0
4:30 PM	0	0	45	8	0	14	52	1	0	13	0	11	0	8	0	1	153	597	0	0	1	0
4:45 PM	0	0	32	12	0	13	42	0	0	20	0	11	0	4	0	1	135	578	0	0	0	0
5:00 PM	0	0	51	21	0	9	47	0	0	24	0	12	0	2	1	0	167	582	0	0	0	0
5:15 PM	0	0	45	20	0	14	43	0	0	15	1	4	0	0	0	0	142		0	1	0	0
5:30 PM	0	0	40	22	0	10	42	0	0	13	0	5	0	0	0	2	134		0	0	0	0
5:45 PM	0	0	38	20	0	22	33	0	0	15	1	7	0	1	1	1	139		0	0	0	0
Count Total	0	0	518	186	0	158	603	2	0	181	5	127	0	26	3	6	1,815		0	1	2	1
Peak Hour	0	0	188	54	0	52	261	1	0	60	1	48	0	9	1	0	675		0	0	1	1

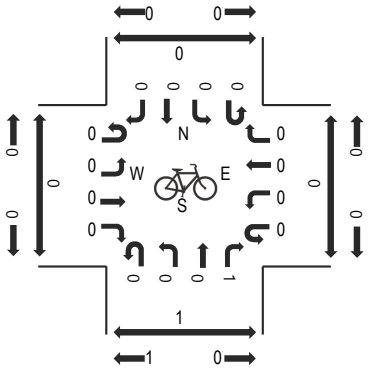
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 4 CAMINO AZUL & BLUEWATER RD PM
Date: Wednesday, October 11, 2023
Peak Hour: 03:45 PM - 04:45 PM
Peak 15-Minutes: 03:45 PM - 04:00 PM

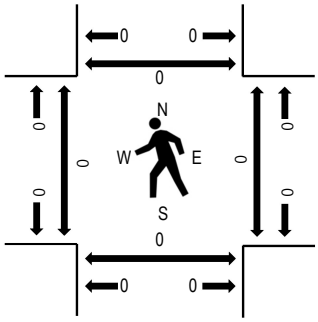
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

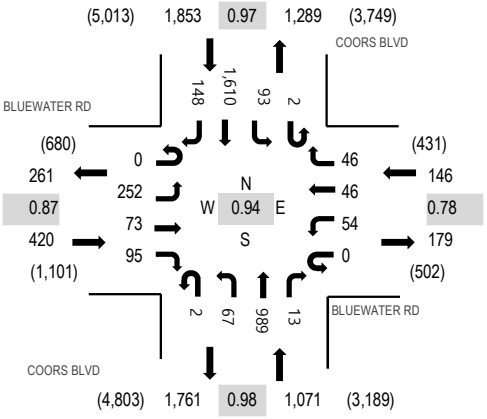
Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				CAMINO AZUL Northbound				CAMINO AZUL Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
3:00 PM	0	0	40	3	0	9	71	1	0	8	1	28	0	0	0	0	161	710	0	0	0	0
3:15 PM	0	0	43	11	0	3	42	0	0	5	0	35	0	4	1	0	144	734	0	0	0	0
3:30 PM	0	0	73	13	0	8	27	1	0	10	0	26	0	5	0	2	165	746	0	0	0	0
3:45 PM	0	0	90	18	0	15	68	0	0	15	0	34	0	0	0	0	240	772	0	0	0	0
4:00 PM	0	0	61	11	0	13	54	0	0	11	0	35	0	0	0	0	185	680	0	0	0	0
4:15 PM	1	0	46	8	0	7	49	0	0	9	0	36	0	0	0	0	156	669	0	0	0	0
4:30 PM	0	0	63	8	0	17	51	1	0	13	0	37	0	1	0	0	191	656	0	0	0	0
4:45 PM	0	0	47	5	0	3	44	0	0	11	0	38	0	0	0	0	148	606	0	0	0	0
5:00 PM	0	0	64	6	0	11	44	0	0	11	0	38	0	0	0	0	174	602	0	0	0	1
5:15 PM	0	0	34	10	0	14	43	0	0	9	0	33	0	0	0	0	143		0	0	1	0
5:30 PM	0	0	33	14	0	6	38	0	0	17	0	33	0	0	0	0	141		0	0	0	0
5:45 PM	0	0	31	16	0	7	39	0	0	14	0	37	0	0	0	0	144		0	0	1	0
Count Total	1	0	625	123	0	113	570	3	0	133	1	410	0	10	1	2	1,992		0	0	2	1
Peak Hour	1	0	260	45	0	52	222	1	0	48	0	142	0	1	0	0	772		0	0	0	0

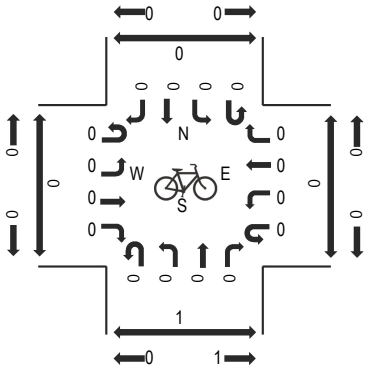
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 5 COORS BLVD & BLUEWATER RD PM
Date: Wednesday, October 11, 2023
Peak Hour: 03:45 PM - 04:45 PM
Peak 15-Minutes: 03:45 PM - 04:00 PM

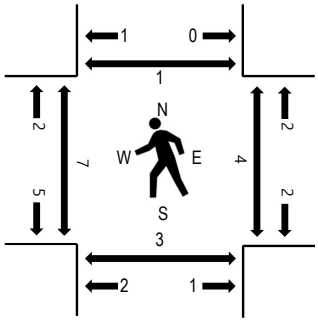
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

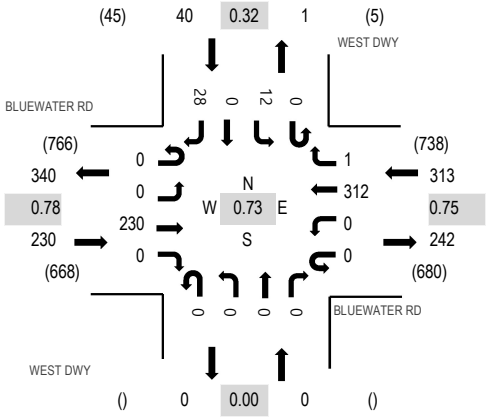
Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				COORS BLVD Northbound				COORS BLVD Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
3:00 PM	0	44	17	17	0	16	18	21	1	20	251	9	1	16	305	40	776	3,241	0	1	1	0
3:15 PM	0	50	19	16	0	17	13	14	2	14	246	6	1	14	334	15	761	3,324	0	0	1	0
3:30 PM	0	68	16	28	0	15	4	12	0	20	258	4	1	18	317	19	780	3,431	0	0	0	0
3:45 PM	0	69	19	37	0	17	12	12	1	16	262	0	1	26	407	45	924	3,490	1	2	2	0
4:00 PM	0	66	22	26	0	9	7	12	0	27	220	3	0	25	407	35	859	3,378	2	1	0	0
4:15 PM	0	49	11	19	0	10	15	10	0	11	264	7	0	24	420	28	868	3,348	2	1	1	0
4:30 PM	0	68	21	13	0	18	12	12	1	13	243	3	1	18	376	40	839	3,241	2	0	0	1
4:45 PM	0	50	20	16	0	8	6	9	0	12	263	4	0	23	371	30	812	3,133	1	2	2	0
5:00 PM	0	71	17	19	0	11	9	11	1	18	250	4	0	23	371	24	829	3,115	0	0	2	0
5:15 PM	0	38	18	13	0	5	12	12	0	9	240	2	0	19	361	32	761		0	3	0	0
5:30 PM	0	37	13	18	0	11	10	10	0	17	204	3	0	23	362	23	731		0	0	3	0
5:45 PM	0	42	17	17	0	20	11	10	1	13	246	0	0	18	369	30	794		1	0	0	0
Count Total	0	652	210	239	0	157	129	145	7	190	2,947	45	5	247	4,400	361	9,734		9	10	12	1
Peak Hour	0	252	73	95	0	54	46	46	2	67	989	13	2	93	1,610	148	3,490		7	4	3	1

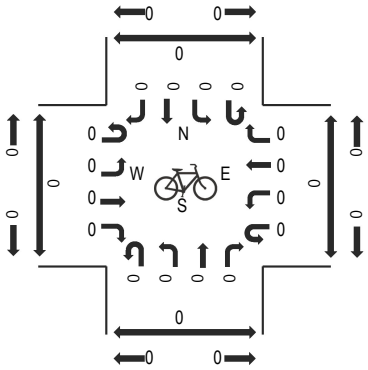
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 7 WEST DWY & BLUEWATER RD PM
Date: Wednesday, October 11, 2023
Peak Hour: 03:45 PM - 04:45 PM
Peak 15-Minutes: 03:45 PM - 04:00 PM

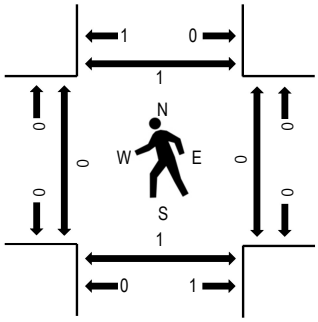
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

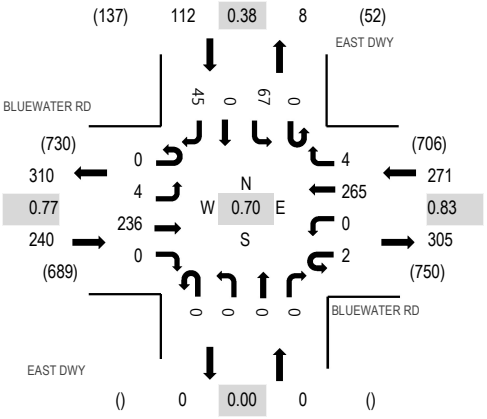
Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				WEST DWY Northbound				WEST DWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
3:00 PM	0	1	55	0	0	0	62	0	0	0	0	0	0	0	0	0	118	540	0	0	0	0
3:15 PM	0	0	50	0	0	0	46	1	0	0	0	0	0	1	0	0	98	551	0	0	0	0
3:30 PM	0	1	79	0	0	0	42	0	0	0	0	0	0	0	0	1	123	577	0	0	0	0
3:45 PM	0	0	64	0	0	0	104	1	0	0	0	0	0	10	0	22	201	583	0	0	1	1
4:00 PM	0	0	56	0	0	0	69	0	0	0	0	0	0	0	0	4	129	477	0	0	0	0
4:15 PM	0	0	48	0	0	0	72	0	0	0	0	0	0	2	0	2	124	476	0	0	0	0
4:30 PM	0	0	62	0	0	0	67	0	0	0	0	0	0	0	0	0	129	458	0	0	0	0
4:45 PM	0	0	42	0	0	0	53	0	0	0	0	0	0	0	0	0	95	427	0	0	1	0
5:00 PM	0	0	69	0	0	0	58	0	0	0	0	0	0	1	0	0	128	434	0	0	0	1
5:15 PM	0	0	49	0	0	0	57	0	0	0	0	0	0	0	0	0	106		0	0	1	0
5:30 PM	0	1	43	0	0	0	52	0	0	0	0	0	0	1	0	1	98		0	0	1	0
5:45 PM	0	0	48	0	0	0	54	0	0	0	0	0	0	0	0	0	102		0	0	0	0
Count Total	0	3	665	0	0	0	736	2	0	0	0	0	0	15	0	30	1,451		0	0	4	2
Peak Hour	0	0	230	0	0	0	312	1	0	0	0	0	0	12	0	28	583		0	0	1	1

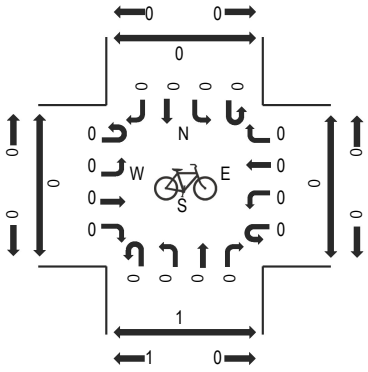
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 6 EAST DWY & BLUEWATER RD PM
Date: Wednesday, October 11, 2023
Peak Hour: 03:45 PM - 04:45 PM
Peak 15-Minutes: 03:45 PM - 04:00 PM

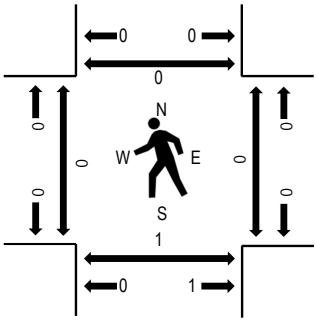
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	BLUEWATER RD Eastbound				BLUEWATER RD Westbound				EAST DWY Northbound				EAST DWY Southbound					Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total		West	East	South	North
3:00 PM	0	16	40	0	0	0	59	20	0	0	0	0	0	3	0	4	142	597	0	0	2	0
3:15 PM	0	1	54	0	0	0	45	1	0	0	0	0	0	1	0	1	103	600	0	0	0	0
3:30 PM	1	1	85	0	0	0	38	2	0	0	0	0	0	2	0	2	131	616	0	0	0	0
3:45 PM	0	3	62	0	0	0	82	0	0	0	0	0	0	46	0	28	221	623	0	0	1	0
4:00 PM	0	1	59	0	0	0	63	3	0	0	0	0	0	11	0	8	145	511	0	0	0	0
4:15 PM	0	0	48	0	2	0	57	0	0	0	0	0	0	6	0	6	119	490	0	0	0	0
4:30 PM	0	0	67	0	0	0	63	1	0	0	0	0	0	4	0	3	138	469	0	0	0	0
4:45 PM	0	0	49	0	0	0	53	2	0	0	0	0	0	4	0	1	109	432	0	0	1	0
5:00 PM	0	0	67	0	0	0	55	0	0	0	0	0	0	2	0	0	124	424	0	0	0	1
5:15 PM	0	0	44	0	0	0	52	0	0	0	0	0	0	0	0	2	98		0	0	1	0
5:30 PM	0	0	44	0	1	0	54	0	0	0	0	0	0	1	0	1	101		0	0	1	0
5:45 PM	0	0	47	0	0	0	52	1	0	0	0	0	0	1	0	0	101		0	0	0	0
Count Total	1	22	666	0	3	0	673	30	0	0	0	0	0	81	0	56	1,532		0	0	6	1
Peak Hour	0	4	236	0	2	0	265	4	0	0	0	0	0	67	0	45	623		0	0	1	0

Study Name 30168-Bluewater Rd Count
Start Date 11/10/2023
Start Time 6:00 AM
Site Code 5
Lat 35.08623112
Long -106.7106957

	BLUEWATER RD			BLUEWATER RD			COORS BLVD			COORS BLVD		
	Eastbound			Westbound			Northbound			Southbound		
Time	Total of vehicle	Total of heavy vehicle	vehicle volumes percentages	Total of vehicle	Total of heavy vehicle	vehicle volumes percentages	Total of vehicle	Total of heavy vehicle	vehicle volumes percentages	Total of vehicle	Total of heavy vehicle	vehicle volumes percentages
10/11/2023 6:00 AM	16	2	13%	8	0	0%	114	2	2%	71	3	4%
10/11/2023 6:15 AM	23	2	9%	5	0	0%	186	4	2%	96	2	2%
10/11/2023 6:30 AM	22	3	14%	9	0	0%	227	2	1%	128	3	2%
10/11/2023 6:45 AM	43	2	5%	10	0	0%	240	4	2%	168	2	1%
10/11/2023 7:00 AM	55	0	0%	23	0	0%	253	1	0%	171	3	2%
10/11/2023 7:15 AM	56	2	4%	21	0	0%	295	4	1%	199	6	3%
10/11/2023 7:30 AM	90	3	3%	21	0	0%	351	2	1%	213	2	1%
10/11/2023 7:45 AM	128	1	1%	13	0	0%	283	2	1%	245	0	0%
10/11/2023 8:00 AM	74	1	1%	17	0	0%	272	1	0%	243	5	2%
10/11/2023 8:15 AM	66	2	3%	15	0	0%	318	0	0%	249	4	2%
10/11/2023 8:30 AM	79	1	1%	13	0	0%	274	0	0%	276	8	3%
10/11/2023 8:45 AM	55	1	2%	13	0	0%	252	3	1%	217	4	2%
10/11/2023 3:00 PM	78	0	0%	22	0	0%	281	0	0%	362	6	2%
10/11/2023 3:15 PM	85	0	0%	14	0	0%	268	1	0%	364	3	1%
10/11/2023 3:30 PM	112	0	0%	12	0	0%	282	2	1%	355	6	2%
10/11/2023 3:45 PM	125	2	2%	12	0	0%	279	2	1%	479	7	1%
10/11/2023 4:00 PM	114	0	0%	12	0	0%	250	1	0%	467	4	1%
10/11/2023 4:15 PM	79	0	0%	10	0	0%	282	0	0%	472	3	1%
10/11/2023 4:30 PM	102	0	0%	16	0	0%	260	1	0%	435	3	1%
10/11/2023 4:45 PM	86	1	1%	9	0	0%	279	4	1%	424	3	1%
10/11/2023 5:00 PM	107	0	0%	11	0	0%	273	0	0%	418	0	0%
10/11/2023 5:15 PM	69	0	0%	12	0	0%	251	1	0%	412	1	0%
10/11/2023 5:30 PM	68	1	1%	10	0	0%	224	2	1%	408	4	1%
10/11/2023 5:45 PM	76	0	0%	10	0	0%	260	0	0%	417	6	1%
AM Peak Hour	358	7	2%	66	0	0%	1,224	5	0%	950	11	1%
PM Peak Hour	420	2	0%	50	0	0%	1,071	4	0%	1,853	17	1%

Study Name 30168-Bluewater Rd Count (Eastbound Approach)
Start Date 11/10/2023
Start Time 6:00 AM
Site Code 5
Lat 35.08623112
Long -106.7106957

	EB APPROACH - BLUEWATER RD																																											
	LANE 1																				LANE 2																				LANE 3							
	Lights				Mediums				Buses				Articulated Trucks				Bicycles on Road				Lights				Mediums				Buses				Articulated Trucks				Bicycles on Road				Lights				Mediums				Buses				Articulated Trucks				Bicycles on Road			
TIME	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
6:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
6:30	0	0	2	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
6:45	0	0	2	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
7:00	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	9	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
7:30	0	0	7	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
7:45	0	0	32	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
8:00	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
8:15	0	0	7	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
8:30	0	0	12	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
8:45	0	0	7	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
15:00	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	26	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
15:45	0	0	36	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
16:00	0	0	24	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	18	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
17:00	0	0	17	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	12	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
17:45	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	329	0	0	0	20	0	0	0	2	0	0	0	1	0	0	0	0	0	2	321	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1080	0	0	0	24	0	0	0	3	0	0	0	23	0	0	0	0	0	0	0

Study Name 30168-Bluewater Rd Count (Westbound Approach)
Start Date 11/10/2023
Start Time 6:00 AM
Site Code 5
Lat 35.08623112
Long -106.7106957

	WB APPROACH - BLUEWATER RD																																			
	LANE 1																				LANE 2															
	Lights				Mediums				Buses				Articulated Trucks				Bicycles on Road				Lights				Mediums				Buses				Articulated Trucks				Bicycles on Road			
TIME	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
6:00	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	0	0	9	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	0	0	20	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	11	11	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	8	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
7:30	0	0	20	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	10	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	1	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	6	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	17	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
15:15	0	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	9	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	11	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	1	302	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	254	226	0	0	2	2	0	0	0	2	0	0	0	0	0	0	0	0

Study Name 30168-Bluewater Rd Count (Northbound Approach)
Start Date 11/10/2023
Start Time 6:00 AM
Site Code 5
Lat 35.08623112
Long -106.7106957

NB APPROACH - COORS BLVD

LANE 1

	Lights				Mediums				Buses				Articulated Trucks				Bicycles on Road			
TIME	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
6:00	0	25	3	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6:15	0	50	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0
6:30	0	66	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6:45	0	64	3	0	0	5	1	0	0	0	0	0	0	1	0	0	0	0	0	0
7:00	0	56	5	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	84	7	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0
7:30	0	86	4	0	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0
7:45	0	57	3	0	0	5	0	0	0	1	0	0	0	1	0	0	0	0	0	0
8:00	0	73	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	74	4	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8:30	0	67	3	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8:45	0	59	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0
15:00	0	59	9	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0
15:15	0	70	6	0	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0
15:30	0	59	4	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	72	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0
16:00	0	60	3	0	0	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0
16:15	0	67	6	0	0	2	1	0	0	2	0	0	0	0	0	0	0	0	0	0
16:30	0	64	3	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
16:45	0	72	4	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
17:00	0	65	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	62	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	55	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
17:45	0	66	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	1532	78	0	0	58	2	0	0	18	0	0	0	9	0	0	0	0	0	0

LANE 2

	Lights				Mediums				Buses				Articulated Trucks				Bicycles on Road			
TIME	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
6:00	0	41	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6:15	0	64	0	0	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0	0
6:30	0	80	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6:45	0	73	0	0	0	5	0	0	0	1	0	0	0	3	0	0	0	0	0	0
7:00	0	73	0	0	0	4	0	0	0	1	0	0	0	1	0	0	0	0	0	0
7:15	0	103	0	0	0	6	0	0	0	0	0	0	0	2	0	0	0	0	0	0
7:30	0	99	0	0	0	7	0	0	0	1	0	0	0	1	0	0	0	0	0	0
7:45	0	92	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	83	0	0	0	8	0	0	0	0	0	0	0	1	0	0	0	0	0	0
8:15	0	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	88	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8:45	0	87	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0
15:00	0	93	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	93	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	96	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0
16:00	0	79	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	98	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
16:30	0	93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	98	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
17:00	0	96	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	98	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
17:30	0	75	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	82	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	2095	0	0	0	62	0	0	0	6	0	0	0	16	0	0	0	0	0	0

LANE 3

	Lights				Mediums				Buses				Articulated Trucks				Bicycles on Road			
TIME	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
6:00	0	29	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	0	50	0	0	0	3	0	0	0	1	0	0	0	1	0	0	0	0	0	0
6:30	0	62	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0
6:45	0	56	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	0	81	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	74	0	0	0	2	0	0	0	2	0	0	0	1	0	0	0	0	0	0
7:30	0	128	0	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0
7:45	0	103	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
8:00	0	81	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0
8:15	0	113	0	0	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0
8:30	0	93	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8:45	0	82	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0
15:00	0	88	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	1	76	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	85	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0
15:45	0	85	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
16:00	0	72	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
16:15	0	91	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0
16:30	0	80	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
16:45	0	86	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
17:00	0	87	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
17:15	0	75	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
17:30	0	70	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
17:45	0	90	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1	1937	0	0	0	31	0	0	0	28	0	0	0	9	0	0	0	0	0	0

LANE 4

	Lights				Mediums				Buses				Articulated Trucks				Bicycles on Road			
TIME	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
6:00	9	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	7	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	24	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	25	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	10	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
7:30	12	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	16	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	11	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	11	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	10	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
15:00	19	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	13	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	19	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
15:45	14	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
16:00	23	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
16:15	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	13	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	11	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
17:00	18	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	8	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	13	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	337	2	0	13	14	0	0	0	1	0	0	0	5	0	0	0	0	0	0	0

Study Name 30168-Bluewater Rd Count (Southbound Approach)
Start Date 11/10/2023
Start Time 6:00 AM
Site Code 5
Lat 35.08623112
Long -106.7106957

SB APPROACH - COORS BLVD

LANE 1

	Lights				Mediums				Buses				Articulated Trucks				Bicycles on Road			
TIME	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
6:00	0	12	15	0	0	0	1	0	0	1	0	0	0	0	2	0	0	0	0	0
6:15	0	22	20	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0
6:30	0	20	27	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0
6:45	0	19	46	0	0	0	0	0	0	4	0	0	0	1	0	0	0	0	0	0
7:00	0	29	45	0	0	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0
7:15	0	37	26	0	0	1	0	0	0	0	0	0	0	2	3	0	0	0	0	0
7:30	0	32	26	0	0	3	1	0	0	1	0	0	0	0	1	0	0	0	0	0
7:45	0	41	52	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	37	33	0	0	2	2	0	0	1	1	0	0	0	3	0	0	0	0	0
8:15	0	51	26	0	0	2	1	0	0	1	0	0	0	2	1	0	0	0	0	0
8:30	0	39	29	0	0	4	2	0	0	2	0	0	0	3	5	0	0	0	0	0
8:45	0	42	17	0	0	4	5	0	0	1	0	0	0	0	3	0	0	0	0	0
15:00	0	84	38	0	0	2	1	0	0	1	0	0	0	2	1	0	0	0	0	0
15:15	0	101	12	0	0	2	2	0	0	0	0	0	0	2	1	0	0	0	0	0
15:30	0	91	17	0	0	1	0	0	0	1	0	0	0	1	2	0	0	0	0	0
15:45	0	95	39	0	0	0	2	0	0	1	1	0	0	4	1	0	0	0	0	0
16:00	0	124	33	0	0	6	0	0	0	1	1	0	0	0	1	0	0	0	0	0
16:15	0	127	25	0	0	3	0	0	0	0	1	0	0	1	2	0	0	0	0	0
16:30	0	108	36	0	0	1	0	0	0	2	2	0	0	0	2	0	0	0	0	0
16:45	0	114	27	0	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0
17:00	0	121	22	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0
17:15	0	115	32	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
17:30	0	114	20	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
17:45	0	108	25	0	0	0	2	0	0	1	0	0	0	2	3	0	0	0	0	0
TOTAL	0	1683	688	0	0	37	26	0	0	21	8	0	0	21	39	0	0	0	0	0

LANE 2

	Lights				Mediums				Buses				Articulated Trucks				Bicycles on Road			
TIME	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
6:00	0	26	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6:15	0	27	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0
6:30	0	48	0	0	0	1	0	0	0	2	0	0	0	1	0	0	0	0	0	0
6:45	0	55	0	0	0	2	0	0	0	3	0	0	0	1	0	0	0	0	0	0
7:00	0	64	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0
7:15	0	77	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0
7:30	0	80	0	0	0	3	0	0	0	1	0	0	0	1	0	0	0	0	0	0
7:45	0	82	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	84	0	0	0	5	0	0	0	0	0	0	0	2	0	0	0	0	0	0
8:15	0	89	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
8:30	0	98	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0
8:45	0	76	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0
15:00	0	121	0	0	0	4	0	0	0	1	0	0	0	3	0	0	0	0	0	0
15:15	0	114	0	0	0	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0
15:30	0	129	0	0	0	3	0	0	0	1	0	0	0	3	0	0	0	0	0	0
15:45	0	154	0	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	0	0
16:00	0	151	0	0	0	2	0	0	0	1	0	0	0	3	0	0	0	0	0	0
16:15	0	159	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
16:30	0	147	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
16:45	0	128	0	0	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0
17:00	0	135	0	0	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0
17:15	0	132	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0
17:30	0	139	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
17:45	0	153	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0
TOTAL	0	2468	0	0	0	54	0	0	0	23	0	0	0	25	2	0	0	0	0	0

LANE 3

	Lights				Mediums				Buses				Articulated Trucks				Bicycles on Road			
TIME	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
6:00	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	0	18	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6:45	0	28	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0
7:00	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	35	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
7:30	0	53	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	50	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	60	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8:15	0	64	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	75	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	0	85	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	0	109	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	0	86	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	149	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
16:00	0	117	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	100	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	1827	0	1	0	19	0	0	0	4	0	0	0	1	0	0	0	0	0	0

LANE 4

	Lights				Mediums				Buses				Articulated Trucks				Bicycles on Road			
TIME	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	7	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	10	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	8	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	11	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00	15	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30	18	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	26	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	24	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	18	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	330	1	0	7	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Study Name 30168-Bluewater Rd Count
Start Date 11/10/2023
Start Time 6:00 AM
Site Code 5
Lat 35.08623112
Long -106.7106957

