14.D – Traffic Impact Analysis

ARFF Station Consolidation & New Fumigation Facility

Traffic Impact Analysis (TIA)

DFW

Prepared For:

Dallas / Fort Worth International Airport

August 2020

GARVER

GarverUSA.com

ARFF Station Consolidation & New Fumigation Facility

Traffic Impact Analysis (TIA)

Prepared by:

14160 N. Dallas Parkway, Suite 850
Dallas, Texas 75254

August 26, 2020

Garver Project No.: 17081223

Table of Contents

Table of Contents ii
List of Figures ii
List of Tables iii
List of Appendices iii
1.0 Introduction 1
2.0 ARFF Stations and Fumigation Facility 1
3.0 Existing Conditions 5
3.1 Roadway System 5
3.2 Study Intersections 5
3.3 Traffic Volumes 6
4.0 Operational Analysis 11
4.1 Operational Analysis - 2020 Existing Scenario 12
4.2 Operational Analysis - 2023 No Build Scenario 13
5.0 Future Traffic Conditions 14
5.1 Trip Generation and Volume Development 14
5.2 Operational Analysis – Future Conditions 19
6.0 Summary and Conclusions 21

List of Figures

Figure 1: Construction Site Plan – West ARFF 2
Figure 2: Construction Site Plan – East ARFF 3
Figure 3: Construction Site Plan – Fumigation Facility 4
Figure 4: Vicinity Map 6
Figure 2: 2020 Existing Volumes – West Airfield Drive 7
Figure 3: 2020 Existing Volumes – East Airfield Drive 8
Figure 4: 2023 No Build Volumes – West Airfield Drive 9
Figure 5: 2023 No Build Volumes – East Airfield Drive 10
Figure 6: 2023 Build Volumes – West Airfield Drive 15
Figure 7: 2023 Build Volumes – East Airfield Drive 16
Figure 8: 2028 Build Volumes – West Airfield Drive 17
Figure 9: 2028 Build Volumes – East Airfield Drive 18

List of Tables

Table 1: LOS Thresholds for Intersections (Control Delay) 11
Table 2: 2020 Existing Conditions – West Airfield Drive 12
Table 3: 2020 Existing Conditions – East Airfield Drive 12
Table 4: 2023 No Build Conditions – West Airfield Drive 13
Table 5: 2023 No Build Conditions – East Airfield Drive 13
Table 6: 2023 Build Conditions – West Airfield Drive 19
Table 7: 2023 Build Conditions – East Airfield Drive 19
Table 8: 2028 Build Conditions – West Airfield Drive 20
Table 9: 2028 Build Conditions – East Airfield Drive 20

List of Appendices

Appendix A Traffic Data
Appendix B Operational Analysis Results

1.0 Introduction

At the request of Dallas Fort Worth International Airport (DFW), Garver conducted a Traffic Impact Analysis to determine the impact of two proposed Aircraft Rescue and Fire Fighting (ARFF) Stations: East ARFF Station and West ARFF Station, and a new Fumigation facility to the existing roadway system. The new ARFF stations will consolidate and replace existing ARFF stations. Existing ARFF stations 1 and 3 will be replaced by the East ARFF Station, and the existing ARFF stations 2 and 4 will be replaced by the West ARFF Station. In addition, a new building will be constructed to replace the existing Fumigation building.

The study specifically addresses how the proposed ARFF stations and Fumigation facility will impact the capacity and level of service of the following study intersections:

- West ARFF Station
  - West Airfield Drive and West 21st Street
  - West Airfield Drive and West 23rd Street
  - West Airfield Drive and East Glade Road
- East ARFF Station
  - East Airfield Drive and Carbon Road
  - East Airfield Drive and West Walnut Hill Lane

This study includes, but is not limited to the following items:

- Review traffic counts to determine peak hour volumes and directional distribution.
- Develop future conditions based upon trip generation and growth rates.
- Determine the effects on traffic operations as a result of the proposed ARFF stations and future growth.
- Establish any necessary improvements to ensure acceptable traffic operations

The traffic analysis techniques used in this study are those most commonly used in the traffic engineering profession. These techniques include distribution of traffic, capacity analysis, and level of service analysis.

2.0 ARFF Stations and Fumigation Facility

Two new ARFF stations are proposed to consolidate and replace four existing ARFF stations. Each station is approximately 48,000 square feet. The West ARFF station, which will replace existing ARFF stations 2 and 4, is located on West Airfield Drive, south of West 23rd Street. Access to the West ARFF station will use the existing access drives used by the existing Fumigation facility. The East ARFF station, which will replace existing ARFF stations 1 and 3, is located on the north terminus of East Airfield Drive and East 23rd Street. Access to the East ARFF will utilize the existing connection on East 23rd Street. The new Fumigation facility will be located on West 23rd Street in between the International Air Cargo Centre and UPS facilities. Access to the Fumigation facility will connect at the terminus of West 23rd Street. All site locations were previously studied as a part of the ARFF consolidation planning study prepared by Landrum and Brown. The construction site plans, provided by Gensler, for the West ARFF station, the East ARFF station, and the Fumigation facility are displayed in **Figures 1, 2, and 3**, respectively.

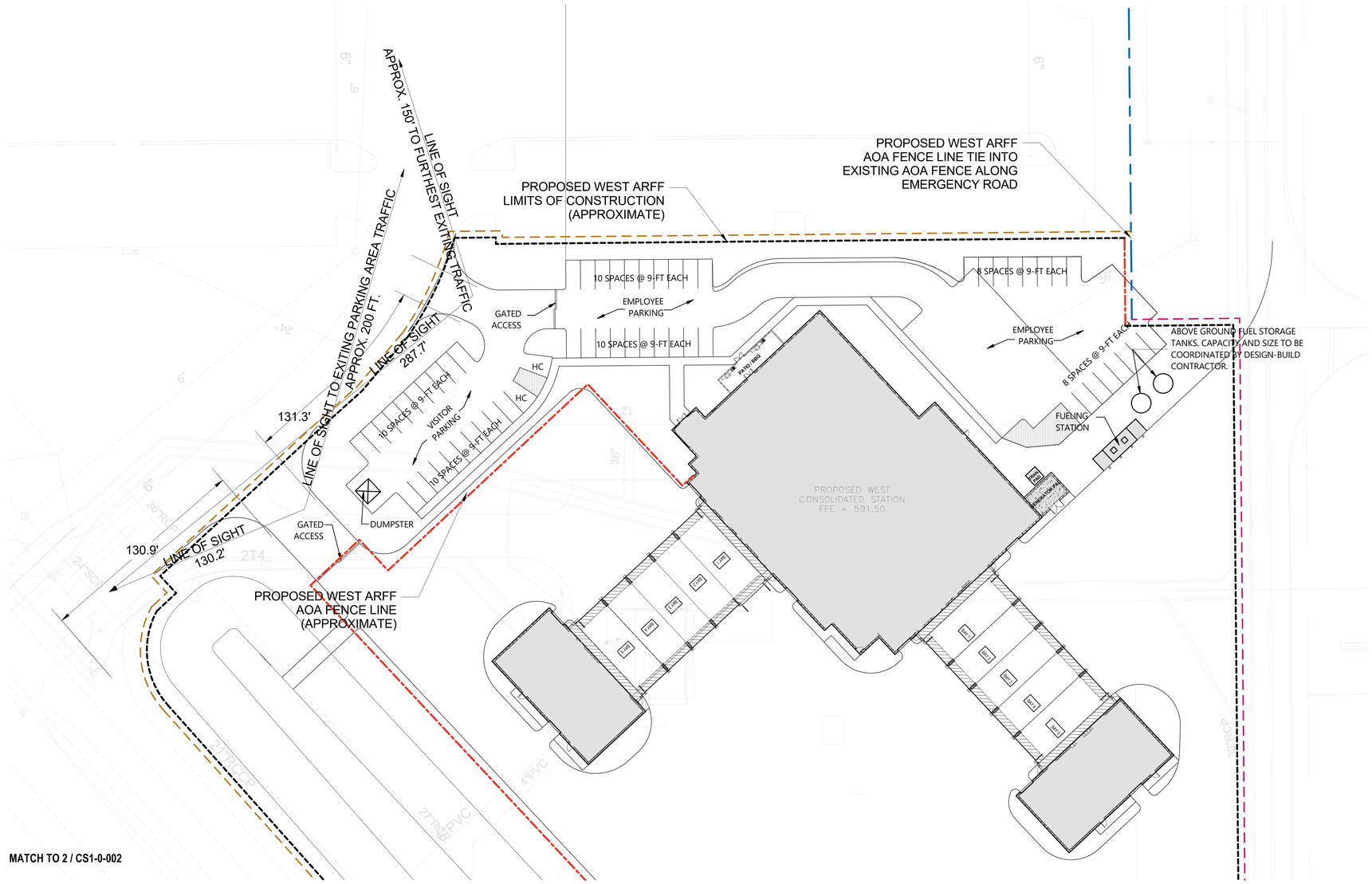
EXISTING AOA FENCE

NEW AOA FENCE TO BE ADDED AFTER CONSTRUCTION

LIMITS OF CONSTRUCTION

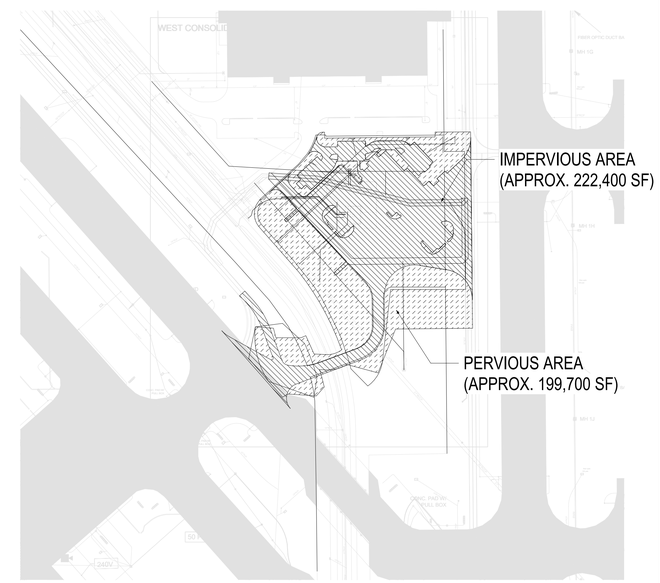
TEMPORARY PERIMETER CONSTRUCTION FENCE DURING CONSTRUCTION

TEMPORARY AOA FENCE DURING CONSTRUCTION



2 CONSTRUCTION PLAN - WEST ARFF ENLARGED NORTH

SCALE: 1" = 30'-0"



1 CONSTRUCTION PLAN - WEST ARFF SITE.

SCALE: 1" = 200'-0"

PRELIMINARY

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

DESIGN, CODE & CONSTRUCTION (DCC)
3003 SOUTH SERVICE ROAD
DFW AIRPORT, TX 75261

Gensler

NOT FOR CONSTRUCTION

ISSUE DATE: 08/07/20

NO:	DATE:	REVISION:
1	6/25/2020	50% SCHEMATIC DESIGN
2	7/16/2020	INTERIM SCHEMATIC DESIGN SUBMISSION
3	7/31/2020	100% SCHEMATIC DESIGN
4	8/7/2020	100% SCHEMATIC DESIGN

ARFF STATION CONSOLIDATION

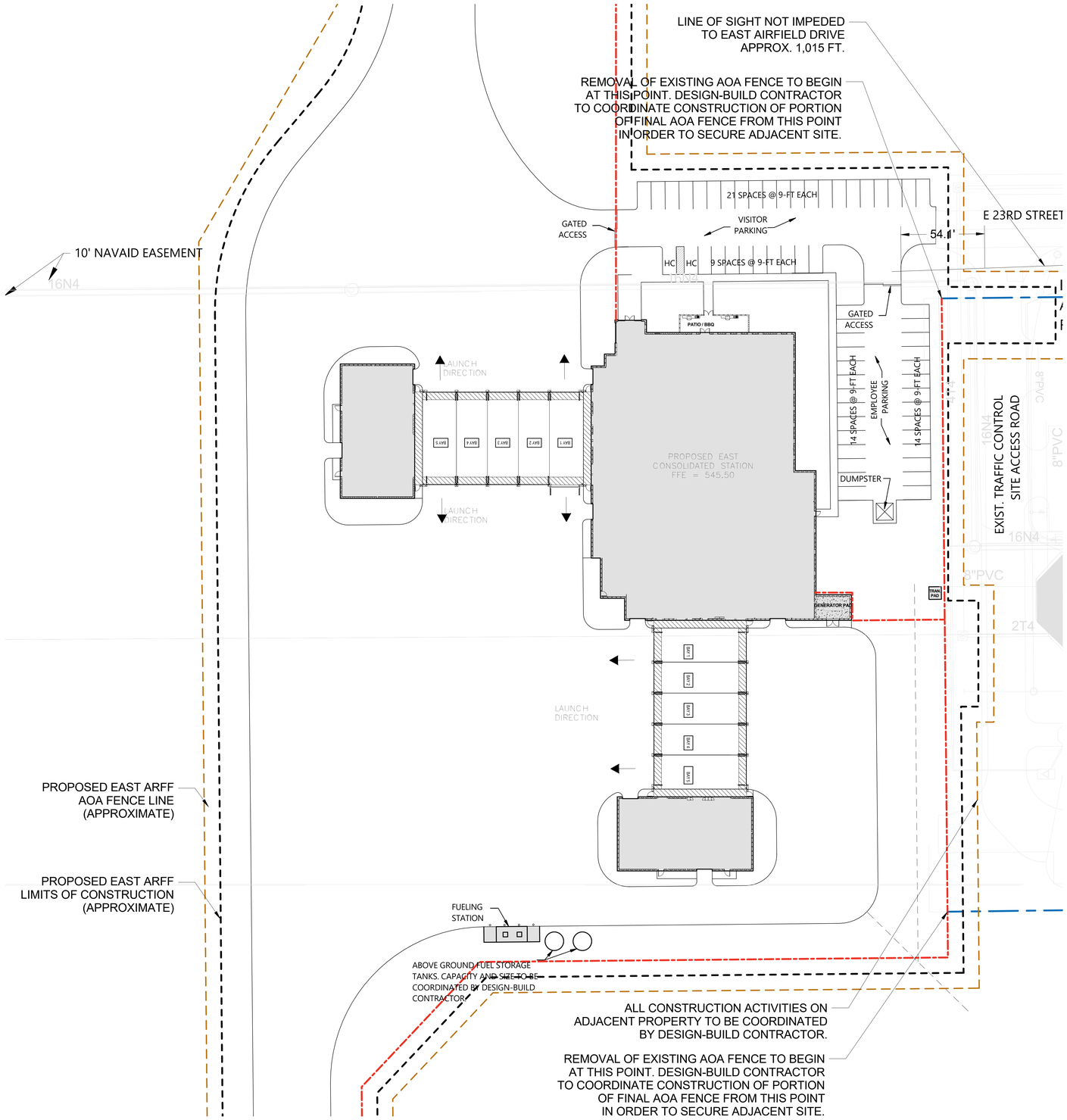
CONSTRUCTION SITE PLAN - WEST ARFF

CONTRACT NUMBER: 9500729 PERMIT NUMBER: A20-134B

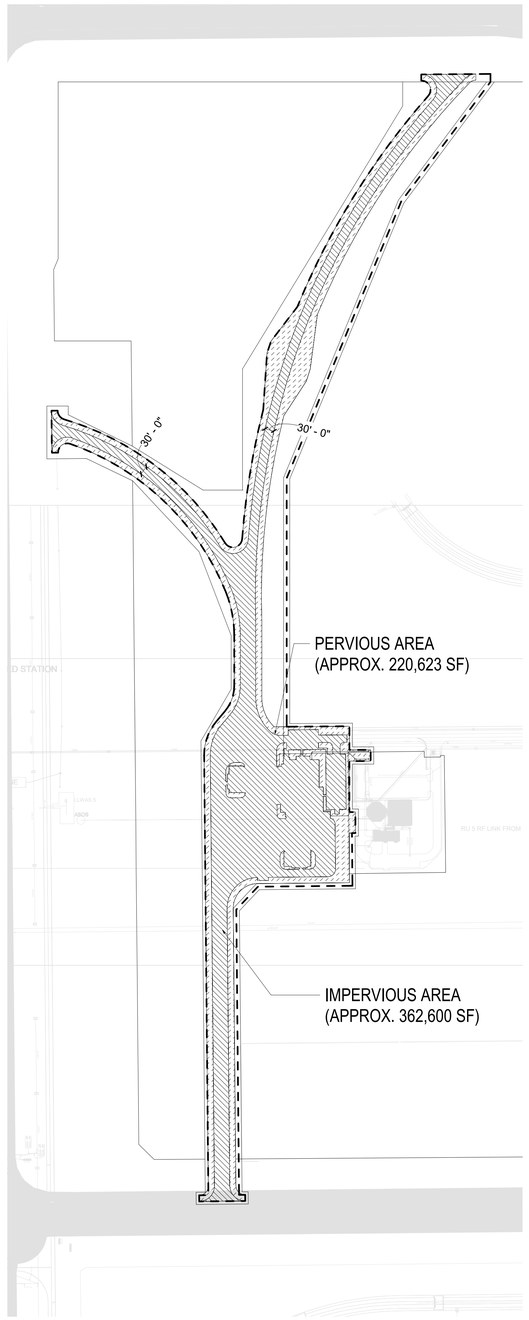
SHEET NUMBER

FIGURE 1

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



2 CONSTRUCTION PLAN - EAST ARFF ENLARGED
SCALE: 1" = 30'-0"



1 SITE PLAN - EAST ARFF.
SCALE: 1" = 200'-0"

EXISTING AOA FENCE

NEW AOA FENCE TO BE ADDED AFTER CONSTRUCTION

LIMITS OF CONSTRUCTION

TEMPORARY PERIMETER CONSTRUCTION FENCE DURING CONSTRUCTION

TEMPORARY AOA FENCE DURING CONSTRUCTION

N

PRELIMINARY

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

DESIGN, CODE & CONSTRUCTION (DCC)
3003 SOUTH SERVICE ROAD
DFW AIRPORT, TX 75261

Gensler

NOT FOR CONSTRUCTION

ISSUE DATE: 08/07/20

NO:	DATE:	REVISION:
1	9/25/2020	50% SCHEMATIC DESIGN
2	7/16/2020	INTERIM SCHEMATIC DESIGN SUBMISSION
3	7/31/2020	100% SCHEMATIC DESIGN
4	8/7/2020	100% SCHEMATIC DESIGN

ARFF STATION CONSOLIDATION

CONSTRUCTION SITE PLAN - EAST ARFF

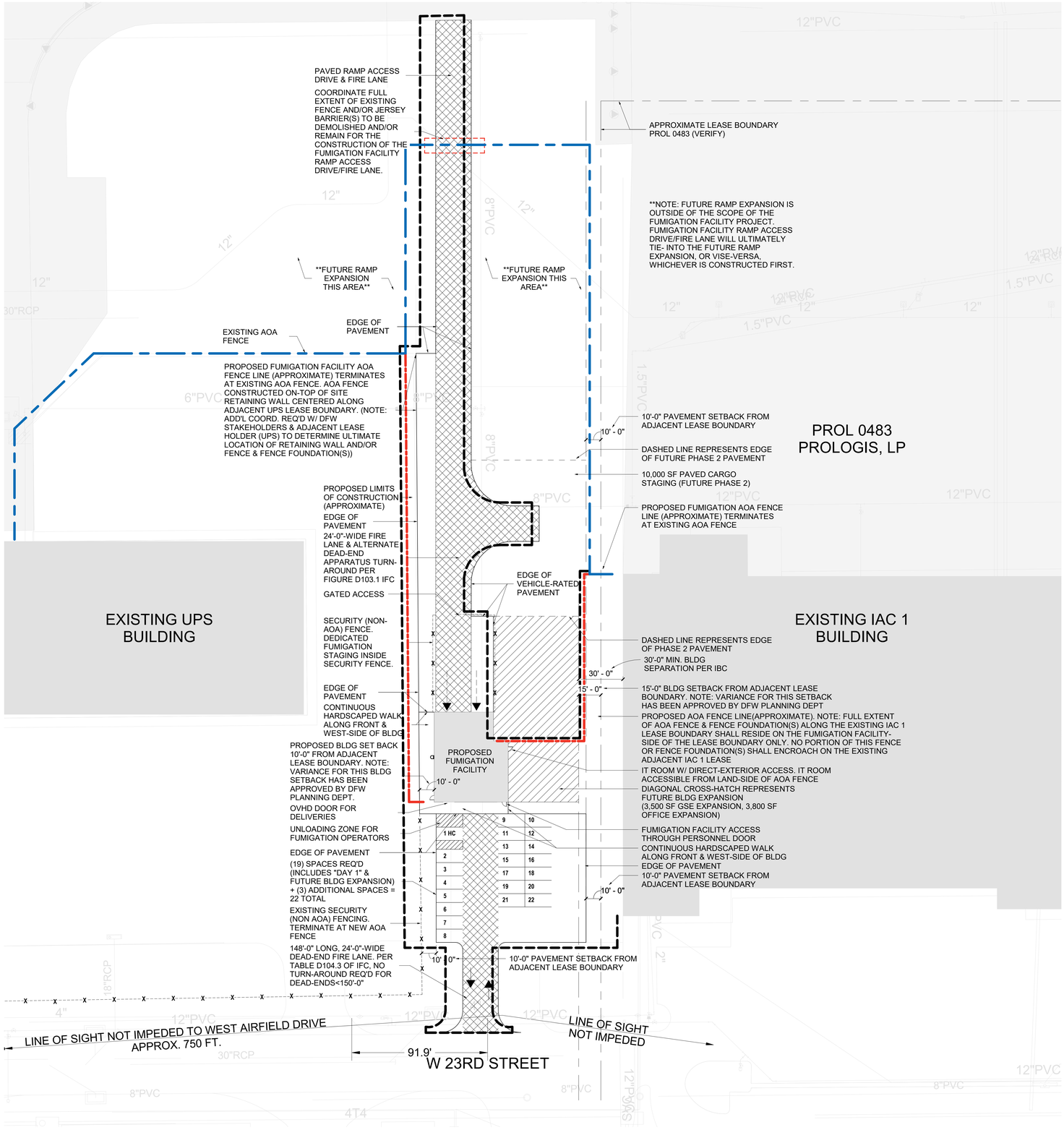
CONTRACT NUMBER: 9500729

PERMIT NUMBER: A20-134B

SHEET NUMBER

FIGURE 2

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.



EXISTING AOA FENCE

PROPOSED AOA FENCE LOCATION

LIMITS OF CONSTRUCTION (APPROXIMATE)

SECURITY FENCE (NON AOA)

ARFF ACCESS ROAD

1 CONSTRUCTION PLAN - FUMIGATION FACILITY ENLARGED

SCALE: 1" = 30'-0"

PRELIMINARY

DFW DALLAS FORT WORTH INTERNATIONAL AIRPORT

DESIGN, CODE & CONSTRUCTION (DCC)
3003 SOUTH SERVICE ROAD
DFW AIRPORT, TX 75261

Gensler

NOT FOR CONSTRUCTION

ISSUE DATE: 08/07/20

NO:	DATE:	REVISION:
1	6/25/2020	50% SCHEMATIC DESIGN
2	7/16/2020	INTERIM SCHEMATIC DESIGN SUBMISSION
3	7/31/2020	100% SCHEMATIC DESIGN
4	8/7/2020	100% SCHEMATIC DESIGN

ARFF STATION CONSOLIDATION

CONSTRUCTION SITE PLAN - FUMIGATION FACILITY

CONTRACT NUMBER: 9500729

PERMIT NUMBER: A20-134B

SHEET NUMBER

FIGURE 3

SCALE(S) AS NOTED ON THIS SHEET ARE BASED ON A FULL SIZE 30 X 42 SHEET.

3.0 Existing Conditions

3.1 Roadway System

West Airfield Drive is a Regional Arterial that borders the west side of DFW. It terminates at Mustang Drive/North Airfield Drive on the north end and Mid Cities Boulevard on the south end. Access to the West ARFF station is located on West Airfield Drive between W 23rd Street and Glade Road. Between Glade Road and W 23rd Street, West Airfield Drive is a six-lane divided roadway with curb and gutter and reduces to a four-lane roadway north of W 23rd Street. It has a posted speed limit of 45 miles per hour (mph).

East Airfield Drive is a four-lane divided Regional Arterial that borders the east side of DFW. It features curb and gutter and has a posted speed limit of 45 mph. It reduces to a two-lane roadway approximately 1,000 feet north of 28th Street and terminates at the Airport control tower on the north end. East Airfield Drive intersects at Walnut Hill Lane and continues southwest to International Parkway. The East ARFF station is located on the north terminus of East Airfield Drive.

The locations of the new ARFF stations and Fumigation facility within the surrounding roadway system are shown in **Figure 4**.

3.2 Study Intersections

The access road to West ARFF station ties into West Airfield Drive at an existing uncontrolled intersection. At the intersection, the northbound approach consists of two through lanes and a right-turn lane, and the southbound approach features three through lanes and a left-turn lane. Sight distance was not evaluated at this existing intersection.

Other study intersections along West Airfield Drive are at West 21st Street, West 23rd Street, and Glade Road which are all currently signalized. The intersection at West 21st Street features a left-turn lane, two through lanes, and a right-turn lane on the major approaches, a shared left-through lane and a right-turn lane on the westbound approach, and a shared left-through-right lane on the eastbound approach. The intersection at West 23rd Street is a three-leg intersection consisting of two through lanes and a right-turn lane on the northbound approach, a left-turn lane and two through lanes on the southbound approach, and a shared left-through-right lane on the minor approach. The Fumigation building is located on West 23rd Street. The intersection at East Glade Road includes a left-turn lane and two through lanes on the northbound approach, two through lanes and a right-turn lane on the southbound approach, and a left-turn lane and a right-turn lane on the minor approach. Sight distance was not evaluated at these existing intersections.

The access road to East ARFF station will intersect East Airfield Drive at the north terminus. The study intersections along East Airfield Drive are at Carbon Road and at West Walnut Hill Lane. The intersection at Carbon Road is currently stop-controlled on the minor approaches. The northbound and southbound approaches feature a shared left-through lane and a shared right-through lane. The intersection at West Walnut Hill Lane is currently signalized. This intersection features a left-turn lane, two through lanes and a channelized right-turn lane on the northbound and southbound approaches, a left-turn lane, two through lanes and a channelized right-turn lane on the eastbound approach, and dual left-turn lanes, a through lane

and a channelized right-turn lane on the westbound approach. Sight distance was not evaluated for the East ARFF station site.

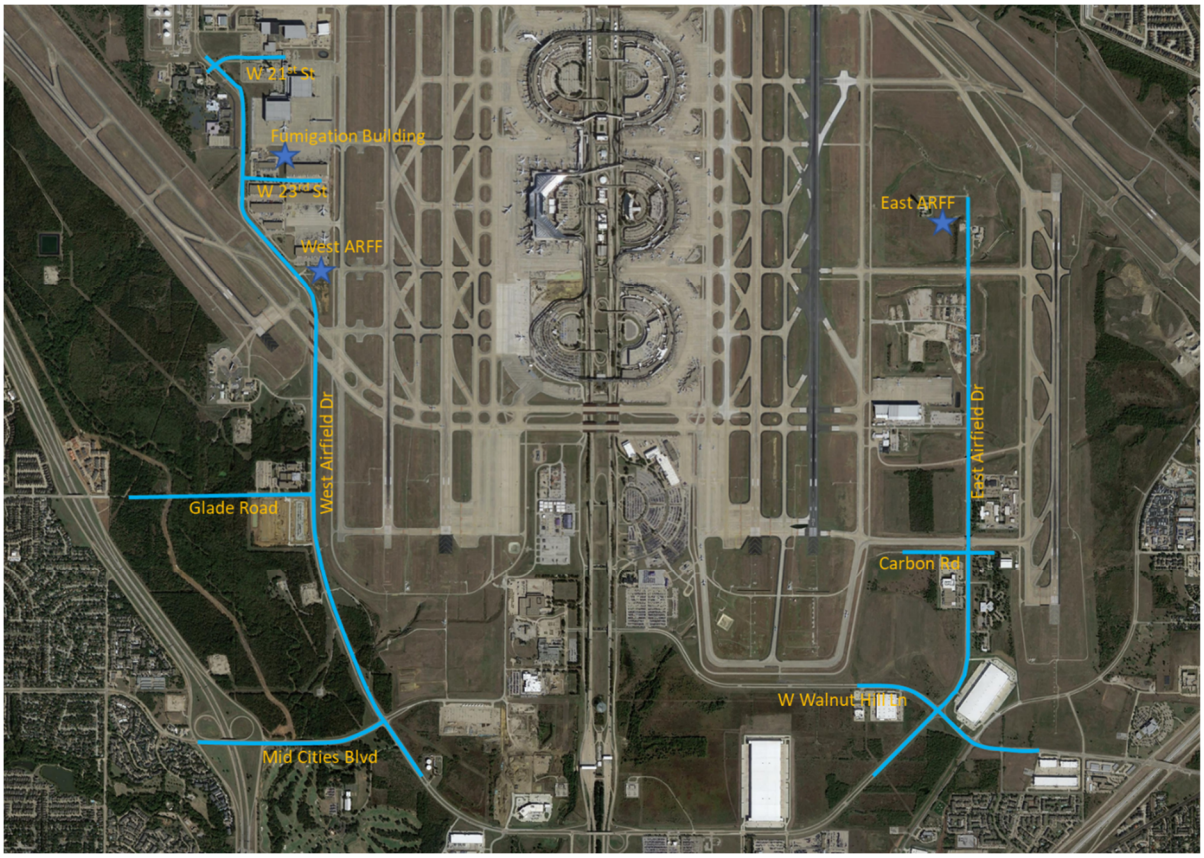


Figure 4: Vicinity Map

3.3 Traffic Volumes

Turning movement counts for the study intersections were provided by DFW. The counts along East Airfield Drive and West Airfield Drive were performed on July 2018 and April 2019, respectively. Refer to **Appendix A – Traffic Data** for traffic count data. This data was processed to develop 2018 and 2019 peak hour volumes, and then the data was balanced, as necessary. DFW also provided growth rate information for the area. An annual growth rate of 2.5% was utilized to project 2020 Existing volumes and 2023 No Build volumes (future volumes without proposed development) which are exhibited in **Figures 5 to 8**.