	BLUEWATER RD			BLUEWATER RD			COORS BLVD			COORS BLVD		
	Eastbound			Westbound			Northbound			Southbound		
Time	Total of vehicle	Total of Green arrival vehicle	Percent arrival on green	Total of vehicle	Total of Green arrival vehicle	Percent arrival on green	Total of vehicle	Total of Green arrival vehicle	Percent arrival on green	Total of vehicle	Total of Green arrival vehicle	Percent arrival on green
10/11/2023 6:00 AM	16	8	50%	8	1	13%	114	73	64%	71	49	69%
10/11/2023 6:15 AM	23	4	17%	5	2	40%	186	144	77%	96	85	89%
10/11/2023 6:30 AM	22	7	32%	9	0	0%	227	185	81%	128	114	89%
10/11/2023 6:45 AM	43	8	19%	10	0	0%	240	142	59%	168	125	74%
10/11/2023 7:00 AM	55	10	18%	23	13	57%	253	151	60%	171	158	92%
10/11/2023 7:15 AM	56	10	18%	21	6	29%	295	248	84%	199	183	92%
10/11/2023 7:30 AM	90	18	20%	21	15	71%	351	208	59%	213	180	85%
10/11/2023 7:45 AM	128	37	29%	13	7	54%	283	186	66%	245	223	91%
10/11/2023 8:00 AM	74	36	49%	17	4	24%	272	194	71%	243	227	93%
10/11/2023 8:15 AM	66	6	9%	15	5	33%	318	165	52%	249	182	73%
10/11/2023 8:30 AM	79	24	30%	13	5	38%	274	172	63%	276	239	87%
10/11/2023 8:45 AM	55	11	20%	13	8	62%	252	120	48%	217	195	90%
10/11/2023 3:00 PM	78	18	23%	22	6	27%	281	207	74%	362	360	99%
10/11/2023 3:15 PM	85	19	22%	14	3	21%	268	184	69%	364	311	85%
10/11/2023 3:30 PM	112	31	28%	12	3	25%	282	170	60%	355	273	77%
10/11/2023 3:45 PM	125	18	14%	12	5	42%	279	161	58%	479	381	80%
10/11/2023 4:00 PM	114	14	12%	12	4	33%	250	139	56%	467	419	90%
10/11/2023 4:15 PM	79	20	25%	10	5	50%	282	172	61%	472	421	89%
10/11/2023 4:30 PM	102	22	22%	16	6	38%	260	144	55%	435	363	83%
10/11/2023 4:45 PM	86	14	16%	9	4	44%	279	164	59%	424	394	93%
10/11/2023 5:00 PM	107	30	28%	11	1	9%	273	183	67%	418	359	86%
10/11/2023 5:15 PM	69	15	22%	12	8	67%	251	214	85%	412	380	92%
10/11/2023 5:30 PM	68	22	32%	10	4	40%	224	166	74%	408	383	94%
10/11/2023 5:45 PM	76	22	29%	10	5	50%	260	167	64%	417	334	80%
AM Peak Hour	358	97	27%	66	31	47%	1,224	753	62%	950	812	85%
PM Peak Hour	420	74	18%	50	20	40%	1,071	616	58%	1,853	1,584	85%

All Traffic Data Services

5 COORS BLVD & BLUEWATER RD AM
Wednesday, October 11, 2023

Peak Hour
07:30 AM - 08:30 AM
Peak 15-Minutes
07:30 AM - 07:45 AM

Traffic Counts - All Vehicles

	BLUEWATER RD					BLUEWATER RD					COORS BLVD					COORS BLVD						
	Eastbound					Westbound					Northbound					Southbound						Rolling
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Hour
6:00 AM	0	15	0	0	1	0	2	3	3	5	1	9	101	3	0	0	0	53	15	3	214	1,402
6:15 AM	0	21	2	0	0	0	5	4	2	3	0	8	178	0	0	0	3	71	20	2	319	1,711
6:30 AM	0	17	1	1	3	0	2	5	1	8	0	8	218	1	0	0	4	95	29	0	393	1,980
6:45 AM	0	30	9	1	3	0	6	9	3	7	2	25	209	4	0	0	6	116	46	0	476	2,286
7:00 AM	0	29	18	1	7	0	12	11	8	13	0	25	223	3	2	0	6	118	45	2	523	2,505
7:15 AM	0	39	7	5	5	0	9	9	10	10	0	11	277	6	1	0	13	157	26	3	588	2,607
7:30 AM	0	55	26	5	4	0	10	14	11	10	0	14	333	4	0	0	10	175	23	5	699	2,681
7:45 AM	0	79	14	25	10	0	8	18	6	7	0	16	264	3	0	0	9	181	50	5	695	2,643
8:00 AM	0	49	12	7	6	0	14	8	5	9	1	18	252	1	0	1	10	193	30	9	625	2,504
8:15 AM	0	50	8	4	4	0	9	5	7	8	1	11	302	4	0	1	8	212	27	1	662	0
8:30 AM	0	58	7	8	6	0	11	8	6	7	1	11	259	3	0	1	11	228	27	9	661	0
8:45 AM	0	38	9	1	7	0	11	8	4	9	0	12	240	0	0	0	7	185	21	4	556	0

All Traffic Data Services

5 COORS BLVD & BLUEWATER RD PM
Wednesday, October 11, 2023

Peak Hour
03:45 PM - 04:45 PM
Peak 15-Minutes
03:45 PM - 04:00 PM

Traffic Counts - All Vehicles

	BLUEWATER RD					BLUEWATER RD					COORS BLVD					COORS BLVD						
	Eastbound					Westbound					Northbound					Southbound						Rolling
Time	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	U-Turn	Left	Thru	Right	RTOR	Total	Hour
3:00 PM	0	44	17	8	9	0	16	18	8	13	1	20	251	8	1	1	16	305	36	4	776	3,241
3:15 PM	0	50	19	6	10	0	17	13	4	10	2	14	246	3	3	1	14	334	13	2	761	3,324
3:30 PM	0	68	16	16	12	0	15	4	6	6	0	20	258	4	0	1	18	317	17	2	780	3,431
3:45 PM	0	69	19	30	7	0	17	12	1	11	1	16	262	0	0	1	26	407	43	2	924	3,490
4:00 PM	0	66	22	20	6	0	9	7	7	5	0	27	220	3	0	0	25	407	33	2	859	3,378
4:15 PM	0	49	11	16	3	0	10	15	3	7	0	11	264	6	1	0	24	420	27	1	868	3,348
4:30 PM	0	68	21	9	4	0	18	12	3	9	1	13	243	3	0	1	18	376	39	1	839	3,241
4:45 PM	0	50	20	9	7	0	8	6	4	5	0	12	263	3	1	0	23	371	28	2	812	3,133
5:00 PM	0	71	17	15	4	0	11	9	2	9	1	18	250	4	0	0	23	371	21	3	829	3,115
5:15 PM	0	38	18	11	2	0	5	12	5	7	0	9	240	1	1	0	19	361	31	1	761	0
5:30 PM	0	37	13	13	5	0	11	10	2	8	0	17	204	3	0	0	23	362	22	1	731	0
5:45 PM	0	42	17	7	10	0	20	11	2	8	1	13	246	0	0	0	18	369	27	3	794	0

APPENDIX D

Future Traffic Projections

MRCOG Historical Traffic Projections: ABB Expansion

Location	2012	2013	2014	2015	2017	2018	2019	Growth Factor	Annual Growth
Unser Blvd N/O Bluewater Rd	28,640		29,386		36,434			1.27	5%
Unser Blvd S/O Bluewater Rd	28,148	28,024			31,914			1.13	3%
Unser Blvd Total								1.20	4%
Airport Rd S/O Bluewater Rd	2,366			2,590		3,005		1.27	4%
Airport Rd S/O Los Volcanes Rd			1,455	1,660		1,903		1.31	7%
Airport Rd Total								1.29	6%
Coors Blvd N/O Bluewater Rd	37,210	33,092					39,836	1.07	1%
Coors Blvd N/O Central Ave				35,827		29,589		0.83	-6%
Coors Blvd Total								0.95	-3%
Bluewater Rd W/O Unser Blvd		5,147					11,869	2.31	15%
Bluewater Rd E/O Unser Blvd	5,917			5,675		6,191		1.05	1%
Bluewater Rd W/O Coors Blvd			8,943	8,610		9,720		1.09	2%
Bluewater Rd Total								1.48	6%
Total								1.23	3%

MRCOG MTP Traffic Projections: ABB Expansion

Location	2040 ADT	2016 ADT	Growth Factor	Annual Growth
Airport Rd (E) S/O Blue Water Rd	1180	1562	0.76	-1.2%
Airport Rd (W) N/O Bluewater Rd	1715	1473	1.16	0.6%
Airport Rd Total	**2895**	**3035**	**0.95**	**-0.2%**
Blue Water Rd E/O Airport Rd (E)	1991	2130	0.93	-0.3%
Blue Water Rd E/O Airport Rd (W)	896	647	1.38	1.4%
Blue Water Rd E/O Airport Rd (W)	1425	1149	1.24	0.9%
Blue Water Rd E/O Unser Blvd	3623	3279	1.10	0.4%
Blue Water Rd E/O Unser Blvd	3603	1614	2.23	3.4%
Blue Water Rd W/O Coors Blvd	806	560	1.44	1.5%
Blue Water Rd W/O Coors Blvd	1991	2130	0.93	-0.3%
Blue Water Rd Total	**14335**	**11509**	**1.25**	**0.9%**
Coors Blvd N/O Bluewater Rd	16630	15319	1.09	0.3%
Coors Blvd S/O Bluewater Rd	15736	14074	1.12	0.5%
Coors Blvd Total	**32366**	**29393**	**1.10**	**0.4%**
Unser Blvd N/O Bluewater Rd	16553	15391	1.08	0.3%
Unser Blvd S/O Bluewater Rd	16161	13884	1.16	0.6%
Unser Blvd Total	**32714**	**29275**	**1.12**	**0.5%**
Total	**82310**	**73212**	**1.12**	**0.5%**

APPENDIX E

Trip Generation Worksheets

Existing Trip Generation (Based on Existing Counts)

	Daily	AM			PM		
		In	Out	Total	In	Out	Total
Total	1426	102	84	186	9	152	161

Trip Generation Existing + Expansion (Employees)

Existing Emp	469
Expansion Emp	100
Ratio	21%

	Daily	AM			PM		
Expansion		In	Out	Total	In	Out	Total
Site-Specific Counts	306	22	18	40	2	32	34

Kimley»Horn

Project	ABB Expansion (Expansion Only)				
Subject	Trip Generation for Manufacturing				
Designed by	TES	*Date*	October 19, 2023	*Job No.*	096523009
Checked by		*Date*		*Sheet No.*	*of*

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Manufacturing (140)

Independent Variable - Employees (X)
Employees = 100
X = 100
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (100 Series Page 77)

Directional Distribution: 73% ent. 27% exit.
T = 0.32 (X) T = 32 Average Vehicle Trip Ends
T = 0.32 * 100 23 entering 9 exiting

23 + 9 = 32

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (100 Series Page 78)

Directional Distribution: 37% ent. 63% exit.
T = 0.31(X) T = 31 Average Vehicle Trip Ends
T = 0.31 * 100 11 entering 20 exiting

11 + 20 = 31

Weekday (100 Series Page 76)

Directional Distribution: 50% entering, 50% exiting
T = 2.51 (X) T = 252 Average Vehicle Trip Ends
T = 2.51 * 100 126 entering 126 exiting

126 + 126 = 252

APPENDIX F

Signal Timing Worksheets

ASC3 COORDINATION PLAN DATA

10/26/2023 6:51 AM

377 - Bluewater & Coors

COORDINATOR OPTIONS (MM 3-1)

MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	SYSTEM FORMAT	PTN
SPLITS IN	PERCENT	OFFSET IN	PERCENT
TRANSITION	SMOOTH	MAX SELECT	MAXINH
DWELL/ADD TIME	0	ENABLE MAN SYNC	NO
DLY COORD WK-LZ	NO	FORCE OFF	FLOAT
OFFSET REF	LEAD	CAL USE PED TM	NO
PED RECALL	NO	PED RESERVE	NO
LOCAL ZERO OVRD	NO	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

COORDINATION PATTERN 21 (MM 3-2)

USE SPLIT PATTERN	21	SPLIT SUM	100%
TS2 (PAT-OFF)	6-3		
CYCLE	120s	STD (COS)	211
OFFSET VAL	88%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB		EB	N-W	SB	E-N	WB
SPLITS	12	42		46	13	41	13	33

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

COORDINATION PATTERN 23

USE SPLIT PATTERN	23	SPLIT SUM	100%
TS2 (PAT-OFF)	7-2		
CYCLE	110s	STD (COS)	231
OFFSET VAL	56%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB		EB	N-W	SB	E-N	WB
SPLITS	12	44		44	12	44	14	28

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

COORDINATION PATTERN 25

ASC3 COORDINATION PLAN DATA

10/26/2023 6:51 AM

USE SPLIT PATTERN	25	SPLIT SUM	100%
TS2 (PAT-OFF)	8-1		
CYCLE	130s	STD (COS)	251
OFFSET VAL	52%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB		EB	N-W	SB	E-N	WB
SPLITS	12	49		39	12	49	12	27

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

CLOCK / CALENDAR DATA (MM 5-1)

CURRENT DATE	CURRENT DOW		CURRENT TOD
ENA ACTION PLAN	0		
SYNC REF TIME	03:30	SYNC REF	REF TIME
TIME FROM GMT	+00	DAY LIGHT SAVE	NO
TIME RESET INPUT SET TIME		3:30:00	

ACTION PLAN 21 (MM 5-2)

PATTERN	21	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 23

PATTERN	23	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 25

PATTERN	25	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 100

ASC3 COORDINATION PLAN DATA

10/26/2023 6:51 AM

PATTERN	FREE	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

DAY PLAN/EVENT 1 (MM 5-3)

EVENT	ACTION PLAN	START TIME
1	23	10:00
2	100	18:00

DAY PLAN/EVENT 2

EVENT	ACTION PLAN	START TIME
1	21	6:30
2	23	9:00
3	25	15:00
4	23	18:30
5	100	22:00

DAY PLAN/EVENT 3

EVENT	ACTION PLAN	START TIME
1	23	9:00
2	100	22:00

SCHEDULE NUMBER 1 (MM 5-4)

SCHEDULE NUMBER	1	
DAY PLAN NO	1	CLEAR ALL FIELDS

SELECT ALL MONTHS DOW DOM

MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X

DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X	.	.	.	.	.	.

DAY(DOM)										
1	2	3	4	5	6	7	8	9	10	11
X	X	X	X	X	X	X	X	X	X	X
12	13	14	15	16	17	18	19	20	21	22
X	X	X	X	X	X	X	X	X	X	X
23	24	25	26	27	28	29	30	31		
X	X	X	X	X	X	X	X	X		

ASC3 COORDINATION PLAN DATA

10/26/2023 6:51 AM

SCHEDULE NUMBER 2

SCHEDULE NUMBER	2											
DAY PLAN NO	2	CLEAR ALL FIELDS										
SELECT ALL MONTHS						DOW		DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	X	X	X	X	X	.					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

SCHEDULE NUMBER 3

SCHEDULE NUMBER	3											
DAY PLAN NO	3	CLEAR ALL FIELDS										
SELECT ALL MONTHS						DOW		DOM				
MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X
DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT					
	.	.	.	.	.	.	X					
DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11	
	X	X	X	X	X	X	X	X	X	X	X	
	12	13	14	15	16	17	18	19	20	21	22	
	X	X	X	X	X	X	X	X	X	X	X	
	23	24	25	26	27	28	29	30	31			
	X	X	X	X	X	X	X	X	X			

NOTES:

1. Coord sheet created 3-25-09, by BB.
2. New coordination sheets done by Lee Eng. 9/30/13.
3. Coordination sheet updated to ASC3 form 11/13/2013.
4. Coordination sheet updated for Coors ATSPMs by Lee Engineering on 4/22/2020

Intersection No.:	377
Intersection Name:	BLUEWATER - COORS
Revision Date	9/26/2016

CENTRAC
1

Timing Data

Phase I.D.:	1	2	3	4	5	6	7	8
Phase Dir.:	S-E	NB		EB	N-W	SB	E-N	WB
Min Grn	3	16		8	3	16	3	8
Walk:	0	7		7	0	7	0	7
Ped Clr:	0	13		27	0	23	0	24
Veh Ext:	1.5	4.0		2.5	1.5	4.0	1.5	2.5
Veh Ext2:								
Max 1:	16	36		24	16	36	16	24
Max 2:	16	36		24	16	36	16	24
Max 3:								
Yellow:	3.0	4.5		3.8	3.0	4.5	3.0	3.8
Red Clr	0.5	1.5		1.5	0.5	1.5	0.5	1.5

Recall Data

Locking Memory:								
Vehicle Recall:								
Ped Recall:								
Recall To Max:		X				X		

Flash Mode:	ALL RED
Start Up Mode:	ALL RED
Time:	8 SEC.
First Phases:	2 & 6
Start In:	GREEN
Overlap Phases:	NONE

Overlap	Par Ph	Grn	Yel	Red
A				
B				
C				
D				

NOTES:
1. Yellow and red clearance times revised. 1/24/92
2. Yellow and red clearance times revised. 7/24/92
3. E-N turn arrow added. 3/17/05
4. Adjusted ped times and clearance intervals, 8/19/09.
5. Ped clearance intervals updated to NMDOT standard by BB, 10/21/13.
6. Timing sheet updated to current timing sheet, 9/26/16.

ASC3 COORDINATION PLAN DATA

10/26/2023 6:50 AM

394 - Unser Blvd & Bluewater Rd

COORDINATOR OPTIONS (MM 3-1)

MANUAL PATTERN	AUTO	ECPI COORD	YES
SYSTEM SOURCE	SYS	SYSTEM FORMAT	PTN
SPLITS IN	PERCENT	OFFSET IN	PERCENT
TRANSITION	SMOOTH	MAX SELECT	MAXINH
DWELL/ADD TIME	0	ENABLE MAN SYNC	NO
DLY COORD WK-LZ	NO	FORCE OFF	FIXED
OFFSET REF	LEAD	CAL USE PED TM	NO
PED RECALL	NO	PED RESERVE	NO
LOCAL ZERO OVRD	NO	FO ADD INI GRN	NO
RE-SYNC COUNT	0	MULTISYNC	NO

COORDINATION PATTERN 21 (MM 3-2)

USE SPLIT PATTERN	21	SPLIT SUM	100%
TS2 (PAT-OFF)	0-1		
CYCLE	120s	STD (COS)	111
OFFSET VAL	83%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS	15	43	0	42	12	46	11	31

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

COORDINATION PATTERN 23

USE SPLIT PATTERN	23	SPLIT SUM	100%
TS2 (PAT-OFF)	0-3		
CYCLE	110s	STD (COS)	131
OFFSET VAL	14%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS	12	42	0	46	12	42	12	34

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

ASC3 COORDINATION PLAN DATA

10/26/2023 6:50 AM

COORDINATION PATTERN 25

USE SPLIT PATTERN	25	SPLIT SUM	100%
TS2 (PAT-OFF)	0-5		
CYCLE	130s	STD (COS)	151
OFFSET VAL	98%		
ACTUATED COORD	YES	TIMING PLAN	0
ACT WALK REST	NO	SEQUENCE	0
PHASE RESRVCE	NO	ACTION PLAN	0

PHASE	1	2	3	4	5	6	7	8
DIRECTION	S-E	NB	W-S	EB	N-W	SB	E-N	WB
SPLITS	11	49	0	40	11	49	11	29

PHASE	1	2	3	4	5	6	7	8
COORD PHASE		X				X		
VEH RECALL								
MAX RECALL		X				X		

CLOCK / CALENDAR DATA (MM 5-1)

CURRENT DATE	CURRENT DOW		CURRENT TOD
ENA ACTION PLAN	0		
SYNC REF TIME	03:30	SYNC REF	REF TIME
TIME FROM GMT	+00	DAY LIGHT SAVE	NO
TIME RESET INPUT SET TIME		3:30:00	

ACTION PLAN 21 (MM 5-2)

PATTERN	21	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 23

PATTERN	23	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ACTION PLAN 25

PATTERN	25	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

ASC3 COORDINATION PLAN DATA

10/26/2023 6:50 AM

ACTION PLAN 100

PATTERN	254	SYS OVERRIDE	NO
TIMING PLAN	0	SEQUENCE	0
VEHICLE DETECTOR PLAN	0.00	DET LOG	NONE
FLASH	--	RED REST	NO
VEH DET DIAG PLN	0	PED DET DIAG PLN	0
DIMMING ENABLE	NO		

DAY PLAN/EVENT 1 (MM 5-3)

EVENT	ACTION PLAN	START TIME
1	23	10:00
2	100	18:00
3	0	00:00

DAY PLAN/EVENT 2

EVENT	ACTION PLAN	START TIME
1	21	6:30
2	23	9:00
3	25	15:00
4	23	18:30
5	100	22:00
6	0	00:00
7	0	00:00

DAY PLAN/EVENT 3

EVENT	ACTION PLAN	START TIME
1	23	9:00
2	100	22:00
3	0	00:00

SCHEDULE NUMBER 1 (MM 5-4)

SCHEDULE NUMBER	1	
DAY PLAN NO	1	CLEAR ALL FIELDS

SELECT ALL MONTHS DOW DOM

MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X

DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	X	.	.	.	.	.	.

DAY(DOM)										
1	2	3	4	5	6	7	8	9	10	11
X	X	X	X	X	X	X	X	X	X	X
12	13	14	15	16	17	18	19	20	21	22
X	X	X	X	X	X	X	X	X	X	X
23	24	25	26	27	28	29	30	31		
X	X	X	X	X	X	X	X	X		

ASC3 COORDINATION PLAN DATA

10/26/2023 6:50 AM

SCHEDULE NUMBER 2

SCHEDULE NUMBER	2	
DAY PLAN NO	2	CLEAR ALL FIELDS

SELECT ALL MONTHS — DOW — DOM

MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X

DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	.	X	X	X	X	X	.

DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

SCHEDULE NUMBER 3

SCHEDULE NUMBER	3	
DAY PLAN NO	3	CLEAR ALL FIELDS

SELECT ALL MONTHS — DOW — DOM

MONTH	J	F	M	A	M	J	J	A	S	O	N	D
	X	X	X	X	X	X	X	X	X	X	X	X

DAY(DOW)	SUN	MON	TUE	WED	THU	FRI	SAT
	.	.	.	.	.	.	X

DAY(DOM)	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

NOTES:

1. January 2010 - New Coordination - Lee Engineering
2. Cycle lengths and offsets changed for cooridor, 9/25/14
3. New Coordination Patterns implemented 05-24-2017, Lee Engineering.

Intersection No.:	394

Centracs
1

Intersection Name:	BLUEWATER - UNSER

Revision Date	5/25/2017

Timing Data

Phase I.D.:	1	2	3	4	5	6	7	8
Phase Dir.:	S-E	NB		EB	N-W	SB	E-N	WB
Min Grn	3	16		8	3	16	3	8
Walk:	0	7		7	0	7	0	7
Ped Clr:	0	14		24	0	14	0	24
Veh Ext:	1.5	3.0		2.0	1.5	3.0	1.5	2.0
Veh Ext2:	1.5	3.0		2.0	1.5	3.0	1.5	2.0
Max 1:	24	36		24	16	36	16	24
Max 2:	24	36		24	16	36	16	24
Max 3:								
Yellow:	3.0	4.0		4.0	3.0	4.5	3.0	4.0
Red Clr	0.5	1.0		2.0	0.5	1.0	0.5	1.5

Recall Data

Locking Memory:								
Vehicle Recall:								
Ped Recall:								
Recall To Max:		X				X		

Flash Mode:	ALL RED

Start Up Mode:	ALL RED
Time:	8 SEC.
First Phases:	2 & 6
Start In:	GREEN

Overlap Phases:	

Overlap	Par Ph	Grn	Yel	Red
A				
B				
C				
D				

NOTES:

1. Intersection flash date 11/2/00.
2. Timing sheet updated 4/4/03
3. Timing sheet updated 11/18/03.
4. Added E-N Left Turn Movement, 4/1/05.
5. Yellow and Red clearance intervals changed as per new standards given by KB, 10/10/07.
6. Pedestrian times adjusted, 12/30/11.
7. Clearance intervals updated to NMDOT standard by BB, 10/3/13.
8. Timing sheet revised to current timing sheet, 8/31/16.
9. New Coordination Patterns implemented 05-24-2017, Lee Engineering.

APPENDIX G

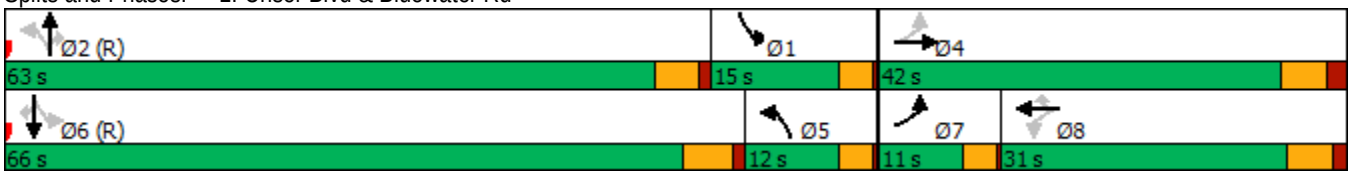
Intersection Analysis Worksheets

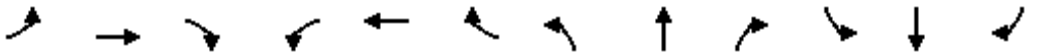
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	60	83	52	40	60	41	1390	152	102	888	74
Future Volume (vph)	60	83	52	40	60	41	1390	152	102	888	74
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	3.0	8.0	8.0	8.0	8.0	3.0	16.0	16.0	3.0	16.0	16.0
Minimum Split (s)	6.5	37.0	31.0	31.0	31.0	6.5	26.0	26.0	6.5	26.5	26.5
Total Split (s)	11.0	42.0	31.0	31.0	31.0	12.0	63.0	63.0	15.0	66.0	66.0
Total Split (%)	9.2%	35.0%	25.8%	25.8%	25.8%	10.0%	52.5%	52.5%	12.5%	55.0%	55.0%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.5	4.5
All-Red Time (s)	0.5	2.0	1.5	1.5	1.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	5.5	5.5	5.5	3.5	5.0	5.0	3.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Unser Blvd & Bluewater Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	83	48	52	40	60	41	1390	152	102	888	74
Future Volume (veh/h)	60	83	48	52	40	60	41	1390	152	102	888	74
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	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	90	52	57	43	65	45	1511	0	111	965	80
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	156	90	140	125	106	633	1718		551	1792	799
Arrive On Green	0.04	0.14	0.14	0.07	0.07	0.07	0.23	0.48	0.00	0.26	0.50	0.50
Sat Flow, veh/h	1781	1112	643	1246	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	65	0	142	57	43	65	45	1511	0	111	965	80
Grp Sat Flow(s),veh/h/ln	1781	0	1755	1246	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	4.0	0.0	9.1	5.4	2.6	3.1	0.0	45.9	0.0	0.0	22.2	2.4
Cycle Q Clear(g_c), s	4.0	0.0	9.1	5.7	2.6	3.1	0.0	45.9	0.0	0.0	22.2	2.4
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	196	0	245	140	125	106	633	1718		551	1792	799
V/C Ratio(X)	0.33	0.00	0.58	0.41	0.34	0.62	0.07	0.88		0.20	0.54	0.10
Avail Cap(c_a), veh/h	229	0	526	322	397	337	633	1718		551	1792	799
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.5	0.0	48.3	55.1	53.5	22.4	14.5	27.9	0.0	31.3	20.2	9.0
Incr Delay (d2), s/veh	0.4	0.0	0.8	0.7	0.6	2.2	0.0	6.8	0.0	0.1	1.2	0.3
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(95%),veh/ln	3.2	0.0	7.3	3.1	2.3	3.5	1.1	27.9	0.0	4.4	14.3	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.9	0.0	49.1	55.8	54.1	24.5	14.5	34.7	0.0	31.4	21.4	9.2
LnGrp LOS	D	A	D	E	D	C	B	C		C	C	A
Approach Vol, veh/h		207			165			1556			1156	
Approach Delay, s/veh		48.7			43.0			34.1			21.5	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.2	63.0		22.8	31.2	66.0	8.8	14.0				
Change Period (Y+Rc), s	3.5	5.0		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	11.5	58.0		36.0	8.5	60.5	7.5	* 26				
Max Q Clear Time (g_c+I1), s	2.0	47.9		11.1	2.0	24.2	6.0	7.7				
Green Ext Time (p_c), s	0.1	7.2		0.5	0.0	8.9	0.0	0.3				

Intersection Summary			
HCM 6th Ctrl Delay		30.8	
HCM 6th LOS		C	

Notes

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

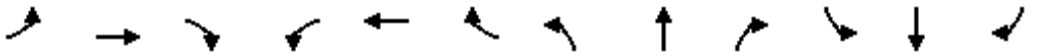
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	120	67	107	100	178	66	1064	54	54	1462	103
Future Volume (vph)	120	67	107	100	178	66	1064	54	54	1462	103
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	3.0	8.0	8.0	8.0	8.0	3.0	16.0	16.0	3.0	16.0	16.0
Minimum Split (s)	6.5	37.0	29.0	29.0	29.0	6.5	26.0	26.0	6.5	26.5	26.5
Total Split (s)	11.0	40.0	29.0	29.0	29.0	11.0	79.0	79.0	11.0	79.0	79.0
Total Split (%)	8.5%	30.8%	22.3%	22.3%	22.3%	8.5%	60.8%	60.8%	8.5%	60.8%	60.8%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.5	4.5
All-Red Time (s)	0.5	2.0	1.5	1.5	1.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	5.5	5.5	5.5	3.5	5.0	5.0	3.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 127 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Unser Blvd & Bluewater Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	67	70	107	100	178	66	1064	54	54	1462	103
Future Volume (veh/h)	120	67	70	107	100	178	66	1064	54	54	1462	103
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	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	125	70	73	111	104	185	69	1108	0	56	1523	107
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	219	161	168	190	202	171	355	2023		469	2009	896
Arrive On Green	0.06	0.19	0.19	0.11	0.11	0.11	0.13	0.57	0.00	0.13	0.57	0.57
Sat Flow, veh/h	1781	839	874	1245	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	125	0	143	111	104	185	69	1108	0	56	1523	107
Grp Sat Flow(s),veh/h/ln	1781	0	1713	1245	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.5	0.0	9.6	11.3	6.8	10.9	0.0	25.4	0.0	0.0	42.4	2.9
Cycle Q Clear(g_c), s	7.5	0.0	9.6	11.3	6.8	10.9	0.0	25.4	0.0	0.0	42.4	2.9
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	219	0	330	190	202	171	355	2023		469	2009	896
V/C Ratio(X)	0.57	0.00	0.43	0.58	0.51	1.08	0.19	0.55		0.12	0.76	0.12
Avail Cap(c_a), veh/h	219	0	448	281	338	287	355	2023		469	2009	896
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	0.0	46.2	56.8	54.8	34.9	33.6	17.5	0.0	18.5	21.5	6.6
Incr Delay (d2), s/veh	2.3	0.0	0.3	1.1	0.8	64.2	0.1	1.1	0.0	0.0	2.7	0.3
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(95%),veh/ln	6.7	0.0	7.4	6.5	5.9	12.1	3.2	15.8	0.0	1.7	24.7	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.1	0.0	46.6	57.8	55.5	99.1	33.7	18.6	0.0	18.5	24.2	6.9
LnGrp LOS	D	A	D	E	E	F	C	B		B	C	A
Approach Vol, veh/h		268			400			1177			1686	
Approach Delay, s/veh		48.2			76.3			19.5			22.9	
Approach LOS		D			E			B			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	79.0		31.0	20.0	79.0	11.0	20.0				
Change Period (Y+Rc), s	3.5	5.0		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	7.5	74.0		34.0	7.5	73.5	7.5	* 24				
Max Q Clear Time (g_c+I1), s	2.0	27.4		11.6	2.0	44.4	9.5	13.3				
Green Ext Time (p_c), s	0.0	10.9		0.5	0.0	15.3	0.0	0.7				