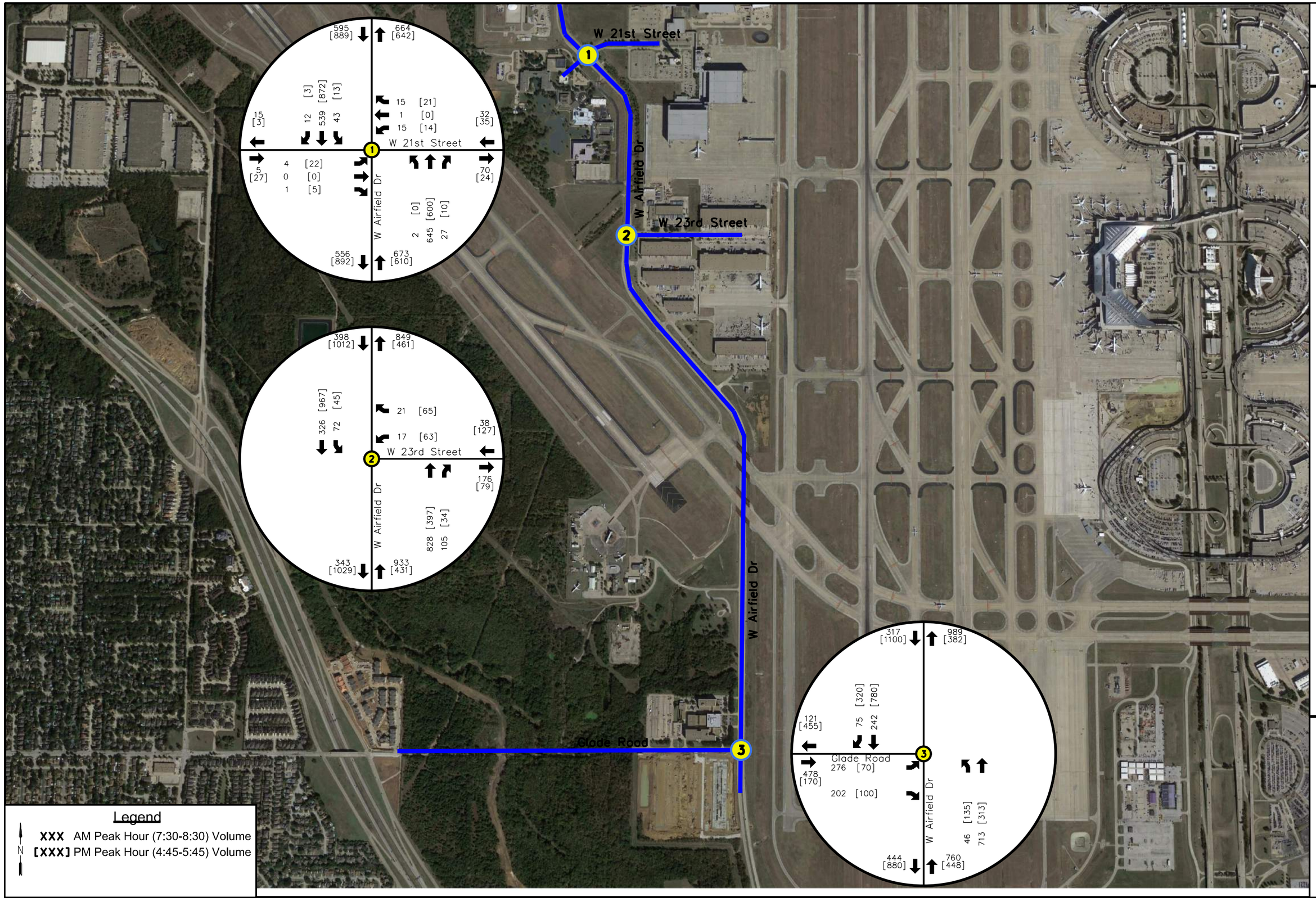


Figure 5

W Airfield Dr - 2020 Volumes

Existing Conditions

August 2020

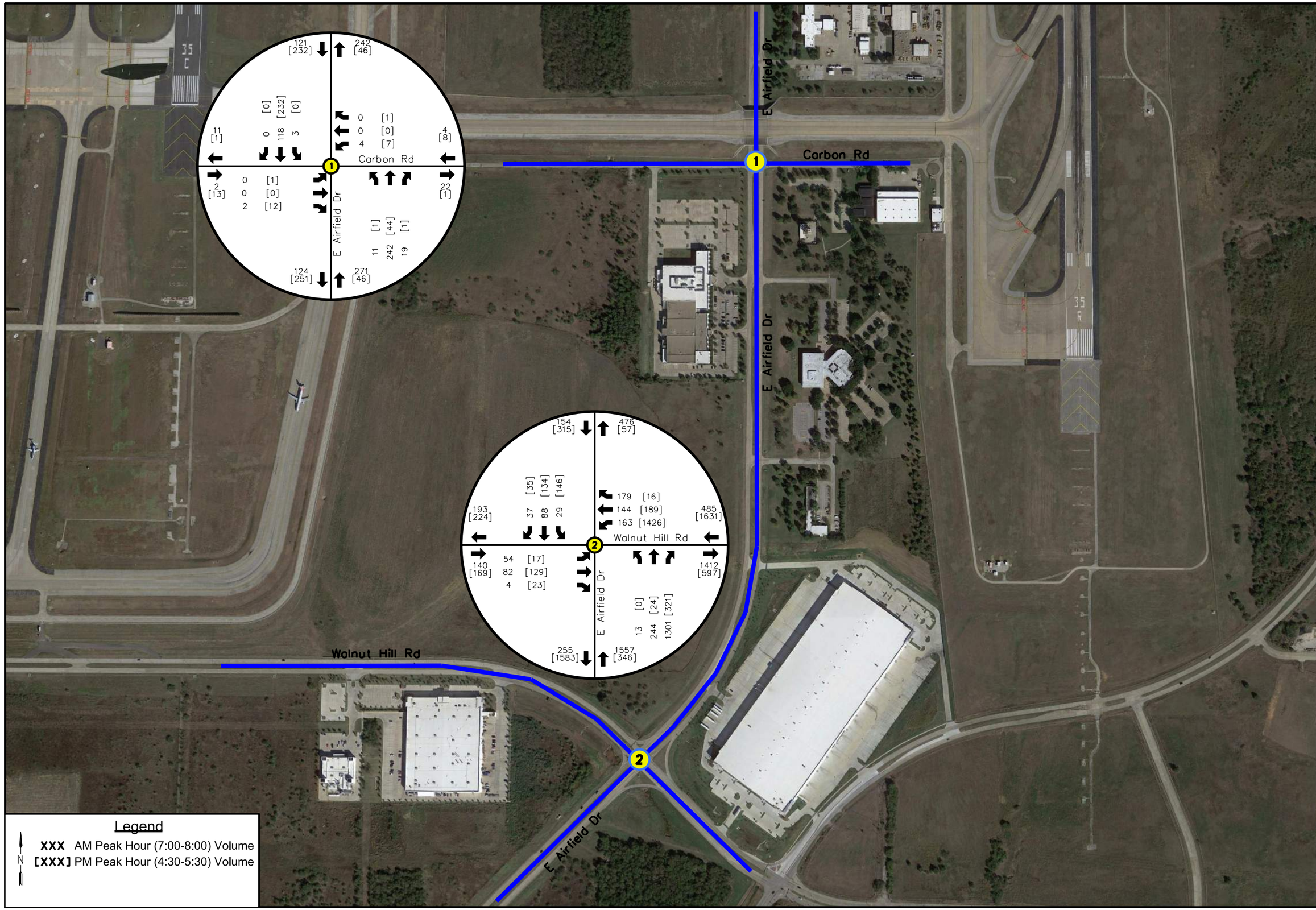


Figure 6

E Airfield Dr - 2020 Volumes

Existing Conditions

August 2020

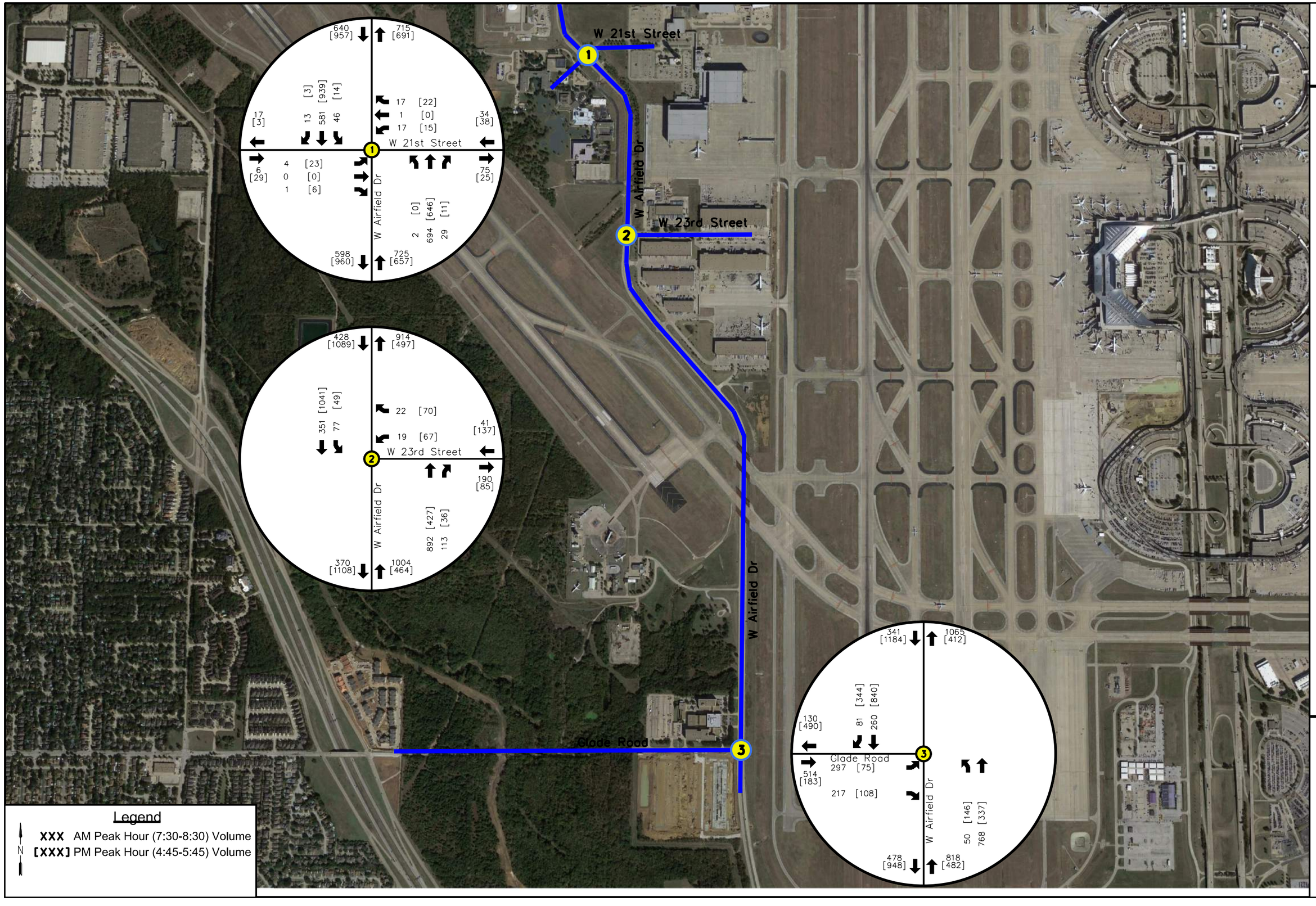


Figure 7

W Airfield Dr - 2023 Volumes

No Build Conditions

August 2020

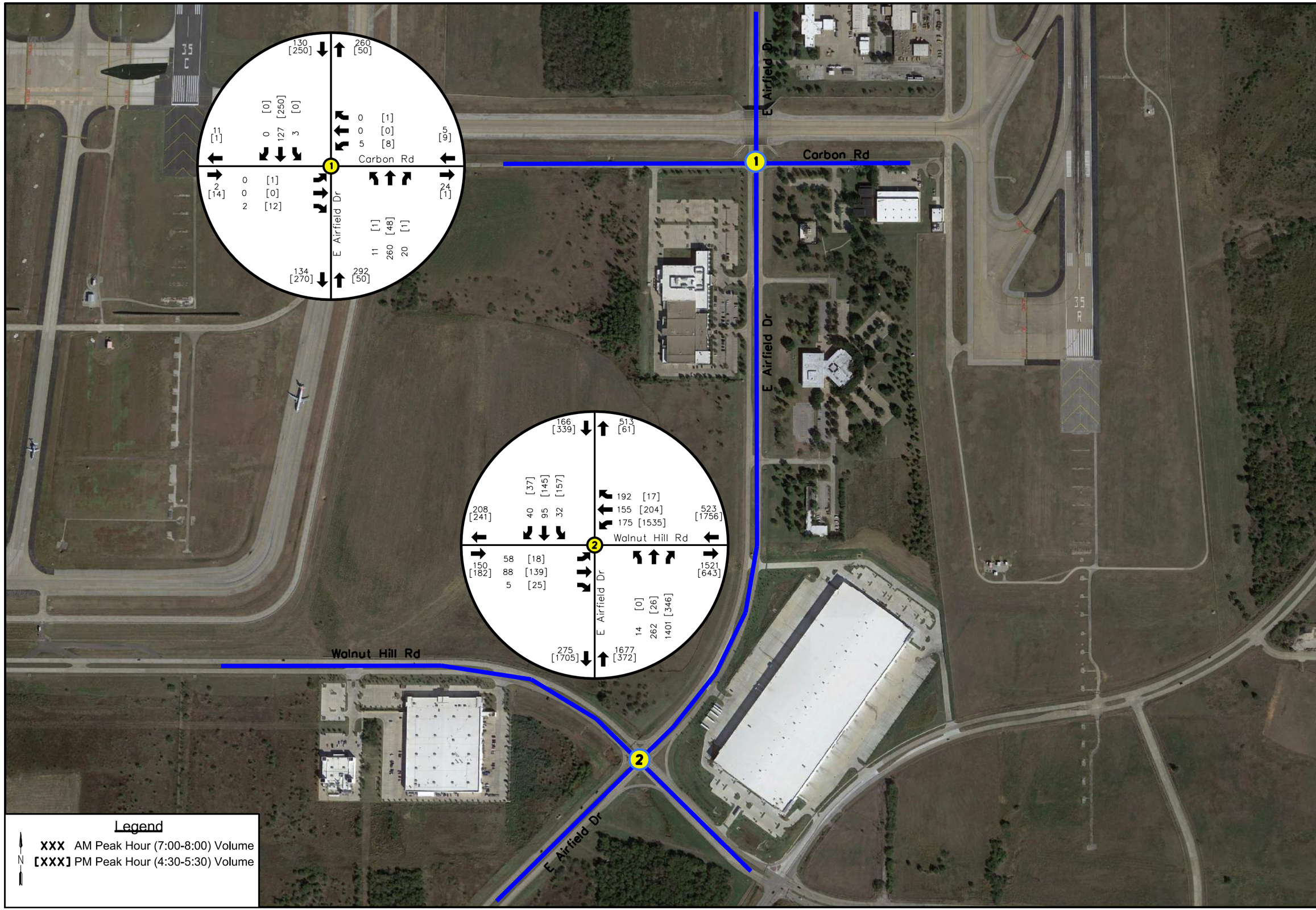


Figure 8

E Airfield Dr - 2023 Volumes
No Build Conditions

August 2020

4.0 Operational Analysis

Level of Service (LOS) was the key measure of effectiveness (MOE) used for the analysis and was determined at the study intersections. LOS is a concept defined by the *Highway Capacity Manual (HCM)* to qualitatively describe operating conditions within a traffic stream. LOS is typically stratified into six categories (A through F). These range from LOS A indicating free-flow, low density, or nearly negligible delay conditions to LOS F where demand exceeds capacity and large queues are experienced. A brief description of each level of service is provided below.

- **Level of Service A**: This LOS is a free flow condition, with vehicles acting nearly independently to one another. There is little or no delay.
- **Level of Service B**: This LOS is similar to LOS A, but drivers have slightly less freedom to maneuver.
- **Level of Service C**: At LOS C, density becomes more noticeable with the ability to maneuver limited by other vehicles. Speeds are at or near free flow speed.
- **Level of Service D**: This LOS is often a common goal for urban streets during peak periods and represents the lower end of stable flow. This LOS is typified by increased density and delay and severely restricted maneuverability.
- **Level of Service E**: At this LOS, the route approaches capacity where virtually no usable gaps in the traffic stream exist. Vehicle density increases such that traffic flow is unstable and speeds vary greatly.
- **Level of Service F**: At this LOS, the route has more demand than capacity. Flow is forced, and movement within the traffic stream is stop and go. Minor incidents or disruptions cause queuing that extends significant distances upstream along the roadway.

For unsignalized and signalized intersections, the *HCM* uses control delay for the basis of determining LOS. Control delay at an intersection is the average stopped time per vehicle traveling through the intersection plus the movements at slower speeds due to the vehicles moving up in the queue or slowing down upstream of the approach. **Table 1** show the Levels of Service as stated in the *HCM*.

Table 1: LOS Thresholds for Intersections (Control Delay)

Level of Service	Description	Signalized Intersection Control Delay (sec/veh)	Stop Controlled Intersection (sec/veh)
A	Most vehicles do not stop	0 to 10	0 to 10
B	Some vehicles stop	> 10 to 20	> 10 to 15
C	Significant number of stops	> 20 to 35	> 15 to 25
D	Many stop, individual cycle failure	> 35 to 55	> 25 to 35
E	Frequent individual cycle failure, at capacity	> 55 to 80	> 35 to 50
F	Arrival rate exceeds capacity	> 80 or v/c > 1	> 50 or v/c >1

Synchro 10 software was used to determine the expected delays and LOS at each study intersections based on HCM methodology.

4.1 Operational Analysis - 2020 Existing Scenario

Existing conditions were analyzed using 2020 Existing volumes. All signalized intersections were modeled with optimized signal timings. The peak hour factors (PHF) and truck percentages (T%) determined from the volume data were applied to the model. The results based on *HCM* methodology are summarized in **Tables 2 and 3**. The complete results are provided in **Appendix B - Operational Analysis Results**.

Based on the 2020 analysis, all intersections showed an overall intersection LOS C or better during the AM and PM peak hours.

Table 2: 2020 Existing Conditions – West Airfield Drive

Intersection	Time Period	Control	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
W Airfield Dr @ W 21st St	AM	Signal	LOS	B			B		B	E	A	n/a[1]	C	A	A	A
			Delay	18.5			18.3		19.9	70.8	5.5		23.2	4.1	3.1	6.0
	PM		LOS	B			B		B	A	A	n/a[1]	C	A	A	A
			Delay	18.6			17.9		19.1	0.0	4.7		29.9	2.7	1.7	4.4
W Airfield Dr @ W 23rd St	AM	Signal	LOS				C		n/a[1]		A	n/a[1]	A	A		A
			Delay				25.6				6.8		3.7	1.6		5.6
	PM		LOS				C		n/a[1]		A	n/a[1]	A	A		A
			Delay				23.1				5.1		2.9	3.0		4.4
W Airfield Dr @ E Glade Rd	AM	Signal	LOS	C		n/a[1]				A	A			A	n/a[1]	A
			Delay	22.4						5.6	5.9			8.4		9.9
	PM		LOS	C		n/a[1]				A	A			A	n/a[1]	A
			Delay	26.1						3.9	1.9			7.1		6.5

n/a[1] - *HCM* methodology does not calculate delay for yield-controlled channelized right at signalized intersections

Table 3: 2020 Existing Conditions – East Airfield Drive

Intersection	Time Period	Control	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
E Airfield Dr @ Carbon Rd	AM	Two-Way Stop	LOS	A			B			A	n/a[2]		A	n/a[2]		A
			Delay	8.7			11.4			7.5			7.8			0.4
	PM		LOS	A			A			A	n/a[2]		A	n/a[2]		A
			Delay	9.5			10.0			7.9			0.0			0.7
E Airfield Dr @ W Walnut Hill Ln	AM	Signal	LOS	D	B	n/a[1]	C	B	n/a[1]	C	C	n/a[1]	C	C	n/a[1]	C
			Delay	35.5	10.7		29.0	10.2		21.0	24.2		20.6	21.6		21.6
	PM		LOS	D	C	n/a[1]	C	A	n/a[1]	A	D	n/a[1]	D	C	n/a[1]	C
			Delay	51.7	31.3		33.9	6.0		0.0	38.9		40.0	31.3		31.6

n/a[1] - *HCM* methodology does not calculate delay for yield-controlled channelized right at signalized intersections
n/a[2] – free movement, no delay reported

4.2 Operational Analysis - 2023 No Build Scenario

Study intersections were analyzed for the year 2023 No Build scenario using the 2023 No Build volumes. The 2023 No Build scenario is future conditions without the proposed developments. For this analysis, traffic control on all study intersections remain the same as existing and the signalized intersections were modeled with optimized signal timings. **Tables 4 and 5** show the results for 2023 No Build analyses for the study intersections along West Airfield Drive and East Airfield Drive. The complete results are provided in **Appendix B - Operational Analysis Results**.

Based on the 2023 No Build analysis, the results were similar to 2020 Existing analysis in which all intersections showed an overall intersection LOS C or better during both peak hours.

Table 4: 2023 No Build Conditions – West Airfield Drive

Intersection	Time Period	Control	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
W Airfield Dr @ W 21st St	AM	Signal	LOS	B			B		B	E	A	n/a[1]	C	A	A	A
			Delay	16.7			17.2		18.0	67.6	6.4		21.1	4.6	3.4	6.5
	PM		LOS	B			B		B	A	A	n/a[1]	C	A	A	A
			Delay	18.7			17.9		18.8	0.0	4.9		29.4	2.9	1.7	4.4
W Airfield Dr @ W 23rd St	AM	Signal	LOS				C		n/a[1]		A	n/a[1]	A	A		A
			Delay				27.8				6.8		3.7	1.5		5.4
	PM		LOS				C		n/a[1]		A	n/a[1]	A	A		A
			Delay				23.1				5.3		3.0	3.2		4.6
W Airfield Dr @ E Glade Rd	AM	Signal	LOS	C		n/a[1]				A	A			A	n/a[1]	B
			Delay	21.3						6.0	6.6			9.1		10.2
	PM		LOS	C		n/a[1]				A	A			A	n/a[1]	A
			Delay	26.4						4.2	2.0			7.5		6.8

n/a[1] - *HCM* methodology does not calculate delay for yield-controlled channelized right at signalized intersections

Table 5: 2023 No Build Conditions – East Airfield Drive

Intersection	Time Period	Control	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
E Airfield Dr @ Carbon Rd	AM	Two-Way Stop	LOS	A			B			A	n/a[2]		A	n/a[2]		A
			Delay	8.7			11.6			7.5			7.9			0.4
	PM		LOS	A			B			A	n/a[2]		A	n/a[2]		A
			Delay	9.6			10.2			8.0			0.0			0.7
E Airfield Dr @ W Walnut Hill Ln	AM	Signal	LOS	D	B	n/a[1]	C	B	n/a[1]	C	C	n/a[1]	C	C	n/a[1]	C
			Delay	37.2	11.3		29.9	10.6		21.3	24.8		21.0	22.0		22.3
	PM		LOS	E	D	n/a[1]	C	A	n/a[1]	A	D	n/a[1]	D	D	n/a[1]	C
			Delay	56.7	35.9		32.8	5.6		0.0	43.6		52.2	36.1		32.4

n/a[1] - *HCM* methodology does not calculate delay for yield-controlled channelized right at signalized intersections
n/a[2] – free movement, no delay reported

5.0 Future Traffic Conditions

To establish the future traffic conditions, trip generation was performed for the proposed ARFF stations and Fumigation facility. For this study, no off-site development or other planned or programmed roadway improvements were anticipated to impact the study intersections. Future conditions were determined for the years 2023 and 2028.

5.1 Trip Generation and Volume Development

The *ITE Trip Generation Manual, 10th Edition* was reviewed to locate applicable land use and associated trip generation rates for the ARFF station. Trip generation rates are expressed in vehicle trip ends per unit of the type of facility. By definition, a trip is a single or one-directional vehicle movement with either the origin or destination (exiting or entering) inside the study site.

A similar land use to the ARFF station is the Fire and Rescue Station land use, however, it has a small sample size. Hence, information from DFW Fire Chief regarding ARFF parking, vehicle counts, and shift overlap was used to determine the trips generated from the ARFF stations. With rooms for 21 fire fighters at each ARFF station and consideration of one shift change in the morning, each ARFF station was assumed to generate 42 trips with a directional distribution of 50% entering and 50% exiting in the AM peak hour. No trips were assumed generated for the PM peak hour.

A new Fumigation building is proposed to replace the existing structure at its current location on West 23rd Street. The new fumigation facility will have four additional parking spaces and generate approximately 8 more trucks per week. Based on the information provided, it was assumed that the new fumigation facility will generate two (2) additional trips in the AM peak hour with a directional distribution of 50% entering and 50% exiting. In the PM peak hour, no trips were assumed.

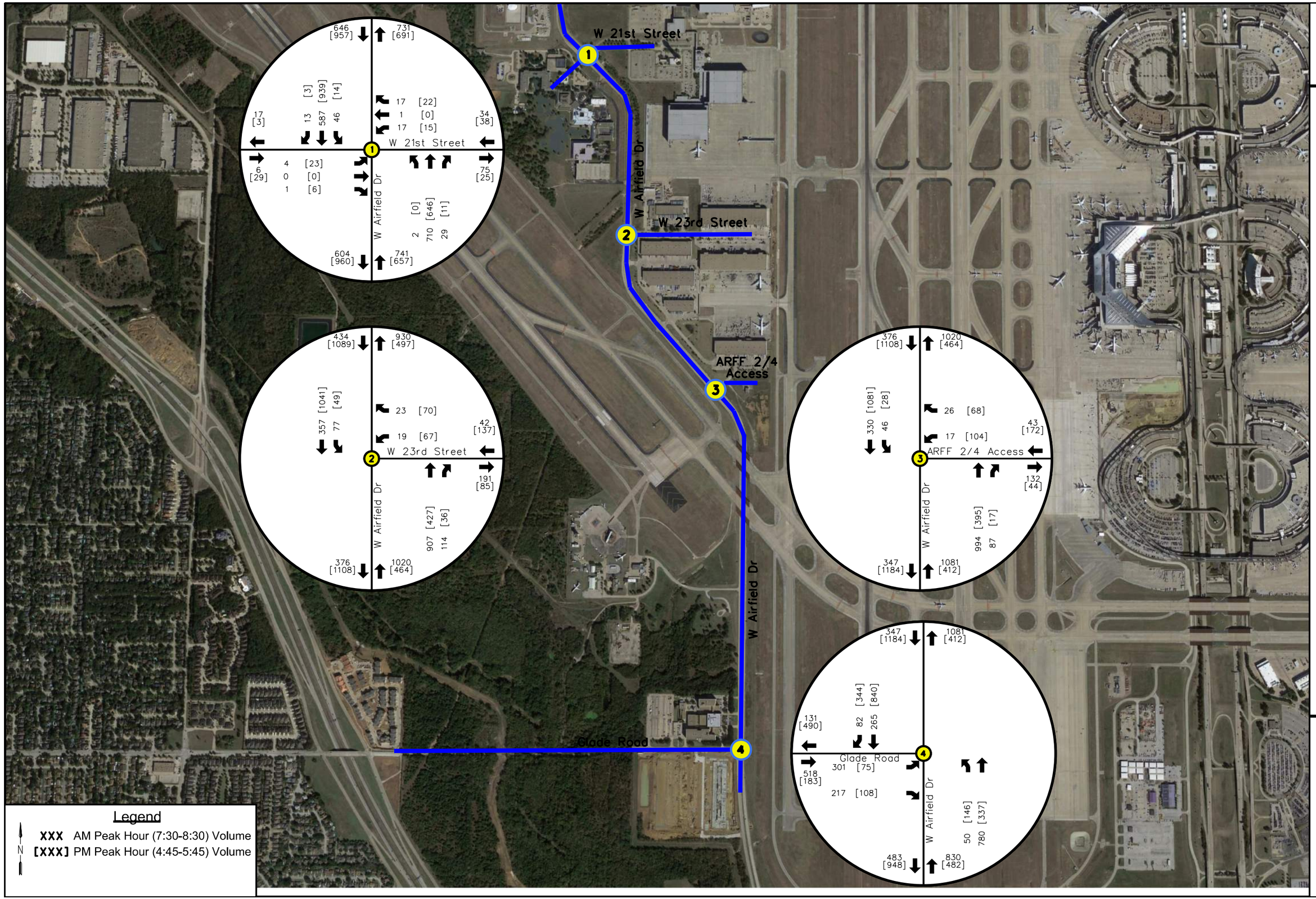
The trips generated from the ARFF stations and the fumigation facility were distributed to the adjacent streets. The inbound and outbound turning movement volumes were distributed based on the existing traffic patterns at the study intersections. The trip generated volumes were added to 2023 No Build volumes resulting in 2023 Build volumes (future volumes plus development) as shown in **Figures 9 and 10**. In addition to the 2023 Build volumes, future 2028 Build volumes were developed. For this, trips generated were added to 2028 background traffic volumes which was developed using the annual growth rate of 2.5% for the study. **Figures 11 and 12** summarize the projected 2028 Build volumes.

Figure 9

W Airfield Dr - 2023 Volumes

Build Conditions

August 2020



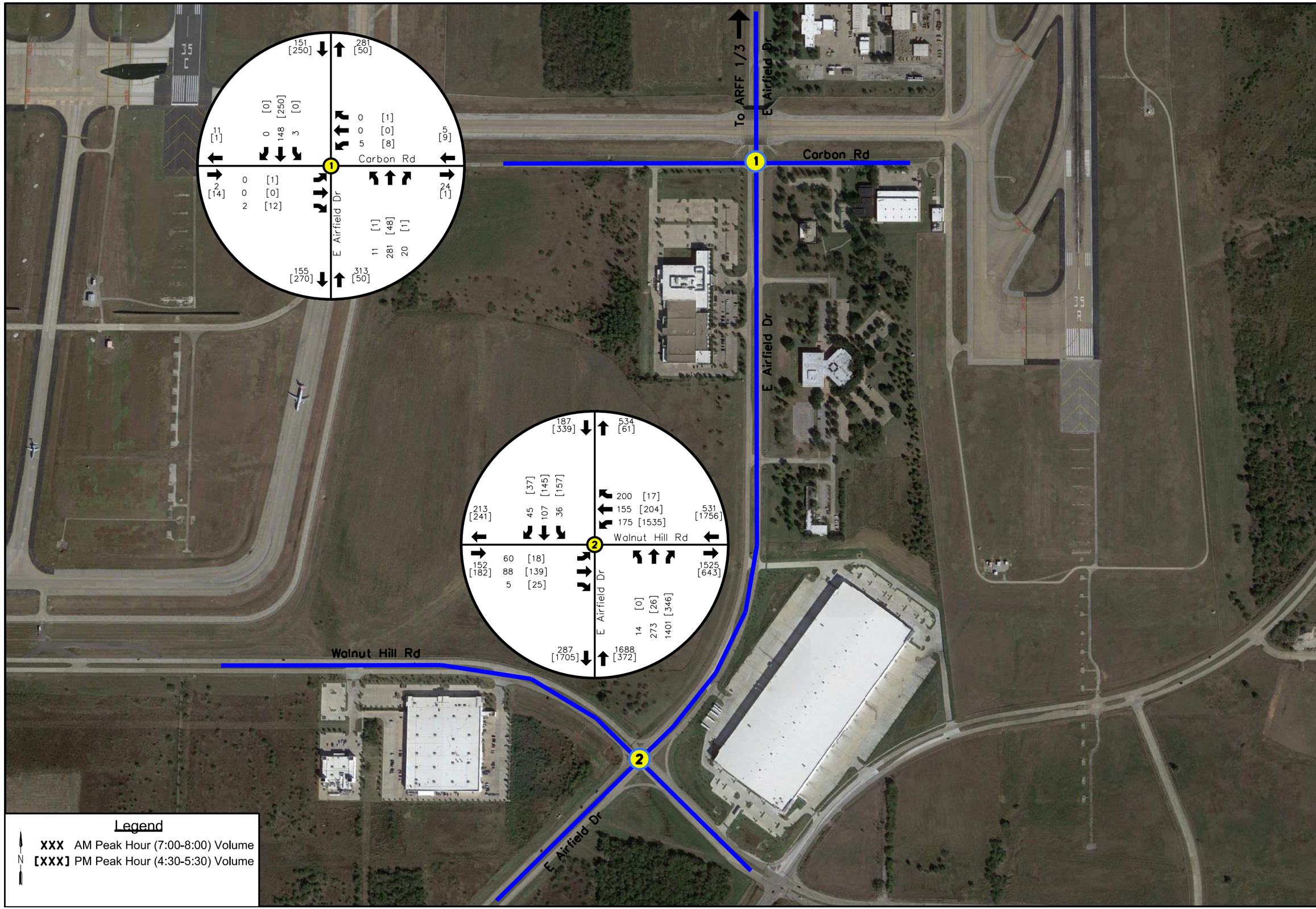


Figure 10

E Airfield Dr - 2023 Volumes

Build Conditions

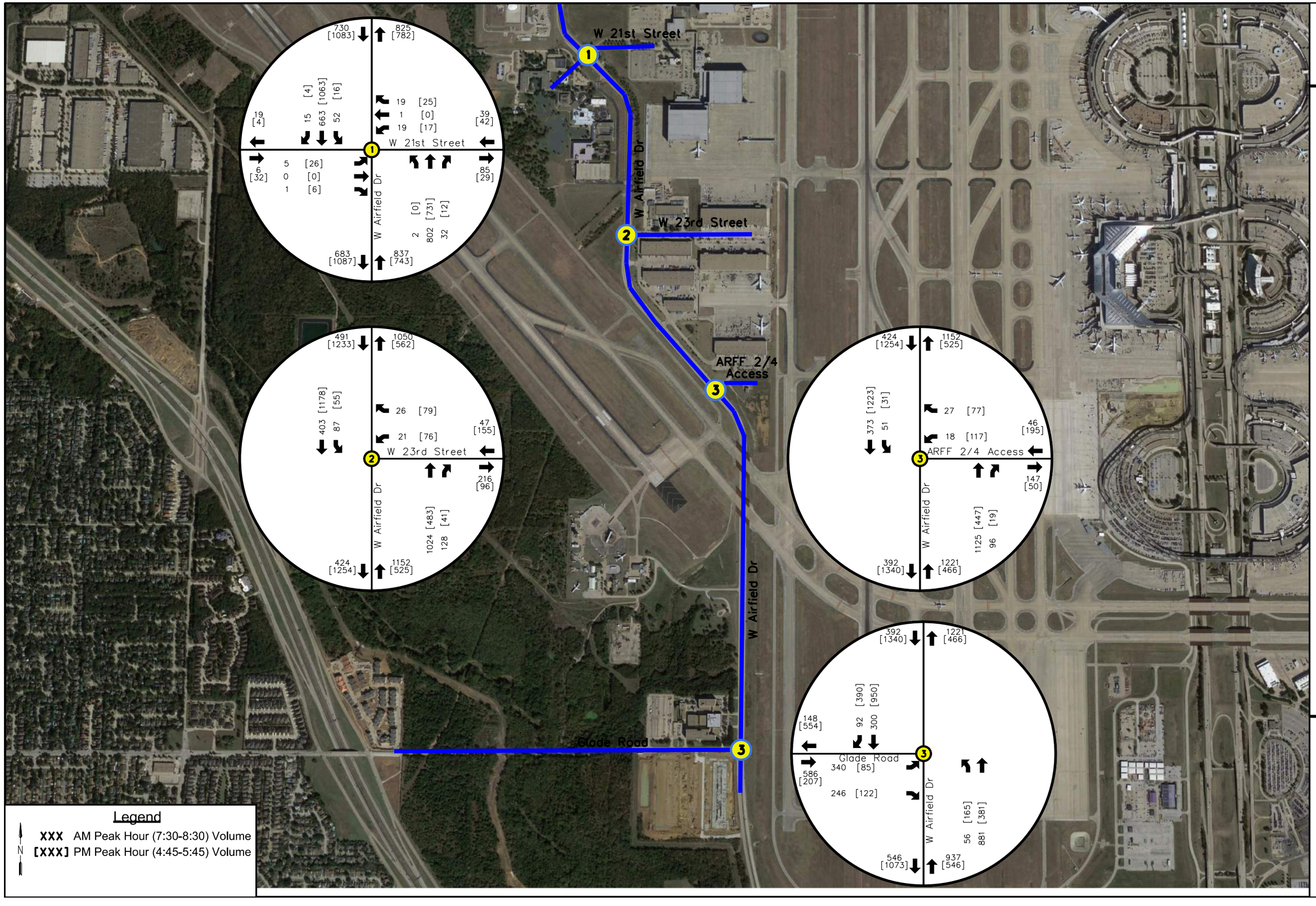
August 2020

Figure 11

W Airfield Dr - 2028 Volumes

Build Conditions

August 2020



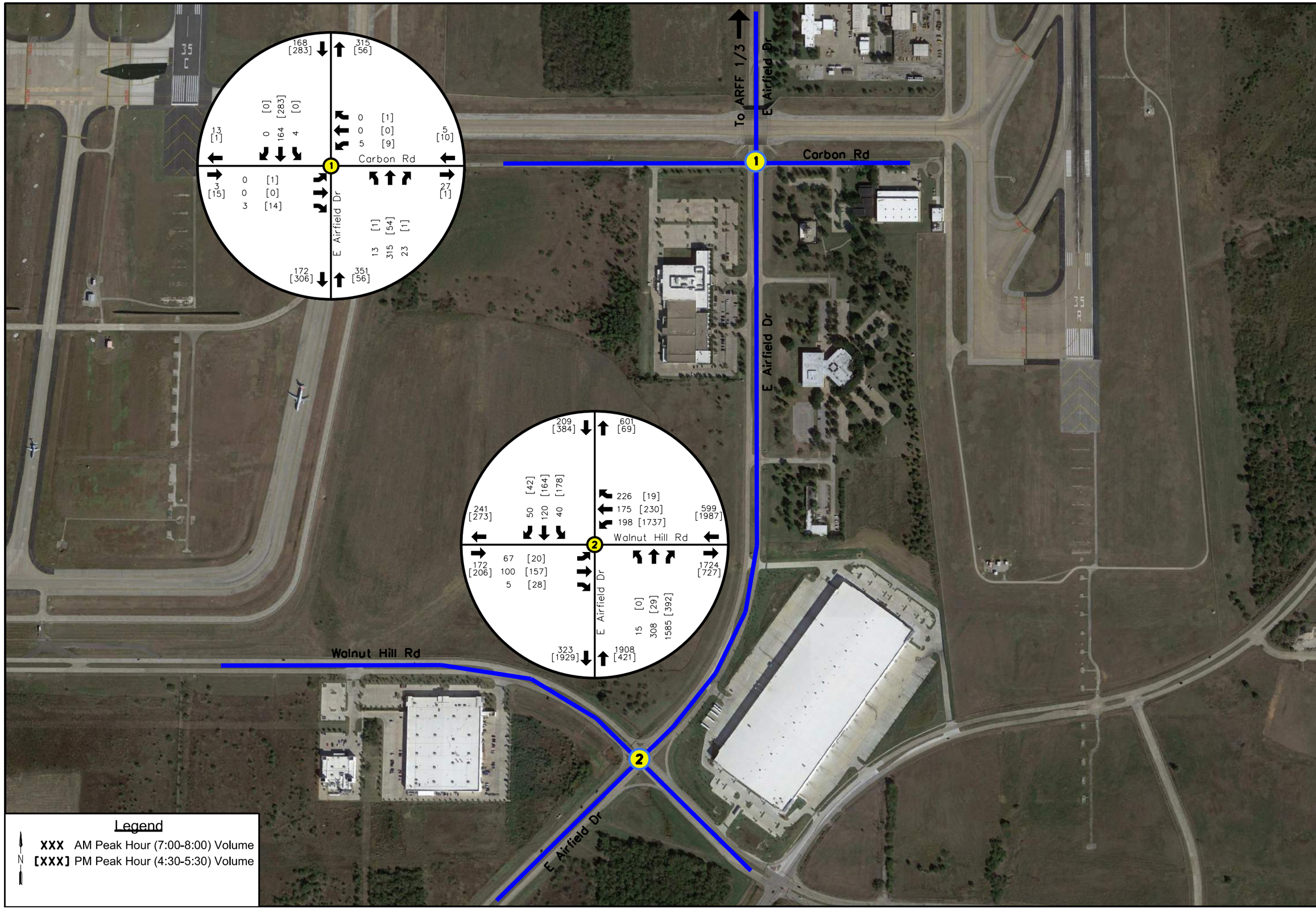


Figure 12

E Airfield Dr - 2028 Volumes

Build Conditions

August 2020

5.2 Operational Analysis – Future Conditions

To analyze future conditions, study intersections were analyzed for the years 2023 and 2028 using respective Build volumes. For this analysis, traffic control on all study intersections remain the same as existing and signalized intersections were modeled with optimized signal timings.

Tables 6 to 9 show the results for 2023 and 2028 Build analysis for the study intersections. The complete results are provided in **Appendix B – Operational Analysis Results**.

Table 6: 2023 Build Conditions – West Airfield Drive

Intersection	Time Period	Control	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
W Airfield Dr @ W 21st St	AM	Signal	LOS	B			B		B	E	A	n/a[1]	C	A	A	A
			Delay	16.7			16.5		18.0	67.6	6.5		21.1	4.7	3.4	6.5
	PM		LOS	B			B		B	A	A	n/a[1]	C	A	A	A
			Delay	18.7			17.9		18.8	0.0	4.9		29.4	2.9	1.7	4.4
W Airfield Dr @ W 23rd St	AM	Signal	LOS				C		n/a[1]		A	n/a[1]	A	A		A
			Delay				27.8				6.7		3.8	1.5		5.5
	PM		LOS				C		n/a[1]		A	n/a[1]	A	A		A
			Delay				23.1				5.3		3.0	3.2		4.6
W Airfield Dr @ E Glade Rd	AM	Signal	LOS	C		n/a[1]				A	A			A	n/a[1]	B
			Delay	21.9						6.0	6.7			9.1		10.4
	PM		LOS	C		n/a[1]				A	A			A	n/a[1]	A
			Delay	26.4						4.2	2.0			7.5		6.8
W Airfield Dr @ ARFF Station 2/4 Access	AM	One-Way Stop	LOS				B		B		n/a[2]		B	n/a[2]		A
			Delay				14.9		14.9				11.1			0.8
	PM		LOS				B		B		n/a[2]		A	n/a[2]		A
			Delay				17.9		17.9				8.3			1.9

n/a[1] - *HCM* methodology does not calculate delay for yield-controlled channelized right at signalized intersections
n/a[2] – free movement, no delay reported

Table 7: 2023 Build Conditions – East Airfield Drive

Intersection	Time Period	Control	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
E Airfield Dr @ Carbon Rd	AM	Two-Way Stop	LOS	A			B			A	n/a[2]		A	n/a[2]		A
			Delay	8.8			12.0			7.6			7.9			0.4
	PM		LOS	A			B			A	n/a[2]		A	n/a[2]		A
			Delay	9.6			10.2			8.0			0.0			0.7
E Airfield Dr @ W Walnut Hill Ln	AM	Signal	LOS	D	B	n/a[1]	C	B	n/a[1]	C	C	n/a[1]	C	C	n/a[1]	C
			Delay	38.8	11.5		30.6	10.8		21.8	25.4		21.4	22.4		22.9
	PM		LOS	E	D	n/a[1]	C	A	n/a[1]	A	D	n/a[1]	D	D	n/a[1]	C
			Delay	56.7	35.9		32.8	5.6		0.0	43.6		52.2	36.1		32.4

n/a[1] - *HCM* methodology does not calculate delay for yield-controlled channelized right at signalized intersections
n/a[2] – free movement, no delay reported

Table 8: 2028 Build Conditions – West Airfield Drive

Intersection	Time Period	Control	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
W Airfield Dr @ W 21st St	AM	Signal	LOS	B			B		C	E	A	n/a[1]	C	A	A	A
			Delay	19.1			18.8		20.4	71.7	6.5		24.0	4.4	3.1	6.6
	PM		LOS	B			B		B	A	A	n/a[1]	C	A	A	A
			Delay	18.7			17.9		18.8	0.0	5.3		28.7	3.2	1.7	4.8
W Airfield Dr @ W 23rd St	AM	Signal	LOS				C		n/a[1]		A	n/a[1]	A	A		A
			Delay				27.5				7.7		4.6	1.6		6.2
	PM		LOS				C		n/a[1]		A	n/a[1]	A	A		A
			Delay				23.4				5.7		3.2	3.7		5.1
W Airfield Dr @ E Glade Rd	AM	Signal	LOS	C		n/a[1]				A	A			B	n/a[1]	B
			Delay	24.6						6.7	8.0			10.2		11.9
	PM		LOS	C		n/a[1]				A	A			A	n/a[1]	A
			Delay	27.0						5.1	2.1			8.4		7.5
W Airfield Dr @ ARFF Station 2/4 Access	AM	One-Way Stop	LOS				B		B		n/a[2]		B	n/a[2]		A
			Delay				18.5		18.5				12.1			0.8
	PM		LOS				C		C		n/a[2]		A	n/a[2]		A
			Delay				24.6		24.6				8.5			2.6

n/a[1] - *HCM* methodology does not calculate delay for yield-controlled channelized right at signalized intersections
n/a[2] – free movement, no delay reported

Table 9: 2028 Build Conditions – East Airfield Drive

Intersection	Time Period	Control	MOE	EB Movement			WB Movement			NB Movement			SB Movement			Overall
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
E Airfield Dr @ Carbon Rd	AM	Two-Way Stop	LOS	A			B			A	n/a[2]		A	n/a[2]		A
			Delay	8.8			12.6			7.6			8.0			0.4
	PM		LOS	A			B			A	n/a[2]		A	n/a[2]		A
			Delay	9.8			10.5			8.1			0.0			0.7
E Airfield Dr @ W Walnut Hill Ln	AM	Signal	LOS	D	B	n/a[1]	C	B	n/a[1]	C	C	n/a[1]	C	C	n/a[1]	C
			Delay	42.1	12.7		31.1	11.9		21.5	25.5		21.2	22.1		23.5
	PM		LOS	E	D	n/a[1]	D	A	n/a[1]	A	D	n/a[1]	D	D	n/a[1]	D
			Delay	68.1	52.4		39.5	6.8		0.0	54.2		54.9	42.0		38.9

n/a[1] - *HCM* methodology does not calculate delay for yield-controlled channelized right at signalized intersections
n/a[2] – free movement, no delay reported

The results of the 2023 Build analysis are similar to the results of the 2023 No Build analysis in which LOS C or better are shown for the overall intersection LOS in the AM and PM peak hours for all study intersections. The results show no adverse impact on the overall operations of the study intersections due to traffic generated from the proposed developments.

In 2028 Build analysis, results show all study intersections to operate at LOS C or better for the overall intersection during both peak hours except for the intersection at East Airfield Drive and Walnut Hill Lane which show LOS D for the overall intersection. The increased in delay is due to the growth of the background traffic and not traffic generated by the proposed developments.

The 95th percentile queue length was reviewed for the access road to the West ARFF station. It should be noted that a queue length less than 100 feet is anticipated along the westbound approach at the

intersection of West Airfield Drive and ARFF Station access in 2028 Build conditions. This queue length is less than the distance from the first driveway to the intersection.

6.0 Summary and Conclusions

The results of the analysis show the study intersections will perform adequately, with overall intersection LOS C or better, with the proposed ARFF stations and new fumigation facility in 2023. Hence, the proposed developments do not have a significant impact on the study intersections along West Airfield Drive and East Airfield Drive. In 2028, although more delay will incur at the study intersections, with overall intersection LOS D or better, it is due to the growth of the background traffic and not due to the traffic generated by the proposed developments. Recommendations are to monitor the intersection at East Airfield Drive and Walnut Hill Lane as traffic grow due to airport growth.

APPENDIX A

Traffic Data

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ CARBON RD - TUE
Site Code:
Start Date: 07/24/2018

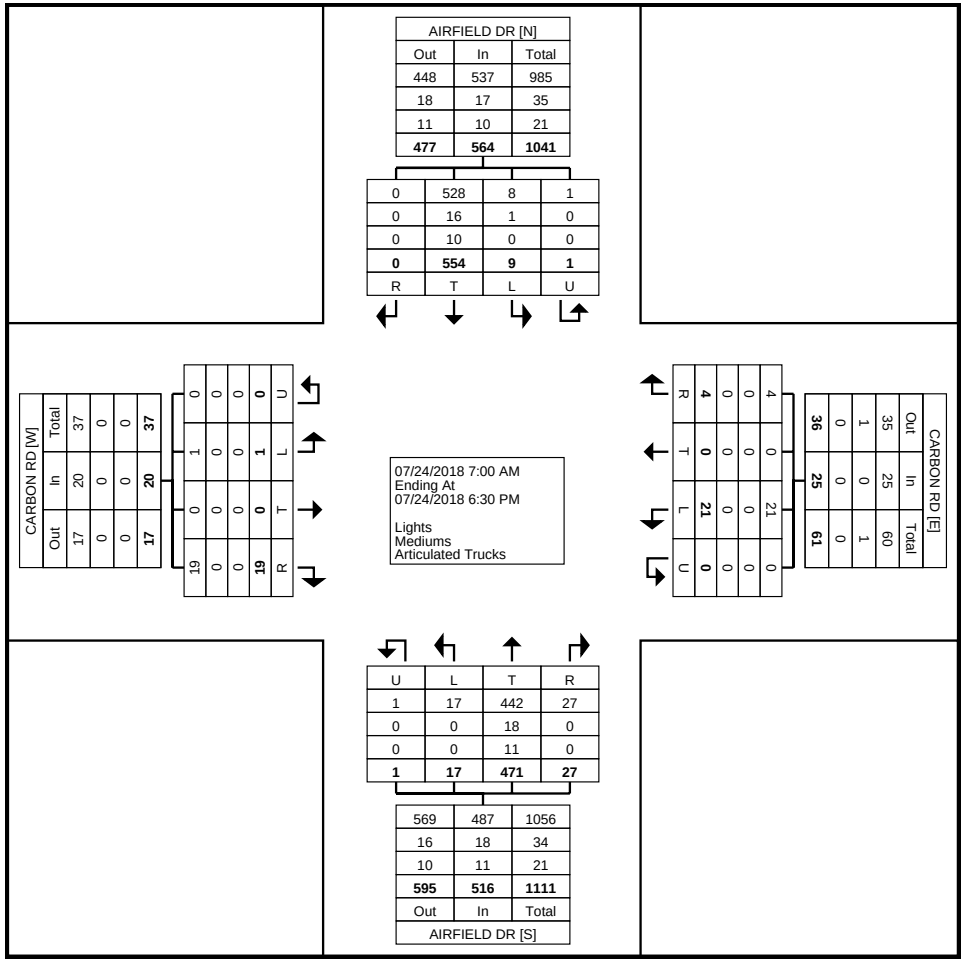
Turning Movement Data

Start Time	AIRFIELD DR Southbound					CARBON RD Westbound					AIRFIELD DR Northbound					CARBON RD Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
7:00 AM	0	18	0	0	18	0	0	0	0	0	4	47	4	0	55	0	0	0	0	0	73
7:15 AM	1	19	0	0	20	1	0	0	0	1	2	75	2	0	79	0	0	2	0	2	102
7:30 AM	1	38	0	1	40	2	0	0	0	2	3	60	4	0	67	0	0	0	0	0	109
7:45 AM	1	37	0	0	38	1	0	0	0	1	1	48	8	0	57	0	0	0	0	0	96
Hourly Total	3	112	0	1	116	4	0	0	0	4	10	230	18	0	258	0	0	2	0	2	380
8:00 AM	2	29	0	0	31	1	0	1	0	2	1	32	4	1	38	0	0	1	0	1	72
8:15 AM	2	22	0	0	24	5	0	2	0	7	1	49	2	0	52	0	0	1	0	1	84
8:30 AM	1	28	0	0	29	1	0	0	0	1	1	39	2	0	42	0	0	1	0	1	73
8:45 AM	1	24	0	0	25	1	0	0	0	1	1	40	0	0	41	0	0	0	0	0	67
Hourly Total	6	103	0	0	109	8	0	3	0	11	4	160	8	1	173	0	0	3	0	3	296
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	78	0	0	78	2	0	1	0	3	0	15	0	0	15	0	0	2	0	2	98
4:45 PM	0	48	0	0	48	1	0	0	0	1	0	5	1	0	6	0	0	4	0	4	59
Hourly Total	0	126	0	0	126	3	0	1	0	4	0	20	1	0	21	0	0	6	0	6	157
5:00 PM	0	60	0	0	60	2	0	0	0	2	1	9	0	0	10	1	0	4	0	5	77
5:15 PM	0	35	0	0	35	2	0	0	0	2	0	13	0	0	13	0	0	1	0	1	51
5:30 PM	0	40	0	0	40	1	0	0	0	1	0	9	0	0	9	0	0	0	0	0	50
5:45 PM	0	25	0	0	25	0	0	0	0	0	0	13	0	0	13	0	0	2	0	2	40
Hourly Total	0	160	0	0	160	5	0	0	0	5	1	44	0	0	45	1	0	7	0	8	218
6:00 PM	0	22	0	0	22	1	0	0	0	1	2	7	0	0	9	0	0	1	0	1	33
6:15 PM	0	31	0	0	31	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	41
Grand Total	9	554	0	1	564	21	0	4	0	25	17	471	27	1	516	1	0	19	0	20	1125
Approach %	1.6	98.2	0.0	0.2	-	84.0	0.0	16.0	0.0	-	3.3	91.3	5.2	0.2	-	5.0	0.0	95.0	0.0	-	-
Total %	0.8	49.2	0.0	0.1	50.1	1.9	0.0	0.4	0.0	2.2	1.5	41.9	2.4	0.1	45.9	0.1	0.0	1.7	0.0	1.8	-
Lights	8	528	0	1	537	21	0	4	0	25	17	442	27	1	487	1	0	19	0	20	1069
% Lights	88.9	95.3	-	100.0	95.2	100.0	-	100.0	-	100.0	100.0	93.8	100.0	100.0	94.4	100.0	-	100.0	-	100.0	95.0
Mediums	1	16	0	0	17	0	0	0	0	0	0	18	0	0	18	0	0	0	0	0	35
% Mediums	11.1	2.9	-	0.0	3.0	0.0	-	0.0	-	0.0	0.0	3.8	0.0	0.0	3.5	0.0	-	0.0	-	0.0	3.1
Articulated Trucks	0	10	0	0	10	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	21
% Articulated Trucks	0.0	1.8	-	0.0	1.8	0.0	-	0.0	-	0.0	0.0	2.3	0.0	0.0	2.1	0.0	-	0.0	-	0.0	1.9

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ CARBON RD - TUE
Site Code:
Start Date: 07/24/2018
Page No: 2



Turning Movement Data Plot

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ CARBON RD - TUE
Site Code:
Start Date: 07/24/2018