Intersection Summary			
HCM 6th Ctrl Delay		29.7	
HCM 6th LOS		C	

Notes

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

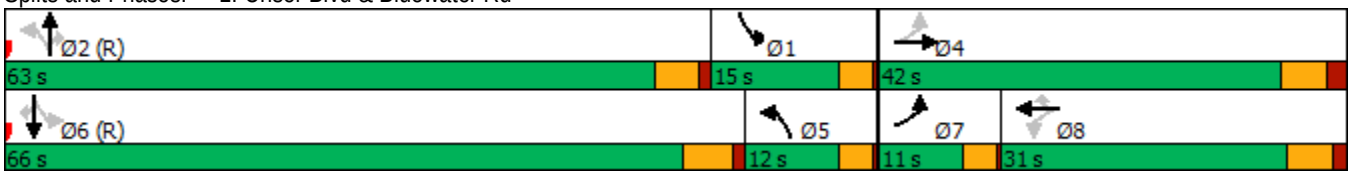
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

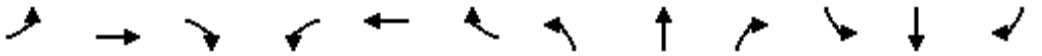
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	64	88	55	42	64	43	1475	161	108	942	79
Future Volume (vph)	64	88	55	42	64	43	1475	161	108	942	79
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	3.0	8.0	8.0	8.0	8.0	3.0	16.0	16.0	3.0	16.0	16.0
Minimum Split (s)	6.5	37.0	31.0	31.0	31.0	6.5	26.0	26.0	6.5	26.5	26.5
Total Split (s)	11.0	42.0	31.0	31.0	31.0	12.0	63.0	63.0	15.0	66.0	66.0
Total Split (%)	9.2%	35.0%	25.8%	25.8%	25.8%	10.0%	52.5%	52.5%	12.5%	55.0%	55.0%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.5	4.5
All-Red Time (s)	0.5	2.0	1.5	1.5	1.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	5.5	5.5	5.5	3.5	5.0	5.0	3.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Unser Blvd & Bluewater Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	88	51	55	42	64	43	1475	161	108	942	79
Future Volume (veh/h)	64	88	51	55	42	64	43	1475	161	108	942	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	96	55	60	46	70	47	1603	0	117	1024	86
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	164	94	143	133	112	602	1718		522	1792	799
Arrive On Green	0.05	0.15	0.15	0.07	0.07	0.07	0.22	0.48	0.00	0.25	0.50	0.50
Sat Flow, veh/h	1781	1116	639	1236	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	70	0	151	60	46	70	47	1603	0	117	1024	86
Grp Sat Flow(s),veh/h/ln	1781	0	1755	1236	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	4.2	0.0	9.6	5.7	2.8	3.3	0.0	50.9	0.0	0.7	24.1	2.6
Cycle Q Clear(g_c), s	4.2	0.0	9.6	6.2	2.8	3.3	0.0	50.9	0.0	0.7	24.1	2.6
Prop In Lane	1.00		0.36	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	204	0	258	143	133	112	602	1718		522	1792	799
V/C Ratio(X)	0.34	0.00	0.58	0.42	0.35	0.62	0.08	0.93		0.22	0.57	0.11
Avail Cap(c_a), veh/h	232	0	527	318	397	337	602	1718		522	1792	799
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	0.0	47.7	54.9	53.1	22.7	16.1	29.2	0.0	33.3	20.7	8.9
Incr Delay (d2), s/veh	0.4	0.0	0.8	0.7	0.6	2.1	0.0	10.8	0.0	0.1	1.3	0.3
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(95%),veh/ln	3.4	0.0	7.7	3.3	2.4	3.8	1.3	31.5	0.0	4.7	15.4	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.2	0.0	48.5	55.6	53.7	24.8	16.1	40.0	0.0	33.4	22.1	9.1
LnGrp LOS	D	A	D	E	D	C	B	D		C	C	A
Approach Vol, veh/h		221			176			1650			1227	
Approach Delay, s/veh		48.1			42.8			39.3			22.2	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.3	63.0		23.7	30.3	66.0	9.1	14.5
Change Period (Y+Rc), s	3.5	5.0		6.0	3.5	5.5	3.5	* 6
Max Green Setting (Gmax), s	11.5	58.0		36.0	8.5	60.5	7.5	* 26
Max Q Clear Time (g_c+I1), s	2.7	52.9		11.6	2.0	26.1	6.2	8.2
Green Ext Time (p_c), s	0.1	4.1		0.5	0.0	9.5	0.0	0.3

Intersection Summary			
HCM 6th Ctrl Delay		33.7	
HCM 6th LOS		C	

Notes

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

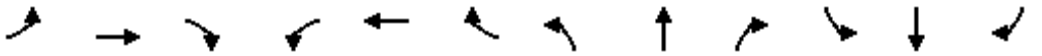
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	127	71	114	106	189	70	1129	57	57	1551	109
Future Volume (vph)	127	71	114	106	189	70	1129	57	57	1551	109
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	3.0	8.0	8.0	8.0	8.0	3.0	16.0	16.0	3.0	16.0	16.0
Minimum Split (s)	6.5	37.0	29.0	29.0	29.0	6.5	26.0	26.0	6.5	26.5	26.5
Total Split (s)	11.0	40.0	29.0	29.0	29.0	11.0	79.0	79.0	11.0	79.0	79.0
Total Split (%)	8.5%	30.8%	22.3%	22.3%	22.3%	8.5%	60.8%	60.8%	8.5%	60.8%	60.8%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.5	4.5
All-Red Time (s)	0.5	2.0	1.5	1.5	1.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	5.5	5.5	5.5	3.5	5.0	5.0	3.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 127 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Unser Blvd & Bluewater Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	71	74	114	106	189	70	1129	57	57	1551	109
Future Volume (veh/h)	127	71	74	114	106	189	70	1129	57	57	1551	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	74	77	119	110	197	73	1176	0	59	1616	114
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	222	168	174	198	215	182	325	2023		436	2009	896
Arrive On Green	0.06	0.20	0.20	0.12	0.12	0.12	0.12	0.57	0.00	0.12	0.57	0.57
Sat Flow, veh/h	1781	840	874	1236	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	132	0	151	119	110	197	73	1176	0	59	1616	114
Grp Sat Flow(s),veh/h/ln	1781	0	1713	1236	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.5	0.0	10.1	12.3	7.2	11.7	0.0	27.7	0.0	0.0	47.1	3.1
Cycle Q Clear(g_c), s	7.5	0.0	10.1	12.3	7.2	11.7	0.0	27.7	0.0	0.0	47.1	3.1
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	222	0	342	198	215	182	325	2023		436	2009	896
V/C Ratio(X)	0.59	0.00	0.44	0.60	0.51	1.08	0.22	0.58		0.14	0.80	0.13
Avail Cap(c_a), veh/h	222	0	448	279	338	287	325	2023		436	2009	896
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.6	0.0	45.7	56.3	54.1	35.2	40.1	18.0	0.0	20.7	22.5	6.6
Incr Delay (d2), s/veh	2.9	0.0	0.3	1.1	0.7	66.5	0.1	1.2	0.0	0.1	3.5	0.3
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(95%),veh/ln	1.1	0.0	7.8	7.0	6.2	12.9	3.8	17.0	0.0	2.0	27.3	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	0.0	46.0	57.4	54.8	101.7	40.3	19.3	0.0	20.7	26.1	6.9
LnGrp LOS	D	A	D	E	D	F	D	B		C	C	A
Approach Vol, veh/h		283			426			1249			1789	
Approach Delay, s/veh		48.1			77.2			20.5			24.7	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	79.0		32.0	19.0	79.0	11.0	21.0				
Change Period (Y+Rc), s	3.5	5.0		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	7.5	74.0		34.0	7.5	73.5	7.5	* 24				
Max Q Clear Time (g_c+I1), s	2.0	29.7		12.1	2.0	49.1	9.5	14.3				
Green Ext Time (p_c), s	0.0	11.8		0.5	0.0	14.8	0.0	0.7				

Intersection Summary			
HCM 6th Ctrl Delay		31.0	
HCM 6th LOS		C	

Notes

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

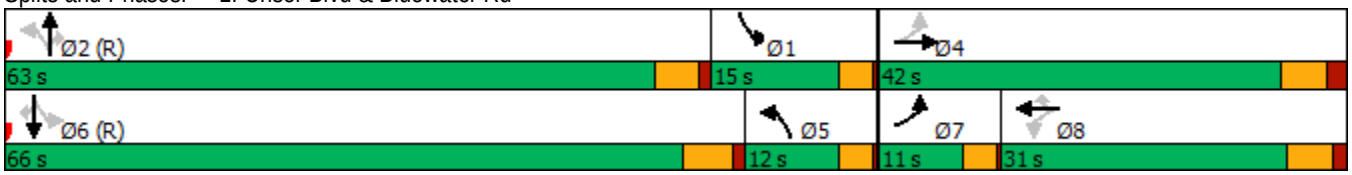
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

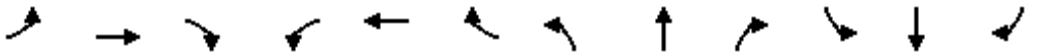
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	64	90	57	44	67	43	1475	165	110	942	79
Future Volume (vph)	64	90	57	44	67	43	1475	165	110	942	79
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	3.0	8.0	8.0	8.0	8.0	3.0	16.0	16.0	3.0	16.0	16.0
Minimum Split (s)	6.5	37.0	31.0	31.0	31.0	6.5	26.0	26.0	6.5	26.5	26.5
Total Split (s)	11.0	42.0	31.0	31.0	31.0	12.0	63.0	63.0	15.0	66.0	66.0
Total Split (%)	9.2%	35.0%	25.8%	25.8%	25.8%	10.0%	52.5%	52.5%	12.5%	55.0%	55.0%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.5	4.5
All-Red Time (s)	0.5	2.0	1.5	1.5	1.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	5.5	5.5	5.5	3.5	5.0	5.0	3.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Unser Blvd & Bluewater Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	64	90	51	57	44	67	43	1475	165	110	942	79
Future Volume (veh/h)	64	90	51	57	44	67	43	1475	165	110	942	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	98	55	62	48	73	47	1603	0	120	1024	86
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	169	95	145	138	117	597	1718		517	1792	799
Arrive On Green	0.05	0.15	0.15	0.07	0.07	0.07	0.22	0.48	0.00	0.25	0.50	0.50
Sat Flow, veh/h	1781	1125	631	1234	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	70	0	153	62	48	73	47	1603	0	120	1024	86
Grp Sat Flow(s),veh/h/ln	1781	0	1757	1234	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	4.2	0.0	9.7	5.9	2.9	3.5	0.0	50.9	0.0	0.9	24.1	2.6
Cycle Q Clear(g_c), s	4.2	0.0	9.7	6.5	2.9	3.5	0.0	50.9	0.0	0.9	24.1	2.6
Prop In Lane	1.00		0.36	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	0	263	145	138	117	597	1718		517	1792	799
V/C Ratio(X)	0.34	0.00	0.58	0.43	0.35	0.62	0.08	0.93		0.23	0.57	0.11
Avail Cap(c_a), veh/h	234	0	527	316	397	337	597	1718		517	1792	799
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	0.0	47.5	54.8	52.8	22.7	16.3	29.2	0.0	33.6	20.7	8.9
Incr Delay (d2), s/veh	0.4	0.0	0.8	0.7	0.6	2.0	0.0	10.8	0.0	0.1	1.3	0.3
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(95%),veh/ln	3.4	0.0	7.7	3.4	2.5	3.9	1.3	31.5	0.0	4.8	15.4	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	0.0	48.3	55.5	53.4	24.8	16.3	40.0	0.0	33.7	22.1	9.1
LnGrp LOS	D	A	D	E	D	C	B	D		C	C	A
Approach Vol, veh/h		223			183			1650			1230	
Approach Delay, s/veh		47.9			42.7			39.3			22.3	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.0	63.0		24.0	30.0	66.0	9.1	14.8				
Change Period (Y+Rc), s	3.5	5.0		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	11.5	58.0		36.0	8.5	60.5	7.5	* 26				
Max Q Clear Time (g_c+I1), s	2.9	52.9		11.7	2.0	26.1	6.2	8.5				
Green Ext Time (p_c), s	0.1	4.1		0.5	0.0	9.5	0.0	0.3				

Intersection Summary			
HCM 6th Ctrl Delay		33.7	
HCM 6th LOS		C	

Notes

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

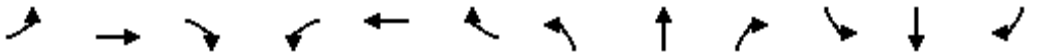
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	127	72	118	110	196	70	1129	57	57	1551	109
Future Volume (vph)	127	72	118	110	196	70	1129	57	57	1551	109
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	3.0	8.0	8.0	8.0	8.0	3.0	16.0	16.0	3.0	16.0	16.0
Minimum Split (s)	6.5	37.0	29.0	29.0	29.0	6.5	26.0	26.0	6.5	26.5	26.5
Total Split (s)	11.0	40.0	29.0	29.0	29.0	11.0	79.0	79.0	11.0	79.0	79.0
Total Split (%)	8.5%	30.8%	22.3%	22.3%	22.3%	8.5%	60.8%	60.8%	8.5%	60.8%	60.8%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.5	4.5
All-Red Time (s)	0.5	2.0	1.5	1.5	1.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	5.5	5.5	5.5	3.5	5.0	5.0	3.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 127 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Unser Blvd & Bluewater Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	72	74	118	110	196	70	1129	57	57	1551	109
Future Volume (veh/h)	127	72	74	118	110	196	70	1129	57	57	1551	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	75	77	123	115	204	73	1176	0	59	1616	114
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	223	172	176	202	222	188	319	2023		430	2009	896
Arrive On Green	0.06	0.20	0.20	0.12	0.12	0.12	0.12	0.57	0.00	0.12	0.57	0.57
Sat Flow, veh/h	1781	846	868	1235	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	132	0	152	123	115	204	73	1176	0	59	1616	114
Grp Sat Flow(s),veh/h/ln	1781	0	1714	1235	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.5	0.0	10.1	12.7	7.5	12.1	0.0	27.7	0.0	0.0	47.1	3.1
Cycle Q Clear(g_c), s	7.5	0.0	10.1	12.7	7.5	12.1	0.0	27.7	0.0	0.0	47.1	3.1
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	0	348	202	222	188	319	2023		430	2009	896
V/C Ratio(X)	0.59	0.00	0.44	0.61	0.52	1.09	0.23	0.58		0.14	0.80	0.13
Avail Cap(c_a), veh/h	223	0	448	279	338	287	319	2023		430	2009	896
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	0.0	45.3	56.1	53.8	35.3	40.5	18.0	0.0	21.0	22.5	6.6
Incr Delay (d2), s/veh	2.9	0.0	0.3	1.1	0.7	70.1	0.1	1.2	0.0	0.1	3.5	0.3
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(95%),veh/ln	1.1	0.0	7.8	7.2	6.5	13.6	3.8	17.0	0.0	2.0	27.3	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.2	0.0	45.6	57.2	54.5	105.5	40.6	19.3	0.0	21.0	26.1	6.9
LnGrp LOS	D	A	D	E	D	F	D	B		C	C	A
Approach Vol, veh/h		284			442			1249			1789	
Approach Delay, s/veh		47.7			78.8			20.5			24.7	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.6	79.0		32.4	18.6	79.0	11.0	21.4				
Change Period (Y+Rc), s	3.5	5.0		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	7.5	74.0		34.0	7.5	73.5	7.5	* 24				
Max Q Clear Time (g_c+I1), s	2.0	29.7		12.1	2.0	49.1	9.5	14.7				
Green Ext Time (p_c), s	0.0	11.8		0.5	0.0	14.8	0.0	0.7				

Intersection Summary			
HCM 6th Ctrl Delay		31.4	
HCM 6th LOS		C	

Notes

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

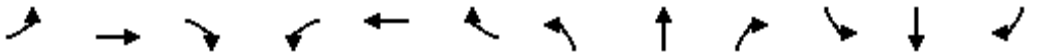
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	127	72	118	110	196	70	1129	57	57	1551	109
Future Volume (vph)	127	72	118	110	196	70	1129	57	57	1551	109
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	3.0	8.0	8.0	8.0	8.0	3.0	16.0	16.0	3.0	16.0	16.0
Minimum Split (s)	6.5	37.0	29.0	29.0	29.0	6.5	26.0	26.0	6.5	26.5	26.5
Total Split (s)	8.0	40.0	32.0	32.0	32.0	11.0	79.0	79.0	11.0	79.0	79.0
Total Split (%)	6.2%	30.8%	24.6%	24.6%	24.6%	8.5%	60.8%	60.8%	8.5%	60.8%	60.8%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.5	4.5
All-Red Time (s)	0.5	2.0	1.5	1.5	1.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	5.5	5.5	5.5	3.5	5.0	5.0	3.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 127 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Unser Blvd & Bluewater Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	72	74	118	110	196	70	1129	57	57	1551	109
Future Volume (veh/h)	127	72	74	118	110	196	70	1129	57	57	1551	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	75	77	123	115	204	73	1176	0	59	1616	114
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	167	171	202	253	215	330	2023		441	2009	896
Arrive On Green	0.03	0.20	0.20	0.14	0.14	0.14	0.12	0.57	0.00	0.12	0.57	0.57
Sat Flow, veh/h	1781	846	868	1235	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	132	0	152	123	115	204	73	1176	0	59	1616	114
Grp Sat Flow(s),veh/h/ln	1781	0	1714	1235	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	4.5	0.0	10.2	12.7	7.4	12.9	0.0	27.7	0.0	0.0	47.1	3.3
Cycle Q Clear(g_c), s	4.5	0.0	10.2	14.8	7.4	12.9	0.0	27.7	0.0	0.0	47.1	3.3
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	0	337	202	253	215	330	2023		441	2009	896
V/C Ratio(X)	0.66	0.00	0.45	0.61	0.45	0.95	0.22	0.58		0.13	0.80	0.13
Avail Cap(c_a), veh/h	201	0	448	287	381	323	330	2023		441	2009	896
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	0.0	46.0	56.1	51.8	33.4	39.8	18.0	0.0	20.5	22.5	7.7
Incr Delay (d2), s/veh	6.2	0.0	0.4	1.1	0.5	24.7	0.1	1.2	0.0	0.1	3.5	0.3
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(95%),veh/ln	4.3	0.0	7.8	7.2	6.3	10.6	3.8	17.0	0.0	2.0	27.3	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.8	0.0	46.4	57.2	52.3	58.1	39.9	19.3	0.0	20.5	26.1	8.0
LnGrp LOS	E	A	D	E	D	E	D	B		C	C	A
Approach Vol, veh/h		284			442			1249			1789	
Approach Delay, s/veh		51.7			56.3			20.5			24.7	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.4	79.0		31.6	19.4	79.0	8.0	23.6				
Change Period (Y+Rc), s	3.5	5.0		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	7.5	74.0		34.0	7.5	73.5	4.5	* 27				
Max Q Clear Time (g_c+I1), s	2.0	29.7		12.2	2.0	49.1	6.5	16.8				
Green Ext Time (p_c), s	0.0	11.8		0.5	0.0	14.8	0.0	0.8				

Intersection Summary			
HCM 6th Ctrl Delay		29.1	
HCM 6th LOS		C	

Notes

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

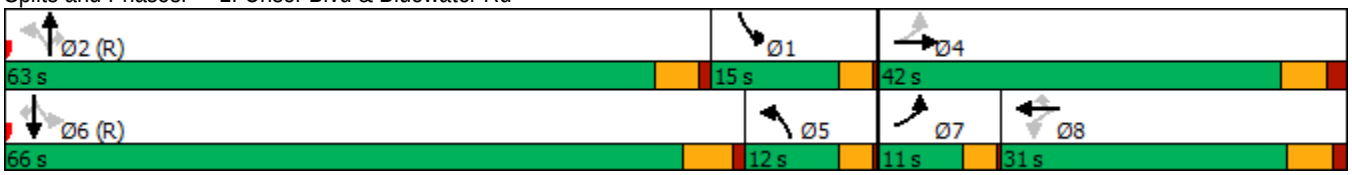
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

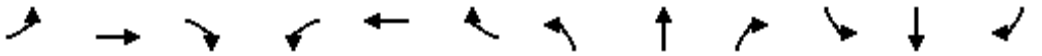
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	68	94	59	45	68	46	1566	171	115	1001	83
Future Volume (vph)	68	94	59	45	68	46	1566	171	115	1001	83
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	3.0	8.0	8.0	8.0	8.0	3.0	16.0	16.0	3.0	16.0	16.0
Minimum Split (s)	6.5	37.0	31.0	31.0	31.0	6.5	26.0	26.0	6.5	26.5	26.5
Total Split (s)	11.0	42.0	31.0	31.0	31.0	12.0	63.0	63.0	15.0	66.0	66.0
Total Split (%)	9.2%	35.0%	25.8%	25.8%	25.8%	10.0%	52.5%	52.5%	12.5%	55.0%	55.0%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.5	4.5
All-Red Time (s)	0.5	2.0	1.5	1.5	1.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	5.5	5.5	5.5	3.5	5.0	5.0	3.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Unser Blvd & Bluewater Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	94	54	59	45	68	46	1566	171	115	1001	83
Future Volume (veh/h)	68	94	54	59	45	68	46	1566	171	115	1001	83
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	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	102	59	64	49	74	50	1702	0	125	1088	90
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	215	173	100	147	145	123	569	1718		490	1792	799
Arrive On Green	0.05	0.16	0.16	0.08	0.08	0.08	0.21	0.48	0.00	0.24	0.50	0.50
Sat Flow, veh/h	1781	1112	643	1225	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	74	0	161	64	49	74	50	1702	0	125	1088	90
Grp Sat Flow(s),veh/h/ln	1781	0	1755	1225	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	4.5	0.0	10.2	6.1	3.0	3.5	0.0	57.0	0.0	2.4	26.3	2.7
Cycle Q Clear(g_c), s	4.5	0.0	10.2	7.0	3.0	3.5	0.0	57.0	0.0	2.4	26.3	2.7
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	215	0	274	147	145	123	569	1718		490	1792	799
V/C Ratio(X)	0.34	0.00	0.59	0.44	0.34	0.60	0.09	0.99		0.26	0.61	0.11
Avail Cap(c_a), veh/h	238	0	526	312	397	337	569	1718		490	1792	799
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	0.0	47.1	54.7	52.4	22.9	18.2	30.7	0.0	35.0	21.3	8.8
Incr Delay (d2), s/veh	0.4	0.0	0.8	0.8	0.5	1.8	0.0	19.7	0.0	0.1	1.5	0.3
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(95%),veh/ln	3.6	0.0	8.0	3.5	2.6	3.9	1.5	36.8	0.0	5.2	16.5	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	0.0	47.8	55.4	52.9	24.7	18.2	50.4	0.0	35.1	22.8	9.1
LnGrp LOS	D	A	D	E	D	C	B	D		D	C	A
Approach Vol, veh/h		235			187			1752			1303	
Approach Delay, s/veh		47.4			42.6			49.5			23.0	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	32.3	63.0		24.7	29.3	66.0	9.4	15.3
Change Period (Y+Rc), s	3.5	5.0		6.0	3.5	5.5	3.5	* 6
Max Green Setting (Gmax), s	11.5	58.0		36.0	8.5	60.5	7.5	* 26
Max Q Clear Time (g_c+I1), s	4.4	59.0		12.2	2.0	28.3	6.5	9.0
Green Ext Time (p_c), s	0.1	0.0		0.6	0.0	10.2	0.0	0.3

Intersection Summary		
HCM 6th Ctrl Delay		39.1
HCM 6th LOS		D

Notes

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

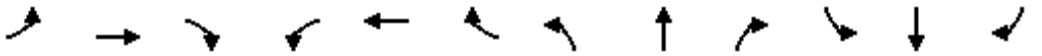
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	135	75	121	113	201	74	1199	61	61	1647	116
Future Volume (vph)	135	75	121	113	201	74	1199	61	61	1647	116
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	3.0	8.0	8.0	8.0	8.0	3.0	16.0	16.0	3.0	16.0	16.0
Minimum Split (s)	6.5	37.0	29.0	29.0	29.0	6.5	26.0	26.0	6.5	26.5	26.5
Total Split (s)	11.0	40.0	29.0	29.0	29.0	11.0	79.0	79.0	11.0	79.0	79.0
Total Split (%)	8.5%	30.8%	22.3%	22.3%	22.3%	8.5%	60.8%	60.8%	8.5%	60.8%	60.8%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.5	4.5
All-Red Time (s)	0.5	2.0	1.5	1.5	1.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	5.5	5.5	5.5	3.5	5.0	5.0	3.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 127 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Unser Blvd & Bluewater Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	75	79	121	113	201	74	1199	61	61	1647	116
Future Volume (veh/h)	135	75	79	121	113	201	74	1199	61	61	1647	116
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	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	78	82	126	118	209	77	1249	0	64	1716	121
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	224	172	181	205	228	193	297	2023		404	2009	896
Arrive On Green	0.06	0.21	0.21	0.12	0.12	0.12	0.11	0.57	0.00	0.11	0.57	0.57
Sat Flow, veh/h	1781	835	878	1226	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	141	0	160	126	118	209	77	1249	0	64	1716	121
Grp Sat Flow(s),veh/h/ln	1781	0	1712	1226	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.5	0.0	10.6	13.1	7.7	12.5	0.0	30.3	0.0	0.0	52.8	3.3
Cycle Q Clear(g_c), s	7.5	0.0	10.6	13.1	7.7	12.5	0.0	30.3	0.0	0.0	52.8	3.3
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	224	0	353	205	228	193	297	2023		404	2009	896
V/C Ratio(X)	0.63	0.00	0.45	0.62	0.52	1.08	0.26	0.62		0.16	0.85	0.14
Avail Cap(c_a), veh/h	224	0	448	277	338	287	297	2023		404	2009	896
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	0.0	45.2	55.9	53.5	35.5	45.7	18.6	0.0	23.4	23.7	6.7
Incr Delay (d2), s/veh	4.2	0.0	0.3	1.1	0.7	70.2	0.2	1.4	0.0	0.1	4.9	0.3
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(95%),veh/ln	1.8	0.0	8.1	7.4	6.6	13.9	4.1	18.4	0.0	2.3	30.4	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.0	0.0	45.5	57.0	54.2	105.7	45.9	20.0	0.0	23.5	28.6	7.0
LnGrp LOS	D	A	D	E	D	F	D	C		C	C	A
Approach Vol, veh/h		301			453			1326			1901	
Approach Delay, s/veh		48.6			78.7			21.5			27.1	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.2	79.0		32.8	18.2	79.0	11.0	21.8				
Change Period (Y+Rc), s	3.5	5.0		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	7.5	74.0		34.0	7.5	73.5	7.5	* 24				
Max Q Clear Time (g_c+I1), s	2.0	32.3		12.6	2.0	54.8	9.5	15.1				
Green Ext Time (p_c), s	0.0	12.7		0.6	0.0	13.2	0.0	0.7				

Intersection Summary			
HCM 6th Ctrl Delay		32.7	
HCM 6th LOS		C	

Notes

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

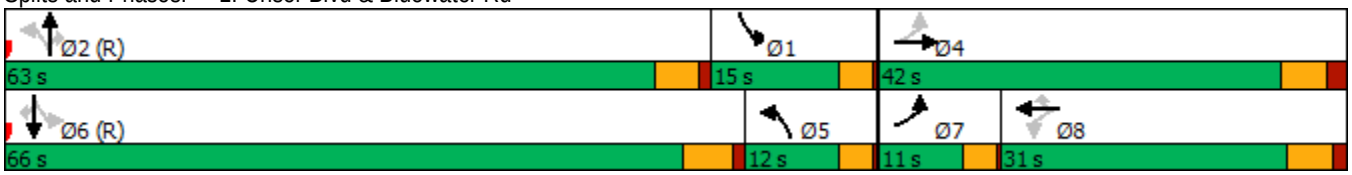
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