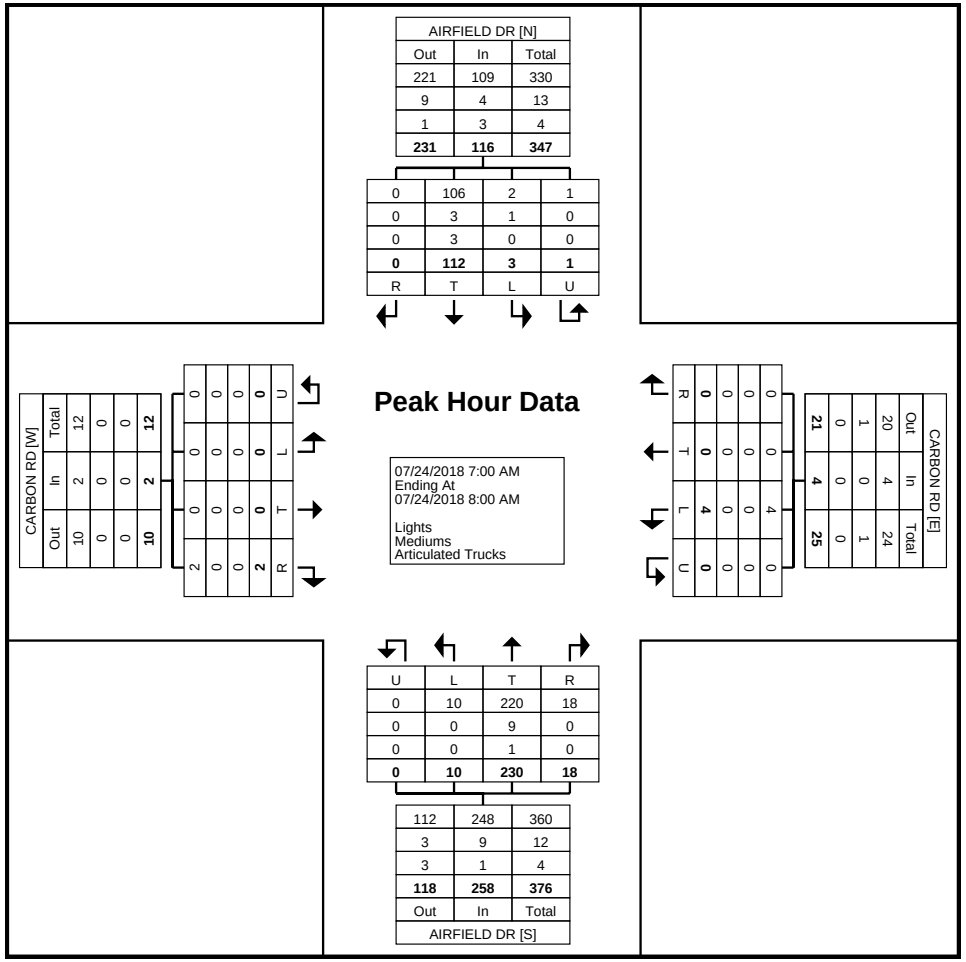
Turning Movement Peak Hour Data (7:00 AM)

Start Time	AIRFIELD DR Southbound					CARBON RD Westbound					AIRFIELD DR Northbound					CARBON RD Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
7:00 AM	0	18	0	0	18	0	0	0	0	0	4	47	4	0	55	0	0	0	0	0	73
7:15 AM	1	19	0	0	20	1	0	0	0	1	2	75	2	0	79	0	0	2	0	2	102
7:30 AM	1	38	0	1	40	2	0	0	0	2	3	60	4	0	67	0	0	0	0	0	109
7:45 AM	1	37	0	0	38	1	0	0	0	1	1	48	8	0	57	0	0	0	0	0	96
Total	3	112	0	1	116	4	0	0	0	4	10	230	18	0	258	0	0	2	0	2	380
Approach %	2.6	96.6	0.0	0.9	-	100.0	0.0	0.0	0.0	-	3.9	89.1	7.0	0.0	-	0.0	0.0	100.0	0.0	-	-
Total %	0.8	29.5	0.0	0.3	30.5	1.1	0.0	0.0	0.0	1.1	2.6	60.5	4.7	0.0	67.9	0.0	0.0	0.5	0.0	0.5	-
PHF	0.750	0.737	0.000	0.250	0.725	0.500	0.000	0.000	0.000	0.500	0.625	0.767	0.563	0.000	0.816	0.000	0.000	0.250	0.000	0.250	0.872
Lights	2	106	0	1	109	4	0	0	0	4	10	220	18	0	248	0	0	2	0	2	363
% Lights	66.7	94.6	-	100.0	94.0	100.0	-	-	-	100.0	100.0	95.7	100.0	-	96.1	-	-	100.0	-	100.0	95.5
Mediums	1	3	0	0	4	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	13
% Mediums	33.3	2.7	-	0.0	3.4	0.0	-	-	-	0.0	0.0	3.9	0.0	-	3.5	-	-	0.0	-	0.0	3.4
Articulated Trucks	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	4
% Articulated Trucks	0.0	2.7	-	0.0	2.6	0.0	-	-	-	0.0	0.0	0.4	0.0	-	0.4	-	-	0.0	-	0.0	1.1

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ CARBON RD - TUE
Site Code:
Start Date: 07/24/2018



Turning Movement Peak Hour Data Plot (7:00 AM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ CARBON RD - TUE
Site Code:
Start Date: 07/24/2018

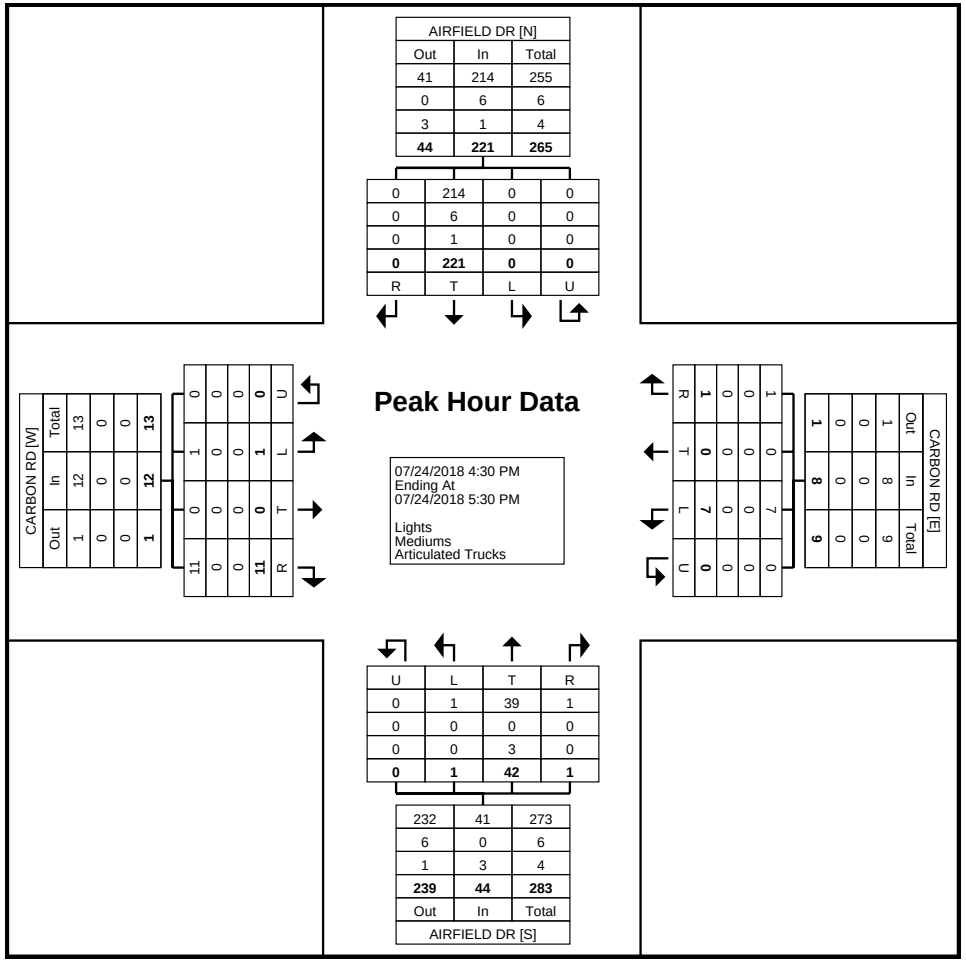
Turning Movement Peak Hour Data (4:30 PM)

Start Time	AIRFIELD DR Southbound					CARBON RD Westbound					AIRFIELD DR Northbound					CARBON RD Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
4:30 PM	0	78	0	0	78	2	0	1	0	3	0	15	0	0	15	0	0	2	0	2	98
4:45 PM	0	48	0	0	48	1	0	0	0	1	0	5	1	0	6	0	0	4	0	4	59
5:00 PM	0	60	0	0	60	2	0	0	0	2	1	9	0	0	10	1	0	4	0	5	77
5:15 PM	0	35	0	0	35	2	0	0	0	2	0	13	0	0	13	0	0	1	0	1	51
Total	0	221	0	0	221	7	0	1	0	8	1	42	1	0	44	1	0	11	0	12	285
Approach %	0.0	100.0	0.0	0.0	-	87.5	0.0	12.5	0.0	-	2.3	95.5	2.3	0.0	-	8.3	0.0	91.7	0.0	-	-
Total %	0.0	77.5	0.0	0.0	77.5	2.5	0.0	0.4	0.0	2.8	0.4	14.7	0.4	0.0	15.4	0.4	0.0	3.9	0.0	4.2	-
PHF	0.000	0.708	0.000	0.000	0.708	0.875	0.000	0.250	0.000	0.667	0.250	0.700	0.250	0.000	0.733	0.250	0.000	0.688	0.000	0.600	0.727
Lights	0	214	0	0	214	7	0	1	0	8	1	39	1	0	41	1	0	11	0	12	275
% Lights	-	96.8	-	-	96.8	100.0	-	100.0	-	100.0	100.0	92.9	100.0	-	93.2	100.0	-	100.0	-	100.0	96.5
Mediums	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
% Mediums	-	2.7	-	-	2.7	0.0	-	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	-	0.0	-	0.0	2.1
Articulated Trucks	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	4
% Articulated Trucks	-	0.5	-	-	0.5	0.0	-	0.0	-	0.0	0.0	7.1	0.0	-	6.8	0.0	-	0.0	-	0.0	1.4

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ CARBON RD - TUE
Site Code:
Start Date: 07/24/2018
Page No: 6



Turning Movement Peak Hour Data Plot (4:30 PM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ CARBON RD - WED
Site Code:
Start Date: 07/25/2018

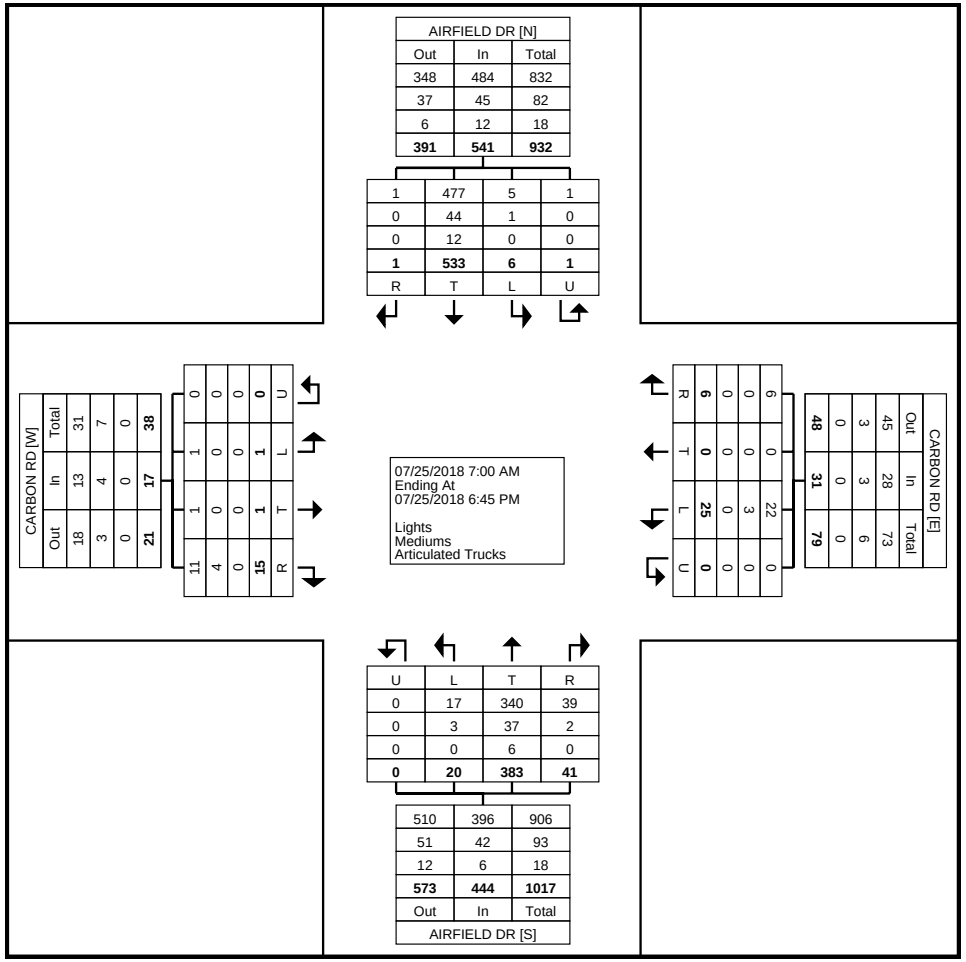
Turning Movement Data

Start Time	AIRFIELD DR Southbound					CARBON RD Westbound					AIRFIELD DR Northbound					CARBON RD Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
7:00 AM	1	35	0	0	36	1	0	0	0	1	4	33	4	0	41	0	1	0	0	1	79
7:15 AM	0	18	0	0	18	2	0	1	0	3	1	35	7	0	43	0	0	1	0	1	65
7:30 AM	0	25	0	0	25	3	0	0	0	3	3	41	4	0	48	0	0	0	0	0	76
7:45 AM	1	33	0	0	34	2	0	1	0	3	2	43	10	0	55	0	0	1	0	1	93
Hourly Total	2	111	0	0	113	8	0	2	0	10	10	152	25	0	187	0	1	2	0	3	313
8:00 AM	0	23	0	0	23	1	0	0	0	1	1	24	2	0	27	0	0	1	0	1	52
8:15 AM	2	34	0	0	36	1	0	1	0	2	3	39	3	0	45	1	0	0	0	1	84
8:30 AM	1	24	0	1	26	4	0	1	0	5	0	34	2	0	36	0	0	1	0	1	68
8:45 AM	1	27	1	0	29	2	0	1	0	3	4	33	5	0	42	0	0	2	0	2	76
Hourly Total	4	108	1	1	114	8	0	3	0	11	8	130	12	0	150	1	0	4	0	5	280
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	53	0	0	53	2	0	0	0	2	0	28	1	0	29	0	0	1	0	1	85
4:45 PM	0	60	0	0	60	0	0	1	0	1	0	10	1	0	11	0	0	2	0	2	74
Hourly Total	0	113	0	0	113	2	0	1	0	3	0	38	2	0	40	0	0	3	0	3	159
5:00 PM	0	30	0	0	30	4	0	0	0	4	0	15	2	0	17	0	0	3	0	3	54
5:15 PM	0	58	0	0	58	3	0	0	0	3	1	11	0	0	12	0	0	1	0	1	74
5:30 PM	0	30	0	0	30	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	36
5:45 PM	0	21	0	0	21	0	0	0	0	0	1	11	0	0	12	0	0	1	0	1	34
Hourly Total	0	139	0	0	139	7	0	0	0	7	2	43	2	0	47	0	0	5	0	5	198
6:00 PM	0	25	0	0	25	0	0	0	0	0	0	12	0	0	12	0	0	1	0	1	38
6:15 PM	0	37	0	0	37	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	45
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	6	533	1	1	541	25	0	6	0	31	20	383	41	0	444	1	1	15	0	17	1033
Approach %	1.1	98.5	0.2	0.2	-	80.6	0.0	19.4	0.0	-	4.5	86.3	9.2	0.0	-	5.9	5.9	88.2	0.0	-	-
Total %	0.6	51.6	0.1	0.1	52.4	2.4	0.0	0.6	0.0	3.0	1.9	37.1	4.0	0.0	43.0	0.1	0.1	1.5	0.0	1.6	-
Lights	5	477	1	1	484	22	0	6	0	28	17	340	39	0	396	1	1	11	0	13	921
% Lights	83.3	89.5	100.0	100.0	89.5	88.0	-	100.0	-	90.3	85.0	88.8	95.1	-	89.2	100.0	100.0	73.3	-	76.5	89.2
Mediums	1	44	0	0	45	3	0	0	0	3	3	37	2	0	42	0	0	4	0	4	94
% Mediums	16.7	8.3	0.0	0.0	8.3	12.0	-	0.0	-	9.7	15.0	9.7	4.9	-	9.5	0.0	0.0	26.7	-	23.5	9.1
Articulated Trucks	0	12	0	0	12	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	18
% Articulated Trucks	0.0	2.3	0.0	0.0	2.2	0.0	-	0.0	-	0.0	0.0	1.6	0.0	-	1.4	0.0	0.0	0.0	-	0.0	1.7

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ CARBON RD - WED
Site Code:
Start Date: 07/25/2018
Page No: 2



Turning Movement Data Plot

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

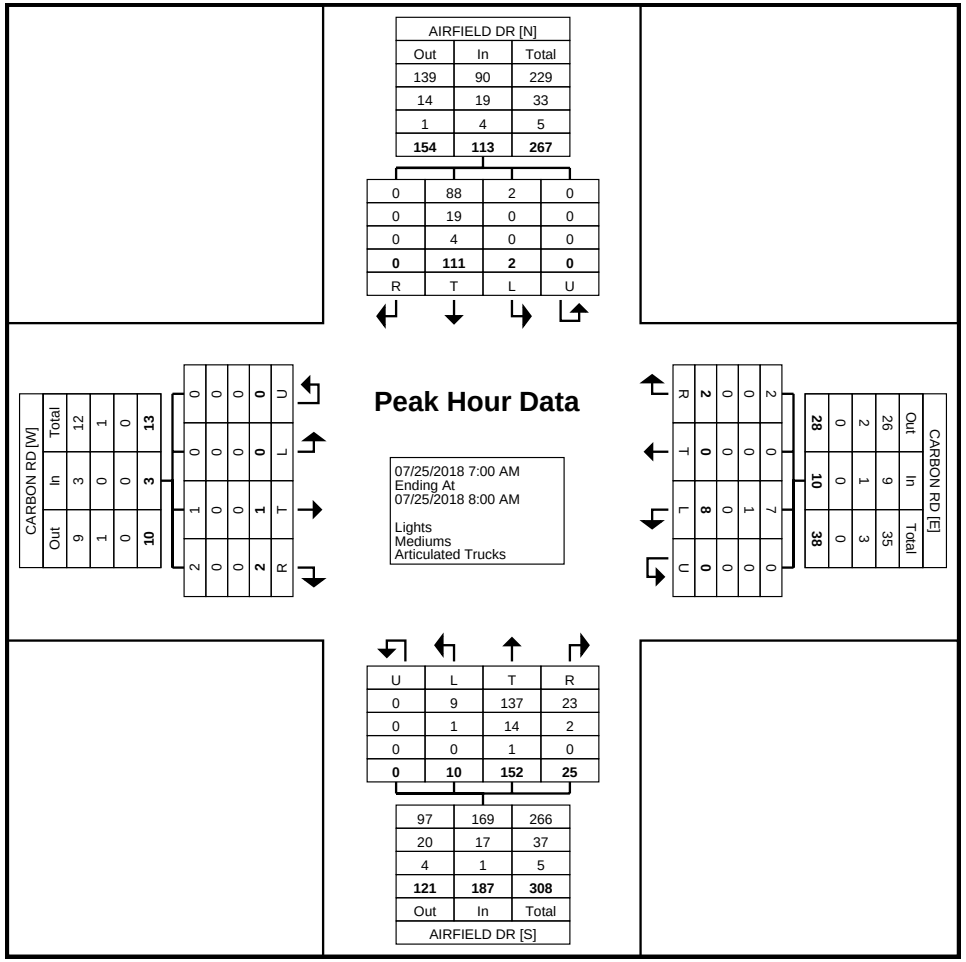
Count Name: AIRFIELD DR @ CARBON RD - WED
Site Code:
Start Date: 07/25/2018

Turning Movement Peak Hour Data (7:00 AM)

Start Time	AIRFIELD DR Southbound					CARBON RD Westbound					AIRFIELD DR Northbound					CARBON RD Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
7:00 AM	1	35	0	0	36	1	0	0	0	1	4	33	4	0	41	0	1	0	0	1	79
7:15 AM	0	18	0	0	18	2	0	1	0	3	1	35	7	0	43	0	0	1	0	1	65
7:30 AM	0	25	0	0	25	3	0	0	0	3	3	41	4	0	48	0	0	0	0	0	76
7:45 AM	1	33	0	0	34	2	0	1	0	3	2	43	10	0	55	0	0	1	0	1	93
Total	2	111	0	0	113	8	0	2	0	10	10	152	25	0	187	0	1	2	0	3	313
Approach %	1.8	98.2	0.0	0.0	-	80.0	0.0	20.0	0.0	-	5.3	81.3	13.4	0.0	-	0.0	33.3	66.7	0.0	-	-
Total %	0.6	35.5	0.0	0.0	36.1	2.6	0.0	0.6	0.0	3.2	3.2	48.6	8.0	0.0	59.7	0.0	0.3	0.6	0.0	1.0	-
PHF	0.500	0.793	0.000	0.000	0.785	0.667	0.000	0.500	0.000	0.833	0.625	0.884	0.625	0.000	0.850	0.000	0.250	0.500	0.000	0.750	0.841
Lights	2	88	0	0	90	7	0	2	0	9	9	137	23	0	169	0	1	2	0	3	271
% Lights	100.0	79.3	-	-	79.6	87.5	-	100.0	-	90.0	90.0	90.1	92.0	-	90.4	-	100.0	100.0	-	100.0	86.6
Mediums	0	19	0	0	19	1	0	0	0	1	1	14	2	0	17	0	0	0	0	0	37
% Mediums	0.0	17.1	-	-	16.8	12.5	-	0.0	-	10.0	10.0	9.2	8.0	-	9.1	-	0.0	0.0	-	0.0	11.8
Articulated Trucks	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
% Articulated Trucks	0.0	3.6	-	-	3.5	0.0	-	0.0	-	0.0	0.0	0.7	0.0	-	0.5	-	0.0	0.0	-	0.0	1.6

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com



Turning Movement Peak Hour Data Plot (7:00 AM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

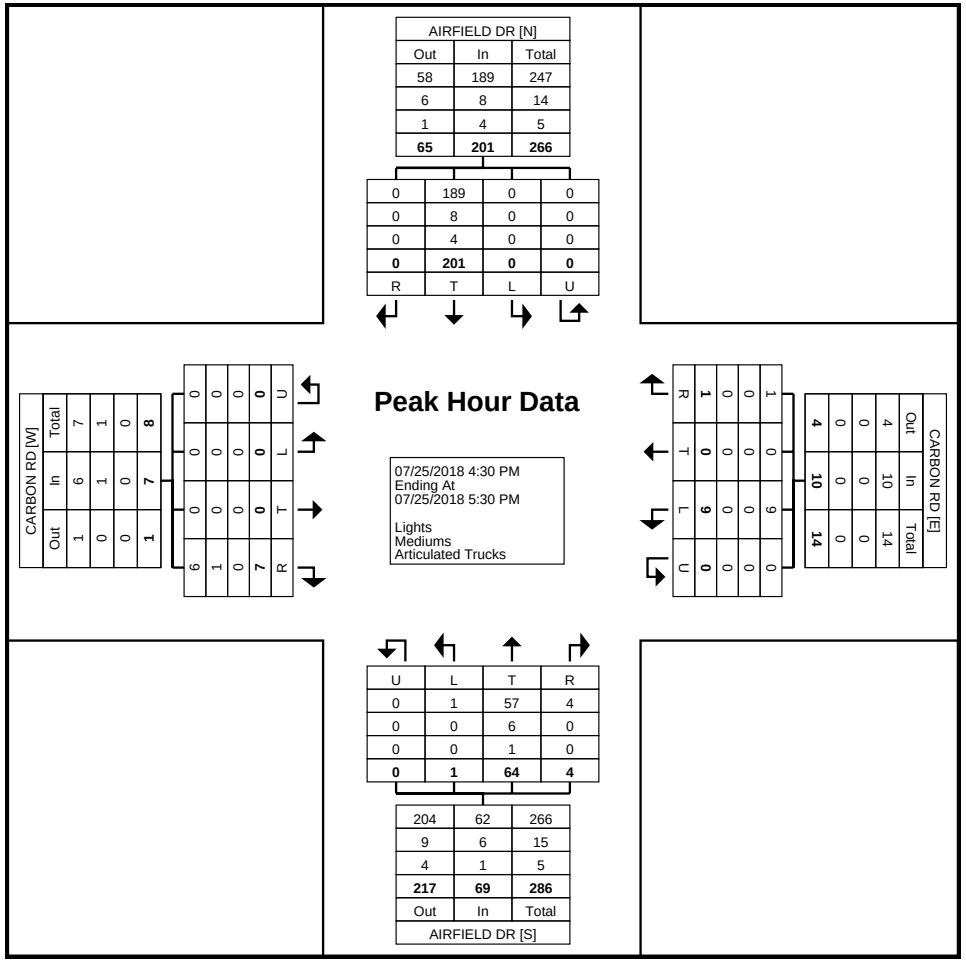
Count Name: AIRFIELD DR @ CARBON RD - WED
Site Code:
Start Date: 07/25/2018

Turning Movement Peak Hour Data (4:30 PM)

Start Time	AIRFIELD DR Southbound					CARBON RD Westbound					AIRFIELD DR Northbound					CARBON RD Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
4:30 PM	0	53	0	0	53	2	0	0	0	2	0	28	1	0	29	0	0	1	0	1	85
4:45 PM	0	60	0	0	60	0	0	1	0	1	0	10	1	0	11	0	0	2	0	2	74
5:00 PM	0	30	0	0	30	4	0	0	0	4	0	15	2	0	17	0	0	3	0	3	54
5:15 PM	0	58	0	0	58	3	0	0	0	3	1	11	0	0	12	0	0	1	0	1	74
Total	0	201	0	0	201	9	0	1	0	10	1	64	4	0	69	0	0	7	0	7	287
Approach %	0.0	100.0	0.0	0.0	-	90.0	0.0	10.0	0.0	-	1.4	92.8	5.8	0.0	-	0.0	0.0	100.0	0.0	-	-
Total %	0.0	70.0	0.0	0.0	70.0	3.1	0.0	0.3	0.0	3.5	0.3	22.3	1.4	0.0	24.0	0.0	0.0	2.4	0.0	2.4	-
PHF	0.000	0.838	0.000	0.000	0.838	0.563	0.000	0.250	0.000	0.625	0.250	0.571	0.500	0.000	0.595	0.000	0.000	0.583	0.000	0.583	0.844
Lights	0	189	0	0	189	9	0	1	0	10	1	57	4	0	62	0	0	6	0	6	267
% Lights	-	94.0	-	-	94.0	100.0	-	100.0	-	100.0	100.0	89.1	100.0	-	89.9	-	-	85.7	-	85.7	93.0
Mediums	0	8	0	0	8	0	0	0	0	0	0	6	0	0	6	0	0	1	0	1	15
% Mediums	-	4.0	-	-	4.0	0.0	-	0.0	-	0.0	0.0	9.4	0.0	-	8.7	-	-	14.3	-	14.3	5.2
Articulated Trucks	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	5
% Articulated Trucks	-	2.0	-	-	2.0	0.0	-	0.0	-	0.0	0.0	1.6	0.0	-	1.4	-	-	0.0	-	0.0	1.7

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com



Turning Movement Peak Hour Data Plot (4:30 PM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ CARBON RD - WED
Site Code:
Start Date: 07/25/2018

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - TUE
Site Code:
Start Date: 07/24/2018