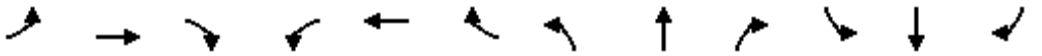
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	68	96	61	47	71	46	1566	175	117	1001	83
Future Volume (vph)	68	96	61	47	71	46	1566	175	117	1001	83
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	3.0	8.0	8.0	8.0	8.0	3.0	16.0	16.0	3.0	16.0	16.0
Minimum Split (s)	6.5	37.0	31.0	31.0	31.0	6.5	26.0	26.0	6.5	26.5	26.5
Total Split (s)	11.0	42.0	31.0	31.0	31.0	12.0	63.0	63.0	15.0	66.0	66.0
Total Split (%)	9.2%	35.0%	25.8%	25.8%	25.8%	10.0%	52.5%	52.5%	12.5%	55.0%	55.0%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.5	4.5
All-Red Time (s)	0.5	2.0	1.5	1.5	1.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	5.5	5.5	5.5	3.5	5.0	5.0	3.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Unser Blvd & Bluewater Rd





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	96	54	61	47	71	46	1566	175	117	1001	83
Future Volume (veh/h)	68	96	54	61	47	71	46	1566	175	117	1001	83
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	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	104	59	66	51	77	50	1702	0	127	1088	90
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	216	178	101	149	150	127	564	1718		485	1792	799
Arrive On Green	0.05	0.16	0.16	0.08	0.08	0.08	0.21	0.48	0.00	0.24	0.50	0.50
Sat Flow, veh/h	1781	1120	636	1223	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	74	0	163	66	51	77	50	1702	0	127	1088	90
Grp Sat Flow(s),veh/h/ln	1781	0	1756	1223	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	4.4	0.0	10.3	6.3	3.1	3.7	0.0	57.0	0.0	2.5	26.3	2.7
Cycle Q Clear(g_c), s	4.4	0.0	10.3	7.3	3.1	3.7	0.0	57.0	0.0	2.5	26.3	2.7
Prop In Lane	1.00		0.36	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	216	0	279	149	150	127	564	1718		485	1792	799
V/C Ratio(X)	0.34	0.00	0.59	0.44	0.34	0.61	0.09	0.99		0.26	0.61	0.11
Avail Cap(c_a), veh/h	240	0	527	310	397	337	564	1718		485	1792	799
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	0.0	46.8	54.6	52.2	23.0	18.4	30.7	0.0	35.2	21.3	8.8
Incr Delay (d2), s/veh	0.3	0.0	0.7	0.8	0.5	1.7	0.0	19.7	0.0	0.1	1.5	0.3
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(95%),veh/ln	3.6	0.0	8.1	3.6	2.7	4.1	1.5	36.8	0.0	5.3	16.5	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	0.0	47.6	55.3	52.7	24.7	18.4	50.4	0.0	35.3	22.8	9.1
LnGrp LOS	D	A	D	E	D	C	B	D		D	C	A
Approach Vol, veh/h		237			194			1752			1305	
Approach Delay, s/veh		47.1			42.5			49.5			23.1	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.0	63.0		25.0	29.0	66.0	9.4	15.6				
Change Period (Y+Rc), s	3.5	5.0		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	11.5	58.0		36.0	8.5	60.5	7.5	* 26				
Max Q Clear Time (g_c+I1), s	4.5	59.0		12.3	2.0	28.3	6.4	9.3				
Green Ext Time (p_c), s	0.1	0.0		0.6	0.0	10.2	0.0	0.4				

Intersection Summary												
HCM 6th Ctrl Delay			39.1									
HCM 6th LOS			D									

Notes

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

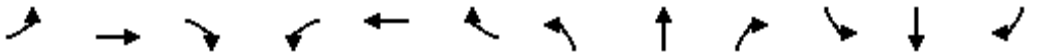
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	135	76	125	117	208	74	1199	61	61	1647	116
Future Volume (vph)	135	76	125	117	208	74	1199	61	61	1647	116
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	3.0	8.0	8.0	8.0	8.0	3.0	16.0	16.0	3.0	16.0	16.0
Minimum Split (s)	6.5	37.0	29.0	29.0	29.0	6.5	26.0	26.0	6.5	26.5	26.5
Total Split (s)	11.0	40.0	29.0	29.0	29.0	11.0	79.0	79.0	11.0	79.0	79.0
Total Split (%)	8.5%	30.8%	22.3%	22.3%	22.3%	8.5%	60.8%	60.8%	8.5%	60.8%	60.8%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.5	4.5
All-Red Time (s)	0.5	2.0	1.5	1.5	1.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	5.5	5.5	5.5	3.5	5.0	5.0	3.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 127 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Unser Blvd & Bluewater Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	76	79	125	117	208	74	1199	61	61	1647	116
Future Volume (veh/h)	135	76	79	125	117	208	74	1199	61	61	1647	116
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	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	79	82	130	122	217	77	1249	0	64	1716	121
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	225	176	183	209	234	198	291	2023		398	2009	896
Arrive On Green	0.06	0.21	0.21	0.13	0.13	0.13	0.11	0.57	0.00	0.11	0.57	0.57
Sat Flow, veh/h	1781	841	873	1225	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	141	0	161	130	122	217	77	1249	0	64	1716	121
Grp Sat Flow(s),veh/h/ln	1781	0	1713	1225	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.5	0.0	10.7	13.5	7.9	12.9	0.0	30.3	0.0	0.0	52.8	3.3
Cycle Q Clear(g_c), s	7.5	0.0	10.7	13.5	7.9	12.9	0.0	30.3	0.0	0.0	52.8	3.3
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	225	0	359	209	234	198	291	2023		398	2009	896
V/C Ratio(X)	0.63	0.00	0.45	0.62	0.52	1.09	0.26	0.62		0.16	0.85	0.14
Avail Cap(c_a), veh/h	225	0	448	277	338	287	291	2023		398	2009	896
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	0.0	44.8	55.7	53.2	35.6	46.1	18.6	0.0	23.7	23.7	6.7
Incr Delay (d2), s/veh	4.1	0.0	0.3	1.1	0.7	75.5	0.2	1.4	0.0	0.1	4.9	0.3
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(95%),veh/ln	1.8	0.0	8.1	7.6	6.8	14.7	4.1	18.4	0.0	2.3	30.4	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.5	0.0	45.1	56.8	53.9	111.1	46.3	20.0	0.0	23.7	28.6	7.0
LnGrp LOS	D	A	D	E	D	F	D	C		C	C	A
Approach Vol, veh/h		302			469			1326			1901	
Approach Delay, s/veh		48.1			81.2			21.5			27.1	
Approach LOS		D			F			C			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.7	79.0		33.3	17.7	79.0	11.0	22.3				
Change Period (Y+Rc), s	3.5	5.0		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	7.5	74.0		34.0	7.5	73.5	7.5	* 24				
Max Q Clear Time (g_c+I1), s	2.0	32.3		12.7	2.0	54.8	9.5	15.5				
Green Ext Time (p_c), s	0.0	12.7		0.6	0.0	13.2	0.0	0.8				

Intersection Summary			
HCM 6th Ctrl Delay		33.2	
HCM 6th LOS		C	

Notes

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

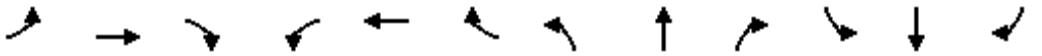
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	135	76	125	117	208	74	1199	61	61	1647	116
Future Volume (vph)	135	76	125	117	208	74	1199	61	61	1647	116
Turn Type	pm+pt	NA	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	3.0	8.0	8.0	8.0	8.0	3.0	16.0	16.0	3.0	16.0	16.0
Minimum Split (s)	6.5	37.0	29.0	29.0	29.0	6.5	26.0	26.0	6.5	26.5	26.5
Total Split (s)	8.0	40.0	32.0	32.0	32.0	11.0	79.0	79.0	11.0	79.0	79.0
Total Split (%)	6.2%	30.8%	24.6%	24.6%	24.6%	8.5%	60.8%	60.8%	8.5%	60.8%	60.8%
Yellow Time (s)	3.0	4.0	4.0	4.0	4.0	3.0	4.0	4.0	3.0	4.5	4.5
All-Red Time (s)	0.5	2.0	1.5	1.5	1.5	0.5	1.0	1.0	0.5	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.5	6.0	5.5	5.5	5.5	3.5	5.0	5.0	3.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag	Lag	Lag	Lead	Lead	Lag	Lead	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 130
Offset: 127 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 1: Unser Blvd & Bluewater Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	76	79	125	117	208	74	1199	61	61	1647	116
Future Volume (veh/h)	135	76	79	125	117	208	74	1199	61	61	1647	116
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	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	79	82	130	122	217	77	1249	0	64	1716	121
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	174	181	209	273	231	295	2023		402	2009	896
Arrive On Green	0.03	0.21	0.21	0.15	0.15	0.15	0.11	0.57	0.00	0.11	0.57	0.57
Sat Flow, veh/h	1781	841	873	1225	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	141	0	161	130	122	217	77	1249	0	64	1716	121
Grp Sat Flow(s),veh/h/ln	1781	0	1713	1225	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	4.5	0.0	10.7	13.5	7.7	13.8	0.0	30.3	0.0	0.0	52.8	3.6
Cycle Q Clear(g_c), s	4.5	0.0	10.7	16.2	7.7	13.8	0.0	30.3	0.0	0.0	52.8	3.6
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	0	355	209	273	231	295	2023		402	2009	896
V/C Ratio(X)	0.68	0.00	0.45	0.62	0.45	0.94	0.26	0.62		0.16	0.85	0.14
Avail Cap(c_a), veh/h	207	0	448	280	381	323	295	2023		402	2009	896
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.3	0.0	45.1	55.7	50.7	33.7	45.8	18.6	0.0	23.5	23.7	7.7
Incr Delay (d2), s/veh	7.3	0.0	0.3	1.1	0.4	24.9	0.2	1.4	0.0	0.1	4.9	0.3
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(95%),veh/ln	5.0	0.0	8.1	7.6	6.6	11.3	4.1	18.4	0.0	2.3	30.4	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.7	0.0	45.4	56.8	51.2	58.6	46.0	20.0	0.0	23.6	28.6	8.0
LnGrp LOS	E	A	D	E	D	E	D	C		C	C	A
Approach Vol, veh/h		302			469			1326			1901	
Approach Delay, s/veh		51.6			56.2			21.5			27.1	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	79.0		33.0	18.0	79.0	8.0	25.0				
Change Period (Y+Rc), s	3.5	5.0		6.0	3.5	5.5	3.5	* 6				
Max Green Setting (Gmax), s	7.5	74.0		34.0	7.5	73.5	4.5	* 27				
Max Q Clear Time (g_c+I1), s	2.0	32.3		12.7	2.0	54.8	6.5	18.2				
Green Ext Time (p_c), s	0.0	12.7		0.6	0.0	13.2	0.0	0.8				

Intersection Summary			
HCM 6th Ctrl Delay		30.5	
HCM 6th LOS		C	

Notes

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

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

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	81	189	175	132	71	30
Future Vol, veh/h	81	189	175	132	71	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	2	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	88	205	190	143	77	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	333	0	-	0	643	262
Stage 1	-	-	-	-	262	-
Stage 2	-	-	-	-	381	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1236	-	-	-	452	854
Stage 1	-	-	-	-	822	-
Stage 2	-	-	-	-	691	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1236	-	-	-	420	854
Mov Cap-2 Maneuver	-	-	-	-	522	-
Stage 1	-	-	-	-	764	-
Stage 2	-	-	-	-	691	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1236	-	-	-	590
HCM Lane V/C Ratio	0.071	-	-	-	0.186
HCM Control Delay (s)	8.1	-	-	-	12.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.7

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	178	250	71	56	24
Future Vol, veh/h	21	178	250	71	56	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	2	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	231	325	92	73	31

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	417	0	-	0	656	371
Stage 1	-	-	-	-	371	-
Stage 2	-	-	-	-	285	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1146	-	-	-	453	764
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	763	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1146	-	-	-	442	764
Mov Cap-2 Maneuver	-	-	-	-	540	-
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	763	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	12.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1146	-	-	-	592
HCM Lane V/C Ratio	0.024	-	-	-	0.176
HCM Control Delay (s)	8.2	-	-	-	12.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	86	201	186	140	75	32
Future Vol, veh/h	86	201	186	140	75	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	150	-	-	-	0	-
Veh in Median Storage, #	-	0	2	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	218	202	152	82	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	354	0	-	0	682	278
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	404	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1211	-	-	-	426	834
Stage 1	-	-	-	-	806	-
Stage 2	-	-	-	-	674	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1211	-	-	-	393	834
Mov Cap-2 Maneuver	-	-	-	-	501	-
Stage 1	-	-	-	-	744	-
Stage 2	-	-	-	-	674	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	12.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1211	-	-	-	569
HCM Lane V/C Ratio	0.077	-	-	-	0.204
HCM Control Delay (s)	8.2	-	-	-	12.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.8

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	189	265	75	59	25
Future Vol, veh/h	22	189	265	75	59	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	2	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	245	344	97	77	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	441	0	-	0	696	393
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	303	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1118	-	-	-	424	738
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	749	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1118	-	-	-	413	738
Mov Cap-2 Maneuver	-	-	-	-	519	-
Stage 1	-	-	-	-	703	-
Stage 2	-	-	-	-	749	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1118	-	-	-	569
HCM Lane V/C Ratio	0.026	-	-	-	0.192
HCM Control Delay (s)	8.3	-	-	-	12.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	86	209	193	140	75	32
Future Vol, veh/h	86	209	193	140	75	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	150	-	-	-	0	-
Veh in Median Storage, #	-	0	2	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	93	227	210	152	82	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	362	0	-	0	699	286
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	413	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1202	-	-	-	415	825
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	668	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1202	-	-	-	383	825
Mov Cap-2 Maneuver	-	-	-	-	494	-
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	668	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	13.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1202	-	-	-	561
HCM Lane V/C Ratio	0.078	-	-	-	0.207
HCM Control Delay (s)	8.2	-	-	-	13.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.8

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	190	280	75	59	25
Future Vol, veh/h	22	190	280	75	59	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	2	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	247	364	97	77	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	461	0	-	0	718	413
Stage 1	-	-	-	-	413	-
Stage 2	-	-	-	-	305	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1098	-	-	-	413	729
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	748	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1098	-	-	-	402	729
Mov Cap-2 Maneuver	-	-	-	-	511	-
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	748	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1098	-	-	-	561
HCM Lane V/C Ratio	0.026	-	-	-	0.194
HCM Control Delay (s)	8.4	-	-	-	13
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	91	213	197	149	80	34
Future Vol, veh/h	91	213	197	149	80	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	2	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	99	232	214	162	87	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	376	0	-	0	725	295
Stage 1	-	-	-	-	295	-
Stage 2	-	-	-	-	430	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1189	-	-	-	401	832
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	656	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1189	-	-	-	367	832
Mov Cap-2 Maneuver	-	-	-	-	483	-
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	656	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1189	-	-	-	552
HCM Lane V/C Ratio	0.083	-	-	-	0.224
HCM Control Delay (s)	8.3	-	-	-	13.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.9

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	201	282	80	63	27
Future Vol, veh/h	24	201	282	80	63	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	2	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	261	366	104	82	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	470	0	-	0	741	418
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	323	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1087	-	-	-	397	724
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	734	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1087	-	-	-	385	724
Mov Cap-2 Maneuver	-	-	-	-	499	-
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	734	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	13.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1087	-	-	-	550
HCM Lane V/C Ratio	0.029	-	-	-	0.213
HCM Control Delay (s)	8.4	-	-	-	13.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	91	221	204	149	80	34
Future Vol, veh/h	91	221	204	149	80	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	2	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	99	240	222	162	87	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	384	0	-	0	741	303
Stage 1	-	-	-	-	303	-
Stage 2	-	-	-	-	438	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1180	-	-	-	390	822
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	651	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1180	-	-	-	358	822
Mov Cap-2 Maneuver	-	-	-	-	476	-
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	651	-

Approach	EB	WB	SB
HCM Control Delay, s	2.4	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1180	-	-	-	544
HCM Lane V/C Ratio	0.084	-	-	-	0.228
HCM Control Delay (s)	8.3	-	-	-	13.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.9

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	202	297	80	63	27
Future Vol, veh/h	24	202	297	80	63	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	2	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	262	386	104	82	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	490	0	-	0	762	438
Stage 1	-	-	-	-	438	-
Stage 2	-	-	-	-	324	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1067	-	-	-	386	715
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	733	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1067	-	-	-	375	715
Mov Cap-2 Maneuver	-	-	-	-	492	-
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	733	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1067	-	-	-	543
HCM Lane V/C Ratio	0.029	-	-	-	0.215
HCM Control Delay (s)	8.5	-	-	-	13.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.8

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	186	68	43	196	18	114	4	85	4	1	2
Future Vol, veh/h	0	186	68	43	196	18	114	4	85	4	1	2
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	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	202	74	47	213	20	124	4	92	4	1	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	233	0	0	276	0	0	558	566	239	604	593	223
Stage 1	-	-	-	-	-	-	239	239	-	317	317	-
Stage 2	-	-	-	-	-	-	319	327	-	287	276	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1369	-	-	1287	-	-	483	457	800	445	439	*920
Stage 1	-	-	-	-	-	-	764	708	-	763	685	-
Stage 2	-	-	-	-	-	-	761	677	-	720	682	-
Platoon blocked, %	1	-	-		-	-	1	1		1	1	1
Mov Cap-1 Maneuver	1369	-	-	1287	-	-	467	441	800	380	423	*920
Mov Cap-2 Maneuver	-	-	-	-	-	-	620	567	-	525	543	-
Stage 1	-	-	-	-	-	-	764	708	-	763	660	-
Stage 2	-	-	-	-	-	-	731	652	-	633	682	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	12.8	11.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	683	1369	-	-	1287	-	-	602
HCM Lane V/C Ratio	0.323	-	-	-	0.036	-	-	0.013
HCM Control Delay (s)	12.8	0	-	-	7.9	-	-	11.1
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.4	0	-	-	0.1	-	-	0

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

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	188	54	52	261	1	60	1	48	9	1	0
Future Vol, veh/h	0	188	54	52	261	1	60	1	48	9	1	0
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	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	241	69	67	335	1	77	1	62	12	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	336	0	0	310	0	0	746	746	276	777	780	336
Stage 1	-	-	-	-	-	-	276	276	-	470	470	-
Stage 2	-	-	-	-	-	-	470	470	-	307	310	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1245	-	-	1250	-	-	349	349	763	330	330	806
Stage 1	-	-	-	-	-	-	730	682	-	625	579	-
Stage 2	-	-	-	-	-	-	625	579	-	703	659	-
Platoon blocked, %	1	-	-		-	-	1	1		1	1	1
Mov Cap-1 Maneuver	1245	-	-	1250	-	-	334	330	763	290	313	806
Mov Cap-2 Maneuver	-	-	-	-	-	-	511	480	-	471	458	-
Stage 1	-	-	-	-	-	-	730	682	-	625	547	-
Stage 2	-	-	-	-	-	-	590	547	-	645	659	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	12.8	12.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	598	1245	-	-	1250	-	-	470
HCM Lane V/C Ratio	0.234	-	-	-	0.053	-	-	0.027
HCM Control Delay (s)	12.8	0	-	-	8	-	-	12.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.9	0	-	-	0.2	-	-	0.1

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	197	72	46	208	18	121	4	90	4	1	2
Future Vol, veh/h	0	197	72	46	208	18	121	4	90	4	1	2
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	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	214	78	50	226	20	132	4	98	4	1	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	246	0	0	292	0	0	591	599	253	640	628	236
Stage 1	-	-	-	-	-	-	253	253	-	336	336	-
Stage 2	-	-	-	-	-	-	338	346	-	304	292	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1352	-	-	1270	-	-	455	435	786	417	416	908
Stage 1	-	-	-	-	-	-	751	698	-	743	670	-
Stage 2	-	-	-	-	-	-	741	663	-	705	671	-
Platoon blocked, %	1	-	-		-	-	1	1		1	1	1
Mov Cap-1 Maneuver	1352	-	-	1270	-	-	439	418	786	352	400	908
Mov Cap-2 Maneuver	-	-	-	-	-	-	600	551	-	502	526	-
Stage 1	-	-	-	-	-	-	751	698	-	743	644	-
Stage 2	-	-	-	-	-	-	709	637	-	613	671	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	13.3	11.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	665	1352	-	-	1270	-	-	580
HCM Lane V/C Ratio	0.351	-	-	-	0.039	-	-	0.013
HCM Control Delay (s)	13.3	0	-	-	8	-	-	11.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.6	0	-	-	0.1	-	-	0

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	0	199	57	55	277	1	64	1	51	9	1	0
Future Vol, veh/h	0	199	57	55	277	1	64	1	51	9	1	0
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	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	255	73	71	355	1	82	1	65	12	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	356	0	0	328	0	0	790	790	292	823	826	356
Stage 1	-	-	-	-	-	-	292	292	-	498	498	-
Stage 2	-	-	-	-	-	-	498	498	-	325	328	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1226	-	-	1232	-	-	325	327	747	305	308	799
Stage 1	-	-	-	-	-	-	716	671	-	608	563	-
Stage 2	-	-	-	-	-	-	608	563	-	687	647	-
Platoon blocked, %	1	-	-		-	-	1	1		1	1	1
Mov Cap-1 Maneuver	1226	-	-	1232	-	-	310	308	747	265	290	799
Mov Cap-2 Maneuver	-	-	-	-	-	-	493	463	-	450	440	-
Stage 1	-	-	-	-	-	-	716	671	-	608	530	-
Stage 2	-	-	-	-	-	-	572	530	-	626	647	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	13.4	13.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	579	1226	-	-	1232	-	-	449
HCM Lane V/C Ratio	0.257	-	-	-	0.057	-	-	0.029
HCM Control Delay (s)	13.4	0	-	-	8.1	-	-	13.3
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1	0	-	-	0.2	-	-	0.1

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	205	72	46	215	18	121	4	90	4	1	2
Future Vol, veh/h	0	205	72	46	215	18	121	4	90	4	1	2
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	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	223	78	50	234	20	132	4	98	4	1	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	254	0	0	301	0	0	608	616	262	657	645	244
Stage 1	-	-	-	-	-	-	262	262	-	344	344	-
Stage 2	-	-	-	-	-	-	346	354	-	313	301	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1341	-	-	1260	-	-	441	424	777	404	405	898
Stage 1	-	-	-	-	-	-	743	691	-	734	664	-
Stage 2	-	-	-	-	-	-	732	656	-	698	665	-
Platoon blocked, %	1	-	-		-	-	1	1		1	1	1
Mov Cap-1 Maneuver	1341	-	-	1260	-	-	426	407	777	340	389	898
Mov Cap-2 Maneuver	-	-	-	-	-	-	590	544	-	494	519	-
Stage 1	-	-	-	-	-	-	743	691	-	734	637	-
Stage 2	-	-	-	-	-	-	700	630	-	606	665	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	13.5	11.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	655	1341	-	-	1260	-	-	571
HCM Lane V/C Ratio	0.357	-	-	-	0.04	-	-	0.013
HCM Control Delay (s)	13.5	0	-	-	8	-	-	11.4
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.6	0	-	-	0.1	-	-	0

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	0	200	57	55	292	1	64	1	51	9	1	0
Future Vol, veh/h	0	200	57	55	292	1	64	1	51	9	1	0
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	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	256	73	71	374	1	82	1	65	12	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	375	0	0	329	0	0	810	810	293	843	846	375
Stage 1	-	-	-	-	-	-	293	293	-	517	517	-
Stage 2	-	-	-	-	-	-	517	517	-	326	329	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1202	-	-	1231	-	-	313	316	746	293	298	775
Stage 1	-	-	-	-	-	-	715	670	-	590	549	-
Stage 2	-	-	-	-	-	-	590	549	-	687	646	-
Platoon blocked, %	1	-	-		-	-	1	1		1	1	1
Mov Cap-1 Maneuver	1202	-	-	1231	-	-	298	298	746	255	280	775
Mov Cap-2 Maneuver	-	-	-	-	-	-	480	453	-	442	431	-
Stage 1	-	-	-	-	-	-	715	670	-	590	517	-
Stage 2	-	-	-	-	-	-	554	517	-	626	646	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	13.6	13.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	569	1202	-	-	1231	-	-	441
HCM Lane V/C Ratio	0.261	-	-	-	0.057	-	-	0.029
HCM Control Delay (s)	13.6	0	-	-	8.1	-	-	13.4
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1	0	-	-	0.2	-	-	0.1

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	210	77	48	221	18	128	4	96	4	1	2
Future Vol, veh/h	0	210	77	48	221	18	128	4	96	4	1	2
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	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	228	84	52	240	20	139	4	104	4	1	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	260	0	0	312	0	0	626	634	270	678	666	250
Stage 1	-	-	-	-	-	-	270	270	-	354	354	-
Stage 2	-	-	-	-	-	-	356	364	-	324	312	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1333	-	-	1248	-	-	428	412	769	390	392	889
Stage 1	-	-	-	-	-	-	736	686	-	724	656	-
Stage 2	-	-	-	-	-	-	721	648	-	688	658	-
Platoon blocked, %	1	-	-		-	-	1	1		1	1	1
Mov Cap-1 Maneuver	1333	-	-	1248	-	-	412	394	769	324	376	889
Mov Cap-2 Maneuver	-	-	-	-	-	-	579	535	-	479	509	-
Stage 1	-	-	-	-	-	-	736	686	-	724	629	-
Stage 2	-	-	-	-	-	-	688	621	-	591	658	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	14	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	645	1333	-	-	1248	-	-	557
HCM Lane V/C Ratio	0.384	-	-	-	0.042	-	-	0.014
HCM Control Delay (s)	14	0	-	-	8	-	-	11.6
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.8	0	-	-	0.1	-	-	0

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	212	61	59	294	1	68	1	54	9	1	0
Future Vol, veh/h	0	212	61	59	294	1	68	1	54	9	1	0
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	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	272	78	76	377	1	87	1	69	12	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	378	0	0	350	0	0	841	841	311	876	880	378
Stage 1	-	-	-	-	-	-	311	311	-	530	530	-
Stage 2	-	-	-	-	-	-	530	530	-	346	350	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1205	-	-	1209	-	-	297	301	729	277	282	790
Stage 1	-	-	-	-	-	-	699	658	-	587	544	-
Stage 2	-	-	-	-	-	-	587	544	-	670	633	-
Platoon blocked, %	1	-	-		-	-	1	1		1	1	1
Mov Cap-1 Maneuver	1205	-	-	1209	-	-	282	282	729	238	264	790
Mov Cap-2 Maneuver	-	-	-	-	-	-	470	444	-	426	419	-
Stage 1	-	-	-	-	-	-	699	658	-	587	510	-
Stage 2	-	-	-	-	-	-	549	510	-	605	633	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.4	14	13.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	557	1205	-	-	1209	-	-	425
HCM Lane V/C Ratio	0.283	-	-	-	0.063	-	-	0.03
HCM Control Delay (s)	14	0	-	-	8.2	-	-	13.7
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.2	0	-	-	0.2	-	-	0.1

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	218	77	48	228	18	128	4	96	4	1	2
Future Vol, veh/h	0	218	77	48	228	18	128	4	96	4	1	2
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	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	237	84	52	248	20	139	4	104	4	1	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	268	0	0	321	0	0	643	651	279	695	683	258
Stage 1	-	-	-	-	-	-	279	279	-	362	362	-
Stage 2	-	-	-	-	-	-	364	372	-	333	321	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1332	-	-	1239	-	-	421	405	760	383	385	*894
Stage 1	-	-	-	-	-	-	728	680	-	729	656	-
Stage 2	-	-	-	-	-	-	727	649	-	681	652	-
Platoon blocked, %	1	-	-		-	-	1	1		1	1	1
Mov Cap-1 Maneuver	1332	-	-	1239	-	-	406	388	760	318	369	*894
Mov Cap-2 Maneuver	-	-	-	-	-	-	578	532	-	474	505	-
Stage 1	-	-	-	-	-	-	728	680	-	729	629	-
Stage 2	-	-	-	-	-	-	694	622	-	584	652	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	14.1	11.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	642	1332	-	-	1239	-	-	553
HCM Lane V/C Ratio	0.386	-	-	-	0.042	-	-	0.014
HCM Control Delay (s)	14.1	0	-	-	8	-	-	11.6
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.8	0	-	-	0.1	-	-	0

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

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	0	213	61	59	309	1	68	1	54	9	1	0
Future Vol, veh/h	0	213	61	59	309	1	68	1	54	9	1	0
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	150	-	-	150	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	2	-	-	2	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	273	78	76	396	1	87	1	69	12	1	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	397	0	0	351	0	0	861	861	312	896	900	397
Stage 1	-	-	-	-	-	-	312	312	-	549	549	-
Stage 2	-	-	-	-	-	-	549	549	-	347	351	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1180	-	-	1208	-	-	285	291	728	266	272	765
Stage 1	-	-	-	-	-	-	699	658	-	569	531	-
Stage 2	-	-	-	-	-	-	569	531	-	669	632	-
Platoon blocked, %	1	-	-		-	-	1	1		1	1	1
Mov Cap-1 Maneuver	1180	-	-	1208	-	-	271	273	728	229	255	765
Mov Cap-2 Maneuver	-	-	-	-	-	-	458	434	-	418	411	-
Stage 1	-	-	-	-	-	-	699	658	-	569	497	-
Stage 2	-	-	-	-	-	-	532	497	-	604	632	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	14.2	13.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	547	1180	-	-	1208	-	-	417
HCM Lane V/C Ratio	0.288	-	-	-	0.063	-	-	0.031
HCM Control Delay (s)	14.2	0	-	-	8.2	-	-	13.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.2	0	-	-	0.2	-	-	0.1

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	297	35	19	226	21	68
Future Vol, veh/h	297	35	19	226	21	68
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	125
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	323	38	21	246	23	74

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	361	0	630	342
Stage 1	-	-	-	-	342	-
Stage 2	-	-	-	-	288	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1198	-	471	701
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	818	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1198	-	462	701
Mov Cap-2 Maneuver	-	-	-	-	623	-
Stage 1	-	-	-	-	719	-
Stage 2	-	-	-	-	803	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	623	701	-	-	1198	-
HCM Lane V/C Ratio	0.037	0.105	-	-	0.017	-
HCM Control Delay (s)	11	10.7	-	-	8.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	260	45	52	222	48	142
Future Vol, veh/h	260	45	52	222	48	142
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	125
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	325	56	65	278	60	178

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	381	0	761	353
Stage 1	-	-	-	-	353	-
Stage 2	-	-	-	-	408	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1177	-	380	691
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	701	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1177	-	359	691
Mov Cap-2 Maneuver	-	-	-	-	546	-
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	662	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	546	691	-	-	1177	-
HCM Lane V/C Ratio	0.11	0.257	-	-	0.055	-
HCM Control Delay (s)	12.4	12	-	-	8.2	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	1	-	-	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	315	37	20	240	22	72
Future Vol, veh/h	315	37	20	240	22	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	125
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	342	40	22	261	24	78

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	382	0	667	362
Stage 1	-	-	-	-	362	-
Stage 2	-	-	-	-	305	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1176	-	444	683
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	802	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1176	-	435	683
Mov Cap-2 Maneuver	-	-	-	-	604	-
Stage 1	-	-	-	-	704	-
Stage 2	-	-	-	-	786	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	11
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	604	683	-	-	1176	-
HCM Lane V/C Ratio	0.04	0.115	-	-	0.018	-
HCM Control Delay (s)	11.2	11	-	-	8.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	276	48	55	236	51	151
Future Vol, veh/h	276	48	55	236	51	151
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	125
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	345	60	69	295	64	189

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	405	0	808	375
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	433	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1154	-	352	671
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	680	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1154	-	331	671
Mov Cap-2 Maneuver	-	-	-	-	525	-
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	639	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	525	671	-	-	1154	-
HCM Lane V/C Ratio	0.121	0.281	-	-	0.06	-
HCM Control Delay (s)	12.8	12.5	-	-	8.3	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	1.2	-	-	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	326	37	20	254	22	72
Future Vol, veh/h	326	37	20	254	22	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	125
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	354	40	22	276	24	78

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	394	0	694	374
Stage 1	-	-	-	-	374	-
Stage 2	-	-	-	-	320	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1165	-	425	672
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	787	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1165	-	417	672
Mov Cap-2 Maneuver	-	-	-	-	593	-
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	772	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	593	672	-	-	1165	-
HCM Lane V/C Ratio	0.04	0.116	-	-	0.019	-
HCM Control Delay (s)	11.3	11.1	-	-	8.1	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	293	48	55	237	51	151
Future Vol, veh/h	293	48	55	237	51	151
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	125
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	366	60	69	296	64	189

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	426	0	830	396
Stage 1	-	-	-	-	396	-
Stage 2	-	-	-	-	434	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1133	-	339	653
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	679	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1133	-	319	653
Mov Cap-2 Maneuver	-	-	-	-	516	-
Stage 1	-	-	-	-	680	-
Stage 2	-	-	-	-	637	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	12.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	516	653	-	-	1133	-
HCM Lane V/C Ratio	0.124	0.289	-	-	0.061	-
HCM Control Delay (s)	13	12.7	-	-	8.4	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	1.2	-	-	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	335	39	21	255	24	77
Future Vol, veh/h	335	39	21	255	24	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	125
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	364	42	23	277	26	84

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	406	0	708	385
Stage 1	-	-	-	-	385	-
Stage 2	-	-	-	-	323	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1153	-	419	663
Stage 1	-	-	-	-	688	-
Stage 2	-	-	-	-	795	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1153	-	410	663
Mov Cap-2 Maneuver	-	-	-	-	588	-
Stage 1	-	-	-	-	688	-
Stage 2	-	-	-	-	779	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	588	663	-	-	1153	-
HCM Lane V/C Ratio	0.044	0.126	-	-	0.02	-
HCM Control Delay (s)	11.4	11.2	-	-	8.2	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	293	51	59	250	54	160
Future Vol, veh/h	293	51	59	250	54	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	125
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	366	64	74	313	68	200

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	430	0	859	398
Stage 1	-	-	-	-	398	-
Stage 2	-	-	-	-	461	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1129	-	325	652
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	662	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1129	-	303	652
Mov Cap-2 Maneuver	-	-	-	-	504	-
Stage 1	-	-	-	-	678	-
Stage 2	-	-	-	-	618	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	13
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	504	652	-	-	1129	-
HCM Lane V/C Ratio	0.134	0.307	-	-	0.065	-
HCM Control Delay (s)	13.2	12.9	-	-	8.4	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	1.3	-	-	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	346	39	21	269	24	77
Future Vol, veh/h	346	39	21	269	24	77
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	125
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	376	42	23	292	26	84

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	418	0	735	397
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	338	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1141	-	400	652
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	780	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1141	-	392	652
Mov Cap-2 Maneuver	-	-	-	-	576	-
Stage 1	-	-	-	-	679	-
Stage 2	-	-	-	-	764	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	576	652	-	-	1141	-
HCM Lane V/C Ratio	0.045	0.128	-	-	0.02	-
HCM Control Delay (s)	11.5	11.3	-	-	8.2	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	310	51	59	251	54	160
Future Vol, veh/h	310	51	59	251	54	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	75	-	0	125
Veh in Median Storage, #	0	-	-	0	2	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	388	64	74	314	68	200

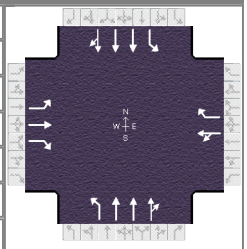
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	452	0	882	420
Stage 1	-	-	-	-	420	-
Stage 2	-	-	-	-	462	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1109	-	313	633
Stage 1	-	-	-	-	663	-
Stage 2	-	-	-	-	661	-
Platoon blocked, %	-	-		-	1	
Mov Cap-1 Maneuver	-	-	1109	-	292	633
Mov Cap-2 Maneuver	-	-	-	-	496	-
Stage 1	-	-	-	-	663	-
Stage 2	-	-	-	-	617	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	13.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	496	633	-	-	1109	-
HCM Lane V/C Ratio	0.136	0.316	-	-	0.067	-
HCM Control Delay (s)	13.4	13.3	-	-	8.5	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	1.4	-	-	0.2	-

HCS7 Signalized Intersection Results Summary

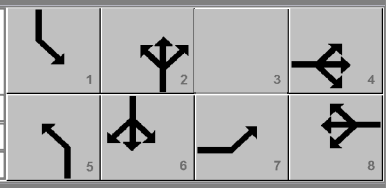
General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	AM Peak Hour	PHF	0.96
Urban Street		Analysis Year	2023 Existing	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2023 Existing AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	233	60	65	41	45	63	61	1511	12	39	761	150

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	75.2	2.7	15.6	8.1	0.0	0.0
Yellow	4.5	3.0	3.0	3.8	0.0	0.0
Red	1.5	0.5	0.5	1.5	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	4.0
Phase Duration, s	19.1	32.5		13.4	6.2	81.2	6.2	81.3
Change Period, ($Y+R_c$), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (g_s), s	17.1	5.0		7.8	2.0		4.3	
Green Extension Time (g_e), s	0.0	0.3		0.3	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	0.88		0.74	
Max Out Probability	1.00	0.00		0.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	243	63	43		90	30	64	1076	510	41	638	290
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1581		1589	1555	1781	1870	1773	1781	1870	1683
Queue Service Time (g_s), s	15.1	3.0	2.4		5.2	1.4	0.0	18.3	18.3	2.3	4.0	4.0
Cycle Queue Clearance Time (g_c), s	15.1	3.0	2.4		5.8	1.4	0.0	18.3	18.3	2.3	4.0	4.0
Green Ratio (*g/C*)	0.21	0.23	0.23		0.07	0.07	0.65	0.63	0.63	0.65	0.63	0.63
Capacity (*c*), veh/h	317	423	358		152	105	458	2361	1119	247	2349	1057
Volume-to-Capacity Ratio (*X*)	0.767	0.148	0.119		0.591	0.288	0.139	0.456	0.456	0.164	0.272	0.274
Back of Queue (*Q*), ft/ln (95 th percentile)	257.7	62.8	42.7		70.8	23.1	11.1	291	281.5	4.2	60	58.3
Back of Queue (*Q*), veh/ln (95 th percentile)	10.1	2.5	1.7		2.8	0.9	0.4	11.5	11.3	0.2	2.4	2.3
Queue Storage Ratio (*RQ*) (95 th percentile)	2.06	0.00	0.34		0.00	0.31	0.04	0.00	0.00	0.04	0.00	0.00
Uniform Delay (d_1), s/veh	36.3	35.0	34.8		31.2	4.9	3.6	11.9	11.9	3.2	3.6	3.7
Incremental Delay (d_2), s/veh	9.7	0.1	0.1		1.4	0.6	0.1	0.6	1.3	0.1	0.3	0.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	46.0	35.1	34.8		32.5	5.4	3.6	12.5	13.2	3.3	3.9	4.3
Level of Service (LOS)	D	D	C		C	A	A	B	B	A	A	A
Approach Delay, s/veh / LOS	42.6	D		25.7	C		12.4	B		4.0	A	
Intersection Delay, s/veh / LOS	13.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.59	C	2.64	C	2.01	B	2.19	B
Bicycle LOS Score / LOS	1.06	A	0.69	A	1.40	A	1.02	A

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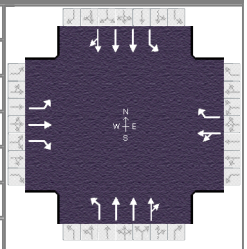
HCS7 Signalized Intersection Results Summary

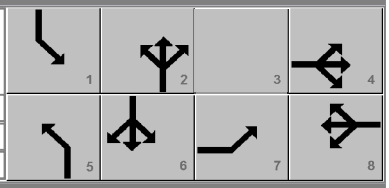
General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	PM Peak Hour	PHF	0.94
Urban Street		Analysis Year	2023 Existing	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2023 Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	252	73	95	54	46	46	69	989	13	95	1610	148

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	85.4	0.9	3.9	11.0	10.6	0.0
Yellow	4.5	0.0	3.0	3.0	3.8	0.0
Red	1.5	0.0	0.5	0.5	1.5	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	4.0
Phase Duration, s	14.5	30.3		15.9	7.4	91.4	8.2	92.3
Change Period, (*Y+R c*), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (*g s*), s	13.5	7.7		10.3	5.1		2.0	
Green Extension Time (*g e*), s	0.0	0.4		0.3	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	0.93		0.97	
Max Out Probability	1.00	0.00		0.00	1.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	268	78	80		106	15	73	726	339	101	1285	579
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1562		1519	1562	1781	1870	1744	1781	1870	1679
Queue Service Time (*g s*), s	11.5	4.6	5.7		7.9	0.8	3.1	12.9	12.9	0.0	11.9	12.0
Cycle Queue Clearance Time (*g c*), s	11.5	4.6	5.7		8.3	0.8	3.1	12.9	12.9	0.0	11.9	12.0
Green Ratio (*g/C*)	0.18	0.19	0.19		0.08	0.08	0.67	0.66	0.66	0.68	0.66	0.66
Capacity (*c*), veh/h	236	368	307		166	127	233	2391	1115	434	2491	1118
Volume-to-Capacity Ratio (*X*)	1.134	0.211	0.260		0.640	0.117	0.315	0.304	0.304	0.233	0.516	0.518
Back of Queue (*Q*), ft/ln (95 th percentile)	358.5	97.6	101.4		104.7	13.8	20.5	229.9	218.2	8.9	144.8	141.6
Back of Queue (*Q*), veh/ln (95 th percentile)	14.1	3.8	4.0		4.1	0.5	0.8	9.1	8.7	0.3	5.7	5.7
Queue Storage Ratio (*RQ*) (95 th percentile)	2.87	0.00	0.81		0.00	0.18	0.08	0.00	0.00	0.09	0.00	0.00
Uniform Delay (*d 1*), s/veh	48.0	44.7	45.2		38.3	3.8	6.4	12.6	12.6	1.7	4.2	4.2
Incremental Delay (*d 2*), s/veh	99.3	0.1	0.2		1.5	0.2	0.3	0.3	0.7	0.1	0.8	1.7
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	147.3	44.8	45.3		39.8	4.0	6.7	12.9	13.3	1.8	4.9	5.9
Level of Service (LOS)	F	D	D		D	A	A	B	B	A	A	A
Approach Delay, s/veh / LOS	109.5	F		35.4	D		12.6	B		5.0	A	
Intersection Delay, s/veh / LOS	20.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.62	C	2.01	B	2.18	B
Bicycle LOS Score / LOS	1.19	A	0.69	A	1.11	A	1.57	B

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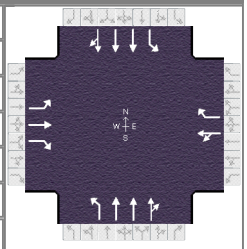
HCS7 Signalized Intersection Results Summary

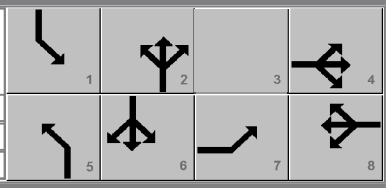
General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	AM Peak Hour	PHF	0.96
Urban Street		Analysis Year	2025 Background	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2025 Background AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	247	64	69	43	48	67	65	1221	13	41	807	159

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	74.3	1.1	2.4	15.3	8.5	0.0	
Yellow	4.5	0.0	3.0	3.0	3.8	0.0	
Red	1.5	0.0	0.5	0.5	1.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	4.0
Phase Duration, s	18.8	32.7		13.8	7.0	81.4	5.9	80.3
Change Period, ($Y+R_c$), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (g_s), s	17.3	5.3		8.2	4.8		2.0	
Green Extension Time (g_e), s	0.0	0.3		0.3	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	1.00		0.76	
Max Out Probability	1.00	0.00		0.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	257	67	47		95	34	68	873	413	43	678	307
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1581		1588	1555	1781	1870	1770	1781	1870	1682
Queue Service Time (g_s), s	15.3	3.3	2.7		5.6	2.5	2.8	13.8	13.8	0.0	4.3	4.4
Cycle Queue Clearance Time (g_c), s	15.3	3.3	2.7		6.2	2.5	2.8	13.8	13.8	0.0	4.3	4.4
Green Ratio (*g/C*)	0.22	0.23	0.23		0.07	0.07	0.66	0.63	0.63	0.65	0.62	0.62
Capacity (*c*), veh/h	313	425	359		157	110	437	2348	1111	317	2342	1053
Volume-to-Capacity Ratio (*X*)	0.823	0.157	0.130		0.605	0.312	0.155	0.372	0.372	0.135	0.290	0.292
Back of Queue (*Q*), ft/ln (95 th percentile)	284.5	67.1	47		75.1	45.6	12.2	231.1	223.1	4	64.2	62.4
Back of Queue (*Q*), veh/ln (95 th percentile)	11.2	2.6	1.8		3.0	1.8	0.5	9.1	8.9	0.2	2.5	2.5
Queue Storage Ratio (*RQ*) (95 th percentile)	2.28	0.00	0.38		0.00	0.61	0.05	0.00	0.00	0.04	0.00	0.00
Uniform Delay (d_1), s/veh	37.0	35.0	34.8		31.1	8.6	4.1	11.1	11.1	2.1	3.7	3.7
Incremental Delay (d_2), s/veh	15.2	0.1	0.1		1.4	0.6	0.1	0.5	1.0	0.1	0.3	0.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	52.2	35.1	34.9		32.5	9.2	4.1	11.6	12.1	2.1	4.0	4.4
Level of Service (LOS)	D	D	C		C	A	A	B	B	A	A	A
Approach Delay, s/veh / LOS	46.9	D		26.3	C		11.3	B		4.0	A	
Intersection Delay, s/veh / LOS	14.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.59	C	2.64	C	2.01	B	2.19	B
Bicycle LOS Score / LOS	1.10	A	0.70	A	1.23	A	1.05	A

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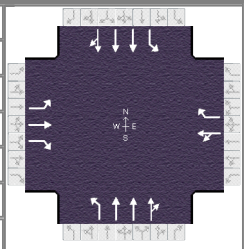
HCS7 Signalized Intersection Results Summary

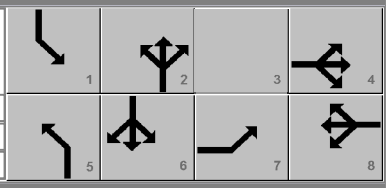
General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	PM Peak Hour	PHF	0.94
Urban Street		Analysis Year	2025 Background	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2023 Existing PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	267	77	101	57	49	49	73	1049	14	101	1708	157

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	82.5	3.3	3.4	11.3	11.2	0.0	
Yellow	4.5	0.0	3.0	3.0	3.8	0.0	
Red	1.5	0.0	0.5	0.5	1.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	4.0
Phase Duration, s	14.8	31.3		16.5	6.9	88.5	10.2	91.8
Change Period, (*Y+R c*), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (*g s*), s	13.5	8.2		10.8	2.0		7.8	
Green Extension Time (*g e*), s	0.0	0.4		0.3	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	0.94		0.98	
Max Out Probability	1.00	0.00		0.00	0.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	284	82	86		113	18	78	770	359	107	1363	615
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1562		1517	1563	1781	1870	1744	1781	1870	1679
Queue Service Time (*g s*), s	11.5	4.9	6.2		8.5	1.4	0.0	13.8	13.8	5.8	13.5	13.6
Cycle Queue Clearance Time (*g c*), s	11.5	4.9	6.2		8.8	1.4	0.0	13.8	13.8	5.8	13.5	13.6
Green Ratio (*g/C*)	0.19	0.20	0.20		0.09	0.09	0.67	0.63	0.63	0.69	0.66	0.66
Capacity (*c*), veh/h	236	376	314		173	134	228	2397	1118	402	2450	1099
Volume-to-Capacity Ratio (*X*)	1.201	0.218	0.275		0.653	0.135	0.340	0.321	0.322	0.267	0.556	0.559
Back of Queue (*Q*), ft/ln (95 th percentile)	421.5	103.2	110		111.3	25.4	22.6	244.2	231.7	28.3	157.2	155.2
Back of Queue (*Q*), veh/ln (95 th percentile)	16.6	4.1	4.3		4.4	1.0	0.9	9.6	9.3	1.1	6.2	6.2
Queue Storage Ratio (*RQ*) (95 th percentile)	3.37	0.00	0.88		0.00	0.34	0.09	0.00	0.00	0.28	0.00	0.00
Uniform Delay (*d 1*), s/veh	47.7	44.6	45.1		38.3	5.9	6.1	12.7	12.7	8.7	4.4	4.4
Incremental Delay (*d 2*), s/veh	123.9	0.1	0.2		1.5	0.2	0.3	0.4	0.8	0.1	0.9	2.1
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	171.6	44.7	45.3		39.8	6.1	6.5	13.1	13.5	8.8	5.3	6.4
Level of Service (LOS)	F	D	D		D	A	A	B	B	A	A	A
Approach Delay, s/veh / LOS	124.5	F		35.2	D		12.8	B		5.8	A	
Intersection Delay, s/veh / LOS	22.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.62	C	2.01	B	2.18	B
Bicycle LOS Score / LOS	1.23	A	0.70	A	1.15	A	1.63	B

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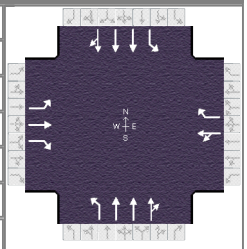
HCS7 Signalized Intersection Results Summary

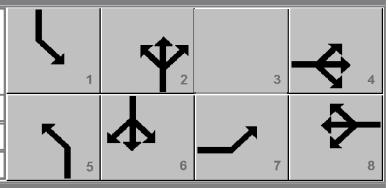
General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	AM Peak Hour	PHF	0.96
Urban Street		Analysis Year	2025 Total	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2025 Total AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	254	66	71	43	50	67	68	1221	13	41	807	168

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	74.7	0.5	2.4	15.3	8.6	0.0
Yellow	4.5	0.0	3.0	3.0	3.8	0.0
Red	1.5	0.0	0.5	0.5	1.5	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	4.0
Phase Duration, s	18.8	32.8		13.9	6.5	81.3	5.9	80.7
Change Period, (*Y+R c*), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (*g s*), s	17.3	5.4		8.4	2.0		2.0	
Green Extension Time (*g e*), s	0.0	0.3		0.3	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	1.00		0.76	
Max Out Probability	1.00	0.00		0.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	265	69	49		97	34	71	873	413	43	685	309
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1581		1593	1555	1781	1870	1770	1781	1870	1674
Queue Service Time (*g s*), s	15.3	3.4	2.8		5.7	2.5	0.0	13.8	13.8	0.0	4.4	4.5
Cycle Queue Clearance Time (*g c*), s	15.3	3.4	2.8		6.4	2.5	0.0	13.8	13.8	0.0	4.4	4.5
Green Ratio (*g/C*)	0.22	0.23	0.23		0.07	0.07	0.65	0.63	0.63	0.64	0.62	0.62
Capacity (*c*), veh/h	313	427	361		159	112	438	2344	1109	315	2324	1040
Volume-to-Capacity Ratio (*X*)	0.846	0.161	0.136		0.611	0.307	0.162	0.372	0.372	0.135	0.295	0.297
Back of Queue (*Q*), ft/ln (95 th percentile)	298.6	69.3	49.1		76.8	45.6	12.9	231.4	223.4	4	65.3	63.3
Back of Queue (*Q*), veh/ln (95 th percentile)	11.8	2.7	1.9		3.0	1.8	0.5	9.1	8.9	0.2	2.6	2.5
Queue Storage Ratio (*RQ*) (95 th percentile)	2.39	0.00	0.39		0.00	0.61	0.05	0.00	0.00	0.04	0.00	0.00
Uniform Delay (*d 1*), s/veh	37.4	35.0	34.8		31.1	8.6	3.8	11.1	11.1	2.1	3.7	3.7
Incremental Delay (*d 2*), s/veh	18.0	0.1	0.1		1.4	0.6	0.1	0.5	1.0	0.1	0.3	0.7
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	55.4	35.1	34.9		32.6	9.2	3.8	11.6	12.1	2.2	4.1	4.5
Level of Service (LOS)	E	D	C		C	A	A	B	B	A	A	A
Approach Delay, s/veh / LOS	49.1	D		26.4	C		11.3	B		4.1	A	
Intersection Delay, s/veh / LOS	14.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.59	C	2.64	C	2.01	B	2.19	B
Bicycle LOS Score / LOS	1.12	A	0.70	A	1.23	A	1.06	A

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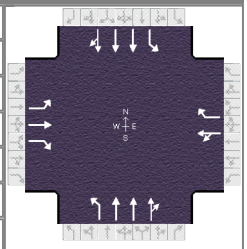
HCS7 Signalized Intersection Results Summary

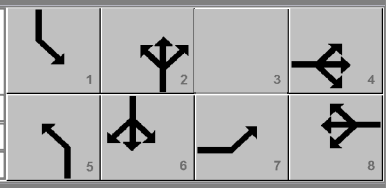
General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	PM Peak Hour	PHF	0.94
Urban Street		Analysis Year	2025 Total	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2025 Total PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	277	80	105	57	49	49	73	1049	14	101	1708	158

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	82.5	3.3	3.4	11.3	11.2	0.0	
Yellow	4.5	0.0	3.0	3.0	3.8	0.0	
Red	1.5	0.0	0.5	0.5	1.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	4.0
Phase Duration, s	14.8	31.3		16.5	6.9	88.5	10.2	91.8
Change Period, (*Y+R c*), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (*g s*), s	13.5	8.5		10.9	2.0		7.8	
Green Extension Time (*g e*), s	0.0	0.4		0.3	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	0.94		0.98	
Max Out Probability	1.00	0.00		0.00	0.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	295	85	90		113	18	78	770	359	107	1363	615
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1562		1514	1563	1781	1870	1744	1781	1870	1678
Queue Service Time (*g s*), s	11.5	5.1	6.5		8.5	1.4	0.0	13.8	13.8	5.8	13.5	13.6
Cycle Queue Clearance Time (*g c*), s	11.5	5.1	6.5		8.9	1.4	0.0	13.8	13.8	5.8	13.5	13.6
Green Ratio (*g/C*)	0.19	0.20	0.20		0.09	0.09	0.67	0.63	0.63	0.69	0.66	0.66
Capacity (*c*), veh/h	237	376	314		173	134	228	2396	1117	402	2449	1099
Volume-to-Capacity Ratio (*X*)	1.246	0.226	0.288		0.652	0.135	0.340	0.321	0.322	0.267	0.557	0.560
Back of Queue (*Q*), ft/ln (95 th percentile)	465	107.5	115.8		111.3	25.4	22.6	244.4	231.9	28.3	157.2	155.3
Back of Queue (*Q*), veh/ln (95 th percentile)	18.3	4.2	4.6		4.4	1.0	0.9	9.6	9.3	1.1	6.2	6.2
Queue Storage Ratio (*RQ*) (95 th percentile)	3.72	0.00	0.93		0.00	0.34	0.09	0.00	0.00	0.28	0.00	0.00
Uniform Delay (*d 1*), s/veh	47.7	44.7	45.3		38.3	5.9	6.1	12.7	12.7	8.7	4.4	4.4
Incremental Delay (*d 2*), s/veh	141.0	0.1	0.2		1.5	0.2	0.3	0.4	0.8	0.1	0.9	2.1
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	188.6	44.8	45.4		39.8	6.1	6.5	13.1	13.5	8.8	5.3	6.5
Level of Service (LOS)	F	D	D		D	A	A	B	B	A	A	A
Approach Delay, s/veh / LOS	135.1	F		35.1	D		12.8	B		5.8	A	
Intersection Delay, s/veh / LOS	24.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.62	C	2.01	B	2.18	B
Bicycle LOS Score / LOS	1.26	A	0.70	A	1.15	A	1.63	B

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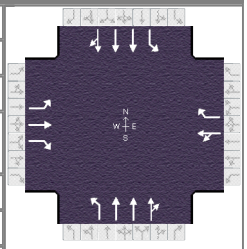
HCS7 Signalized Intersection Results Summary

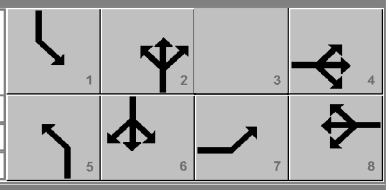
General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	PM Peak Hour - Optimized	PHF	0.94
Urban Street		Analysis Year	2025 Total	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2025 Total PM Optimized.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	277	80	105	57	49	49	73	1049	14	101	1708	158