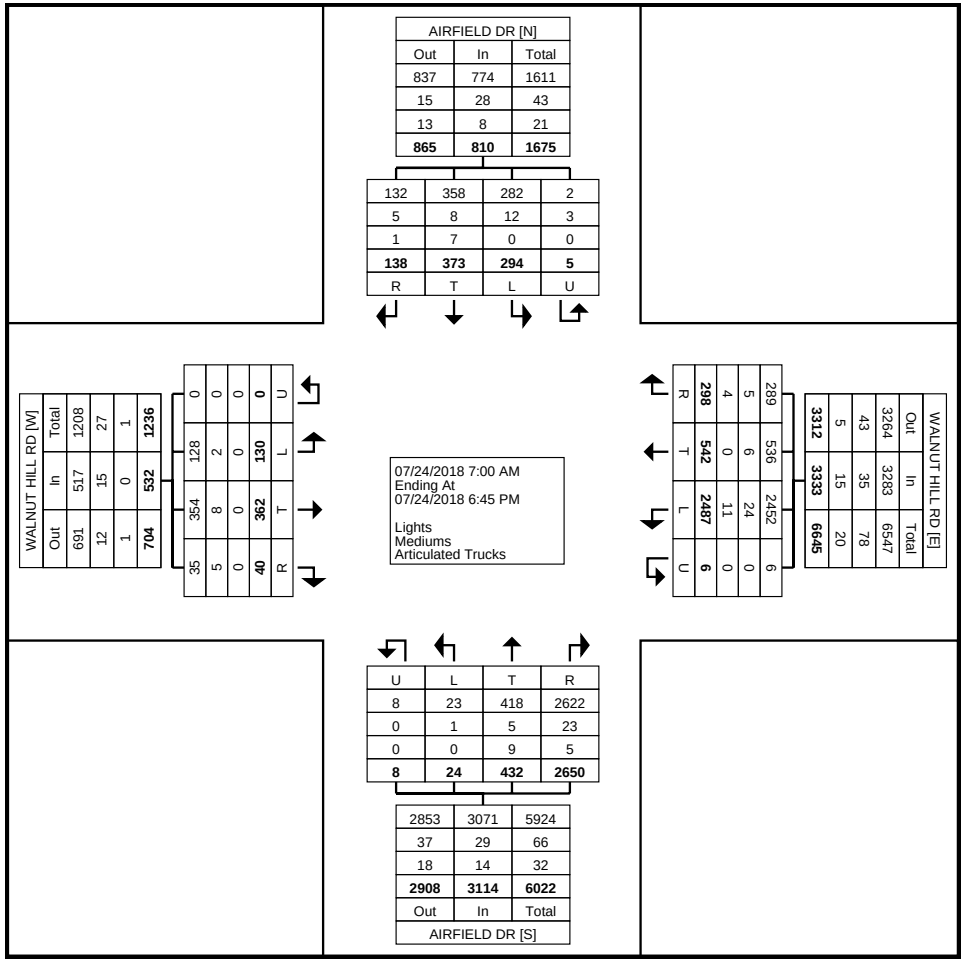
Turning Movement Data

Start Time	AIRFIELD DR Southbound					WALNUT HILL RD Westbound					AIRFIELD DR Northbound					WALNUT HILL RD Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
7:00 AM	6	12	3	0	21	41	35	64	0	140	1	59	299	0	359	11	21	1	0	33	553
7:15 AM	6	23	10	0	39	41	26	38	0	105	3	87	360	0	450	14	18	3	0	35	629
7:30 AM	7	31	11	0	49	47	36	39	0	122	3	47	318	3	371	17	22	0	0	39	581
7:45 AM	9	18	11	0	38	26	40	29	0	95	5	39	261	1	306	9	17	0	0	26	465
Hourly Total	28	84	35	0	147	155	137	170	0	462	12	232	1238	4	1486	51	78	4	0	133	2228
8:00 AM	10	14	12	0	36	31	21	31	0	83	0	45	264	1	310	12	21	1	0	34	463
8:15 AM	7	19	12	1	39	38	43	23	1	105	1	39	270	0	310	9	16	1	0	26	480
8:30 AM	10	12	9	0	31	32	26	17	1	76	8	35	211	1	255	14	18	3	0	35	397
8:45 AM	5	6	7	1	19	27	28	24	0	79	1	35	135	1	172	9	10	1	0	20	290
Hourly Total	32	51	40	2	125	128	118	95	2	343	10	154	880	3	1047	44	65	6	0	115	1630
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	52	46	10	2	110	273	34	1	1	309	0	6	54	0	60	7	25	4	0	36	515
4:45 PM	34	48	8	1	91	300	49	3	0	352	0	7	83	0	90	2	28	13	0	43	576
Hourly Total	86	94	18	3	201	573	83	4	1	661	0	13	137	0	150	9	53	17	0	79	1091
5:00 PM	55	27	11	0	93	370	48	3	0	421	0	4	70	0	74	4	37	4	0	45	633
5:15 PM	32	34	9	0	75	375	45	5	1	426	0	3	84	0	87	7	23	2	0	32	620
5:30 PM	18	19	5	0	42	312	38	4	0	354	0	9	69	1	79	3	35	3	0	41	516
5:45 PM	17	22	5	0	44	246	29	11	0	286	1	6	63	0	70	4	19	3	0	26	426
Hourly Total	122	102	30	0	254	1303	160	23	1	1487	1	22	286	1	310	18	114	12	0	144	2195
6:00 PM	13	17	4	0	34	200	19	1	1	221	0	4	58	0	62	3	28	0	0	31	348
6:15 PM	13	25	11	0	49	128	24	5	1	158	1	7	50	0	58	5	24	1	0	30	295
6:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2
Grand Total	294	373	138	5	810	2487	542	298	6	3333	24	432	2650	8	3114	130	362	40	0	532	7789
Approach %	36.3	46.0	17.0	0.6	-	74.6	16.3	8.9	0.2	-	0.8	13.9	85.1	0.3	-	24.4	68.0	7.5	0.0	-	-
Total %	3.8	4.8	1.8	0.1	10.4	31.9	7.0	3.8	0.1	42.8	0.3	5.5	34.0	0.1	40.0	1.7	4.6	0.5	0.0	6.8	-
Lights	282	358	132	2	774	2452	536	289	6	3283	23	418	2622	8	3071	128	354	35	0	517	7645
% Lights	95.9	96.0	95.7	40.0	95.6	98.6	98.9	97.0	100.0	98.5	95.8	96.8	98.9	100.0	98.6	98.5	97.8	87.5	-	97.2	98.2
Mediums	12	8	5	3	28	24	6	5	0	35	1	5	23	0	29	2	8	5	0	15	107
% Mediums	4.1	2.1	3.6	60.0	3.5	1.0	1.1	1.7	0.0	1.1	4.2	1.2	0.9	0.0	0.9	1.5	2.2	12.5	-	2.8	1.4
Articulated Trucks	0	7	1	0	8	11	0	4	0	15	0	9	5	0	14	0	0	0	0	0	37
% Articulated Trucks	0.0	1.9	0.7	0.0	1.0	0.4	0.0	1.3	0.0	0.5	0.0	2.1	0.2	0.0	0.4	0.0	0.0	0.0	-	0.0	0.5

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - TUE
Site Code:
Start Date: 07/24/2018
Page No: 2



Turning Movement Data Plot

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - TUE
Site Code:
Start Date: 07/24/2018

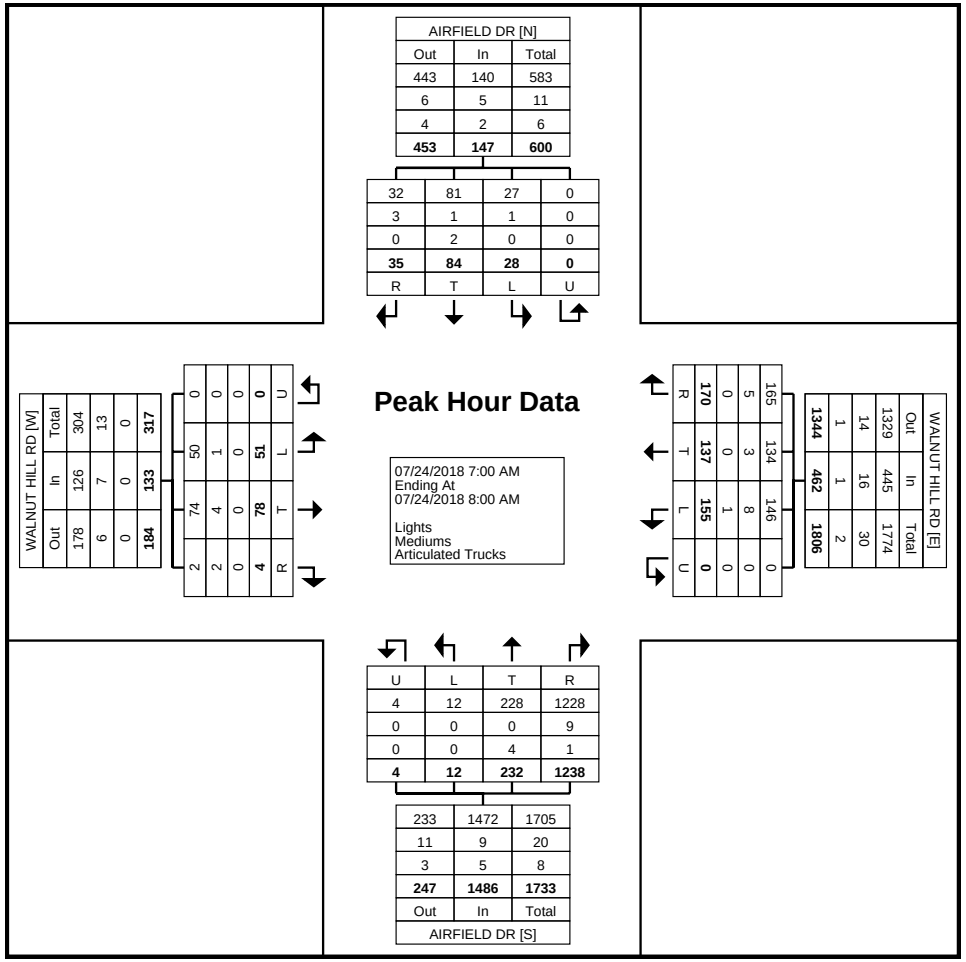
Turning Movement Peak Hour Data (7:00 AM)

Start Time	AIRFIELD DR Southbound					WALNUT HILL RD Westbound					AIRFIELD DR Northbound					WALNUT HILL RD Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
7:00 AM	6	12	3	0	21	41	35	64	0	140	1	59	299	0	359	11	21	1	0	33	553
7:15 AM	6	23	10	0	39	41	26	38	0	105	3	87	360	0	450	14	18	3	0	35	629
7:30 AM	7	31	11	0	49	47	36	39	0	122	3	47	318	3	371	17	22	0	0	39	581
7:45 AM	9	18	11	0	38	26	40	29	0	95	5	39	261	1	306	9	17	0	0	26	465
Total	28	84	35	0	147	155	137	170	0	462	12	232	1238	4	1486	51	78	4	0	133	2228
Approach %	19.0	57.1	23.8	0.0	-	33.5	29.7	36.8	0.0	-	0.8	15.6	83.3	0.3	-	38.3	58.6	3.0	0.0	-	-
Total %	1.3	3.8	1.6	0.0	6.6	7.0	6.1	7.6	0.0	20.7	0.5	10.4	55.6	0.2	66.7	2.3	3.5	0.2	0.0	6.0	-
PHF	0.778	0.677	0.795	0.000	0.750	0.824	0.856	0.664	0.000	0.825	0.600	0.667	0.860	0.333	0.826	0.750	0.886	0.333	0.000	0.853	0.886
Lights	27	81	32	0	140	146	134	165	0	445	12	228	1228	4	1472	50	74	2	0	126	2183
% Lights	96.4	96.4	91.4	-	95.2	94.2	97.8	97.1	-	96.3	100.0	98.3	99.2	100.0	99.1	98.0	94.9	50.0	-	94.7	98.0
Mediums	1	1	3	0	5	8	3	5	0	16	0	0	9	0	9	1	4	2	0	7	37
% Mediums	3.6	1.2	8.6	-	3.4	5.2	2.2	2.9	-	3.5	0.0	0.0	0.7	0.0	0.6	2.0	5.1	50.0	-	5.3	1.7
Articulated Trucks	0	2	0	0	2	1	0	0	0	1	0	4	1	0	5	0	0	0	0	0	8
% Articulated Trucks	0.0	2.4	0.0	-	1.4	0.6	0.0	0.0	-	0.2	0.0	1.7	0.1	0.0	0.3	0.0	0.0	0.0	-	0.0	0.4

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - TUE
Site Code:
Start Date: 07/24/2018
Page No: 4



Turning Movement Peak Hour Data Plot (7:00 AM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - TUE
Site Code:
Start Date: 07/24/2018

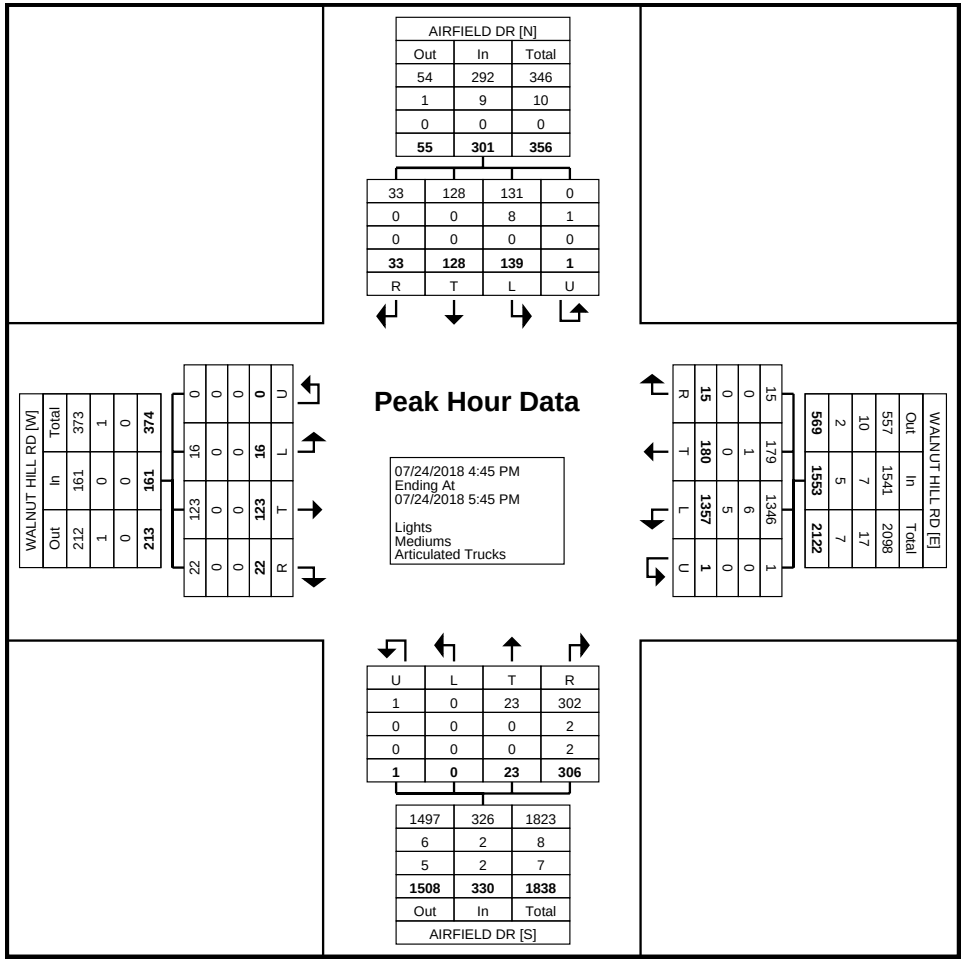
Turning Movement Peak Hour Data (4:45 PM)

Start Time	AIRFIELD DR Southbound					WALNUT HILL RD Westbound					AIRFIELD DR Northbound					WALNUT HILL RD Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
4:45 PM	34	48	8	1	91	300	49	3	0	352	0	7	83	0	90	2	28	13	0	43	576
5:00 PM	55	27	11	0	93	370	48	3	0	421	0	4	70	0	74	4	37	4	0	45	633
5:15 PM	32	34	9	0	75	375	45	5	1	426	0	3	84	0	87	7	23	2	0	32	620
5:30 PM	18	19	5	0	42	312	38	4	0	354	0	9	69	1	79	3	35	3	0	41	516
Total	139	128	33	1	301	1357	180	15	1	1553	0	23	306	1	330	16	123	22	0	161	2345
Approach %	46.2	42.5	11.0	0.3	-	87.4	11.6	1.0	0.1	-	0.0	7.0	92.7	0.3	-	9.9	76.4	13.7	0.0	-	-
Total %	5.9	5.5	1.4	0.0	12.8	57.9	7.7	0.6	0.0	66.2	0.0	1.0	13.0	0.0	14.1	0.7	5.2	0.9	0.0	6.9	-
PHF	0.632	0.667	0.750	0.250	0.809	0.905	0.918	0.750	0.250	0.911	0.000	0.639	0.911	0.250	0.917	0.571	0.831	0.423	0.000	0.894	0.926
Lights	131	128	33	0	292	1346	179	15	1	1541	0	23	302	1	326	16	123	22	0	161	2320
% Lights	94.2	100.0	100.0	0.0	97.0	99.2	99.4	100.0	100.0	99.2	-	100.0	98.7	100.0	98.8	100.0	100.0	100.0	-	100.0	98.9
Mediums	8	0	0	1	9	6	1	0	0	7	0	0	2	0	2	0	0	0	0	0	18
% Mediums	5.8	0.0	0.0	100.0	3.0	0.4	0.6	0.0	0.0	0.5	-	0.0	0.7	0.0	0.6	0.0	0.0	0.0	-	0.0	0.8
Articulated Trucks	0	0	0	0	0	5	0	0	0	5	0	0	2	0	2	0	0	0	0	0	7
% Articulated Trucks	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.3	-	0.0	0.7	0.0	0.6	0.0	0.0	0.0	-	0.0	0.3

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - TUE
Site Code:
Start Date: 07/24/2018
Page No: 6



Turning Movement Peak Hour Data Plot (4:45 PM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - TUE
Site Code:
Start Date: 07/24/2018

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - WED
Site Code:
Start Date: 07/25/2018

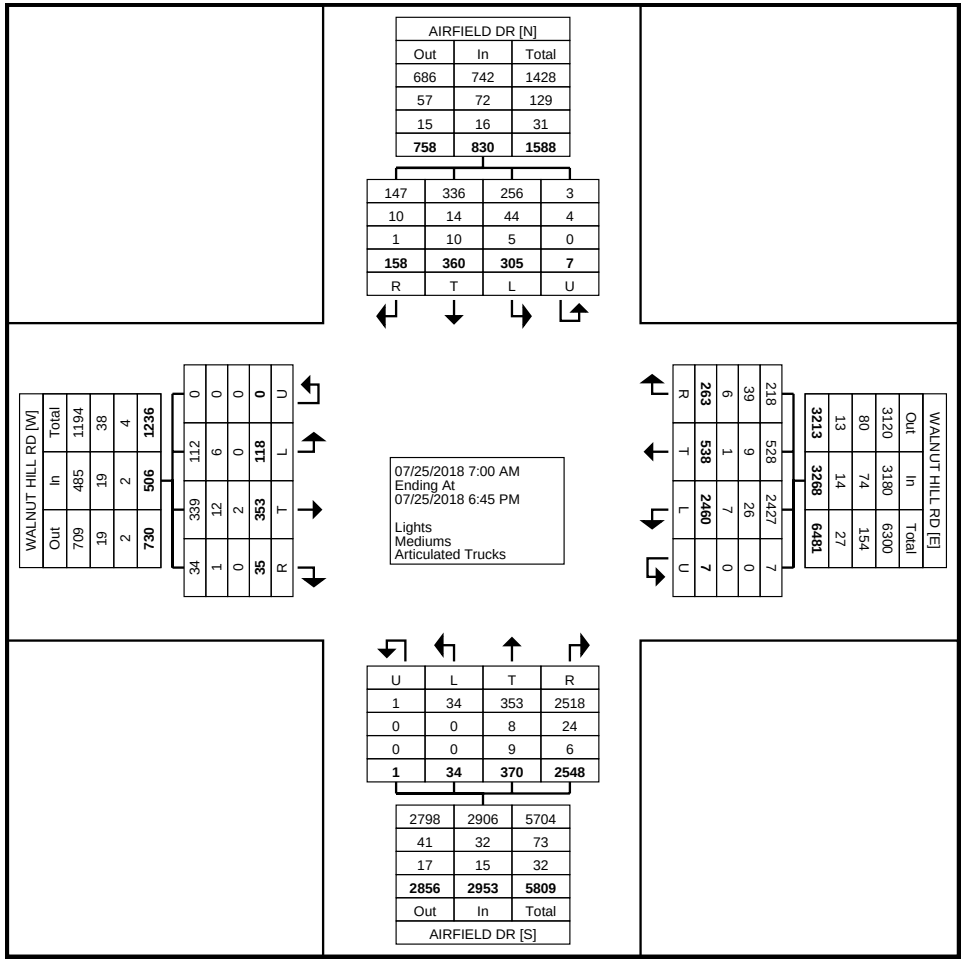
Turning Movement Data

Start Time	AIRFIELD DR Southbound					WALNUT HILL RD Westbound					AIRFIELD DR Northbound					WALNUT HILL RD Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
7:00 AM	6	10	15	0	31	43	30	42	0	115	4	58	272	0	334	6	16	1	0	23	503
7:15 AM	9	16	6	0	31	40	42	26	1	109	3	61	345	0	409	7	19	1	0	27	576
7:30 AM	16	13	11	0	40	40	45	27	1	113	5	50	326	0	381	16	19	0	0	35	569
7:45 AM	11	16	12	0	39	35	38	19	0	92	6	40	274	0	320	6	26	3	0	35	486
Hourly Total	42	55	44	0	141	158	155	114	2	429	18	209	1217	0	1444	35	80	5	0	120	2134
8:00 AM	14	14	14	0	42	42	31	29	0	102	5	29	305	0	339	11	23	1	0	35	518
8:15 AM	13	21	10	1	45	33	31	27	3	94	2	20	222	0	244	14	10	3	0	27	410
8:30 AM	14	15	7	0	36	41	18	30	0	89	2	29	190	0	221	11	18	1	0	30	376
8:45 AM	13	11	11	5	40	29	30	25	2	86	2	19	105	0	126	13	8	0	0	21	273
Hourly Total	54	61	42	6	163	145	110	111	5	371	11	97	822	0	930	49	59	5	0	113	1577
9:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	4
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	1	0	0	1	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	4
4:30 PM	31	48	8	1	88	282	29	8	0	319	4	7	74	0	85	9	39	5	0	53	545
4:45 PM	35	46	17	0	98	291	31	3	0	325	0	11	72	0	83	3	27	5	0	35	541
Hourly Total	66	94	25	1	186	573	60	11	0	644	4	18	146	0	168	12	66	10	0	88	1086
5:00 PM	53	34	13	0	100	321	57	4	0	382	0	14	78	0	92	7	30	7	0	44	618
5:15 PM	18	30	9	0	57	368	49	4	0	421	0	7	67	0	74	1	16	1	0	18	570
5:30 PM	20	21	8	0	49	305	30	5	0	340	0	4	65	0	69	2	24	1	0	27	485
5:45 PM	16	19	4	0	39	228	28	4	0	260	0	8	54	1	63	4	28	3	0	35	397
Hourly Total	107	104	34	0	245	1222	164	17	0	1403	0	33	264	1	298	14	98	12	0	124	2070
6:00 PM	16	19	7	0	42	223	27	5	0	255	1	7	57	0	65	6	26	3	0	35	397
6:15 PM	20	25	6	0	51	139	22	5	0	166	0	6	38	0	44	2	24	0	0	26	287
6:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
Grand Total	305	360	158	7	830	2460	538	263	7	3268	34	370	2548	1	2953	118	353	35	0	506	7557
Approach %	36.7	43.4	19.0	0.8	-	75.3	16.5	8.0	0.2	-	1.2	12.5	86.3	0.0	-	23.3	69.8	6.9	0.0	-	-
Total %	4.0	4.8	2.1	0.1	11.0	32.6	7.1	3.5	0.1	43.2	0.4	4.9	33.7	0.0	39.1	1.6	4.7	0.5	0.0	6.7	-
Lights	256	336	147	3	742	2427	528	218	7	3180	34	353	2518	1	2906	112	339	34	0	485	7313
% Lights	83.9	93.3	93.0	42.9	89.4	98.7	98.1	82.9	100.0	97.3	100.0	95.4	98.8	100.0	98.4	94.9	96.0	97.1	-	95.8	96.8
Mediums	44	14	10	4	72	26	9	39	0	74	0	8	24	0	32	6	12	1	0	19	197
% Mediums	14.4	3.9	6.3	57.1	8.7	1.1	1.7	14.8	0.0	2.3	0.0	2.2	0.9	0.0	1.1	5.1	3.4	2.9	-	3.8	2.6
Articulated Trucks	5	10	1	0	16	7	1	6	0	14	0	9	6	0	15	0	2	0	0	2	47
% Articulated Trucks	1.6	2.8	0.6	0.0	1.9	0.3	0.2	2.3	0.0	0.4	0.0	2.4	0.2	0.0	0.5	0.0	0.6	0.0	-	0.4	0.6

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - WED
Site Code:
Start Date: 07/25/2018
Page No: 2



Turning Movement Data Plot

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - WED
Site Code:
Start Date: 07/25/2018

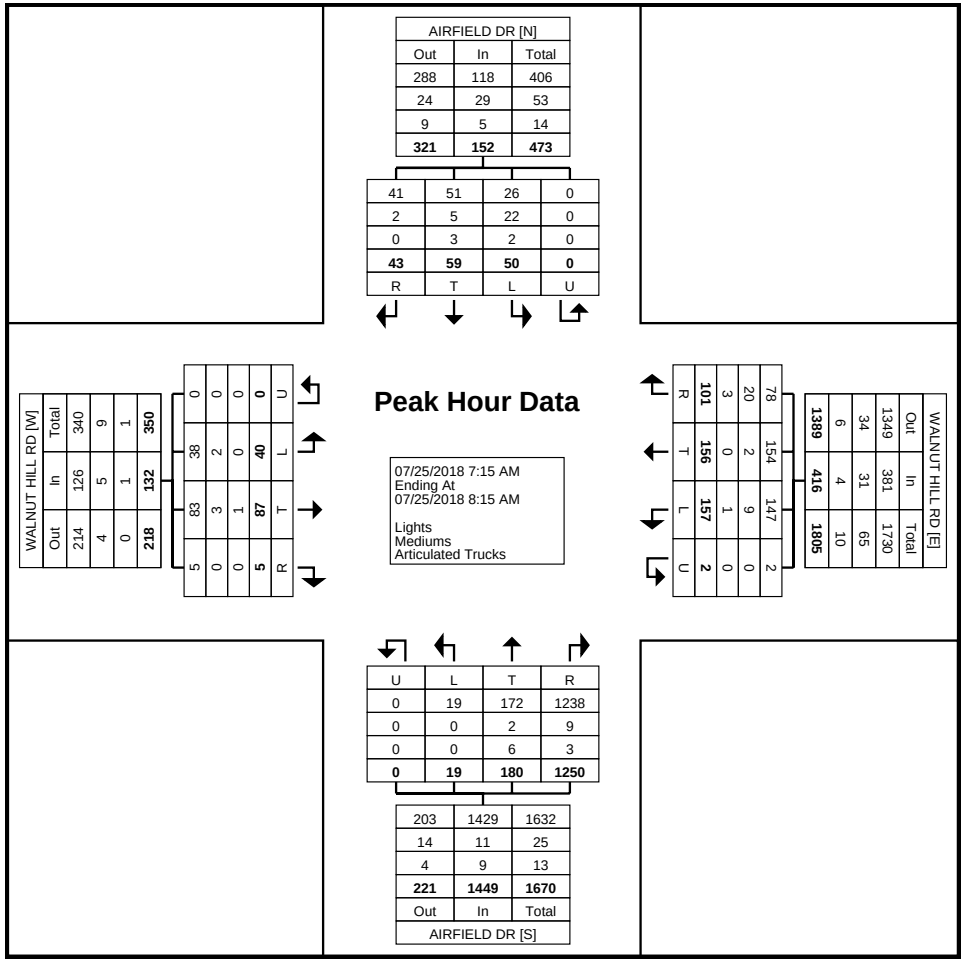
Turning Movement Peak Hour Data (7:15 AM)