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	76.6	3.3	3.4	17.3	11.1	0.0	
Yellow	4.5	0.0	3.0	3.0	3.8	0.0	
Red	1.5	0.0	0.5	0.5	1.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	4.0
Phase Duration, s	20.8	37.2		16.4	6.9	82.6	10.2	85.9
Change Period, ($Y+R_c$), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (g_s), s	19.5	9.2		10.9	2.0		7.8	
Green Extension Time (g_e), s	0.0	0.4		0.2	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	0.94		0.98	
Max Out Probability	1.00	0.00		0.17	0.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	295	85	90		113	18	78	770	359	107	1363	615
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1409		1514	1563	1781	1870	1744	1781	1870	1678
Queue Service Time (g_s), s	17.5	5.0	7.2		8.5	1.4	0.0	14.1	14.1	5.8	14.5	14.6
Cycle Queue Clearance Time (g_c), s	17.5	5.0	7.2		8.9	1.4	0.0	14.1	14.1	5.8	14.5	14.6
Green Ratio (*g/C*)	0.23	0.25	0.25		0.09	0.09	0.62	0.59	0.59	0.65	0.61	0.61
Capacity (*c*), veh/h	318	461	348		172	134	217	2226	1038	379	2278	1022
Volume-to-Capacity Ratio (*X*)	0.928	0.184	0.260		0.656	0.135	0.359	0.346	0.346	0.284	0.598	0.602
Back of Queue (*Q*), ft/ln (95 th percentile)	414.4	106.7	116.1		111.3	25.4	26.2	246.2	234.1	29.7	163.4	164
Back of Queue (*Q*), veh/ln (95 th percentile)	16.3	4.2	4.6		4.4	1.0	1.0	9.7	9.4	1.2	6.4	6.6
Queue Storage Ratio (*RQ*) (95 th percentile)	3.32	0.00	0.93		0.00	0.34	0.10	0.00	0.00	0.30	0.00	0.00
Uniform Delay (d_1), s/veh	44.9	42.2	43.1		38.3	4.2	7.7	14.0	14.0	9.9	4.9	4.9
Incremental Delay (d_2), s/veh	30.7	0.1	0.1		1.6	0.2	0.4	0.4	0.9	0.2	1.2	2.6
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	75.6	42.3	43.2		39.9	4.4	8.1	14.4	14.9	10.0	6.1	7.5
Level of Service (LOS)	E	D	D		D	A	A	B	B	B	A	A
Approach Delay, s/veh / LOS	63.3	E		35.0	C		14.2	B		6.7	A	
Intersection Delay, s/veh / LOS	16.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.62	C	2.01	B	2.18	B
Bicycle LOS Score / LOS	1.26	A	0.70	A	1.15	A	1.63	B

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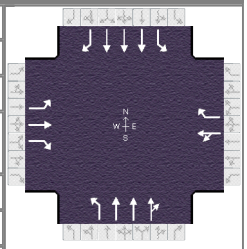
HCS7 Signalized Intersection Results Summary

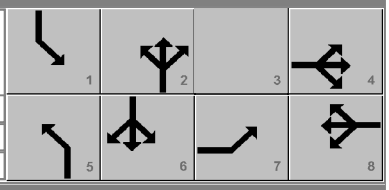
General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	AM Peak Hour w/ SBR	PHF	0.96
Urban Street		Analysis Year	2025 Total	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2025 Total AM w SBR.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	254	66	71	43	50	67	68	1221	13	41	807	168

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	74.7	0.5	2.4	15.3	8.6	0.0						
Yellow	4.5	0.0	3.0	3.0	3.8	0.0						
Red	1.5	0.0	0.5	0.5	1.5	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	3.0
Phase Duration, s	18.8	32.8		13.9	6.5	81.3	5.9	80.7
Change Period, (*Y+R c*), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (*g s*), s	17.3	5.4		8.4	2.0		2.0	
Green Extension Time (*g e*), s	0.0	0.3		0.3	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	1.00		0.76	
Max Out Probability	1.00	0.00		0.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	265	69	49		97	34	71	873	413	43	841	154
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1581		1593	1555	1781	1870	1770	1781	1698	1570
Queue Service Time (*g s*), s	15.3	3.4	2.8		5.7	2.5	0.0	13.8	13.8	0.0	3.8	2.0
Cycle Queue Clearance Time (*g c*), s	15.3	3.4	2.8		6.4	2.5	0.0	13.8	13.8	0.0	3.8	2.0
Green Ratio (*g/C*)	0.22	0.23	0.23		0.07	0.07	0.65	0.63	0.63	0.64	0.62	0.62
Capacity (*c*), veh/h	313	427	361		159	112	493	2344	1109	315	3166	976
Volume-to-Capacity Ratio (*X*)	0.846	0.161	0.136		0.611	0.307	0.144	0.372	0.372	0.135	0.266	0.158
Back of Queue (*Q*), ft/ln (95 th percentile)	298.6	69.3	49.1		76.8	45.6	12.5	231.4	223.4	4	51.8	29.1
Back of Queue (*Q*), veh/ln (95 th percentile)	11.8	2.7	1.9		3.0	1.8	0.5	9.1	8.9	0.2	2.0	1.2
Queue Storage Ratio (*RQ*) (95 th percentile)	2.39	0.00	0.39		0.00	0.61	0.05	0.00	0.00	0.04	0.00	0.00
Uniform Delay (*d 1*), s/veh	37.4	35.0	34.8		31.1	8.6	3.6	11.1	11.1	2.1	3.7	0.3
Incremental Delay (*d 2*), s/veh	18.0	0.1	0.1		1.4	0.6	0.0	0.5	1.0	0.1	0.2	0.3
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	55.4	35.1	34.9		32.6	9.2	3.7	11.6	12.1	2.2	3.9	0.6
Level of Service (LOS)	E	D	C		C	A	A	B	B	A	A	A
Approach Delay, s/veh / LOS	49.1	D		26.4	C		11.3	B		3.3	A	
Intersection Delay, s/veh / LOS	14.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.59	C	2.77	C	2.01	B	2.19	B
Bicycle LOS Score / LOS	1.12	A	0.70	A	1.23	A	1.06	A

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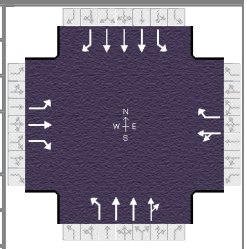
HCS7 Signalized Intersection Results Summary

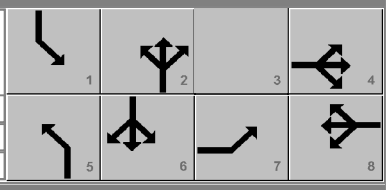
General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	PM Peak Hour - Optimized w SBR	PHF	0.94
Urban Street		Analysis Year	2025 Total	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2025 Total PM Optimized w SBR.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	277	80	105	57	49	49	73	1049	14	101	1708	158

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	76.6	3.3	3.4	17.3	11.1	0.0	
Yellow	4.5	0.0	3.0	3.0	3.8	0.0	
Red	1.5	0.0	0.5	0.5	1.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	3.0
Phase Duration, s	20.8	37.2		16.4	6.9	82.6	10.2	85.9
Change Period, ($Y+R_c$), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (g_s), s	19.5	9.2		10.9	2.0		7.8	
Green Extension Time (g_e), s	0.0	0.4		0.2	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	0.94		0.98	
Max Out Probability	1.00	0.00		0.17	0.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	295	85	90		113	18	78	770	359	107	1817	162
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1409		1514	1563	1781	1870	1744	1781	1698	1512
Queue Service Time (g_s), s	17.5	5.0	7.2		8.5	1.4	0.0	14.1	14.1	5.8	13.8	2.5
Cycle Queue Clearance Time (g_c), s	17.5	5.0	7.2		8.9	1.4	0.0	14.1	14.1	5.8	13.8	2.5
Green Ratio (*g/C*)	0.23	0.25	0.25		0.09	0.09	0.62	0.59	0.59	0.65	0.61	0.61
Capacity (*c*), veh/h	318	461	348		172	134	236	2226	1038	379	3103	921
Volume-to-Capacity Ratio (*X*)	0.928	0.184	0.260		0.656	0.135	0.328	0.346	0.346	0.284	0.586	0.176
Back of Queue (*Q*), ft/ln (95 th percentile)	414.4	106.7	116.1		111.3	25.4	25	246.2	234.1	29.7	140.6	34.4
Back of Queue (*Q*), veh/ln (95 th percentile)	16.3	4.2	4.6		4.4	1.0	1.0	9.7	9.4	1.2	5.5	1.4
Queue Storage Ratio (*RQ*) (95 th percentile)	3.32	0.00	0.93		0.00	0.34	0.10	0.00	0.00	0.30	0.00	0.00
Uniform Delay (d_1), s/veh	44.9	42.2	43.1		38.3	4.2	7.4	14.0	14.0	9.9	4.9	0.5
Incremental Delay (d_2), s/veh	30.7	0.1	0.1		1.6	0.2	0.3	0.4	0.9	0.2	0.8	0.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	75.6	42.3	43.2		39.9	4.4	7.7	14.4	14.9	10.0	5.7	0.9
Level of Service (LOS)	E	D	D		D	A	A	B	B	B	A	A
Approach Delay, s/veh / LOS	63.3	E		35.0	C		14.1	B		5.5	A	
Intersection Delay, s/veh / LOS	16.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.75	C	2.01	B	2.18	B
Bicycle LOS Score / LOS	1.26	A	0.70	A	1.15	A	1.63	B

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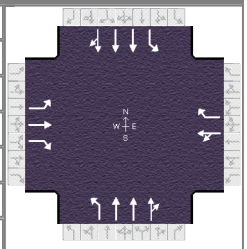
HCS7 Signalized Intersection Results Summary

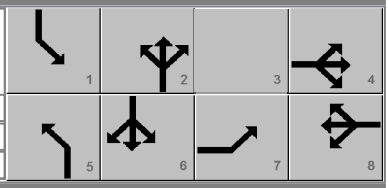
General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	AM Peak Hour	PHF	0.96
Urban Street		Analysis Year	2035 Background	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2035 Background AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	263	68	73	46	51	71	69	1297	14	44	858	169

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	73.6	0.7	3.0	15.4	9.0	0.0	
Yellow	4.5	0.0	3.0	3.0	3.8	0.0	
Red	1.5	0.0	0.5	0.5	1.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	4.0
Phase Duration, s	18.9	33.2		14.3	7.3	80.3	6.5	79.6
Change Period, ($Y+R_c$), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (g_s), s	17.2	5.5		8.7	5.0		4.5	
Green Extension Time (g_e), s	0.0	0.3		0.3	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	1.00		0.78	
Max Out Probability	1.00	0.00		0.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	274	71	51		101	39	72	927	439	46	722	327
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1581		1583	1555	1781	1870	1770	1781	1870	1681
Queue Service Time (g_s), s	15.2	3.5	2.9		6.1	2.8	3.0	15.0	15.0	2.5	4.7	4.8
Cycle Queue Clearance Time (g_c), s	15.2	3.5	2.9		6.7	2.8	3.0	15.0	15.0	2.5	4.7	4.8
Green Ratio (*g/C*)	0.22	0.23	0.23		0.08	0.08	0.65	0.62	0.62	0.65	0.61	0.61
Capacity (*c*), veh/h	312	432	366		163	117	416	2336	1105	294	2321	1043
Volume-to-Capacity Ratio (*X*)	0.878	0.164	0.140		0.619	0.330	0.173	0.397	0.397	0.156	0.311	0.313
Back of Queue (*Q*), ft/ln (95 th percentile)	318.1	71.3	51.2		80.2	50.9	13.4	246.9	238.4	5	69.3	67.4
Back of Queue (*Q*), veh/ln (95 th percentile)	12.5	2.8	2.0		3.2	2.0	0.5	9.7	9.5	0.2	2.7	2.7
Queue Storage Ratio (*RQ*) (95 th percentile)	2.55	0.00	0.41		0.00	0.68	0.05	0.00	0.00	0.05	0.00	0.00
Uniform Delay (d_1), s/veh	37.7	34.9	34.7		31.1	8.7	4.0	11.4	11.4	4.2	3.8	3.8
Incremental Delay (d_2), s/veh	22.6	0.1	0.1		1.4	0.6	0.1	0.5	1.1	0.1	0.3	0.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	60.3	35.0	34.8		32.6	9.3	4.1	11.9	12.5	4.3	4.1	4.6
Level of Service (LOS)	E	D	C		C	A	A	B	B	A	A	A
Approach Delay, s/veh / LOS	52.5	D		26.1	C		11.7	B		4.3	A	
Intersection Delay, s/veh / LOS	15.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.59	C	2.64	C	2.01	B	2.19	B
Bicycle LOS Score / LOS	1.14	A	0.72	A	1.28	A	1.09	A

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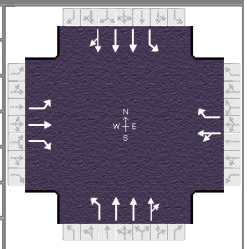
HCS7 Signalized Intersection Results Summary

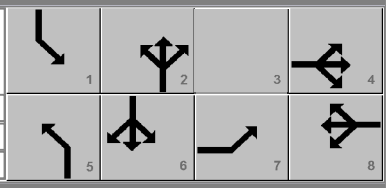
General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	PM Peak Hour	PHF	0.94
Urban Street		Analysis Year	2035 Background	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2035 Background PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	284	82	107	61	52	52	78	1114	15	107	1814	167

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	82.7	2.5	3.5	11.1	11.9	0.0	
Yellow	4.5	0.0	3.0	3.0	3.8	0.0	
Red	1.5	0.0	0.5	0.5	1.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	4.0
Phase Duration, s	14.6	31.8		17.2	7.0	88.7	9.5	91.3
Change Period, (*Y+R c*), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (*g s*), s	12.3	8.7		11.5	2.0		7.1	
Green Extension Time (*g e*), s	0.0	0.4		0.4	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	0.95		0.98	
Max Out Probability	1.00	0.00		0.00	0.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	302	87	93		120	21	83	818	382	114	1446	655
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1562		1510	1564	1781	1870	1744	1781	1870	1679
Queue Service Time (*g s*), s	10.3	5.2	6.7		9.2	1.6	0.0	14.8	14.8	5.1	15.1	15.3
Cycle Queue Clearance Time (*g c*), s	10.3	5.2	6.7		9.5	1.6	0.0	14.8	14.8	5.1	15.1	15.3
Green Ratio (*g/C*)	0.19	0.20	0.20		0.09	0.09	0.68	0.64	0.64	0.70	0.66	0.66
Capacity (*c*), veh/h	220	369	308		180	142	214	2432	1134	371	2459	1104
Volume-to-Capacity Ratio (*X*)	1.371	0.237	0.301		0.667	0.149	0.388	0.337	0.337	0.307	0.588	0.593
Back of Queue (*Q*), ft/ln (95 th percentile)	568.7	110.3	118.7		119	29.7	26.3	260.2	246.7	56.2	169.4	169.3
Back of Queue (*Q*), veh/ln (95 th percentile)	22.4	4.3	4.7		4.7	1.2	1.0	10.2	9.9	2.2	6.7	6.8
Queue Storage Ratio (*RQ*) (95 th percentile)	4.55	0.00	0.95		0.00	0.40	0.11	0.00	0.00	0.56	0.00	0.00
Uniform Delay (*d 1*), s/veh	47.7	44.9	45.5		38.3	5.9	6.8	12.7	12.7	17.5	4.5	4.5
Incremental Delay (*d 2*), s/veh	193.0	0.1	0.2		1.6	0.2	0.4	0.4	0.8	0.2	1.0	2.3
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	240.7	45.0	45.7		39.9	6.1	7.2	13.0	13.5	17.7	5.5	6.8
Level of Service (LOS)	F	D	D		D	A	A	B	B	B	A	A
Approach Delay, s/veh / LOS	167.9	F		34.8	C		12.8	B		6.5	A	
Intersection Delay, s/veh / LOS	28.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.62	C	2.01	B	2.18	B
Bicycle LOS Score / LOS	1.28	A	0.72	A	1.19	A	1.71	B

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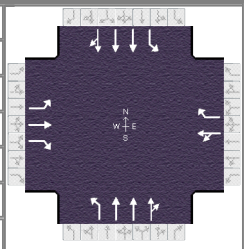
HCS7 Signalized Intersection Results Summary

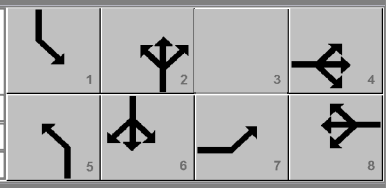
General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	AM Peak Hour	PHF	0.96
Urban Street		Analysis Year	2035 Total	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2035 Total AM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	270	70	75	46	53	71	72	1297	14	44	858	178

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	73.4	0.8	3.0	15.4	9.2	0.0
Yellow	4.5	0.0	3.0	3.0	3.8	0.0
Red	1.5	0.0	0.5	0.5	1.5	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	4.0
Phase Duration, s	18.9	33.3		14.5	7.3	80.2	6.5	79.4
Change Period, ($Y+R_c$), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (g_s), s	17.2	5.6		8.8	5.0		4.5	
Green Extension Time (g_e), s	0.0	0.3		0.3	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	1.00		0.78	
Max Out Probability	1.00	0.00		0.00	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	281	73	53		103	39	75	927	439	46	730	329
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1581		1587	1555	1781	1870	1770	1781	1870	1674
Queue Service Time (g_s), s	15.2	3.6	3.1		6.2	2.8	3.0	15.0	15.0	2.5	4.8	4.8
Cycle Queue Clearance Time (g_c), s	15.2	3.6	3.1		6.8	2.8	3.0	15.0	15.0	2.5	4.8	4.8
Green Ratio (*g/C*)	0.22	0.23	0.23		0.08	0.08	0.65	0.62	0.62	0.64	0.61	0.61
Capacity (*c*), veh/h	312	435	367		165	119	413	2332	1103	294	2316	1036
Volume-to-Capacity Ratio (*X*)	0.901	0.168	0.145		0.625	0.325	0.182	0.398	0.398	0.156	0.315	0.317
Back of Queue (*Q*), ft/ln (95 th percentile)	337.4	73.5	53.4		82	50.8	14.7	247.2	238.7	5	70.2	68
Back of Queue (*Q*), veh/ln (95 th percentile)	13.3	2.9	2.1		3.2	2.0	0.6	9.7	9.5	0.2	2.8	2.7
Queue Storage Ratio (*RQ*) (95 th percentile)	2.70	0.00	0.43		0.00	0.68	0.06	0.00	0.00	0.05	0.00	0.00
Uniform Delay (d_1), s/veh	38.0	34.9	34.7		31.1	8.7	5.1	11.4	11.4	4.3	3.8	3.8
Incremental Delay (d_2), s/veh	26.6	0.1	0.1		1.4	0.6	0.1	0.5	1.1	0.1	0.4	0.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	64.7	35.0	34.8		32.6	9.2	5.2	11.9	12.5	4.4	4.1	4.6
Level of Service (LOS)	E	C	C		C	A	A	B	B	A	A	A
Approach Delay, s/veh / LOS	55.5	E		26.2	C		11.8	B		4.3	A	
Intersection Delay, s/veh / LOS	15.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.59	C	2.64	C	2.01	B	2.19	B
Bicycle LOS Score / LOS	1.16	A	0.72	A	1.28	A	1.09	A

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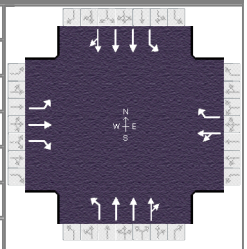
HCS7 Signalized Intersection Results Summary

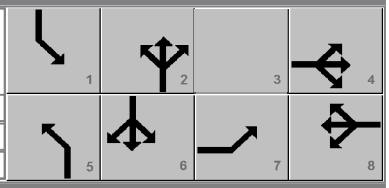
General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	PM Peak Hour	PHF	0.94
Urban Street		Analysis Year	2035 Total	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2035 Total PM.xus		
Project Description					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	294	85	111	61	52	52	78	1114	15	107	1814	168

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	82.7	2.5	3.5	11.1	11.9	0.0	
Yellow	4.5	0.0	3.0	3.0	3.8	0.0	
Red	1.5	0.0	0.5	0.5	1.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	4.0
Phase Duration, s	14.6	31.8		17.2	7.0	88.7	9.5	91.2
Change Period, ($Y+R_c$), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (g_s), s	12.3	9.0		11.5	2.0		7.1	
Green Extension Time (g_e), s	0.0	0.4		0.4	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	0.95		0.98	
Max Out Probability	1.00	0.00		0.00	0.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	313	90	97		120	21	83	818	382	114	1447	655
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1562		1508	1564	1781	1870	1744	1781	1870	1678
Queue Service Time (g_s), s	10.3	5.4	7.0		9.2	1.6	0.0	14.8	14.8	5.1	15.1	15.4
Cycle Queue Clearance Time (g_c), s	10.3	5.4	7.0		9.5	1.6	0.0	14.8	14.8	5.1	15.1	15.4
Green Ratio (*g/C*)	0.19	0.20	0.20		0.09	0.09	0.68	0.64	0.64	0.70	0.66	0.66
Capacity (*c*), veh/h	220	369	308		180	143	214	2431	1133	371	2458	1103
Volume-to-Capacity Ratio (*X*)	1.419	0.245	0.314		0.667	0.149	0.388	0.337	0.337	0.307	0.589	0.594
Back of Queue (*Q*), ft/ln (95 th percentile)	616.3	114.6	124.6		119	29.7	26.3	260.4	247	56.2	169.5	169.3
Back of Queue (*Q*), veh/ln (95 th percentile)	24.3	4.5	4.9		4.7	1.2	1.0	10.3	9.9	2.2	6.7	6.8
Queue Storage Ratio (*RQ*) (95 th percentile)	4.93	0.00	1.00		0.00	0.40	0.11	0.00	0.00	0.56	0.00	0.00
Uniform Delay (d_1), s/veh	47.7	45.0	45.7		38.3	5.9	6.8	12.7	12.7	17.5	4.5	4.5
Incremental Delay (d_2), s/veh	212.9	0.1	0.2		1.6	0.2	0.4	0.4	0.8	0.2	1.0	2.4
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	260.6	45.1	45.9		39.8	6.1	7.3	13.1	13.5	17.7	5.5	6.9
Level of Service (LOS)	F	D	D		D	A	A	B	B	B	A	A
Approach Delay, s/veh / LOS	180.0	F		34.8	C		12.8	B		6.5	A	
Intersection Delay, s/veh / LOS	30.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.60	C	2.62	C	2.01	B	2.18	B
Bicycle LOS Score / LOS	1.31	A	0.72	A	1.19	A	1.71	B

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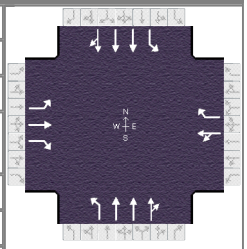
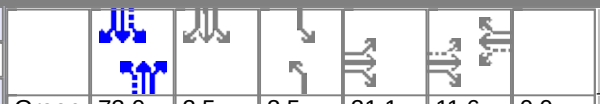
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Kimley-Horn			Duration, h	0.250
Analyst	TES	Analysis Date	10/25/2023	Area Type	Other
Jurisdiction		Time Period	PM Peak Hour - Optimized	PHF	0.94
Urban Street		Analysis Year	2035 Total	Analysis Period	1> 7:00
Intersection	Bluewater Rd & Coors B…	File Name	5_2035 Total PM Optimized.xus		
Project Description					

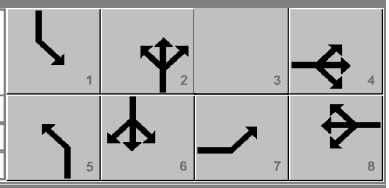


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	294	85	111	61	52	52	78	1114	15	107	1814	168

Signal Information			
Cycle, s	130.0	Reference Phase	2
Offset, s	0	Reference Point	Begin
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On



Green	73.0	2.5	3.5	21.1	11.6	0.0
Yellow	4.5	0.0	3.0	3.0	3.8	0.0
Red	1.5	0.0	0.5	0.5	1.5	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4		8	5	2	1	6
Case Number	1.0	3.0		7.3	1.4	4.0	1.4	4.0
Phase Duration, s	24.6	41.5		16.9	7.0	79.0	9.5	81.6
Change Period, (*Y+R c*), s	3.5	5.3		5.3	3.5	6.0	3.5	6.0
Max Allow Headway (*MAH*), s	1.6	2.7		2.7	1.5	0.0	1.5	0.0
Queue Clearance Time (*g s*), s	22.3	8.9		11.9	2.0		7.1	
Green Extension Time (*g e*), s	0.0	0.4		0.0	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00		1.00	0.95		0.98	
Max Out Probability	1.00	0.00		1.00	0.00		1.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	5	2	12	1	6	16
Adjusted Flow Rate (*v*), veh/h	313	90	97		120	21	83	818	382	114	1447	655
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1781	1870	1566		1503	1563	1781	1870	1744	1781	1870	1678
Queue Service Time (*g s*), s	20.3	5.3	6.9		9.7	1.6	0.0	15.3	15.3	5.1	17.2	17.5
Cycle Queue Clearance Time (*g c*), s	20.3	5.3	6.9		9.9	1.6	0.0	15.3	15.3	5.1	17.2	17.5
Green Ratio (*g/C*)	0.26	0.28	0.28		0.09	0.09	0.61	0.56	0.56	0.62	0.58	0.58
Capacity (*c*), veh/h	349	502	421		172	134	196	2164	1009	335	2191	983
Volume-to-Capacity Ratio (*X*)	0.897	0.180	0.230		0.701	0.159	0.423	0.378	0.378	0.340	0.660	0.666
Back of Queue (*Q*), ft/ln (95 th percentile)	418.1	113.4	123.4		137.8	29.9	33.1	262.3	249.6	58.6	180.4	185.3
Back of Queue (*Q*), veh/ln (95 th percentile)	16.5	4.5	4.9		5.4	1.2	1.3	10.3	10.0	2.3	7.1	7.4
Queue Storage Ratio (*RQ*) (95 th percentile)	3.34	0.00	0.99		0.00	0.40	0.13	0.00	0.00	0.59	0.00	0.00
Uniform Delay (*d 1*), s/veh	43.1	41.2	41.8		38.6	3.3	9.9	14.7	14.7	20.7	5.3	5.4
Incremental Delay (*d 2*), s/veh	24.0	0.1	0.1		10.3	0.2	0.5	0.5	1.1	0.2	1.6	3.6
Initial Queue Delay (*d 3*), s/veh	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	67.0	41.2	41.9		48.9	3.5	10.4	15.2	15.8	21.0	6.9	8.9
Level of Service (LOS)	E	D	D		D	A	B	B	B	C	A	A
Approach Delay, s/veh / LOS	57.5	E		42.0	D		15.1	B		8.2	A	
Intersection Delay, s/veh / LOS	17.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.59	C	2.62	C	2.01	B	2.18	B
Bicycle LOS Score / LOS	1.31	A	0.72	A	1.19	A	1.71	B

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Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	300	283	3	5	1
Future Vol, veh/h	0	300	283	3	5	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	326	308	3	5	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	311	0	-	0	636	310
Stage 1	-	-	-	-	310	-
Stage 2	-	-	-	-	326	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1283	-	-	-	472	853
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	731	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1283	-	-	-	472	853
Mov Cap-2 Maneuver	-	-	-	-	632	-
Stage 1	-	-	-	-	808	-
Stage 2	-	-	-	-	731	-

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

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1283	-	-	-	661
HCM Lane V/C Ratio	-	-	-	-	0.01
HCM Control Delay (s)	0	-	-	-	10.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	245	340	1	15	34
Future Vol, veh/h	0	245	340	1	15	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	336	466	1	21	47

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	467	0	-	0	803	467
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	336	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1099	-	-	-	362	697
Stage 1	-	-	-	-	677	-
Stage 2	-	-	-	-	724	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1099	-	-	-	362	697
Mov Cap-2 Maneuver	-	-	-	-	556	-
Stage 1	-	-	-	-	677	-
Stage 2	-	-	-	-	724	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1099	-	-	-	647
HCM Lane V/C Ratio	-	-	-	-	0.104
HCM Control Delay (s)	0	-	-	-	11.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	318	300	3	5	1
Future Vol, veh/h	0	318	300	3	5	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	346	326	3	5	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	329	0	-	0	674	328
Stage 1	-	-	-	-	328	-
Stage 2	-	-	-	-	346	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	*1260	-	-	-	*448	*842
Stage 1	-	-	-	-	*794	-
Stage 2	-	-	-	-	*716	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	*1260	-	-	-	*448	*842
Mov Cap-2 Maneuver	-	-	-	-	*615	-
Stage 1	-	-	-	-	*794	-
Stage 2	-	-	-	-	*716	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	* 1260	-	-	-	644
HCM Lane V/C Ratio	-	-	-	-	0.01
HCM Control Delay (s)	0	-	-	-	10.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	260	361	1	15	34
Future Vol, veh/h	0	260	361	1	15	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	356	495	1	21	47

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	496	0	-	0	852	496
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	356	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1068	-	-	-	333	678
Stage 1	-	-	-	-	659	-
Stage 2	-	-	-	-	709	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1068	-	-	-	333	678
Mov Cap-2 Maneuver	-	-	-	-	537	-
Stage 1	-	-	-	-	659	-
Stage 2	-	-	-	-	709	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1068	-	-	-	628
HCM Lane V/C Ratio	-	-	-	-	0.107
HCM Control Delay (s)	0	-	-	-	11.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	47	261	226	74	57	39
Future Vol, veh/h	47	261	226	74	57	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	284	246	80	62	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	326	0	-	0	672	286
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	386	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1255	-	-	-	440	863
Stage 1	-	-	-	-	821	-
Stage 2	-	-	-	-	687	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1255	-	-	-	422	863
Mov Cap-2 Maneuver	-	-	-	-	593	-
Stage 1	-	-	-	-	787	-
Stage 2	-	-	-	-	687	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1255	-	-	-	679
HCM Lane V/C Ratio	0.041	-	-	-	0.154
HCM Control Delay (s)	8	-	-	-	11.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	253	283	5	81	54
Future Vol, veh/h	5	253	283	5	81	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	361	404	7	116	77

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	411	0	-	0	783	408
Stage 1	-	-	-	-	408	-
Stage 2	-	-	-	-	375	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1157	-	-	-	370	735
Stage 1	-	-	-	-	715	-
Stage 2	-	-	-	-	695	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1157	-	-	-	368	735
Mov Cap-2 Maneuver	-	-	-	-	561	-
Stage 1	-	-	-	-	711	-
Stage 2	-	-	-	-	695	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	13.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1157	-	-	-	620
HCM Lane V/C Ratio	0.006	-	-	-	0.311
HCM Control Delay (s)	8.1	-	-	-	13.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.3

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	47	277	240	74	57	39
Future Vol, veh/h	47	277	240	74	57	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	301	261	80	62	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	341	0	-	0	704	301
Stage 1	-	-	-	-	301	-
Stage 2	-	-	-	-	403	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1236	-	-	-	417	844
Stage 1	-	-	-	-	805	-
Stage 2	-	-	-	-	675	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1236	-	-	-	400	844
Mov Cap-2 Maneuver	-	-	-	-	578	-
Stage 1	-	-	-	-	772	-
Stage 2	-	-	-	-	675	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1236	-	-	-	663
HCM Lane V/C Ratio	0.041	-	-	-	0.157
HCM Control Delay (s)	8	-	-	-	11.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	269	301	5	81	54
Future Vol, veh/h	5	269	301	5	81	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	384	430	7	116	77

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	437	0	-	0	832	434
Stage 1	-	-	-	-	434	-
Stage 2	-	-	-	-	398	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1130	-	-	-	342	720
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	678	-
Platoon blocked, %	1	-	-	-	1	1
Mov Cap-1 Maneuver	1130	-	-	-	340	720
Mov Cap-2 Maneuver	-	-	-	-	542	-
Stage 1	-	-	-	-	696	-
Stage 2	-	-	-	-	678	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1130	-	-	-	601
HCM Lane V/C Ratio	0.006	-	-	-	0.321
HCM Control Delay (s)	8.2	-	-	-	13.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.4

APPENDIX H

Crash Data

FID	CrashDate	MilitaryTi	AStreet	BStreet	Severity	Analysis	Weather	PEDinv	PECinv
49597	5/8/2017	12:32	CAMINO AZUL NW	CAMINO NW & BLUEWATER	Property Damage Only Crash	Left Blank	Left Blank	Not Involved	Not Involved
68223	9/29/2017	10:29	BLUEWATER RD NW	AIRPORT DR	Injury Crash	Other Vehicle - From Same Direction/Sideswipe Collision	Clear	Not Involved	Not Involved
38357	5/7/2018	12:04	CAMINO AZUL NW	BLUEWATER RD NW	Injury Crash	Other Vehicle - From Same Direction/Rear End Collision	Clear	Not Involved	Not Involved
24307	5/16/2018	7:45	AIRPORT RD	BLUEWATER	Property Damage Only Crash	Left Blank	Left Blank	Not Involved	Not Involved
26416	6/22/2018	13:24	SE CORNER OF BLUEWATER RD NW	CAMINO AZUL	Property Damage Only Crash	Left Blank	Clear	Not Involved	Not Involved
41364	8/1/2018	7:59	BLUEWATER RD NW		Property Damage Only Crash	Other Vehicle - From Opposite Direction/Both Going Straight	Clear	Not Involved	Not Involved
42861	10/24/2018	14:11	AIRPORT DR NW	BLUEWATER RD NW	Injury Crash	Other Vehicle - One Right Turn/Entering At Angle	Clear	Not Involved	Not Involved
34822	11/5/2018	14:36	BLUEWATER RD NW	CAMINO AZUL	Property Damage Only Crash	Other Vehicle - From Opposite Direction/All Others	Clear	Not Involved	Not Involved
23550	11/14/2018	12:30	BLUEWATER AND AIRPORT DR NW		Property Damage Only Crash	Left Blank	Clear	Not Involved	Not Involved
2580	1/1/2019	12:30	BLUE WATER	CAMINO AZUL	Property Damage Only Crash	Left Blank	Snowing	Not Involved	Not Involved
2585	1/1/2019	13:42	BLUEWATER RD NW	CAMINO AZUL	Property Damage Only Crash	Left Blank	Left Blank	Not Involved	Not Involved
13539	2/26/2019	16:09	BLUEWATER RD NW		Property Damage Only Crash	Other Vehicle - One Left Turn/Entering At Angle	Clear	Not Involved	Not Involved
14651	3/28/2019	7:16	BLUEWATER RD NW	AIRPORT DR NW	Property Damage Only Crash	Other Vehicle - One Left Turn/Entering At Angle	Clear	Not Involved	Not Involved
11973	5/24/2019	3:19	AIRPORT DR NW	BLUEWATER RD NW	Property Damage Only Crash	Other Object - Unknown/Not Stated	Clear	Not Involved	Not Involved
16259	6/15/2019	15:26	BLUEWATER RD NW	CAMINO AZUL NW	Property Damage Only Crash	Other Vehicle - From Opposite Direction/One Left Turn	Clear	Not Involved	Not Involved
12581	8/31/2019	7:22	BLUEWATER RD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle - One Vehicle/Parked Improper Location	Left Blank	Not Involved	Not Involved
17903	9/5/2019	7:26	BLUEWATER RD NW	AIRPORT DR	Property Damage Only Crash	Other Vehicle - From Opposite Direction/One Right Turn	Clear	Not Involved	Not Involved
1340	9/12/2019	7:00	BLUEWATER RD NW	AIRKPORT DR.	Property Damage Only Crash	Left Blank	Clear	Not Involved	Not Involved
408	9/12/2019	16:00	BLUEWATER	AIRPORT	Property Damage Only Crash	Left Blank	Left Blank	Not Involved	Not Involved
16960	11/1/2019	9:01	BLUEWATER RD NW	AIRPORT DR NW	Injury Crash	Other Vehicle - From Opposite Direction/Both Going Straight	Clear	Not Involved	Not Involved
75812	1/18/2020	14:26	CAMINO AZUL NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle - From Same Direction/Both Going Straight	Clear	Not Involved	Not Involved
78782	4/29/2020	17:35	BLUEWATER RD NW	AIRPORT DR NW	Injury Crash	Other Vehicle - From Opposite Direction	Clear	Not Involved	Not Involved
99012	5/20/2021	14:48	BLUEWATER RD NW	AIRPORT DR NW	Property Damage Only Crash	Left Blank	Clear	Not Involved	Not Involved
91720	10/12/2021	8:00	BLUEWATER	AIRPORT RD	Property Damage Only Crash	Other Vehicle - From Opposite Direction	Clear	Not Involved	Not Involved
92100	12/11/2021	16:50	CAMINO AZUL NW	BLUE WATER	Property Damage Only Crash	Vehicle On Other Roadway - Not Stated	Left Blank	Not Involved	Not Involved

CRASH REPORT NUMBER	CRASH DATE	TIME OF CRASH	PRIMARY STREET	SECONDARY STREET	CRASH SEVERITY	CRASH CLASSIFICATION	CRASH ANALYSIS	FIRST HARMFUL EVENT	WEATHER	LIGHTING	PEDESTRIAN INVOLVEMENT	PEDALCYCLE INVOLVEMENT
710769264	6/24/2021	7:28	UNSER BLVD NW NM 345		Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710578614	7/3/2021	17:07	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Non-Collision	Clear	Daylight	Not Involved	Not Involved
710564999	3/29/2019	15:07	UNSER BLVD NW NM 345		Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Invalid Code	Daylight	Not Involved	Not Involved
710444921	7/7/2020	22:04	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710569925	9/22/2019	20:13	BLUEWATER RD NW	UNSER BLVD	Injury Crash	Fixed Object	Fixed Object - Sign or Sign Post (Traffic)	Collision with Fixed Object	Clear	Dark-Lighted	Not Involved	Not Involved
30261270	1/8/2020	6:00	BLUEWATER RD NW	UNSER BLVD NW	Property Damage Only Crash	Fixed Object	Fixed Object - Fence (Wood, Brick, Stone)	Collision with Fixed Object	Left Blank	Left Blank	Not Involved	Not Involved
23486524	1/23/2018	13:30	UNSER AND BLUEWATER	BLUE WATER	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Left Blank	Left Blank	Not Involved	Not Involved
23463641	10/28/2018	14:10	UNSER BLVD AND BLUEWATER	BLUEWATER	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Clear	Daylight	Not Involved	Not Involved
23479835	3/12/2019	17:00	BLUE WATER	UNSER	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Left Blank	Left Blank	Not Involved	Not Involved
23479916	3/21/2019	16:30	BLUEWATER RD NW	UNSER BLVD NW	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Left Blank	Left Blank	Not Involved	Not Involved
23468258	4/28/2019	12:45	UNSER BLVD NW	BLUE WATER	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Clear	Daylight	Not Involved	Not Involved
23480158	4/28/2019	12:50	UNSER BLVD NW	BLUE WATER	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Left Blank	Left Blank	Not Involved	Not Involved
30261345	1/17/2020	9:45	UNSER NB	BLUE WATER	Property Damage Only Crash	Left Blank	Invalid Code	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved
30264124	6/24/2020	12:35	BLUEWATER LB	UNSER	Property Damage Only Crash	Left Blank	Invalid Code	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved
710628301	9/10/2020	11:14	BLUEWATER RD NW	UNSER BLVD SW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710767031	9/14/2020	15:15	UNSER BL NW	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710767050	10/12/2020	20:30	BLUEWATER RD NW	UNSER BL NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
30280893	10/14/2020	7:30	UNSER BLVD NW	BLUEWATER RD	Property Damage Only Crash	Left Blank	Invalid Code	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved
710576026	10/27/2020	13:49	UNSER BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Snowing	Daylight	Not Involved	Not Involved
30281607	11/29/2020	17:00	UNSER NB	BLUEWATER	Property Damage Only Crash	Left Blank	Invalid Code	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved
710771190	12/4/2020	22:20	UNSER BL NW	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710767556	1/7/2021	18:56	BLUEWATER RD NW	UNSER BLVD	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710583958	1/27/2021	14:00	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710583959	2/3/2021	8:35	UNSER BLVD SW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710776876	2/17/2021	11:18	UNSER BLVD NW NM 345	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710581780	2/20/2021	23:30	NM 345		Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710780842	4/13/2021	14:15	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710795437	10/1/2021	19:26	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710803034	11/16/2021	18:54	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710777189	11/27/2021	12:40	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710788932	12/18/2021	23:38	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710366553	4/9/2017	9:41	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other (Non-Collision)	Non-Collision - All Other/Not Stated	Non-Collision	Clear	Daylight	Not Involved	Not Involved
710458476	6/27/2018	2:34	UNSER BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other (Object)	Other Object - Unknown/Not Stated	Collision with Other Non-Fixed Object	Clear	Dark-Lighted	Not Involved	Not Involved
23440538	1/11/2017	16:05	UNSER	BLUEWATER	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710400962	1/13/2017	19:11	BLUEWATER RD	UNSER	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710400143	1/19/2017	18:14	UNSER BLVD		Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
23440604	1/25/2017	8:00	UNSER NB	BLUEWATER	Property Damage Only Crash	Other Vehicle	Invalid Code	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710364804	2/11/2017	19:12	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710406038	4/11/2017	7:57	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710404485	5/15/2017	7:52	UNSER BLVD NW NM 345		Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23450129	6/8/2017	19:30	UNSER	BLUEWATER	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710406675	6/10/2017	13:15	BLUEWATER RD NW	UNSER BLVD NW NM 345	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Right Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710370835	7/2/2017	16:43	UNSER BLVD NW NM 345	BLUEWATER NW	Injury Crash	Other Vehicle	Other Vehicle - One Right Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710441548	8/16/2017	9:20	BLUEWATER RD NW	UNSER BLVD SW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Right Turn	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710400527	8/26/2017	17:58	BLUEWATER RD NW	UNSER BLVD	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Vehicle/Making A U-Turn	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710404740	8/27/2017	23:36	BLUEWATER RD NW	UNSER BLVD	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Sideswipe Collision	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710273160	9/18/2017	8:56	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710400008	9/20/2017	15:00	BLUEWATER RD NW	UNSER BLVD	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23447041	9/26/2017	7:55	UNSER	BLUE WATER	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710446583	9/27/2017	19:56	BLUEWATER RD NW	UNSER BLVD	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Raining	Dark-Lighted	Not Involved	Not Involved
710442877	10/15/2017	20:00	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Dark-Not Lighted	Not Involved	Not Involved
710451417	12/4/2017	6:49	UNSER BLVD NW NM 345	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710454257	12/9/2017	18:04	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Right Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Dark-Not Lighted	Not Involved	Not Involved
710451424	12/12/2017	6:55	UNSER BLVD NW NM 345	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710442692	12/22/2017	19:43	BLUEWATER RD NW	UNSER BLVD NW NM 345	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710454271	12/23/2017	17:17	BLUEWATER RD NW	UNSER BLVD	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	Collision with Motor Vehicle	Clear	Dark-Not Lighted	Not Involved	Not Involved
23484807	1/23/2018	7:10	UNSER	BLUEWATER	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710456806	2/8/2018	16:21	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710460141	3/16/2018	3:00	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Sideswipe Collision	Collision with Motor Vehicle	Clear	Dark-Not Lighted	Not Involved	Not Involved
710442886	4/1/2018	20:00	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710542603	5/15/2018	10:49	UNSER BLVD NW NM 345	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710457312	6/10/2018	17:24	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/All Others	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710540772	6/14/2018	6:53	UNSER BLVD NW NM 345	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710546528	7/16/2018	23:16	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Dark-Not Lighted	Not Involved	Not Involved
710548448	8/22/2018	8:48	UNSER BLVD NW NM 345	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710457191	9/25/2018	0:54	UNSER BLVD NW NM 345	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710548463	10/3/2018	16:19	UNSER BLVD NW NM 345		Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710549433	10/3/2018	16:50	UNSER BLVD		Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710457194	10/14/2018	19:48	UNSER BLVD NW NM 345	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710550880	11/9/2018	9:23	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710553860	11/14/2018	17:18	UNSER BLVD NW NM 345	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710554879	12/12/2018	19:58	UNSER BLVD NW NM 345	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved

710556203	12/13/2018	12:37	BLUEWATER RD NW	UNSER BLVD NW NM 345	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710556207	12/18/2018	8:12	UNSER BLVD NW NM 345	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23467913	12/27/2018	11:30	UNSER	AVALON PL NW	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710556217	12/27/2018	13:28	UNSER BLVD NW NM 345		Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710560899	1/31/2019	18:55	UNSER BLVD NW NM 345		Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Dark-Not Lighted	Not Involved	Not Involved
710546028	2/23/2019	0:38	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/One Stopped	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710565498	4/16/2019	12:26	UNSER BLVD NW NM 345		Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710565036	4/28/2019	12:32	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710615251	5/4/2019	14:30	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/All Others	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710568322	5/16/2019	17:28	UNSER BLVD		Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23451241	5/19/2019	17:00	BLUEWATER	UNSER	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710553609	5/20/2019	16:47	UNSER BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710568095	6/19/2019	16:43	UNSER BLVD NW NM 345	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23480628	7/22/2019	17:40	UNSER BLVD	BLUEWATER RD	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710454465	8/16/2019	11:59	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710570030	11/21/2019	15:18	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Raining	Daylight	Not Involved	Not Involved
30260540	12/15/2019	19:00	UNSER BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
30261048	1/6/2020	6:00	UNSER BLVD NW	BLUEWATER	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710577186	1/8/2020	16:30	BLUEWATER RD NW	UNSER BLVD NW NM 345	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710581030	2/12/2020	7:19	UNSER BL NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Turn Right/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710759389	5/18/2020	16:07	UNSER BLVD SW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710761054	6/7/2020	18:37	UNSER BLVD SW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710761494	8/3/2020	6:52	UNSER BLVD NW NM 345	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710761498	8/4/2020	12:56	UNSER BLVD NW NM 345	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
30281945	12/28/2020	14:40	UNSER NB	BLUEWATER	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
30282445	1/27/2021	19:00	UNSER NB	BLUEWATER	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
30295084	5/4/2021	17:05	UNSER SB	BLUE WATER	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710368915	2/2/2017	18:23	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Pedalcyclist	Pedalcyclist Collision - Unknown/All Other	Collision with Person	Clear	Dark-Not Lighted	Not Involved	Involved
710369554	9/27/2017	15:00	UNSER BLVD	BLUEWATER RD NW	Injury Crash	Pedalcyclist	Vehicle Struck Pedalcyclist At Angle	Collision with Person	Raining	Daylight	Not Involved	Involved
23441686	5/25/2017	17:30	UNSER BLVD	BLUE WATER	Property Damage Only Crash	Vehicle on Other Road	Vehicle On Other Roadway - Not Stated	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
23452707	1/4/2017	13:44	BLUEWATER	COORS RD	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710367164	1/6/2017	7:00	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Snowing	Daylight	Not Involved	Not Involved
710400137	1/6/2017	8:41	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Other	Daylight	Not Involved	Not Involved
23440560	1/17/2017	Left Blank	COORS SOUTH ON BLUEWATER	COORS/BLUEWATER	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710364376	1/23/2017	12:31	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710399838	1/29/2017	15:23	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23434949	2/3/2017	Left Blank	COORS RD	BLUEWATER	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710399036	2/13/2017	22:54	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/All Others	Collision with Motor Vehicle	Raining	Dark-Lighted	Not Involved	Not Involved
710403646	3/29/2017	12:43	COORS BLVD NW		Injury Crash	Fixed Object	Fixed Object - Tree	Collision with Fixed Object	Clear	Daylight	Not Involved	Not Involved
23441740	5/19/2017	14:30	COORS NW	COORS AND BLUE WATER	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710441181	7/13/2017	16:14	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23337282	7/17/2017	7:30	COORS	BLUEWATER	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710441195	8/3/2017	13:45	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Fixed Object	Fixed Object - Sign or Sign Post (Traffic)	Collision with Fixed Object	Clear	Daylight	Not Involved	Not Involved
710369550	8/29/2017	8:00	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710408358	8/29/2017	16:00	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710401873	8/30/2017	15:24	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710408360	9/1/2017	19:00	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710446180	9/14/2017	7:35	COORS BL NW	BLUEWATER BL NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710446181	9/14/2017	9:06	COORS BL NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710405131	9/20/2017	21:04	COORS BLVD NW	BLUEWATER NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
23451119	9/27/2017	21:15	BLUEWATER & COORS	COORS	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
23451189	9/27/2017	19:50	COORS GOING NORTH AND BLUEWATER	BLUEWATER	Property Damage Only Crash	Other Vehicle	Invalid Code	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710447140	10/17/2017	14:46	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710442687	10/21/2017	16:45	BLUEWATER RD NW	COORS BLVD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710445624	10/25/2017	13:16	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710449179	11/2/2017	23:26	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710451412	11/20/2017	17:37	BLUEWATER RD NW	COORS BLVD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23465374	12/15/2017	9:50	COORS AND BLUE WATER		Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710449184	12/22/2017	6:10	COORS BLVD NW		Property Damage Only Crash	Fixed Object	Fixed Object - Median Raised Or Curb	Collision with Fixed Object	Clear	Dark-Lighted	Not Involved	Not Involved
710447734	1/25/2018	19:25	BLUEWATER RD NW	COORS BLVD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710454874	2/1/2018	11:09	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23486629	2/11/2018	5:50	BLUEWATER RD NW	COORS BLVD NW	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710460129	2/17/2018	21:55	BLUEWATER RD NW	COORS BLVD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Dark-Not Lighted	Not Involved	Not Involved
710456817	3/6/2018	16:44	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/All Others	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23486648	4/15/2018	Left Blank	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710537715	4/24/2018	9:13	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710542425	4/25/2018	15:53	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Pedestrian	Pedestrian Collision - Vehicle Turning Right	Collision with Person	Clear	Daylight	Involved	Not Involved
710457184	5/9/2018	0:58	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Dark-Not Lighted	Not Involved	Not Involved
710542656	5/13/2018	19:53	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710543051	5/16/2018	9:23	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710446197	6/5/2018	9:47	COORS BL NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23436632	6/19/2018	12:44	COORS NW	BLUEWATER NW	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Left Blank	Left Blank	Not Involved	Not Involved
710545204	6/30/2018	17:25	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710440939	7/15/2018	15:28	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710407047	7/30/2018	9:06	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Sideswipe Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23436922	8/19/2018	20:15	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Left Blank	Left Blank	Not Involved	Not Involved
710544726	9/19/2018	16:33	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Fixed Object	Fixed Object - Unknown/Not Stated	Collision with Fixed Object	Clear	Daylight	Not Involved	Not Involved

710445737	9/21/2018	14:55	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710548469	10/26/2018	15:59	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710445742	12/27/2018	18:14	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Snowing	Dark-Lighted	Not Involved	Not Involved
710556490	12/31/2018	12:09	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Fixed Object	Fixed Object - Shrubs/Vegetation	Collision with Fixed Object	Clear	Daylight	Not Involved	Not Involved
710557142	1/20/2019	14:06	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Fixed Object	Fixed Object - Median Raised Or Curb	Collision with Fixed Object	Clear	Daylight	Not Involved	Not Involved
710546025	1/26/2019	6:21	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
23469497	2/5/2019	9:31	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Left Blank	Left Blank	Not Involved	Not Involved
23469535	2/12/2019	15:45	COORS	BLUEWATER	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Left Blank	Left Blank	Not Involved	Not Involved
710560628	2/17/2019	15:03	COORS BLVD NW		Property Damage Only Crash	Fixed Object	Fixed Object - Fence (Wood, Brick, Stone)	Collision with Fixed Object	Clear	Daylight	Not Involved	Not Involved
710560916	3/12/2019	19:12	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Raining	Dark-Lighted	Not Involved	Not Involved
23479926	3/26/2019	18:07	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710565096	3/31/2019	17:00	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/One Stopped	Collision with Motor Vehicle	Raining	Daylight	Not Involved	Not Involved
23479980	4/1/2019	14:30	COORS	BLUEWATER	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Left Blank	Left Blank	Not Involved	Not Involved
710565027	4/6/2019	16:15	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710557771	4/8/2019	18:02	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710565030	4/20/2019	13:19	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23480205	5/14/2019	13:00	BLUE WATER	COORS	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Left Blank	Left Blank	Not Involved	Not Involved
710564823	6/3/2019	13:02	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710568086	6/6/2019	17:26	COORS BLVD NW		Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710663718	7/3/2019	20:40	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710562450	7/5/2019	22:08	BLUEWATER RD NW	COORS BLVD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Turn Left/Entering At Angle	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710570277	7/5/2019	9:48	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
23430979	7/15/2019	15:55	COORS SB	BLUEWATER	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Left Blank	Left Blank	Not Involved	Not Involved
23480006	7/15/2019	Left Blank	COORD BLVD	BLUEWATER	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Left Blank	Left Blank	Not Involved	Not Involved
710570287	7/25/2019	19:26	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Raining	Dark-Lighted	Not Involved	Not Involved
23431073	7/30/2019	15:15	COORS SB	BLUE WATER RD E	Property Damage Only Crash	Left Blank	Left Blank	Not Available	Left Blank	Left Blank	Not Involved	Not Involved
710544931	8/9/2019	11:51	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710571924	8/16/2019	17:50	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/One Stopped	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710574047	8/20/2019	14:57	BLUEWATER RD NW		Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710454548	9/11/2019	23:00	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710570923	9/17/2019	14:21	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/One Stopped	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710454472	10/5/2019	10:25	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
30259628	10/18/2019	18:30	COORS BLVD NW	BLUE WATER RD E	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710554014	10/28/2019	13:16	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710578563	12/7/2019	8:53	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710562311	12/11/2019	22:41	BLUEWATER RD NW	COORS BLVD NW	Injury Crash	Pedestrian	Pedestrian Collision - Vehicle Turning Right	Collision with Person	Clear	Dark-Lighted	Involved	Not Involved
30260561	12/17/2019	12:30	BLUE WATER	COORS	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710551160	1/3/2020	13:24	COORS BLVD NW	BLUEWATER	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Same Direction/Rear End Collision	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710566080	1/17/2020	10:35	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710580488	1/19/2020	14:18	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710583178	2/2/2020	20:01	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Other Vehicle	Other Vehicle - From Same Direction/Both Going Straight	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710583188	2/17/2020	17:35	BLUEWATER RD NW	COORS BLVD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - One Left Turn/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710577383	3/7/2020	13:10	BLUEWATER RD NW	COORS BLVD NW	Injury Crash	Overturn/Rollover	Overturn/Rollover - On The Road	Non-Collision	Clear	Daylight	Not Involved	Not Involved
710562492	6/10/2020	13:03	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710761628	7/25/2020	22:22	BLUEWATER RD NW	COORS BLVD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - Both Going Straight/Entering At Angle	Collision with Motor Vehicle	Raining	Dark-Lighted	Not Involved	Not Involved
710761629	8/9/2020	22:08	COORS BLVD NW	BLUEWATER RD NW	Fatal Crash	Other Vehicle	Other Vehicle - From Opposite Direction/One Left Turn	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710763266	8/14/2020	18:29	BLUEWATER RD NW	COORS BLVD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Fixed Object	Clear	Daylight	Not Involved	Not Involved
710763267	8/15/2020	17:39	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
30280459	9/17/2020	13:30	COORS SB	BLUE WATER RD E	Property Damage Only Crash	Left Blank	Invalid Code	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved
710758576	9/18/2020	5:21	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
30280608	9/23/2020	14:20	COORS BLVD	BLUEWATER	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
30280639	9/27/2020	10:30	COORS WB	BLUE WATER	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710768054	10/1/2020	15:57	COORS BLVD NW		Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
30280829	10/8/2020	21:00	BLUE WATER WB	COORS BLVD NW	Property Damage Only Crash	Left Blank	Invalid Code	Left Blank	Left Blank	Left Blank	Not Involved	Not Involved
710767045	10/10/2020	13:51	COORS BL NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710577078	10/24/2020	13:31	COORS BLVD NW		Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710554556	11/24/2020	18:49	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710758423	11/24/2020	18:15	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Pedestrian	Pedestrian Collision - Vehicle Going Straight	Collision with Person	Clear	Dark-Lighted	Involved	Not Involved
710772604	12/22/2020	12:09	COORS BLVD NW		Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710772859	1/1/2021	20:21	COORS BL NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710772862	1/4/2021	16:20	COORS BL NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dusk	Not Involved	Not Involved
30282377	1/13/2021	22:45	COORS BLVD	BLUEWATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
30282468	1/28/2021	17:00	COORS SB	BLUEWATER	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710775476	1/31/2021	17:26	COORS BL NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dusk	Not Involved	Not Involved
30282668	2/6/2021	11:30	COORS BLVD NW	BLUE WATER RD NW	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
30283030	3/2/2021	15:00	COORS SB	BLUEWATER	Property Damage Only Crash	Left Blank	Invalid Code	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710776553	4/17/2021	4:50	BLUEWATER RD NW	COORS BLVD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Fixed Object	Clear	Dark-Lighted	Not Involved	Not Involved
710770785	4/19/2021	23:51	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710782403	4/25/2021	15:50	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
30295741	5/30/2021	12:35	COORS BLVD	BLUEWATER	Property Damage Only Crash	Other Vehicle	Other Vehicle - From Opposite Direction	Collision with Motor Vehicle	Left Blank	Daylight	Not Involved	Not Involved
710787582	7/4/2021	11:55	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
710788824	7/12/2021	20:16	COORS BL NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Fixed Object	Clear	Dusk	Not Involved	Not Involved
710769266	7/14/2021	14:10	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Fixed Object	Clear	Daylight	Not Involved	Not Involved
710758841	7/18/2021	21:29	COORS BLVD NW	BLUEWATER RD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dark-Lighted	Not Involved	Not Involved
710782806	7/31/2021	8:43	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved
30297862	8/2/2021	16:00	COORS BLVD SB	BLUEWATER	Property Damage Only Crash	Other Vehicle	Left Blank	Collision with Motor Vehicle	Left Blank	Left Blank	Not Involved	Not Involved
710773221	9/2/2021	18:54	BLUEWATER RD NW	COORS BLVD NW	Property Damage Only Crash	Left Blank	Left Blank	Collision with Motor Vehicle	Clear	Dusk	Not Involved	Not Involved

30298723	9/7/2021	10:00	COORS BLVD NW	BLUE WATER RD E	Property Damage Only Crash	Left Blank		Invalid Code	Collision with Motor Vehicle	Clear	Dark-Not Lighted	Not Involved	Not Involved	
710794803	9/18/2021	21:08	BLUEWATER RD NW	COORS BLVD NW	Injury Crash	Left Blank		Left Blank	Collision with Person	Clear	Dark-Lighted	Involved	Not Involved	
710795628	9/27/2021	17:14	COORS BLVD SW NM 45	BLUEWATER RD NW	Property Damage Only Crash	Left Blank		Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved	
710782694	11/6/2021	9:45	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Left Blank		Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved	
710786292	11/20/2021	15:46	BLUEWATER RD NW	COORS BLVD NW	Injury Crash	Left Blank		Left Blank	Collision with Motor Vehicle	Clear	Daylight	Not Involved	Not Involved	
710805989	12/3/2021	17:53	COORS BLVD NW	BLUEWATER RD NW	Injury Crash	Left Blank		Left Blank	Collision with Motor Vehicle	Clear	Dark-Not Lighted	Not Involved	Not Involved	

Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

October 26, 2023

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Report Overview

Report Generated: Oct 26, 2023 12:39 PM
Report Template: System: Single Page, 508 Compliant [System] (sscpm5, Oct 24, 2023 2:42 PM)

Evaluation Date: Thu Oct 26 12:39:34 MDT 2023
IHSDM Version: v17.0.0 (Sep 22, 2021)
Site Set Crash Prediction Module: v|ModuleInfo.moduleVersion| (|ModuleInfo.moduleDate|)

User Name: tyler.smith
Organization Name: kimley-horn
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E-Mail: tyler.smith@kimley-horn.com

Project Title: ABB Expansion 2025 Existing Conditions
Project Comment: Created using wizard
Project Unit System: U.S. Customary

Site Set: ABB Expansion 2025 Existing Conditions
Site Set Comment: Created Thu Oct 26 12:09:09 MDT 2023
Site Set Version: v1

Evaluation Title: ABB Expansion 2025 Existing Conditions
Evaluation Comment: Created Thu Oct 26 12:39:03 MDT 2023
Policy for Superelevation: AASHTO 2011 U.S. Customary
Calibration: HSM Configuration
Crash Distribution: HSM Configuration
Model/CMF: HSM Configuration

First Year of Analysis: 2025
Last Year of Analysis: 2025
Empirical-Bayes Analysis: None

Disclaimer Regarding Crash Prediction Method

IMPORTANT NOTICE ABOUT COMPARING RESULTS FROM HIGHWAY SAFETY MANUAL FIRST EDITION (2010) MODELS TO RESULTS FROM NEW MODELS DEVELOPED UNDER NCHRP PROJECTS 17-70, 17-58, AND 17-68

Since the publication of the Highway Safety Manual - First Edition (HSM-1), in 2010 by the American Association of State Highway and Transportation Officials (AASHTO), multiple research efforts have been undertaken through the National

Cooperative Highway Research Program (NCHRP) to develop safety performance models for road segment and intersection facility types that were not initially reflected in the HSM-1, in order to expand the breadth and depth of the HSM in the future.