Start Time	AIRFIELD DR Southbound					WALNUT HILL RD Westbound					AIRFIELD DR Northbound					WALNUT HILL RD Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
7:15 AM	9	16	6	0	31	40	42	26	1	109	3	61	345	0	409	7	19	1	0	27	576
7:30 AM	16	13	11	0	40	40	45	27	1	113	5	50	326	0	381	16	19	0	0	35	569
7:45 AM	11	16	12	0	39	35	38	19	0	92	6	40	274	0	320	6	26	3	0	35	486
8:00 AM	14	14	14	0	42	42	31	29	0	102	5	29	305	0	339	11	23	1	0	35	518
Total	50	59	43	0	152	157	156	101	2	416	19	180	1250	0	1449	40	87	5	0	132	2149
Approach %	32.9	38.8	28.3	0.0	-	37.7	37.5	24.3	0.5	-	1.3	12.4	86.3	0.0	-	30.3	65.9	3.8	0.0	-	-
Total %	2.3	2.7	2.0	0.0	7.1	7.3	7.3	4.7	0.1	19.4	0.9	8.4	58.2	0.0	67.4	1.9	4.0	0.2	0.0	6.1	-
PHF	0.781	0.922	0.768	0.000	0.905	0.935	0.867	0.871	0.500	0.920	0.792	0.738	0.906	0.000	0.886	0.625	0.837	0.417	0.000	0.943	0.933
Lights	26	51	41	0	118	147	154	78	2	381	19	172	1238	0	1429	38	83	5	0	126	2054
% Lights	52.0	86.4	95.3	-	77.6	93.6	98.7	77.2	100.0	91.6	100.0	95.6	99.0	-	98.6	95.0	95.4	100.0	-	95.5	95.6
Mediums	22	5	2	0	29	9	2	20	0	31	0	2	9	0	11	2	3	0	0	5	76
% Mediums	44.0	8.5	4.7	-	19.1	5.7	1.3	19.8	0.0	7.5	0.0	1.1	0.7	-	0.8	5.0	3.4	0.0	-	3.8	3.5
Articulated Trucks	2	3	0	0	5	1	0	3	0	4	0	6	3	0	9	0	1	0	0	1	19
% Articulated Trucks	4.0	5.1	0.0	-	3.3	0.6	0.0	3.0	0.0	1.0	0.0	3.3	0.2	-	0.6	0.0	1.1	0.0	-	0.8	0.9

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - WED
Site Code:
Start Date: 07/25/2018
Page No: 4



Turning Movement Peak Hour Data Plot (7:15 AM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - WED
Site Code:
Start Date: 07/25/2018

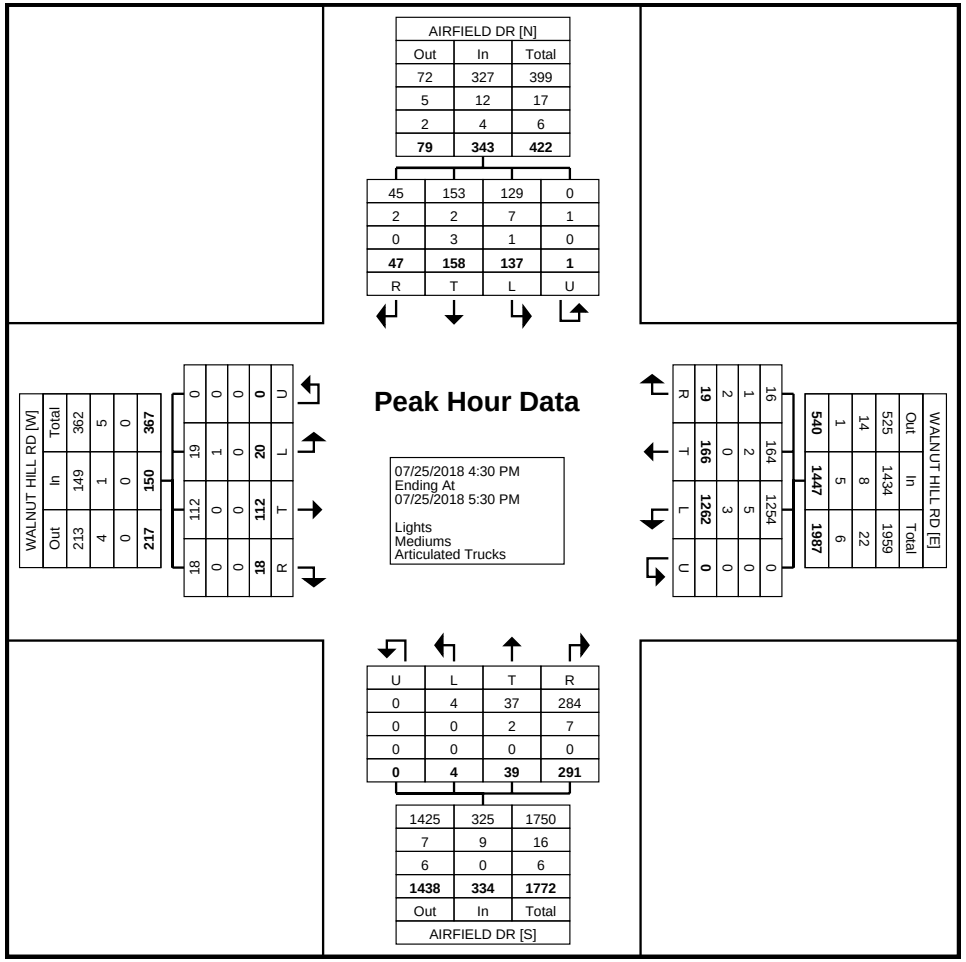
Turning Movement Peak Hour Data (4:30 PM)

Start Time	AIRFIELD DR Southbound					WALNUT HILL RD Westbound					AIRFIELD DR Northbound					WALNUT HILL RD Eastbound					
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Int. Total
4:30 PM	31	48	8	1	88	282	29	8	0	319	4	7	74	0	85	9	39	5	0	53	545
4:45 PM	35	46	17	0	98	291	31	3	0	325	0	11	72	0	83	3	27	5	0	35	541
5:00 PM	53	34	13	0	100	321	57	4	0	382	0	14	78	0	92	7	30	7	0	44	618
5:15 PM	18	30	9	0	57	368	49	4	0	421	0	7	67	0	74	1	16	1	0	18	570
Total	137	158	47	1	343	1262	166	19	0	1447	4	39	291	0	334	20	112	18	0	150	2274
Approach %	39.9	46.1	13.7	0.3	-	87.2	11.5	1.3	0.0	-	1.2	11.7	87.1	0.0	-	13.3	74.7	12.0	0.0	-	-
Total %	6.0	6.9	2.1	0.0	15.1	55.5	7.3	0.8	0.0	63.6	0.2	1.7	12.8	0.0	14.7	0.9	4.9	0.8	0.0	6.6	-
PHF	0.646	0.823	0.691	0.250	0.858	0.857	0.728	0.594	0.000	0.859	0.250	0.696	0.933	0.000	0.908	0.556	0.718	0.643	0.000	0.708	0.920
Lights	129	153	45	0	327	1254	164	16	0	1434	4	37	284	0	325	19	112	18	0	149	2235
% Lights	94.2	96.8	95.7	0.0	95.3	99.4	98.8	84.2	-	99.1	100.0	94.9	97.6	-	97.3	95.0	100.0	100.0	-	99.3	98.3
Mediums	7	2	2	1	12	5	2	1	0	8	0	2	7	0	9	1	0	0	0	1	30
% Mediums	5.1	1.3	4.3	100.0	3.5	0.4	1.2	5.3	-	0.6	0.0	5.1	2.4	-	2.7	5.0	0.0	0.0	-	0.7	1.3
Articulated Trucks	1	3	0	0	4	3	0	2	0	5	0	0	0	0	0	0	0	0	0	0	9
% Articulated Trucks	0.7	1.9	0.0	0.0	1.2	0.2	0.0	10.5	-	0.3	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.4

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - WED
Site Code:
Start Date: 07/25/2018
Page No: 6



Turning Movement Peak Hour Data Plot (4:30 PM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968 john@gramntx.com

Count Name: AIRFIELD DR @ WALNUT HILL RD - WED
Site Code:
Start Date: 07/25/2018

8. 21st Street at W Airfield Drive - TMC

Tue Apr 30, 2019
Full Length (7 AM-9 AM, 4:30 PM-6:30 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645619, Location: 32.9054, -97.066524

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

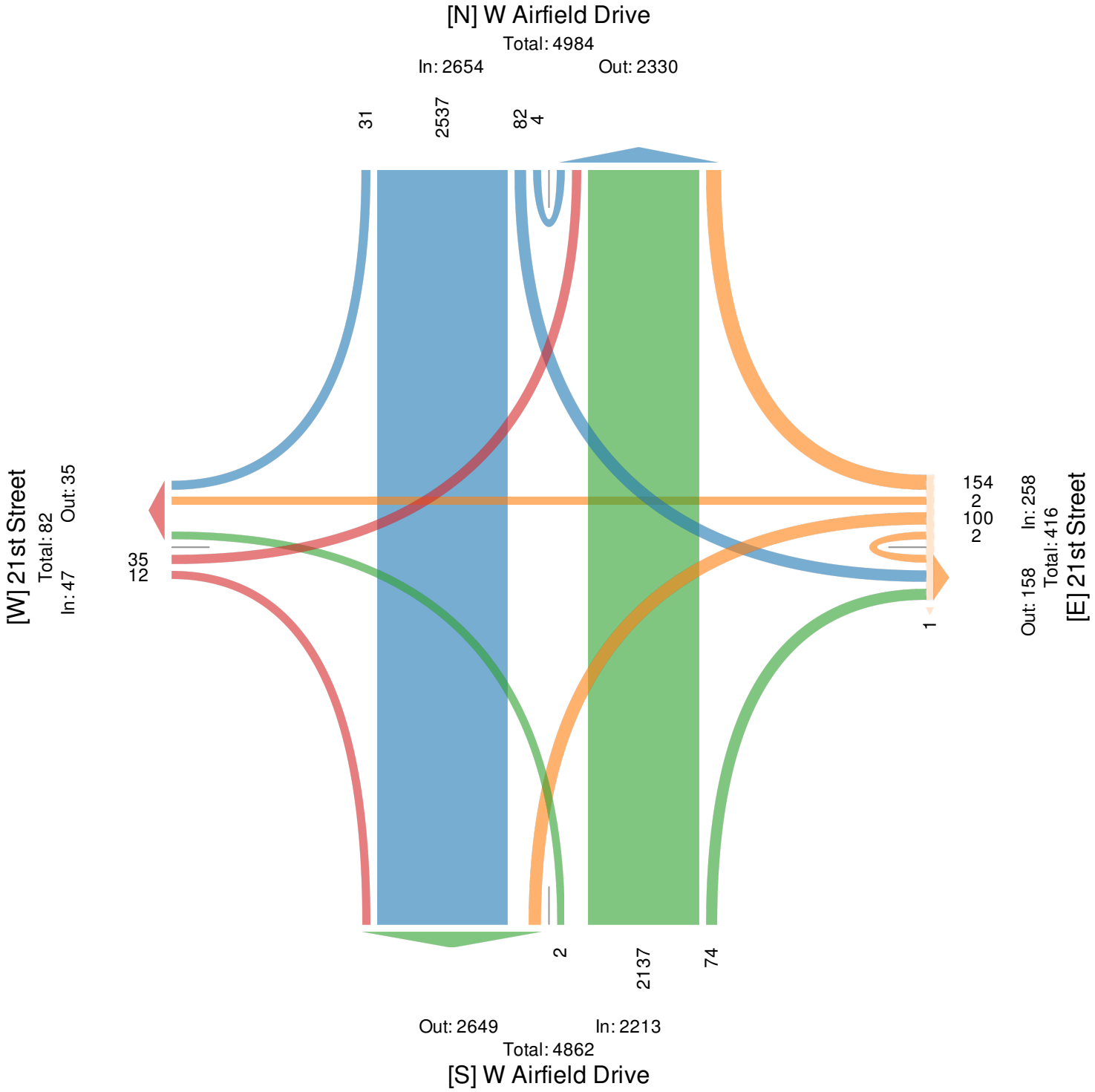
Leg	W Airfield Drive						21st Street						W Airfield Drive						21st Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2019-04-30 7:00AM	14	451	25	1	**491**	0	56	1	38	0	**95**	0	30	589	0	0	**619**	0	2	0	1	0	**3**	0	**1208**
8:00AM	12	456	27	1	**496**	0	50	0	28	1	**79**	1	29	473	2	0	**504**	0	0	0	4	0	**4**	0	**1083**
4:00PM	3	387	6	0	**396**	0	13	1	11	0	**25**	0	1	288	0	0	**289**	0	7	0	11	0	**18**	0	**728**
5:00PM	1	881	19	2	**903**	0	28	0	15	1	**44**	0	12	613	0	0	**625**	0	2	0	16	0	**18**	0	**1590**
6:00PM	1	362	5	0	**368**	0	7	0	8	0	**15**	0	2	174	0	0	**176**	0	1	0	3	0	**4**	0	**563**
Total	31	2537	82	4	**2654**	0	154	2	100	2	**258**	1	74	2137	2	0	**2213**	0	12	0	35	0	**47**	0	**5172**
% Approach	1.2%	95.6%	3.1%	0.2%	**-**	-	59.7%	0.8%	38.8%	0.8%	**-**	-	3.3%	96.6%	0.1%	0%	**-**	-	25.5%	0%	74.5%	0%	**-**	-	-
% Total	0.6%	49.1%	1.6%	0.1%	**51.3%**	-	3.0%	0%	1.9%	0%	**5.0%**	-	1.4%	41.3%	0%	0%	**42.8%**	-	0.2%	0%	0.7%	0%	**0.9%**	-	-
Lights	28	2339	78	3	**2448**	-	148	2	97	2	**249**	-	73	1958	2	0	**2033**	-	11	0	33	0	**44**	-	4774
% Lights	90.3%	92.2%	95.1%	75.0%	**92.2%**	-	96.1%	100%	97.0%	100%	**96.5%**	-	98.6%	91.6%	100%	0%	**91.9%**	-	91.7%	0%	94.3%	0%	**93.6%**	-	92.3%
Articulated Trucks	0	71	1	0	**72**	-	1	0	1	0	**2**	-	0	67	0	0	**67**	-	0	0	0	0	**0**	-	141
% Articulated Trucks	0%	2.8%	1.2%	0%	**2.7%**	-	0.6%	0%	1.0%	0%	**0.8%**	-	0%	3.1%	0%	0%	**3.0%**	-	0%	0%	0%	0%	**0%**	-	2.7%
Buses and Single-Unit Trucks	3	127	3	1	**134**	-	5	0	2	0	**7**	-	1	112	0	0	**113**	-	1	0	2	0	**3**	-	257
% Buses and Single-Unit Trucks	9.7%	5.0%	3.7%	25.0%	**5.0%**	-	3.2%	0%	2.0%	0%	**2.7%**	-	1.4%	5.2%	0%	0%	**5.1%**	-	8.3%	0%	5.7%	0%	**6.4%**	-	5.0%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

8. 21st Street at W Airfield Drive - TMC

Tue Apr 30, 2019
Full Length (7 AM-9 AM, 4:30 PM-6:30 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645619, Location: 32.9054, -97.066524

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



8. 21st Street at W Airfield Drive - TMC

Tue Apr 30, 2019
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645619, Location: 32.9054, -97.066524

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave., Pasadena, TX, 77503, US

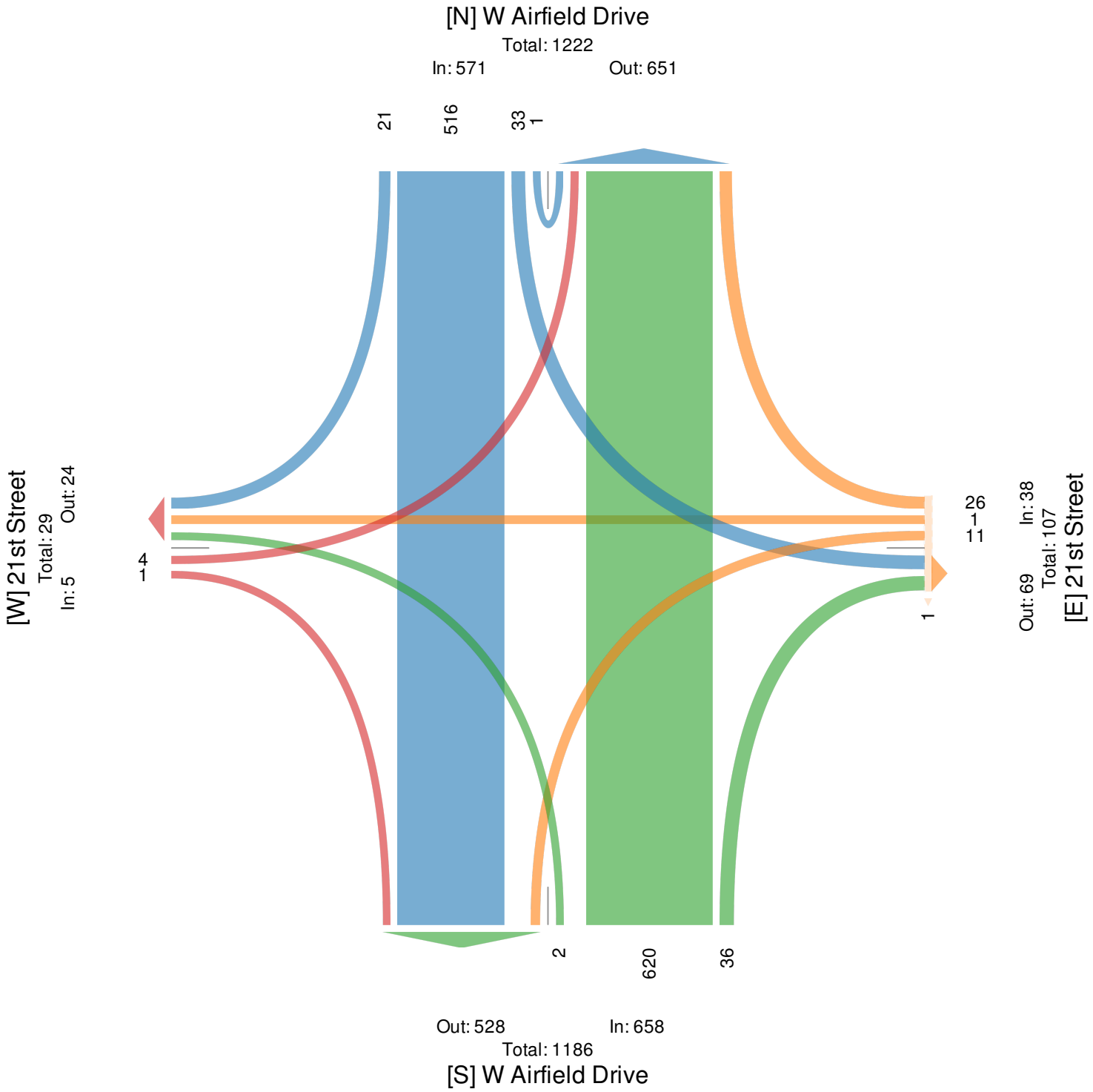
Leg	W Airfield Drive						21st Street						W Airfield Drive						21st Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2019-04-30 7:30AM	7	118	3	1	**129**	0	4	0	4	0	**8**	0	6	167	0	0	**173**	0	1	0	1	0	**2**	0	**312**
7:45AM	5	158	13	0	**176**	0	5	1	3	0	**9**	0	12	173	0	0	**185**	0	0	0	0	0	**0**	0	**370**
8:00AM	8	124	7	0	**139**	0	8	0	1	0	**9**	1	8	157	1	0	**166**	0	0	0	0	0	**0**	0	**314**
8:15AM	1	116	10	0	**127**	0	9	0	3	0	**12**	0	10	123	1	0	**134**	0	0	0	3	0	**3**	0	**276**
Total	21	516	33	1	**571**	0	26	1	11	0	**38**	1	36	620	2	0	**658**	0	1	0	4	0	**5**	0	**1272**
% Approach	3.7%	90.4%	5.8%	0.2%	**-**	-	68.4%	2.6%	28.9%	0%	**-**	-	5.5%	94.2%	0.3%	0%	**-**	-	20.0%	0%	80.0%	0%	**-**	-	**-**
% Total	1.7%	40.6%	2.6%	0.1%	**44.9%**	-	2.0%	0.1%	0.9%	0%	**3.0%**	-	2.8%	48.7%	0.2%	0%	**51.7%**	-	0.1%	0%	0.3%	0%	**0.4%**	-	**-**
PHF	0.656	0.816	0.635	0.250	**0.811**	-	0.722	0.250	0.688	-	**0.792**	-	0.750	0.896	0.500	-	**0.889**	-	0.250	-	0.333	-	**0.417**	-	0.859
Lights	20	476	32	0	**528**	-	22	1	11	0	**34**	-	35	582	2	0	**619**	-	0	0	3	0	**3**	-	1184
% Lights	95.2%	92.2%	97.0%	0%	**92.5%**	-	84.6%	100%	100%	0%	**89.5%**	-	97.2%	93.9%	100%	0%	**94.1%**	-	0%	0%	75.0%	0%	**60.0%**	-	93.1%
Articulated Trucks	0	13	0	0	**13**	-	1	0	0	0	**1**	-	0	13	0	0	**13**	-	0	0	0	0	**0**	-	27
% Articulated Trucks	0%	2.5%	0%	0%	**2.3%**	-	3.8%	0%	0%	0%	**2.6%**	-	0%	2.1%	0%	0%	**2.0%**	-	0%	0%	0%	0%	**0%**	-	2.1%
Buses and Single-Unit Trucks	1	27	1	1	**30**	-	3	0	0	0	**3**	-	1	25	0	0	**26**	-	1	0	1	0	**2**	-	61
% Buses and Single-Unit Trucks	4.8%	5.2%	3.0%	100%	**5.3%**	-	11.5%	0%	0%	0%	**7.9%**	-	2.8%	4.0%	0%	0%	**4.0%**	-	100%	0%	25.0%	0%	**40.0%**	-	4.8%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

8. 21st Street at W Airfield Drive - TMC

Tue Apr 30, 2019
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645619, Location: 32.9054, -97.066524

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



8. 21st Street at W Airfield Drive - TMC

Tue Apr 30, 2019
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645619, Location: 32.9054, -97.066524

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

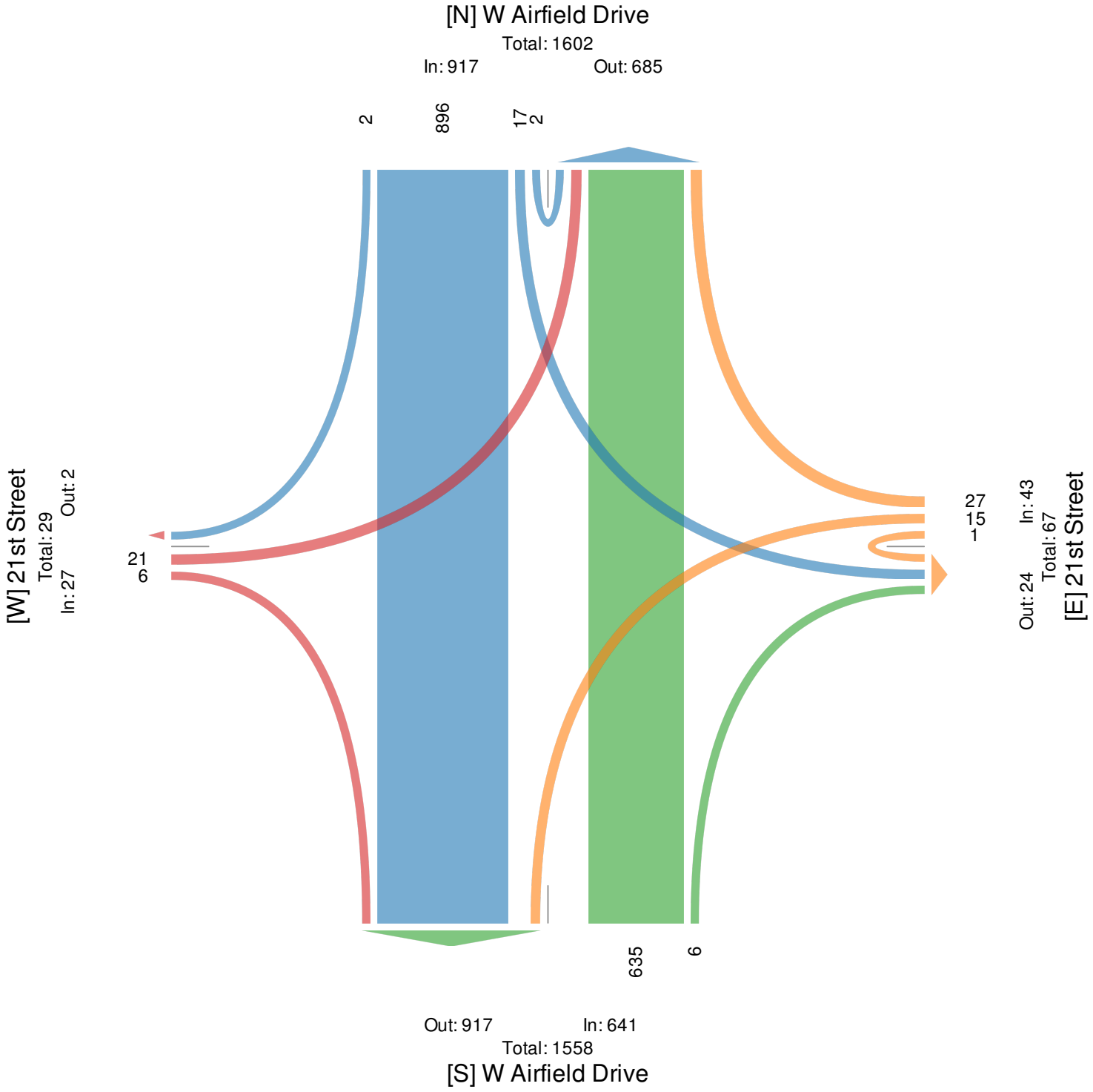
Leg	W Airfield Drive						21st Street						W Airfield Drive						21st Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2019-04-30 4:45PM	1	212	2	0	**215**	0	5	0	3	0	**8**	0	1	144	0	0	**145**	0	4	0	8	0	**12**	0	**380**
5:00PM	1	281	6	1	**289**	0	5	0	8	1	**14**	0	0	178	0	0	**178**	0	2	0	8	0	**10**	0	**491**
5:15PM	0	216	4	1	**221**	0	12	0	1	0	**13**	0	1	157	0	0	**158**	0	0	0	1	0	**1**	0	**393**
5:30PM	0	187	5	0	**192**	0	5	0	3	0	**8**	0	4	156	0	0	**160**	0	0	0	4	0	**4**	0	**364**
Total	2	896	17	2	**917**	0	27	0	15	1	**43**	0	6	635	0	0	**641**	0	6	0	21	0	**27**	0	**1628**
% Approach	0.2%	97.7%	1.9%	0.2%	**-**	-	62.8%	0%	34.9%	2.3%	**-**	-	0.9%	99.1%	0%	0%	**-**	-	22.2%	0%	77.8%	0%	**-**	-	**-**
% Total	0.1%	55.0%	1.0%	0.1%	**56.3%**	-	1.7%	0%	0.9%	0.1%	**2.6%**	-	0.4%	39.0%	0%	0%	**39.4%**	-	0.4%	0%	1.3%	0%	**1.7%**	-	**-**
PHF	0.500	0.797	0.708	0.500	**0.793**	-	0.563	-	0.469	0.250	**0.768**	-	0.375	0.892	-	-	**0.900**	-	0.375	-	0.656	-	**0.563**	-	0.829
Lights	2	832	15	2	**851**	-	27	0	14	1	**42**	-	6	581	0	0	**587**	-	6	0	20	0	**26**	-	1506
% Lights	100%	92.9%	88.2%	100%	**92.8%**	-	100%	0%	93.3%	100%	**97.7%**	-	100%	91.5%	0%	0%	**91.6%**	-	100%	0%	95.2%	0%	**96.3%**	-	92.5%
Articulated Trucks	0	26	1	0	**27**	-	0	0	1	0	**1**	-	0	19	0	0	**19**	-	0	0	0	0	**0**	-	47
% Articulated Trucks	0%	2.9%	5.9%	0%	**2.9%**	-	0%	0%	6.7%	0%	**2.3%**	-	0%	3.0%	0%	0%	**3.0%**	-	0%	0%	0%	0%	**0%**	-	2.9%
Buses and Single-Unit Trucks	0	38	1	0	**39**	-	0	0	0	0	**0**	-	0	35	0	0	**35**	-	0	0	1	0	**1**	-	75
% Buses and Single-Unit Trucks	0%	4.2%	5.9%	0%	**4.3%**	-	0%	0%	0%	0%	**0%**	-	0%	5.5%	0%	0%	**5.5%**	-	0%	0%	4.8%	0%	**3.7%**	-	4.6%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

8. 21st Street at W Airfield Drive - TMC

Tue Apr 30, 2019
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645619, Location: 32.9054, -97.066524

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



8. 21st Street at W Airfield Drive - TMC

Wed May 1, 2019
Full Length (7 AM-9 AM, 4:30 PM-6:30 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645633, Location: 32.905427, -97.066489