The IHSDM Crash Prediction Module (CPM) is intended as a faithful implementation of HSM Part C predictive methods. As NCHRP projects to develop new predictive methods for the HSM are completed, FHWA works to incorporate the new methods into IHSDM, sometimes in advance of publication in the HSM. The following new crash predictive methods have been accepted by NCHRP project panels and incorporated into IHSDM, while pending AASHTO's approval for incorporation into a future edition of the HSM:

- Roundabouts: completed in 2018 under NCHRP Project 17-70, the new methods will provide improved outcomes for the safety analysis of roundabouts.
- 6+ lane and one-way urban/suburban arterials (including models for segments and intersections): completed under NCHRP Project 17-58.
- Intersection crash prediction methods for some intersection configurations and traffic control types not currently addressed in the HSM (e.g., all-way stop; rural 3-leg signalized; 3-leg stop-controlled where the major leg turns; urban 5-leg signalized; urban high-speed intersections): completed in 2021 under NCHRP Project 17-68.

However, in the absence of local calibration factors (see HSM-1 Part C, Appendix A for guidance on calibration of the predictive models), it is neither appropriate nor advisable to directly compare the results from new models (from NCHRP Projects 17-58, 17-68, and 17-70) to results from HSM-1 models, as the models were not calibrated to the same base state data sets, and consequently can produce unexpected results. If local calibration factors are available and applied to both new models and HSM-1 models, then it may be appropriate to directly compare the results.*[Note: Work being performed under NCHRP Project 17-72 (Update of Crash Modification Factors for the Highway Safety Manual) is expected to re-calibrate many of the old (HSM-1) and new (e.g., NCHRP 17-70) models to data from a single (or small number of) states, that would allow results from all models to be directly compared.]*

The models produced for NCHRP Project 17-70 have independent value in terms of informing the design of a roundabout and assessing the effects of different design characteristics on the expected safety performance of a roundabout.

The HSM-1 interim method previously included in IHSDM for evaluating roundabouts on urban/suburban arterials (i.e., evaluating an existing intersection and then applying a Crash Modification Factor for replacing the existing intersection with a roundabout) has been deactivated in IHSDM, to minimize any confusion with the new roundabout methodology.

Section Types

Urban Arterial Site Set CPM Evaluation

Site Type

Type: 3ST
Calibration Factor: 1

Table 1. Evaluation and Crash Data (CSD) (if applicable) Intersection Sites

Site No.	Type	Highway	Site Description	Major AADT	Minor AADT	Number of Approaches with Left-Turn Lanes	Number of Approaches with Right-Turn Lanes	Presence of Lighting
1	3ST2x2le5	Bluewater Rd & Airport Rd (W)	TWSC	2025: 5450	2025: 1800	1	0	no
2	3ST2x2le5	Bluewater Rd & Camino Azul	TWSC	2025: 6650	2025: 3100	2	1	yes
3	3ST2x2le5	Bluewater Rd W. Access	TWSC	2025: 5950	2025: 400	1	0	no
4	3ST2x2le5	Bluewater Rd E. Access	TWSC	2025: 5900	2025: 1200	1	0	no

Table 2. Predicted Crash Frequencies and Rates by Site

Site No.	Type	Highway	Site Description	Total Predicted Crashes for Evaluation Period	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	Predicted Intersection Travel Crash Rate (crashes/million veh)	Intersection Crash Rate (crashes/yr)
1	3ST	Bluewater Rd & Airport Rd (W)	TWSC	0.471	0.4712	0.1788	0.2925	0.20	0.4712
2	3ST	Bluewater Rd & Camino Azul	TWSC	0.371	0.3715	0.1331	0.2384	0.12	0.3715
3	3ST	Bluewater Rd W. Access	TWSC	0.263	0.2632	0.1153	0.1479	0.12	0.2632
4	3ST	Bluewater Rd E. Access	TWSC	0.422	0.4218	0.1663	0.2555	0.18	0.4218
		Total	Total	1.528	1.5277	0.5935	0.9342	0.15	1.5277

Table 3. Predicted Crash Frequencies by Year (3ST)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	1.53	0.59	38.847	0.93	61.153
Total	1.53	0.59	38.847	0.93	61.153
Average	1.53	0.59	38.847	0.93	61.153

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 4. Predicted 3ST Crash Type Distribution

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Intersection	Collision with Animal	0.00	0.0	0.01	0.3	0.01	0.3
Intersection	Collision with Bicycle	0.02	1.5	0.00	0.0	0.02	1.5
Intersection	Collision with Fixed Object	0.10	6.7	0.22	14.7	0.33	21.4
Intersection	Non-Collision	0.01	0.9	0.01	0.5	0.02	1.4
Intersection	Collision with Other Object	0.01	0.8	0.03	1.6	0.04	2.4
Intersection	Other Single-vehicle Collision	0.01	0.3	0.01	0.4	0.01	0.7
Intersection	Collision with Parked Vehicle	0.00	0.0	0.00	0.1	0.00	0.1
Intersection	Collision with Pedestrian	0.03	2.0	0.00	0.0	0.03	2.0
Intersection	Total Intersection Single Vehicle Crashes	0.19	12.4	0.27	17.6	0.46	29.9
Intersection	Angle Collision	0.14	9.1	0.17	11.4	0.31	20.5
Intersection	Head-on Collision	0.02	1.2	0.01	1.0	0.03	2.2
Intersection	Other Multi-vehicle Collision	0.03	1.7	0.16	10.2	0.18	12.0
Intersection	Rear-end Collision	0.17	11.2	0.29	19.2	0.46	30.3
Intersection	Sideswipe	0.05	3.3	0.03	1.7	0.08	5.1
Intersection	Total Intersection Multiple Vehicle Crashes	0.41	26.5	0.67	43.6	1.07	70.1
Intersection	Total Intersection Crashes	0.59	38.8	0.93	61.2	1.53	100.0
	Total Crashes	0.59	38.8	0.93	61.2	1.53	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Site Type

Type: 4ST
Calibration Factor: 1

Table 5. Evaluation and Crash Data (CSD) (if applicable) Intersection Sites

Site No.	Type	Highway	Site Description	Major AADT	Minor AADT	Number of Approaches with Left-Turn Lanes	Number of Approaches with Right-Turn Lanes	Presence of Lighting
1	4ST2x2le5	Bluewater Rd & Airport Rd (East)	TWSC	2025: 5950	2025: 1200	2	0	no

Table 6. Predicted Crash Frequencies and Rates by Site

Site No.	Type	Highway	Site Description	Total Predicted Crashes for Evaluation Period	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	Predicted Intersection Travel Crash Rate (crashes/million veh)	Intersection Crash Rate (crashes/yr)
1	4ST	Bluewater Rd & Airport Rd (East)	TWSC	0.661	0.6608	0.2417	0.4191	0.25	0.6608
		Total	Total	0.661	0.6608	0.2417	0.4191	0.25	0.6608

Table 7. Predicted Crash Frequencies by Year (4ST)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	0.66	0.24	36.579	0.42	63.421
Total	0.66	0.24	36.579	0.42	63.421
Average	0.66	0.24	36.579	0.42	63.421

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 8. Predicted 4ST Crash Type Distribution

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Intersection	Collision with Animal	0.00	0.0	0.00	0.3	0.00	0.3
Intersection	Collision with Bicycle	0.01	1.7	0.00	0.0	0.01	1.7
Intersection	Collision with Fixed Object	0.02	3.5	0.06	9.2	0.08	12.7
Intersection	Non-Collision	0.01	0.9	0.00	0.5	0.01	1.5
Intersection	Collision with Other Object	0.00	0.5	0.01	0.8	0.01	1.2
Intersection	Other Single-vehicle Collision	0.00	0.3	0.00	0.1	0.00	0.3
Intersection	Collision with Parked Vehicle	0.00	0.0	0.00	0.0	0.00	0.0
Intersection	Collision with Pedestrian	0.01	2.1	0.00	0.0	0.01	2.1
Intersection	Total Intersection Single Vehicle Crashes	0.06	9.0	0.07	10.9	0.13	19.9
Intersection	Angle Collision	0.08	12.1	0.12	17.6	0.20	29.7
Intersection	Head-on Collision	0.01	1.1	0.01	1.6	0.02	2.7
Intersection	Other Multi-vehicle Collision	0.01	1.7	0.07	11.4	0.09	13.1
Intersection	Rear-end Collision	0.06	9.3	0.13	19.7	0.19	29.0
Intersection	Sideswipe	0.02	3.3	0.01	2.3	0.04	5.7
Intersection	Total Intersection Multiple Vehicle Crashes	0.18	27.6	0.35	52.6	0.53	80.1
Intersection	Total Intersection Crashes	0.24	36.6	0.42	63.4	0.66	100.0
	Total Crashes	0.24	36.6	0.42	63.4	0.66	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Site Type

Type: 4SG
Calibration Factor: 1

Table 9. Evaluation and Crash Data (CSD) (if applicable) Intersection Sites

Site No.	Type	Highway	Site Description	Major AADT	Minor AADT	Number of Approaches with Left-Turn Lanes	Number of Approaches with Right-Turn Lanes	Presence of Lighting	Number of Approaches with Permissive Left-Turn Phasing	Number of Approaches with Permissive/Protected or Protected/Permissive Left-Turn Phasing	Number of Approaches with Protected Left-Turn Phasing	Number of Approaches on which Right Turn on Red is Prohibited	Presence of Red-Light Cameras	Pedestrian Volumes Crossing all Intersection Legs (crossings/day)	Max. Number of Lanes Crossed by Pedestrians	Number of Bus Stops within 1000 ft of Intersection	Number of Schools within 1000 ft of Intersection	Number of Alcohol Sales Establishments within 1000 ft of Intersection
1	4SG2x2le5	Bluewater Rd & Unser Blvd	Signal	2025: 30800	2025: 5750	4	3	yes	1	3	0	4	no	50	4	0	0	0
2	4SG2x2le5	Bluewater Rd & Coors Blvd	Signal	2025: 31650	2025: 5350	4	2	yes	1	3	0	4	no	50	4	4	0	1

Table 10. Predicted Crash Frequencies and Rates by Site

Site No.	Type	Highway	Site Description	Total Predicted Crashes for Evaluation Period	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	Predicted Intersection Travel Crash Rate (crashes/million veh)	Intersection Crash Rate (crashes/yr)
1	4SG	Bluewater Rd & Unser Blvd	Signal	3.997	3.9971	1.4105	2.5867	0.30	3.9971
2	4SG	Bluewater Rd & Coors Blvd	Signal	4.303	4.3035	1.5720	2.7315	0.32	4.3035
		Total	Total	8.301	8.3006	2.9824	5.3182	0.31	8.3006

Table 11. Predicted Crash Frequencies by Year (4SG)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	8.30	2.98	35.930	5.32	64.070
Total	8.30	2.98	35.930	5.32	64.070
Average	8.30	2.98	35.930	5.32	64.070

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 12. Predicted 4SG Crash Type Distribution

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Intersection	Collision with Animal	0.00	0.0	0.00	0.0	0.00	0.0
Intersection	Collision with Bicycle	0.12	1.5	0.00	0.0	0.12	1.5
Intersection	Collision with Fixed Object	0.07	0.9	0.28	3.3	0.35	4.2
Intersection	Non-Collision	0.01	0.2	0.01	0.1	0.03	0.3
Intersection	Collision with Other Object	0.01	0.1	0.02	0.3	0.03	0.4
Intersection	Other Single-vehicle Collision	0.00	0.0	0.01	0.1	0.01	0.1
Intersection	Collision with Parked Vehicle	0.00	0.0	0.00	0.0	0.00	0.0
Intersection	Collision with Pedestrian	0.12	1.4	0.00	0.0	0.12	1.4
Intersection	Total Intersection Single Vehicle Crashes	0.34	4.1	0.32	3.8	0.66	7.9
Intersection	Angle Collision	0.92	11.1	1.22	14.7	2.14	25.8
Intersection	Head-on Collision	0.13	1.6	0.15	1.8	0.28	3.4
Intersection	Other Multi-vehicle Collision	0.14	1.8	1.05	12.7	1.20	14.5
Intersection	Rear-end Collision	1.19	14.3	2.42	29.1	3.60	43.4
Intersection	Sideswipe	0.26	3.2	0.16	1.9	0.42	5.1
Intersection	Total Intersection Multiple Vehicle Crashes	2.65	31.9	5.00	60.2	7.64	92.1
Intersection	Total Intersection Crashes	2.98	35.9	5.32	64.1	8.30	100.0
	Total Crashes	2.98	35.9	5.32	64.1	8.30	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Interactive Highway Safety Design Model

Crash Prediction Evaluation Report

October 26, 2023

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Report Overview

Report Generated: Oct 26, 2023 12:51 PM
Report Template: System: Single Page, 508 Compliant [System] (sscpm5, Oct 24, 2023 2:42 PM)

Evaluation Date: Thu Oct 26 12:51:35 MDT 2023
IHSDM Version: v17.0.0 (Sep 22, 2021)
Site Set Crash Prediction Module: v|ModuleInfo.moduleVersion| (|ModuleInfo.moduleDate|)

User Name: tyler.smith
Organization Name: kimley-horn
Phone:
E-Mail: tyler.smith@kimley-horn.com

Project Title: ABB Expansion 2025 Existing Conditions
Project Comment: Created using wizard
Project Unit System: U.S. Customary

Site Set: ABB Expansion 2025 Total Conditions
Site Set Comment: Copied from ABB Expansion 2025 Existing Conditions (v1)
Site Set Version: v1

Evaluation Title: ABB Expansion 2025 Total Condition
Evaluation Comment: Created Thu Oct 26 12:51:12 MDT 2023
Policy for Superelevation: AASHTO 2011 U.S. Customary
Calibration: HSM Configuration
Crash Distribution: HSM Configuration
Model/CMF: HSM Configuration

First Year of Analysis: 2025
Last Year of Analysis: 2025
Empirical-Bayes Analysis: None

Disclaimer Regarding Crash Prediction Method

IMPORTANT NOTICE ABOUT COMPARING RESULTS FROM HIGHWAY SAFETY MANUAL FIRST EDITION (2010) MODELS TO RESULTS FROM NEW MODELS DEVELOPED UNDER NCHRP PROJECTS 17-70, 17-58, AND 17-68

Since the publication of the Highway Safety Manual - First Edition (HSM-1), in 2010 by the American Association of State Highway and Transportation Officials (AASHTO), multiple research efforts have been undertaken through the National

Cooperative Highway Research Program (NCHRP) to develop safety performance models for road segment and intersection facility types that were not initially reflected in the HSM-1, in order to expand the breadth and depth of the HSM in the future.

The IHSDM Crash Prediction Module (CPM) is intended as a faithful implementation of HSM Part C predictive methods. As NCHRP projects to develop new predictive methods for the HSM are completed, FHWA works to incorporate the new methods into IHSDM, sometimes in advance of publication in the HSM. The following new crash predictive methods have been accepted by NCHRP project panels and incorporated into IHSDM, while pending AASHTO's approval for incorporation into a future edition of the HSM:

- Roundabouts: completed in 2018 under NCHRP Project 17-70, the new methods will provide improved outcomes for the safety analysis of roundabouts.
- 6+ lane and one-way urban/suburban arterials (including models for segments and intersections): completed under NCHRP Project 17-58.
- Intersection crash prediction methods for some intersection configurations and traffic control types not currently addressed in the HSM (e.g., all-way stop; rural 3-leg signalized; 3-leg stop-controlled where the major leg turns; urban 5-leg signalized; urban high-speed intersections): completed in 2021 under NCHRP Project 17-68.

However, in the absence of local calibration factors (see HSM-1 Part C, Appendix A for guidance on calibration of the predictive models), it is neither appropriate nor advisable to directly compare the results from new models (from NCHRP Projects 17-58, 17-68, and 17-70) to results from HSM-1 models, as the models were not calibrated to the same base state data sets, and consequently can produce unexpected results. If local calibration factors are available and applied to both new models and HSM-1 models, then it may be appropriate to directly compare the results.*[Note: Work being performed under NCHRP Project 17-72 (Update of Crash Modification Factors for the Highway Safety Manual) is expected to re-calibrate many of the old (HSM-1) and new (e.g., NCHRP 17-70) models to data from a single (or small number of) states, that would allow results from all models to be directly compared.]*

The models produced for NCHRP Project 17-70 have independent value in terms of informing the design of a roundabout and assessing the effects of different design characteristics on the expected safety performance of a roundabout.

The HSM-1 interim method previously included in IHSDM for evaluating roundabouts on urban/suburban arterials (i.e., evaluating an existing intersection and then applying a Crash Modification Factor for replacing the existing intersection with a roundabout) has been deactivated in IHSDM, to minimize any confusion with the new roundabout methodology.

Section Types

Urban Arterial Site Set CPM Evaluation

Site Type

Type: 3ST
Calibration Factor: 1

Table 1. Evaluation and Crash Data (CSD) (if applicable) Intersection Sites

Site No.	Type	Highway	Site Description	Major AADT	Minor AADT	Number of Approaches with Left-Turn Lanes	Number of Approaches with Right-Turn Lanes	Presence of Lighting
1	3ST2x2le5	Bluewater Rd & Airport Rd (W)	TWSC	2025: 5590	2025: 1800	1	0	no
2	3ST2x2le5	Bluewater Rd & Camino Azul	TWSC	2025: 6820	2025: 3100	2	1	yes
3	3ST2x2le5	Bluewater Rd W. Access	TWSC	2025: 6045	2025: 490	1	0	no
4	3ST2x2le5	Bluewater Rd E. Access	TWSC	2025: 6010	2025: 1420	1	0	no

Table 2. Predicted Crash Frequencies and Rates by Site

Site No.	Type	Highway	Site Description	Total Predicted Crashes for Evaluation Period	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	Predicted Intersection Travel Crash Rate (crashes/million veh)	Intersection Crash Rate (crashes/yr)
1	3ST	Bluewater Rd & Airport Rd (W)	TWSC	0.481	0.4813	0.1825	0.2988	0.20	0.4813
2	3ST	Bluewater Rd & Camino Azul	TWSC	0.380	0.3797	0.1360	0.2437	0.12	0.3797
3	3ST	Bluewater Rd W. Access	TWSC	0.291	0.2914	0.1253	0.1662	0.13	0.2914
4	3ST	Bluewater Rd E. Access	TWSC	0.461	0.4612	0.1788	0.2824	0.19	0.4612
		Total	Total	1.614	1.6136	0.6226	0.9910	0.16	1.6136

Table 3. Predicted Crash Frequencies by Year (3ST)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	1.61	0.62	38.583	0.99	61.417
Total	1.61	0.62	38.583	0.99	61.417
Average	1.61	0.62	38.583	0.99	61.417

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 4. Predicted 3ST Crash Type Distribution

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Intersection	Collision with Animal	0.00	0.0	0.01	0.3	0.01	0.3
Intersection	Collision with Bicycle	0.03	1.5	0.00	0.0	0.03	1.5
Intersection	Collision with Fixed Object	0.11	6.6	0.23	14.5	0.34	21.1
Intersection	Non-Collision	0.01	0.9	0.01	0.5	0.02	1.4
Intersection	Collision with Other Object	0.01	0.8	0.03	1.6	0.04	2.4
Intersection	Other Single-vehicle Collision	0.01	0.3	0.01	0.4	0.01	0.7
Intersection	Collision with Parked Vehicle	0.00	0.0	0.00	0.1	0.00	0.1
Intersection	Collision with Pedestrian	0.03	2.0	0.00	0.0	0.03	2.0
Intersection	Total Intersection Single Vehicle Crashes	0.20	12.2	0.28	17.4	0.48	29.7
Intersection	Angle Collision	0.15	9.0	0.19	11.5	0.33	20.6
Intersection	Head-on Collision	0.02	1.2	0.02	1.0	0.04	2.2
Intersection	Other Multi-vehicle Collision	0.03	1.7	0.17	10.3	0.19	12.1
Intersection	Rear-end Collision	0.18	11.1	0.31	19.4	0.49	30.4
Intersection	Sideswipe	0.05	3.3	0.03	1.8	0.08	5.1
Intersection	Total Intersection Multiple Vehicle Crashes	0.42	26.3	0.71	44.0	1.14	70.3
Intersection	Total Intersection Crashes	0.62	38.6	0.99	61.4	1.61	100.0
	Total Crashes	0.62	38.6	0.99	61.4	1.61	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Site Type

Type: 4ST
Calibration Factor: 1

Table 5. Evaluation and Crash Data (CSD) (if applicable) Intersection Sites

Site No.	Type	Highway	Site Description	Major AADT	Minor AADT	Number of Approaches with Left-Turn Lanes	Number of Approaches with Right-Turn Lanes	Presence of Lighting
1	4ST2x2le5	Bluewater Rd & Airport Rd (East)	TWSC	2025: 6090	2025: 1200	2	0	no

Table 6. Predicted Crash Frequencies and Rates by Site

Site No.	Type	Highway	Site Description	Total Predicted Crashes for Evaluation Period	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	Predicted Intersection Travel Crash Rate (crashes/million veh)	Intersection Crash Rate (crashes/yr)
1	4ST	Bluewater Rd & Airport Rd (East)	TWSC	0.672	0.6723	0.2464	0.4259	0.25	0.6723
		Total	Total	0.672	0.6723	0.2464	0.4259	0.25	0.6723

Table 7. Predicted Crash Frequencies by Year (4ST)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	0.67	0.25	36.647	0.43	63.353
Total	0.67	0.25	36.647	0.43	63.353
Average	0.67	0.25	36.647	0.43	63.353

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 8. Predicted 4ST Crash Type Distribution

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Intersection	Collision with Animal	0.00	0.0	0.00	0.3	0.00	0.3
Intersection	Collision with Bicycle	0.01	1.7	0.00	0.0	0.01	1.7
Intersection	Collision with Fixed Object	0.02	3.5	0.06	9.1	0.09	12.6
Intersection	Non-Collision	0.01	0.9	0.00	0.5	0.01	1.4
Intersection	Collision with Other Object	0.00	0.5	0.01	0.8	0.01	1.2
Intersection	Other Single-vehicle Collision	0.00	0.3	0.00	0.1	0.00	0.3
Intersection	Collision with Parked Vehicle	0.00	0.0	0.00	0.0	0.00	0.0
Intersection	Collision with Pedestrian	0.01	2.1	0.00	0.0	0.01	2.1
Intersection	Total Intersection Single Vehicle Crashes	0.06	8.9	0.07	10.8	0.13	19.7
Intersection	Angle Collision	0.08	12.2	0.12	17.6	0.20	29.8
Intersection	Head-on Collision	0.01	1.1	0.01	1.6	0.02	2.7
Intersection	Other Multi-vehicle Collision	0.01	1.7	0.08	11.4	0.09	13.1
Intersection	Rear-end Collision	0.06	9.4	0.13	19.7	0.20	29.0
Intersection	Sideswipe	0.02	3.4	0.02	2.3	0.04	5.7
Intersection	Total Intersection Multiple Vehicle Crashes	0.19	27.7	0.35	52.6	0.54	80.3
Intersection	Total Intersection Crashes	0.25	36.6	0.43	63.4	0.67	100.0
	Total Crashes	0.25	36.6	0.43	63.4	0.67	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Site Type

Type: 4SG
Calibration Factor: 1

Table 9. Evaluation and Crash Data (CSD) (if applicable) Intersection Sites

Site No.	Type	Highway	Site Description	Major AADT	Minor AADT	Number of Approaches with Left-Turn Lanes	Number of Approaches with Right-Turn Lanes	Presence of Lighting	Number of Approaches with Permissive Left-Turn Phasing	Number of Approaches with Permissive/Protected or Protected/Permissive Left-Turn Phasing	Number of Approaches with Protected Left-Turn Phasing	Number of Approaches on which Right Turn on Red is Prohibited	Presence of Red-Light Cameras	Pedestrian Volumes Crossing all Intersection Legs (crossings/day)	Max. Number of Lanes Crossed by Pedestrians	Number of Bus Stops within 1000 ft of Intersection	Number of Schools within 1000 ft of Intersection	Number of Alcohol Sales Establishments within 1000 ft of Intersection
1	4SG2x2le5	Bluewater Rd & Unser Blvd	Signal	2025: 30850	2025: 5845	4	3	yes	1	3	0	4	no	50	4	0	0	0
2	4SG2x2le5	Bluewater Rd & Coors Blvd	Signal	2025: 31720	2025: 5450	4	2	yes	1	3	0	4	no	50	4	4	0	1

Table 10. Predicted Crash Frequencies and Rates by Site

Site No.	Type	Highway	Site Description	Total Predicted Crashes for Evaluation Period	Predicted Total Crash Frequency (crashes/yr)	Predicted FI Crash Frequency (crashes/yr)	Predicted PDO Crash Frequency (crashes/yr)	Predicted Intersection Travel Crash Rate (crashes/million veh)	Intersection Crash Rate (crashes/yr)
1	4SG	Bluewater Rd & Unser Blvd	Signal	4.019	4.0192	1.4182	2.6010	0.30	4.0192
2	4SG	Bluewater Rd & Coors Blvd	Signal	4.332	4.3320	1.5823	2.7496	0.32	4.3320
		Total	Total	8.351	8.3512	3.0005	5.3507	0.31	8.3512

Table 11. Predicted Crash Frequencies by Year (4SG)

Year	Total Crashes	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)
2025	8.35	3.00	35.929	5.35	64.070
Total	8.35	3.00	35.929	5.35	64.070
Average	8.35	3.00	35.929	5.35	64.070

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.

Table 12. Predicted 4SG Crash Type Distribution

Element Type	Crash Type	FI Crashes	Percent FI (%)	PDO Crashes	Percent PDO (%)	Total Crashes	Percent Total (%)
Intersection	Collision with Animal	0.00	0.0	0.00	0.0	0.00	0.0
Intersection	Collision with Bicycle	0.12	1.5	0.00	0.0	0.12	1.5
Intersection	Collision with Fixed Object	0.07	0.9	0.28	3.3	0.35	4.2
Intersection	Non-Collision	0.01	0.2	0.01	0.1	0.03	0.3
Intersection	Collision with Other Object	0.01	0.1	0.02	0.3	0.03	0.4
Intersection	Other Single-vehicle Collision	0.00	0.0	0.01	0.1	0.01	0.1
Intersection	Collision with Parked Vehicle	0.00	0.0	0.00	0.0	0.00	0.0
Intersection	Collision with Pedestrian	0.12	1.4	0.00	0.0	0.12	1.4
Intersection	Total Intersection Single Vehicle Crashes	0.34	4.1	0.32	3.8	0.66	7.9
Intersection	Angle Collision	0.92	11.1	1.23	14.7	2.15	25.8
Intersection	Head-on Collision	0.13	1.6	0.15	1.8	0.28	3.4
Intersection	Other Multi-vehicle Collision	0.15	1.8	1.06	12.7	1.21	14.5
Intersection	Rear-end Collision	1.20	14.3	2.43	29.1	3.63	43.4
Intersection	Sideswipe	0.26	3.2	0.16	1.9	0.42	5.1
Intersection	Total Intersection Multiple Vehicle Crashes	2.66	31.9	5.03	60.2	7.69	92.1
Intersection	Total Intersection Crashes	3.00	35.9	5.35	64.1	8.35	100.0
	Total Crashes	3.00	35.9	5.35	64.1	8.35	100.0

Note: *Fatal and Injury Crashes* and *Property Damage Only Crashes* do not necessarily sum up to *Total Crashes* because the distribution of these three crashes had been derived independently.