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

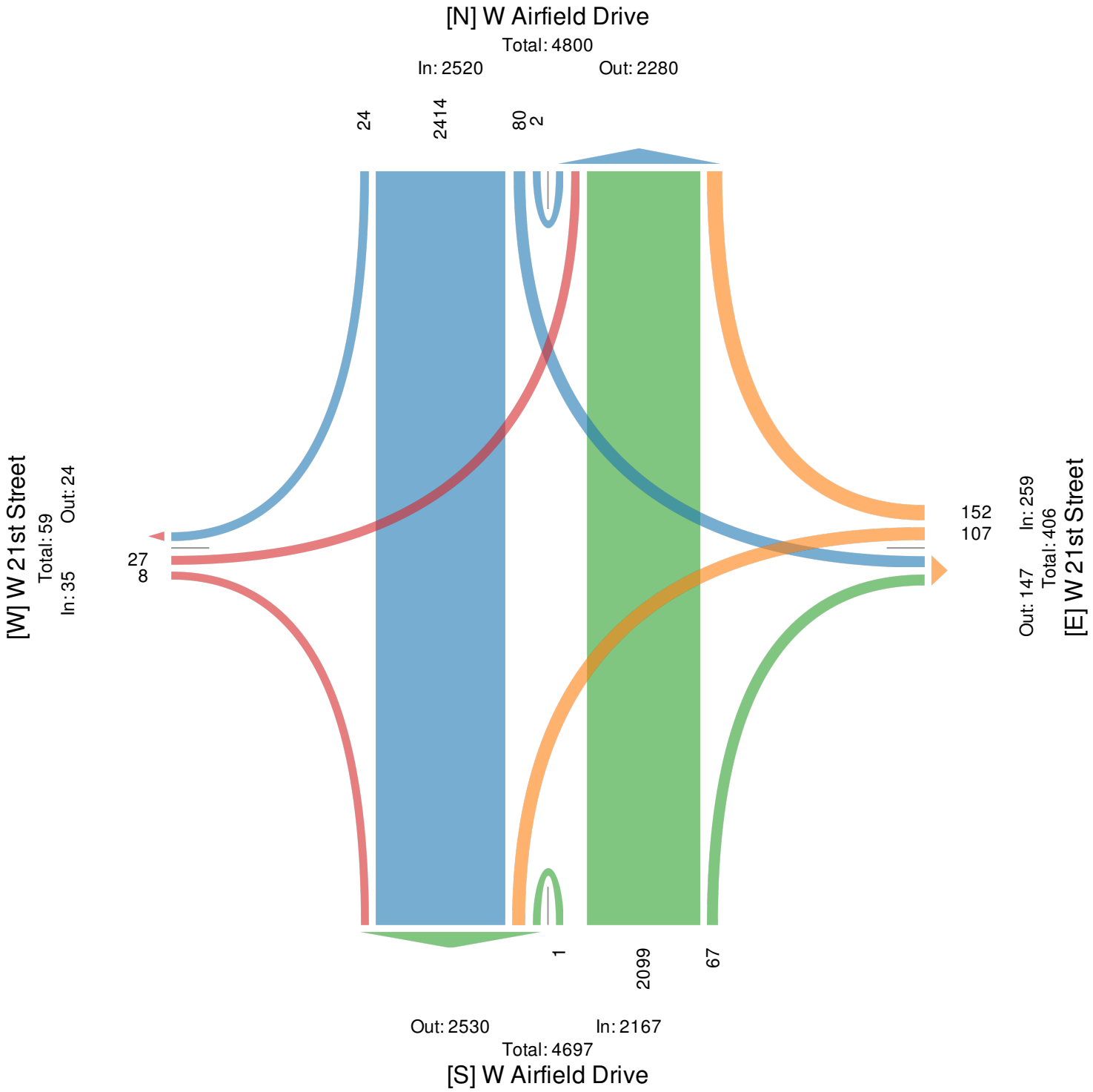
Leg	W Airfield Drive						W 21st Street						W Airfield Drive						W 21st Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2019-05-01 7:00AM	11	482	24	1	**518**	0	54	0	42	0	**96**	0	24	619	0	1	**644**	0	0	0	1	0	**1**	0	**1259**
8:00AM	8	450	28	1	**487**	0	47	0	30	0	**77**	0	20	459	0	0	**479**	0	0	0	3	0	**3**	0	**1046**
4:00PM	3	394	9	0	**406**	0	17	0	8	0	**25**	0	6	263	0	0	**269**	0	5	0	11	0	**16**	0	**716**
5:00PM	1	829	11	0	**841**	0	17	0	15	0	**32**	0	10	565	0	0	**575**	0	1	0	11	0	**12**	0	**1460**
6:00PM	1	259	8	0	**268**	0	17	0	12	0	**29**	0	7	193	0	0	**200**	0	2	0	1	0	**3**	0	**500**
Total	24	2414	80	2	**2520**	0	152	0	107	0	**259**	0	67	2099	0	1	**2167**	0	8	0	27	0	**35**	0	**4981**
% Approach	1.0%	95.8%	3.2%	0.1%	**-**	-	58.7%	0%	41.3%	0%	**-**	-	3.1%	96.9%	0%	0%	**-**	-	22.9%	0%	77.1%	0%	**-**	-	**-**
% Total	0.5%	48.5%	1.6%	0%	**50.6%**	-	3.1%	0%	2.1%	0%	**5.2%**	-	1.3%	42.1%	0%	0%	**43.5%**	-	0.2%	0%	0.5%	0%	**0.7%**	-	**-**
Lights	22	2213	75	1	**2311**	-	147	0	103	0	**250**	-	67	1938	0	1	**2006**	-	8	0	24	0	**32**	-	4599
% Lights	91.7%	91.7%	93.8%	50.0%	**91.7%**	-	96.7%	0%	96.3%	0%	**96.5%**	-	100%	92.3%	0%	100%	**92.6%**	-	100%	0%	88.9%	0%	**91.4%**	-	92.3%
Articulated Trucks	0	73	3	0	**76**	-	2	0	0	0	**2**	-	0	64	0	0	**64**	-	0	0	0	0	**0**	-	142
% Articulated Trucks	0%	3.0%	3.8%	0%	**3.0%**	-	1.3%	0%	0%	0%	**0.8%**	-	0%	3.0%	0%	0%	**3.0%**	-	0%	0%	0%	0%	**0%**	-	2.9%
Buses and Single-Unit Trucks	2	128	2	1	**133**	-	3	0	4	0	**7**	-	0	97	0	0	**97**	-	0	0	3	0	**3**	-	240
% Buses and Single-Unit Trucks	8.3%	5.3%	2.5%	50.0%	**5.3%**	-	2.0%	0%	3.7%	0%	**2.7%**	-	0%	4.6%	0%	0%	**4.5%**	-	0%	0%	11.1%	0%	**8.6%**	-	4.8%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

8. 21st Street at W Airfield Drive - TMC

Wed May 1, 2019
Full Length (7 AM-9 AM, 4:30 PM-6:30 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645633, Location: 32.905427, -97.066489

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



8. 21st Street at W Airfield Drive - TMC

Wed May 1, 2019
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645633, Location: 32.905427, -97.066489

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

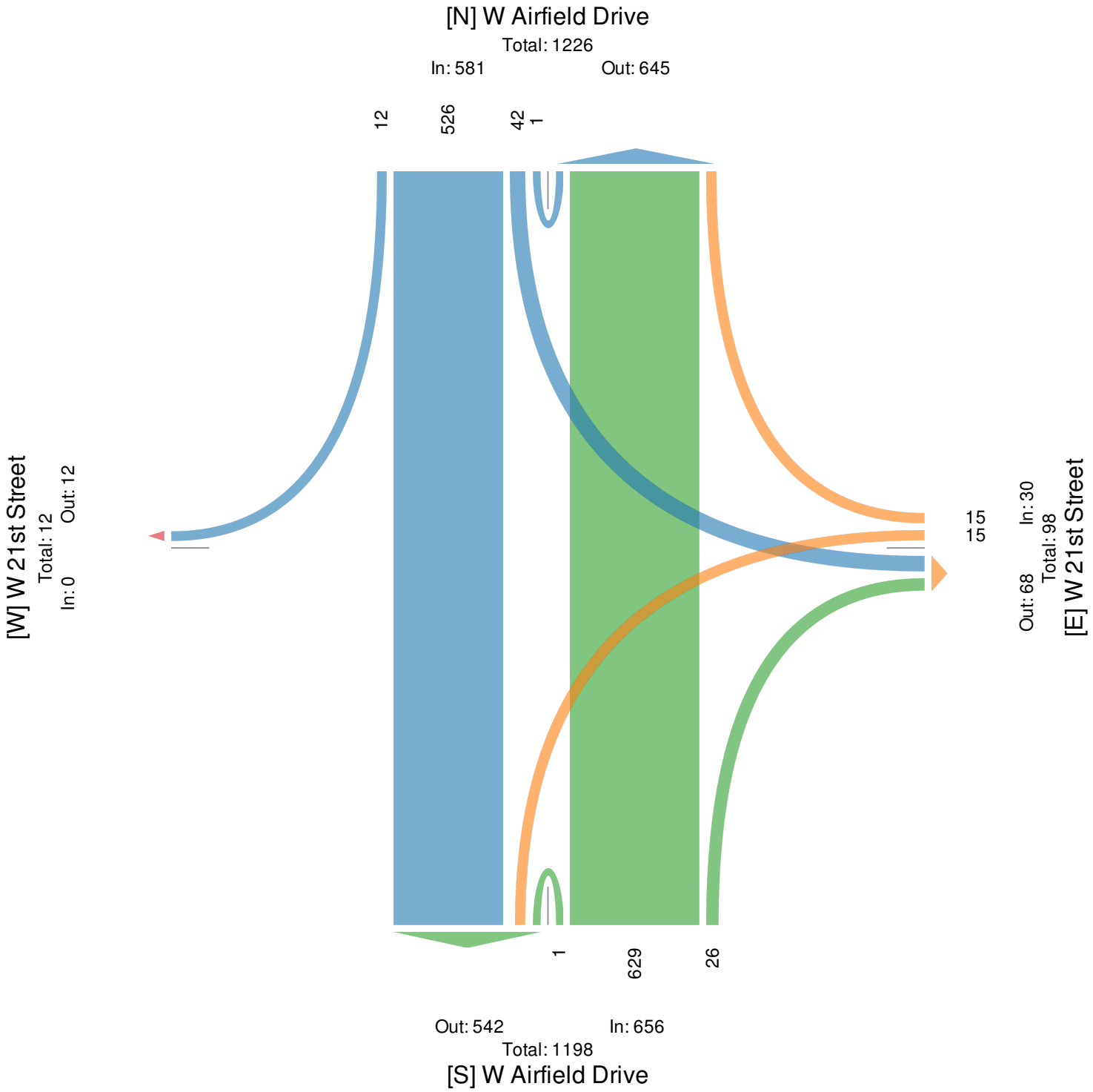
Leg	W Airfield Drive						W 21st Street						W Airfield Drive						W 21st Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2019-05-01 7:30AM	4	134	5	1	144	0	1	0	7	0	8	0	5	165	0	0	170	0	0	0	0	0	0	0	322
7:45AM	2	146	14	0	162	0	4	0	1	0	5	0	8	192	0	1	201	0	0	0	0	0	0	0	368
8:00AM	4	115	12	0	131	0	4	0	3	0	7	0	7	147	0	0	154	0	0	0	0	0	0	0	292
8:15AM	2	131	11	0	144	0	6	0	4	0	10	0	6	125	0	0	131	0	0	0	0	0	0	0	285
Total	12	526	42	1	581	0	15	0	15	0	30	0	26	629	0	1	656	0	0	0	0	0	0	0	1267
% Approach	2.1%	90.5%	7.2%	0.2%	-	-	50.0%	0%	50.0%	0%	-	-	4.0%	95.9%	0%	0.2%	-	-	0%	0%	0%	0%	-	-	-
% Total	0.9%	41.5%	3.3%	0.1%	45.9%	-	1.2%	0%	1.2%	0%	2.4%	-	2.1%	49.6%	0%	0.1%	51.8%	-	0%	0%	0%	0%	0%	-	-
PHF	0.750	0.901	0.750	0.250	0.897	-	0.625	-	0.536	-	0.750	-	0.813	0.819	-	0.250	0.816	-	-	-	-	-	-	-	0.861
Lights	10	485	41	0	536	-	15	0	14	0	29	-	26	584	0	1	611	-	0	0	0	0	0	-	1176
% Lights	83.3%	92.2%	97.6%	0%	92.3%	-	100%	0%	93.3%	0%	96.7%	-	100%	92.8%	0%	100%	93.1%	-	0%	0%	0%	0%	-	-	92.8%
Articulated Trucks	0	9	0	0	9	-	0	0	0	0	0	-	0	18	0	0	18	-	0	0	0	0	0	-	27
% Articulated Trucks	0%	1.7%	0%	0%	1.5%	-	0%	0%	0%	0%	0%	-	0%	2.9%	0%	0%	2.7%	-	0%	0%	0%	0%	-	-	2.1%
Buses and Single-Unit Trucks	2	32	1	1	36	-	0	0	1	0	1	-	0	27	0	0	27	-	0	0	0	0	0	-	64
% Buses and Single-Unit Trucks	16.7%	6.1%	2.4%	100%	6.2%	-	0%	0%	6.7%	0%	3.3%	-	0%	4.3%	0%	0%	4.1%	-	0%	0%	0%	0%	-	-	5.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

8. 21st Street at W Airfield Drive - TMC

Wed May 1, 2019
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645633, Location: 32.905427, -97.066489

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



8. 21st Street at W Airfield Drive - TMC

Wed May 1, 2019
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645633, Location: 32.905427, -97.066489

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

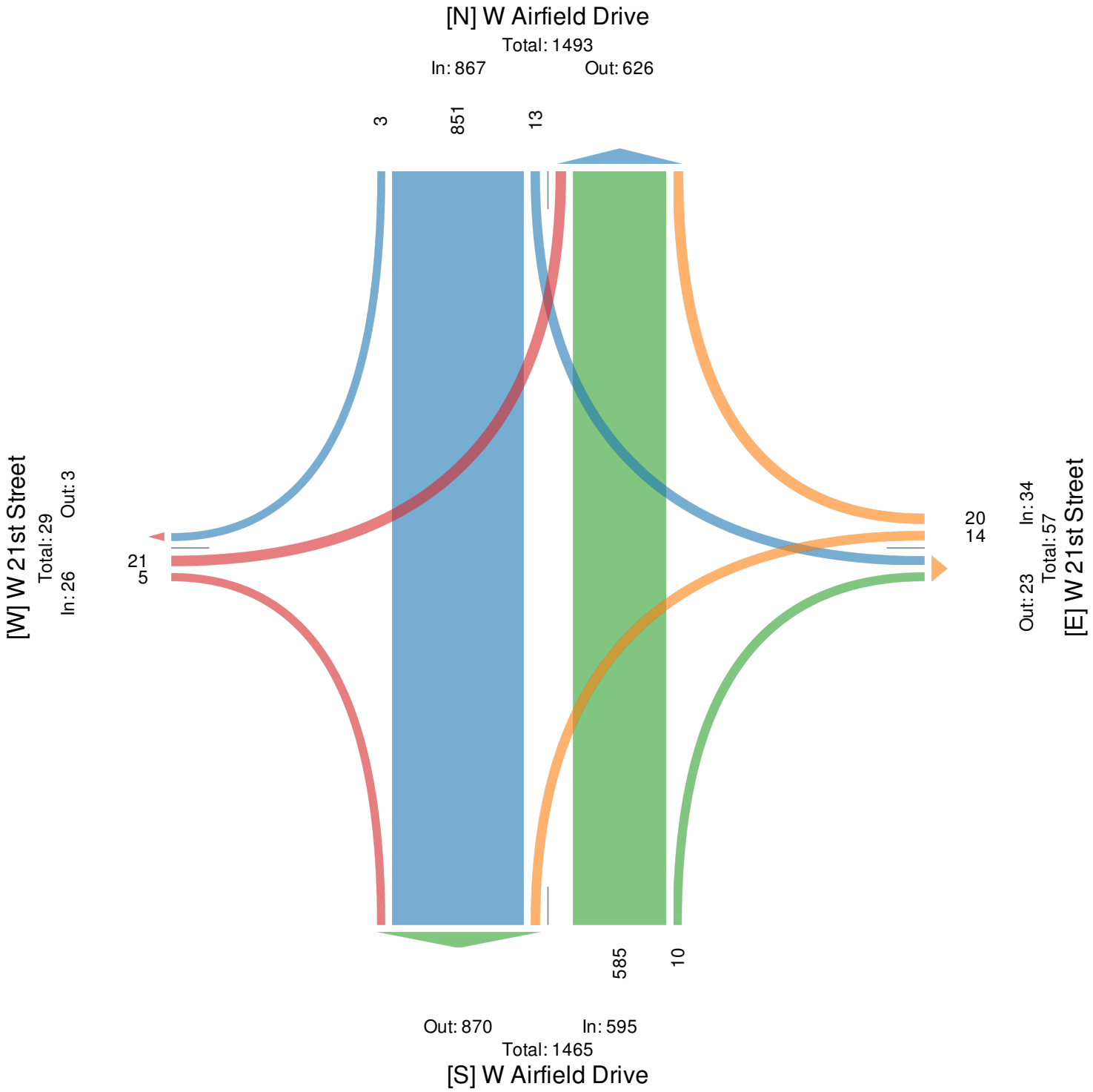
Leg	W Airfield Drive						W 21st Street						W Airfield Drive						W 21st Street						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2019-05-01 4:45PM	2	203	5	0	**210**	0	6	0	2	0	**8**	0	3	122	0	0	**125**	0	4	0	10	0	**14**	0	**357**
5:00PM	0	222	3	0	**225**	0	1	0	1	0	**2**	0	0	162	0	0	**162**	0	0	0	7	0	**7**	0	**396**
5:15PM	0	232	1	0	**233**	0	7	0	6	0	**13**	0	2	151	0	0	**153**	0	0	0	3	0	**3**	0	**402**
5:30PM	1	194	4	0	**199**	0	6	0	5	0	**11**	0	5	150	0	0	**155**	0	1	0	1	0	**2**	0	**367**
Total	3	851	13	0	**867**	0	20	0	14	0	**34**	0	10	585	0	0	**595**	0	5	0	21	0	**26**	0	**1522**
% Approach	0.3%	98.2%	1.5%	0%	**-**	-	58.8%	0%	41.2%	0%	**-**	-	1.7%	98.3%	0%	0%	**-**	-	19.2%	0%	80.8%	0%	**-**	-	**-**
% Total	0.2%	55.9%	0.9%	0%	**57.0%**	-	1.3%	0%	0.9%	0%	**2.2%**	-	0.7%	38.4%	0%	0%	**39.1%**	-	0.3%	0%	1.4%	0%	**1.7%**	-	**-**
PHF	0.375	0.917	0.650	-	**0.930**	-	0.714	-	0.583	-	**0.654**	-	0.500	0.903	-	-	**0.918**	-	0.313	-	0.525	-	**0.464**	-	0.947
Lights	3	783	12	0	**798**	-	17	0	13	0	**30**	-	10	542	0	0	**552**	-	5	0	21	0	**26**	-	1406
% Lights	100%	92.0%	92.3%	0%	**92.0%**	-	85.0%	0%	92.9%	0%	**88.2%**	-	100%	92.6%	0%	0%	**92.8%**	-	100%	0%	100%	0%	**100%**	-	92.4%
Articulated Trucks	0	30	0	0	**30**	-	1	0	0	0	**1**	-	0	17	0	0	**17**	-	0	0	0	0	**0**	-	48
% Articulated Trucks	0%	3.5%	0%	0%	**3.5%**	-	5.0%	0%	0%	0%	**2.9%**	-	0%	2.9%	0%	0%	**2.9%**	-	0%	0%	0%	0%	**0%**	-	3.2%
Buses and Single-Unit Trucks	0	38	1	0	**39**	-	2	0	1	0	**3**	-	0	26	0	0	**26**	-	0	0	0	0	**0**	-	68
% Buses and Single-Unit Trucks	0%	4.5%	7.7%	0%	**4.5%**	-	10.0%	0%	7.1%	0%	**8.8%**	-	0%	4.4%	0%	0%	**4.4%**	-	0%	0%	0%	0%	**0%**	-	4.5%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

8. 21st Street at W Airfield Drive - TMC

Wed May 1, 2019
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645633, Location: 32.905427, -97.066489

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



9. 23rd Street at W Airfield Drive - TMC

Tue Apr 30, 2019
Full Length (7 AM-9 AM, 4:30 PM-6:30 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645620, Location: 32.899083, -97.064743

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

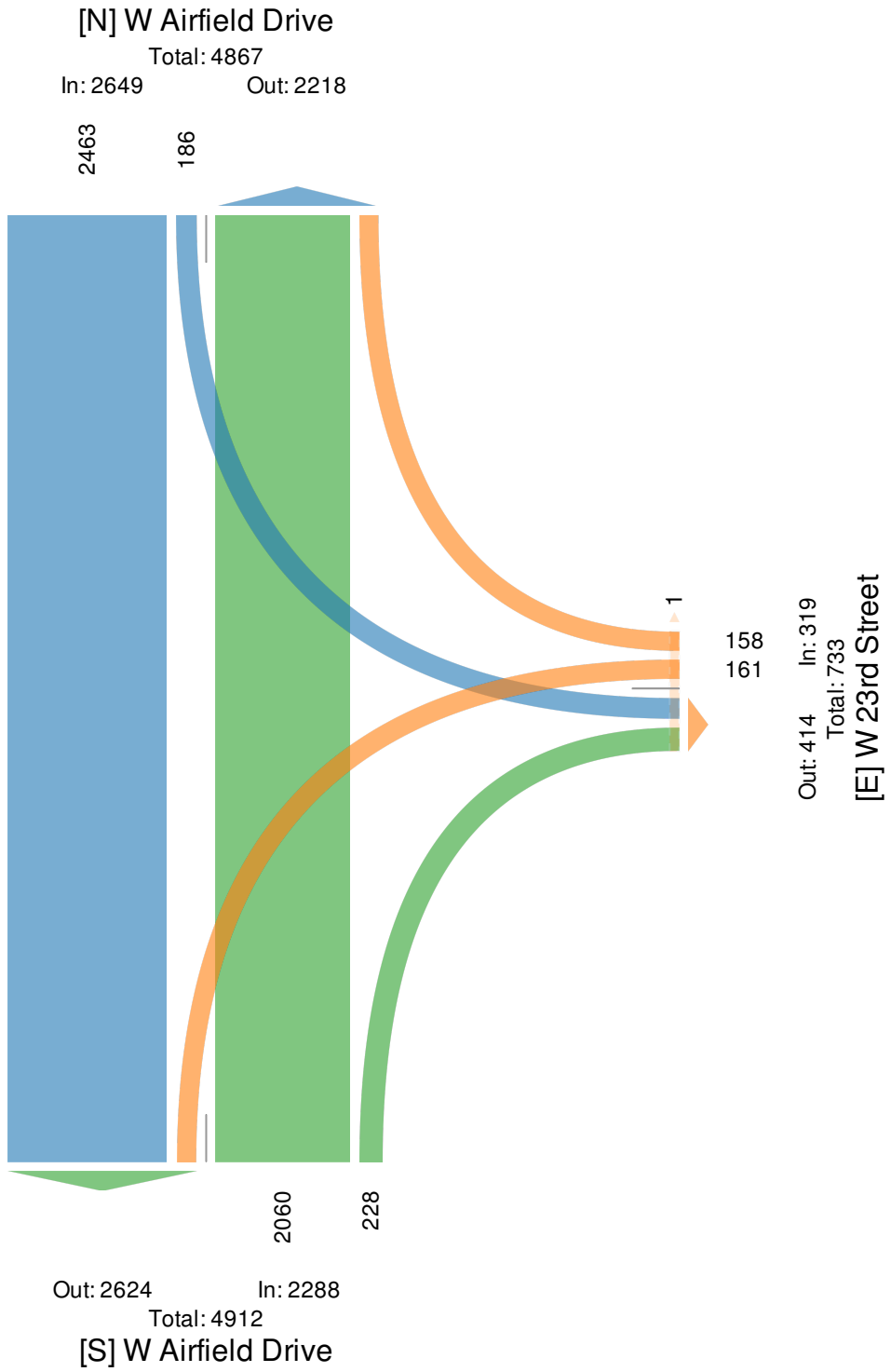
Leg Direction	W Airfield Drive Southbound					W 23rd Street Westbound					W Airfield Drive Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2019-04-30 7:00AM	317	44	0	**361**	0	16	16	0	**32**	0	84	751	0	**835**	0	**1228**
8:00AM	305	69	0	**374**	0	22	20	0	**42**	1	67	590	0	**657**	0	**1073**
4:00PM	446	16	0	**462**	0	28	42	0	**70**	0	20	195	0	**215**	0	**747**
5:00PM	998	35	0	**1033**	0	64	60	0	**124**	0	28	422	0	**450**	0	**1607**
6:00PM	397	22	0	**419**	0	28	23	0	**51**	0	29	102	0	**131**	0	**601**
Total	2463	186	0	**2649**	0	158	161	0	**319**	1	228	2060	0	**2288**	0	**5256**
% Approach	93.0%	7.0%	0%	**-**	-	49.5%	50.5%	0%	**-**	-	10.0%	90.0%	0%	**-**	-	-
% Total	46.9%	3.5%	0%	**50.4%**	-	3.0%	3.1%	0%	**6.1%**	-	4.3%	39.2%	0%	**43.5%**	-	-
Lights	2325	123	0	**2448**	-	106	131	0	**237**	-	194	1933	0	**2127**	-	4812
% Lights	94.4%	66.1%	0%	**92.4%**	-	67.1%	81.4%	0%	**74.3%**	-	85.1%	93.8%	0%	**93.0%**	-	91.6%
Articulated Trucks	48	21	0	**69**	-	18	12	0	**30**	-	16	49	0	**65**	-	164
% Articulated Trucks	1.9%	11.3%	0%	**2.6%**	-	11.4%	7.5%	0%	**9.4%**	-	7.0%	2.4%	0%	**2.8%**	-	3.1%
Buses and Single-Unit Trucks	90	42	0	**132**	-	34	18	0	**52**	-	18	78	0	**96**	-	280
% Buses and Single-Unit Trucks	3.7%	22.6%	0%	**5.0%**	-	21.5%	11.2%	0%	**16.3%**	-	7.9%	3.8%	0%	**4.2%**	-	5.3%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	0%	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	1	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

9. 23rd Street at W Airfield Drive - TMC

Tue Apr 30, 2019
Full Length (7 AM-9 AM, 4:30 PM-6:30 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645620, Location: 32.899083, -97.064743

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



9. 23rd Street at W Airfield Drive - TMC

Tue Apr 30, 2019
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645620, Location: 32.899083, -97.064743

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

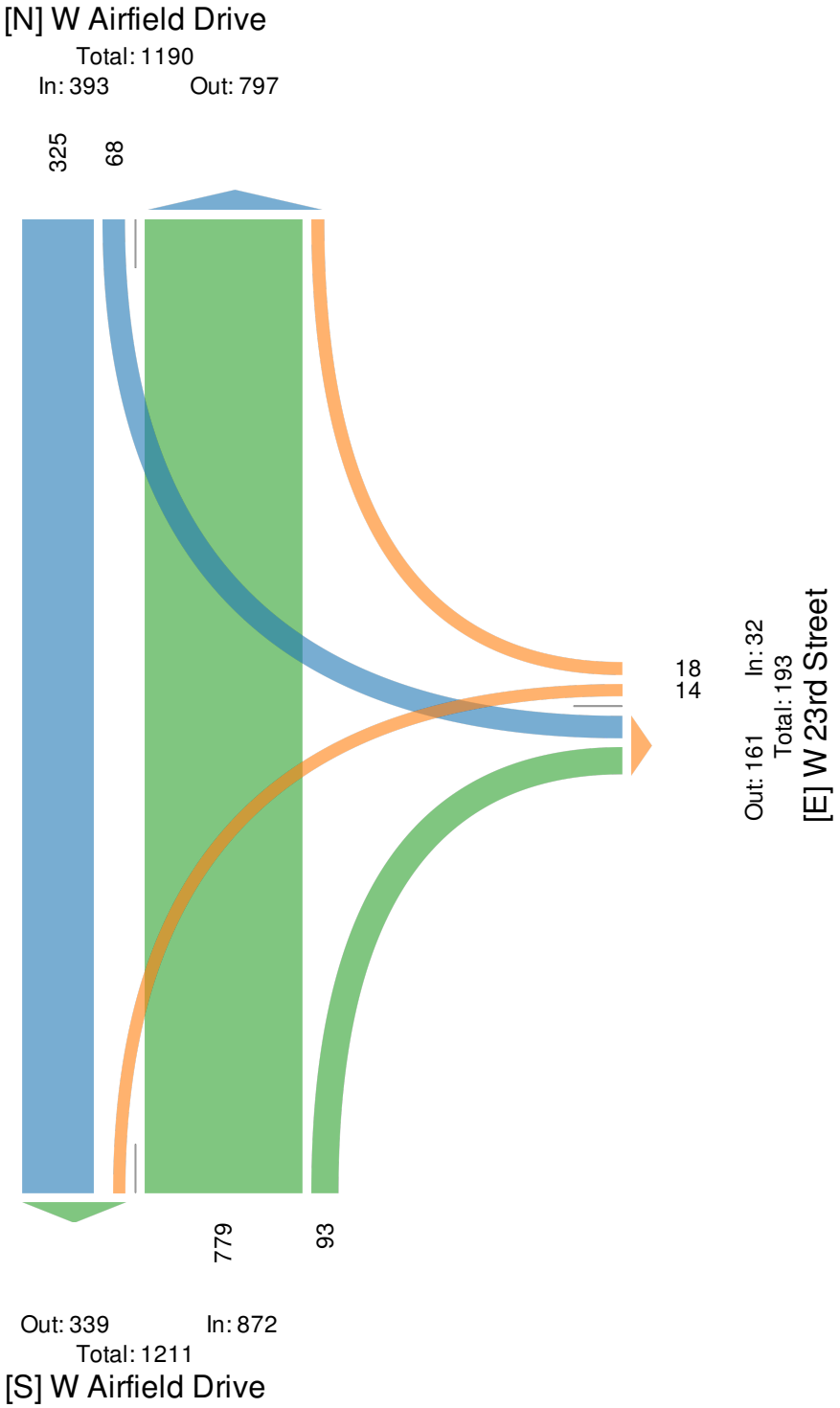
Leg Direction	W Airfield Drive Southbound					W 23rd Street Westbound					W Airfield Drive Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2019-04-30 7:30AM	75	6	0	**81**	0	1	3	0	**4**	0	16	201	0	**217**	0	**302**
7:45AM	97	21	0	**118**	0	4	5	0	**9**	0	38	231	0	**269**	0	**396**
8:00AM	77	19	0	**96**	0	6	3	0	**9**	0	24	184	0	**208**	0	**313**
8:15AM	76	22	0	**98**	0	7	3	0	**10**	0	15	163	0	**178**	0	**286**
Total	325	68	0	**393**	0	18	14	0	**32**	0	93	779	0	**872**	0	**1297**
% Approach	82.7%	17.3%	0%	**-**	-	56.3%	43.8%	0%	**-**	-	10.7%	89.3%	0%	**-**	-	-
% Total	25.1%	5.2%	0%	**30.3%**	-	1.4%	1.1%	0%	**2.5%**	-	7.2%	60.1%	0%	**67.2%**	-	-
PHF	0.838	0.773	-	**0.833**	-	0.643	0.700	-	**0.800**	-	0.612	0.843	-	**0.810**	-	0.819
Lights	297	57	0	**354**	-	12	10	0	**22**	-	85	746	0	**831**	-	1207
% Lights	91.4%	83.8%	0%	**90.1%**	-	66.7%	71.4%	0%	**68.8%**	-	91.4%	95.8%	0%	**95.3%**	-	93.1%
Articulated Trucks	9	4	0	**13**	-	1	2	0	**3**	-	3	11	0	**14**	-	30
% Articulated Trucks	2.8%	5.9%	0%	**3.3%**	-	5.6%	14.3%	0%	**9.4%**	-	3.2%	1.4%	0%	**1.6%**	-	2.3%
Buses and Single-Unit Trucks	19	7	0	**26**	-	5	2	0	**7**	-	5	22	0	**27**	-	60
% Buses and Single-Unit Trucks	5.8%	10.3%	0%	**6.6%**	-	27.8%	14.3%	0%	**21.9%**	-	5.4%	2.8%	0%	**3.1%**	-	4.6%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

9. 23rd Street at W Airfield Drive - TMC

Tue Apr 30, 2019
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645620, Location: 32.899083, -97.064743

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



9. 23rd Street at W Airfield Drive - TMC

Tue Apr 30, 2019
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645620, Location: 32.899083, -97.064743

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

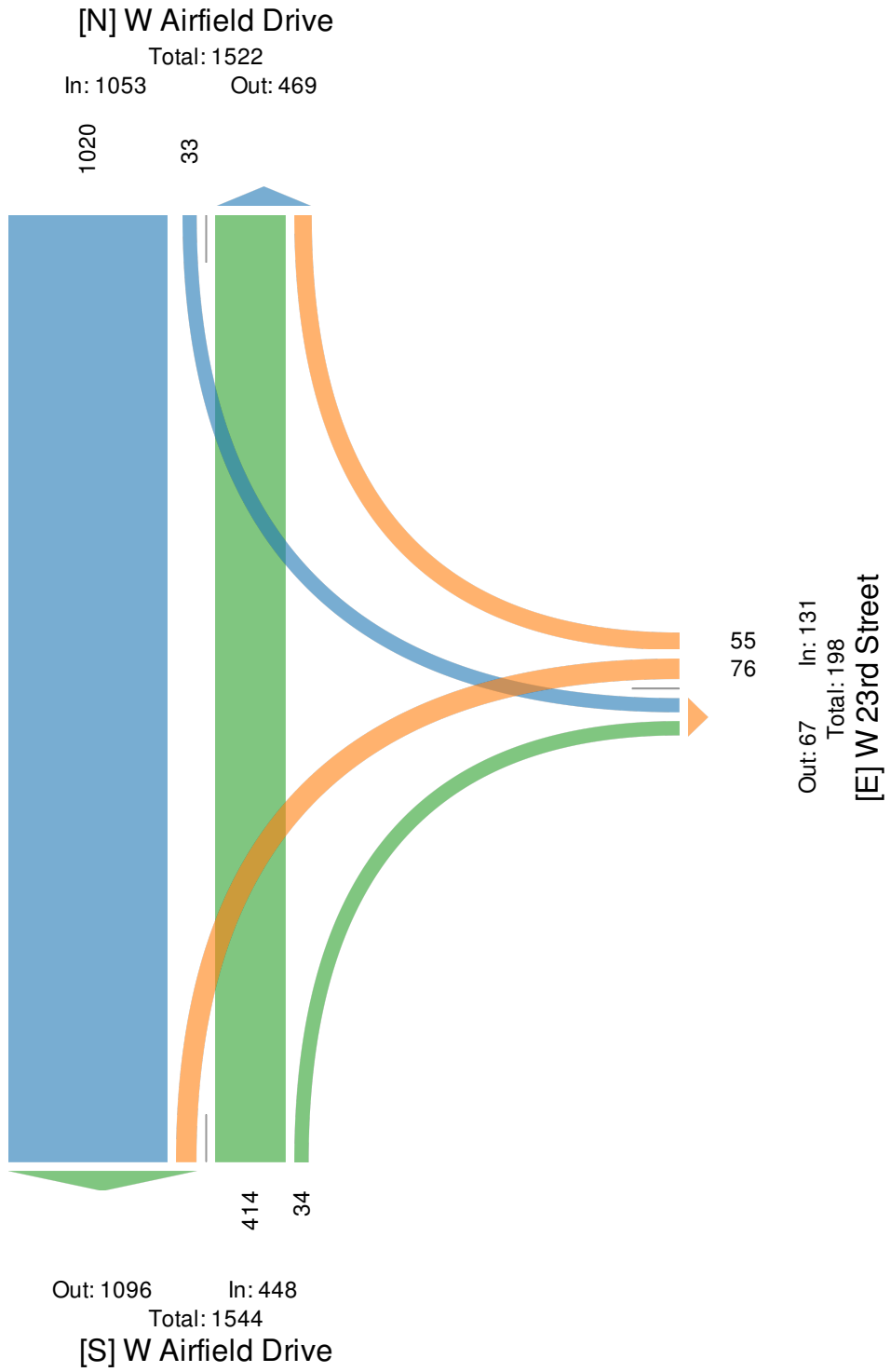
Leg Direction	W Airfield Drive Southbound					W 23rd Street Westbound					W Airfield Drive Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2019-04-30 4:30PM	217	8	0	**225**	0	16	30	0	**46**	0	13	93	0	**106**	0	**377**
4:45PM	229	8	0	**237**	0	12	12	0	**24**	0	7	102	0	**109**	0	**370**
5:00PM	322	11	0	**333**	0	17	20	0	**37**	0	6	110	0	**116**	0	**486**
5:15PM	252	6	0	**258**	0	10	14	0	**24**	0	8	109	0	**117**	0	**399**
Total	1020	33	0	**1053**	0	55	76	0	**131**	0	34	414	0	**448**	0	**1632**
% Approach	96.9%	3.1%	0%	**-**	-	42.0%	58.0%	0%	**-**	-	7.6%	92.4%	0%	**-**	-	-
% Total	62.5%	2.0%	0%	**64.5%**	-	3.4%	4.7%	0%	**8.0%**	-	2.1%	25.4%	0%	**27.5%**	-	-
PHF	0.792	0.750	-	**0.791**	-	0.809	0.633	-	**0.712**	-	0.654	0.941	-	**0.957**	-	0.840
Lights	967	12	0	**979**	-	39	65	0	**104**	-	25	379	0	**404**	-	1487
% Lights	94.8%	36.4%	0%	**93.0%**	-	70.9%	85.5%	0%	**79.4%**	-	73.5%	91.5%	0%	**90.2%**	-	91.1%
Articulated Trucks	20	8	0	**28**	-	10	5	0	**15**	-	3	16	0	**19**	-	62
% Articulated Trucks	2.0%	24.2%	0%	**2.7%**	-	18.2%	6.6%	0%	**11.5%**	-	8.8%	3.9%	0%	**4.2%**	-	3.8%
Buses and Single-Unit Trucks	33	13	0	**46**	-	6	6	0	**12**	-	6	19	0	**25**	-	83
% Buses and Single-Unit Trucks	3.2%	39.4%	0%	**4.4%**	-	10.9%	7.9%	0%	**9.2%**	-	17.6%	4.6%	0%	**5.6%**	-	5.1%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

9. 23rd Street at W Airfield Drive - TMC

Tue Apr 30, 2019
PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645620, Location: 32.899083, -97.064743

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



9. 23rd Street at W Airfield Drive - TMC

Wed May 1, 2019
Full Length (7 AM-9 AM, 4:30 PM-6:30 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645634, Location: 32.899001, -97.064707

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

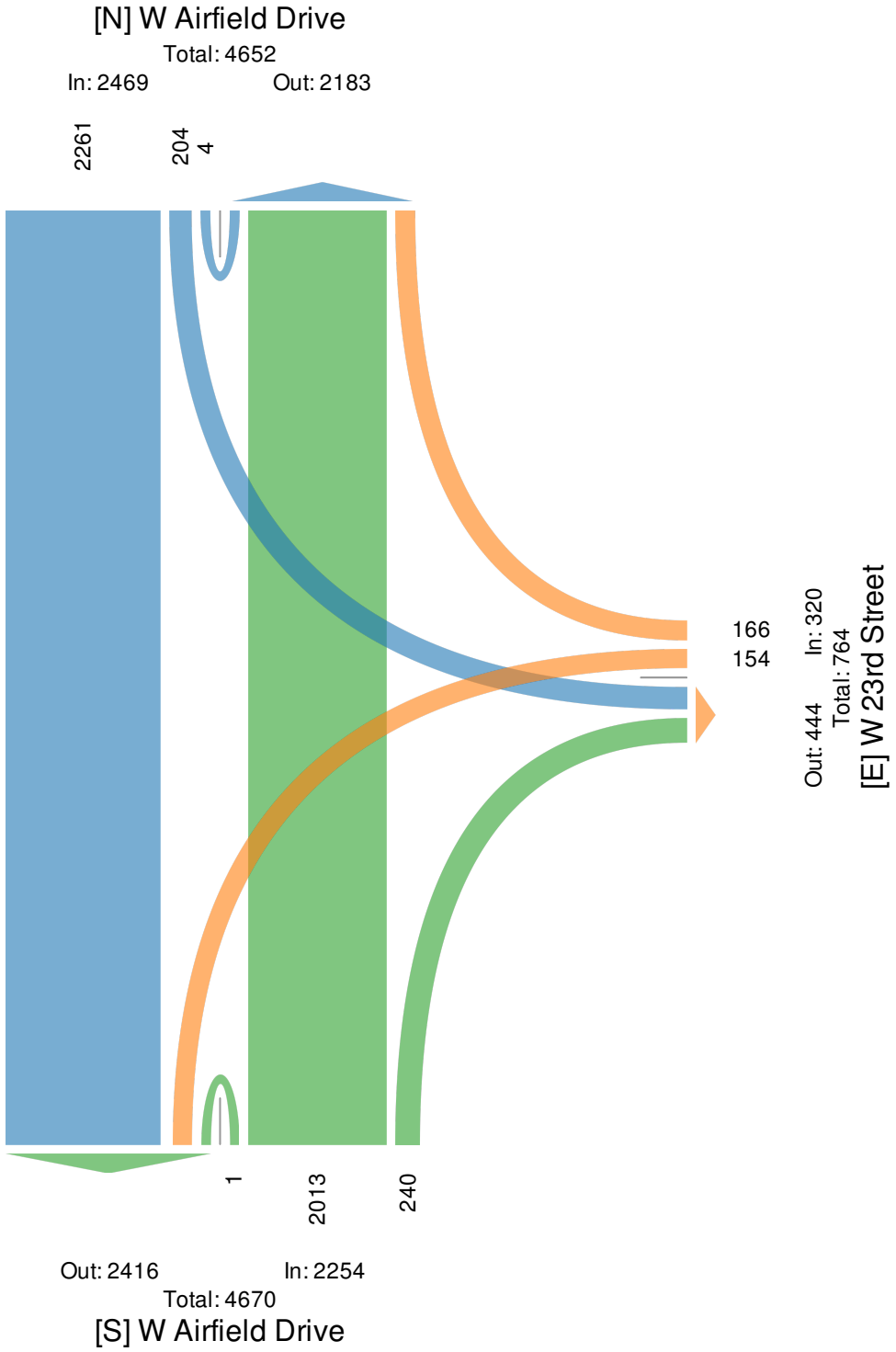
Leg Direction	W Airfield Drive Southbound					W 23rd Street Westbound					W Airfield Drive Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2019-05-01 7:00AM	318	55	1	**374**	0	17	18	0	**35**	0	89	776	0	**865**	0	**1274**
8:00AM	288	57	0	**345**	0	23	21	0	**44**	0	70	572	0	**642**	0	**1031**
4:00PM	420	24	0	**444**	0	24	33	0	**57**	0	23	184	0	**207**	0	**708**
5:00PM	928	42	1	**971**	0	67	58	0	**125**	0	39	366	0	**405**	0	**1501**
6:00PM	307	26	2	**335**	0	35	24	0	**59**	0	19	115	1	**135**	0	**529**
Total	2261	204	4	**2469**	0	166	154	0	**320**	0	240	2013	1	**2254**	0	**5043**
% Approach	91.6%	8.3%	0.2%	**-**	-	51.9%	48.1%	0%	**-**	-	10.6%	89.3%	0%	**-**	-	-
% Total	44.8%	4.0%	0.1%	**49.0%**	-	3.3%	3.1%	0%	**6.3%**	-	4.8%	39.9%	0%	**44.7%**	-	-
Lights	2127	132	4	**2263**	-	120	133	0	**253**	-	211	1898	1	**2110**	-	4626
% Lights	94.1%	64.7%	100%	**91.7%**	-	72.3%	86.4%	0%	**79.1%**	-	87.9%	94.3%	100%	**93.6%**	-	91.7%
Articulated Trucks	42	32	0	**74**	-	15	13	0	**28**	-	14	50	0	**64**	-	166
% Articulated Trucks	1.9%	15.7%	0%	**3.0%**	-	9.0%	8.4%	0%	**8.8%**	-	5.8%	2.5%	0%	**2.8%**	-	3.3%
Buses and Single-Unit Trucks	92	40	0	**132**	-	31	8	0	**39**	-	15	65	0	**80**	-	251
% Buses and Single-Unit Trucks	4.1%	19.6%	0%	**5.3%**	-	18.7%	5.2%	0%	**12.2%**	-	6.3%	3.2%	0%	**3.5%**	-	5.0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

9. 23rd Street at W Airfield Drive - TMC

Wed May 1, 2019
Full Length (7 AM-9 AM, 4:30 PM-6:30 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645634, Location: 32.899001, -97.064707

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



9. 23rd Street at W Airfield Drive - TMC

Wed May 1, 2019
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645634, Location: 32.899001, -97.064707

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

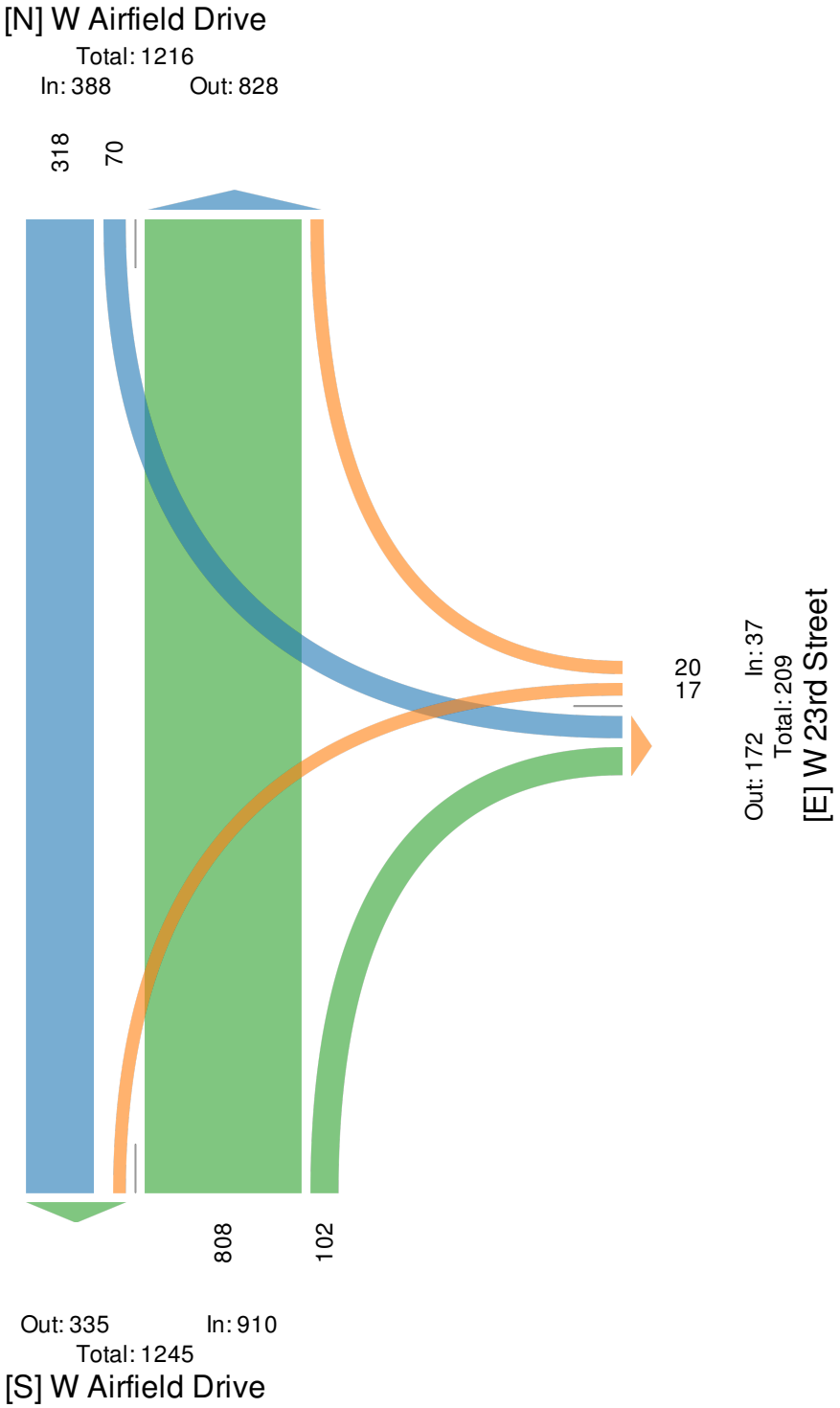
Leg Direction	W Airfield Drive Southbound					W 23rd Street Westbound					W Airfield Drive Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2019-05-01 7:30AM	90	9	0	**99**	0	4	6	0	**10**	0	21	217	0	**238**	0	**347**
7:45AM	76	27	0	**103**	0	6	1	0	**7**	0	39	251	0	**290**	0	**400**
8:00AM	75	15	0	**90**	0	4	3	0	**7**	0	23	179	0	**202**	0	**299**
8:15AM	77	19	0	**96**	0	6	7	0	**13**	0	19	161	0	**180**	0	**289**
Total	318	70	0	**388**	0	20	17	0	**37**	0	102	808	0	**910**	0	**1335**
% Approach	82.0%	18.0%	0%	**-**	-	54.1%	45.9%	0%	**-**	-	11.2%	88.8%	0%	**-**	-	-
% Total	23.8%	5.2%	0%	**29.1%**	-	1.5%	1.3%	0%	**2.8%**	-	7.6%	60.5%	0%	**68.2%**	-	-
PHF	0.883	0.648	-	**0.942**	-	0.833	0.607	-	**0.712**	-	0.654	0.805	-	**0.784**	-	0.834
Lights	294	55	0	**349**	-	16	13	0	**29**	-	97	769	0	**866**	-	1244
% Lights	92.5%	78.6%	0%	**89.9%**	-	80.0%	76.5%	0%	**78.4%**	-	95.1%	95.2%	0%	**95.2%**	-	93.2%
Articulated Trucks	3	7	0	**10**	-	0	3	0	**3**	-	3	18	0	**21**	-	34
% Articulated Trucks	0.9%	10.0%	0%	**2.6%**	-	0%	17.6%	0%	**8.1%**	-	2.9%	2.2%	0%	**2.3%**	-	2.5%
Buses and Single-Unit Trucks	21	8	0	**29**	-	4	1	0	**5**	-	2	21	0	**23**	-	57
% Buses and Single-Unit Trucks	6.6%	11.4%	0%	**7.5%**	-	20.0%	5.9%	0%	**13.5%**	-	2.0%	2.6%	0%	**2.5%**	-	4.3%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

9. 23rd Street at W Airfield Drive - TMC

Wed May 1, 2019
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645634, Location: 32.899001, -97.064707

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



9. 23rd Street at W Airfield Drive - TMC

Wed May 1, 2019
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645634, Location: 32.899001, -97.064707

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

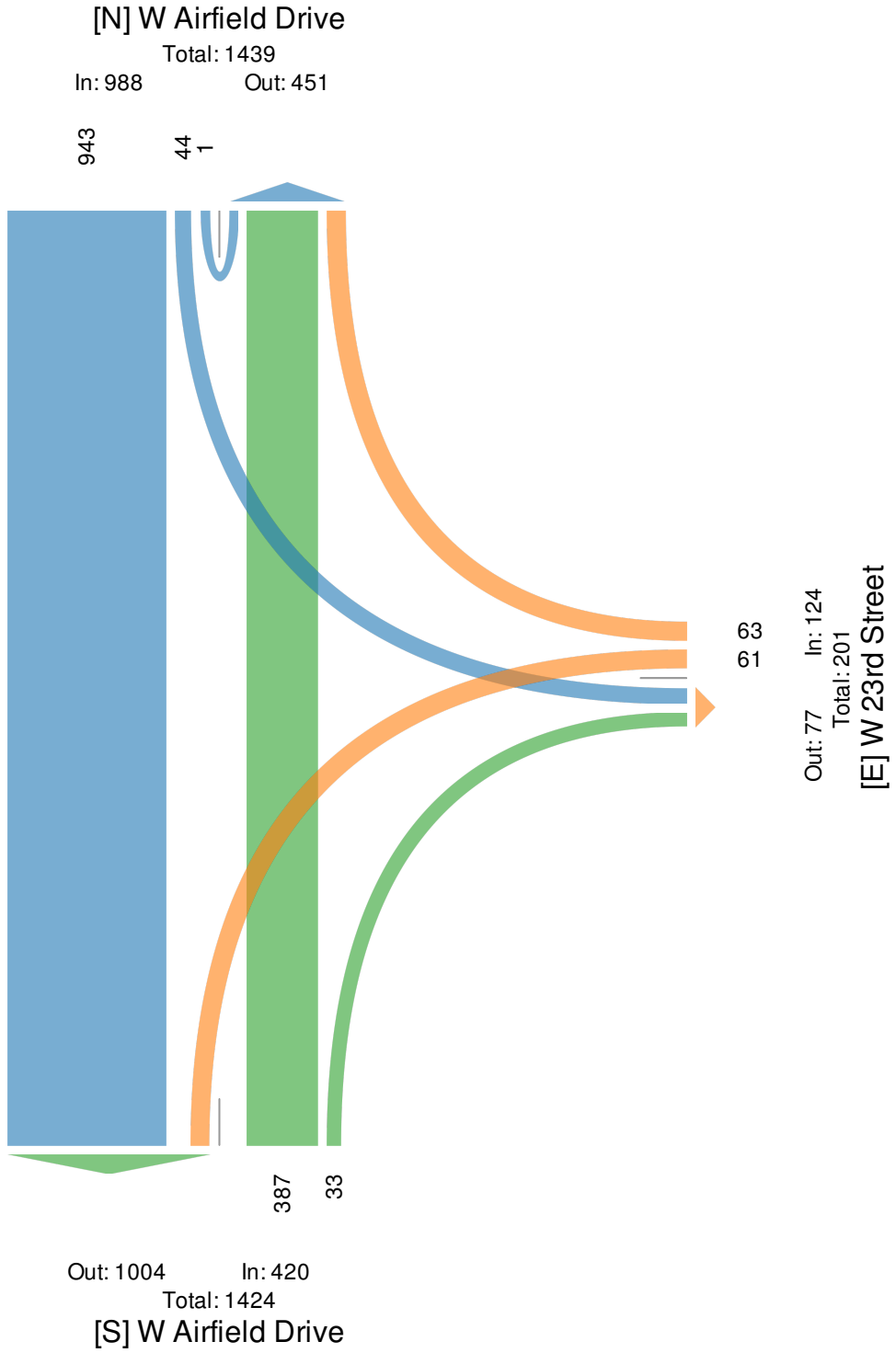
Leg Direction	W Airfield Drive Southbound					W 23rd Street Westbound					W Airfield Drive Northbound					
Time	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	**Int**
2019-05-01 4:45PM	205	13	0	**218**	0	9	11	0	**20**	0	8	94	0	**102**	0	**340**
5:00PM	256	7	0	**263**	0	16	19	0	**35**	0	4	88	0	**92**	0	**390**
5:15PM	244	12	0	**256**	0	17	12	0	**29**	0	11	98	0	**109**	0	**394**
5:30PM	238	12	1	**251**	0	21	19	0	**40**	0	10	107	0	**117**	0	**408**
Total	943	44	1	**988**	0	63	61	0	**124**	0	33	387	0	**420**	0	**1532**
% Approach	95.4%	4.5%	0.1%	**-**	-	50.8%	49.2%	0%	**-**	-	7.9%	92.1%	0%	**-**	-	-
% Total	61.6%	2.9%	0.1%	**64.5%**	-	4.1%	4.0%	0%	**8.1%**	-	2.2%	25.3%	0%	**27.4%**	-	-
PHF	0.921	0.846	0.250	**0.939**	-	0.750	0.803	-	**0.775**	-	0.750	0.904	-	**0.897**	-	0.939
Lights	896	20	1	**917**	-	41	58	0	**99**	-	23	364	0	**387**	-	1403
% Lights	95.0%	45.5%	100%	**92.8%**	-	65.1%	95.1%	0%	**79.8%**	-	69.7%	94.1%	0%	**92.1%**	-	91.6%
Articulated Trucks	16	11	0	**27**	-	10	1	0	**11**	-	5	7	0	**12**	-	50
% Articulated Trucks	1.7%	25.0%	0%	**2.7%**	-	15.9%	1.6%	0%	**8.9%**	-	15.2%	1.8%	0%	**2.9%**	-	3.3%
Buses and Single-Unit Trucks	31	13	0	**44**	-	12	2	0	**14**	-	5	16	0	**21**	-	79
% Buses and Single-Unit Trucks	3.3%	29.5%	0%	**4.5%**	-	19.0%	3.3%	0%	**11.3%**	-	15.2%	4.1%	0%	**5.0%**	-	5.2%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

9. 23rd Street at W Airfield Drive - TMC

Wed May 1, 2019
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645634, Location: 32.899001, -97.064707

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



10. E Glade Road at W Airfield Drive - TMC

Tue Apr 30, 2019
Full Length (7 AM-9 AM, 4:30 PM-6:30 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645621, Location: 32.881219, -97.059902

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

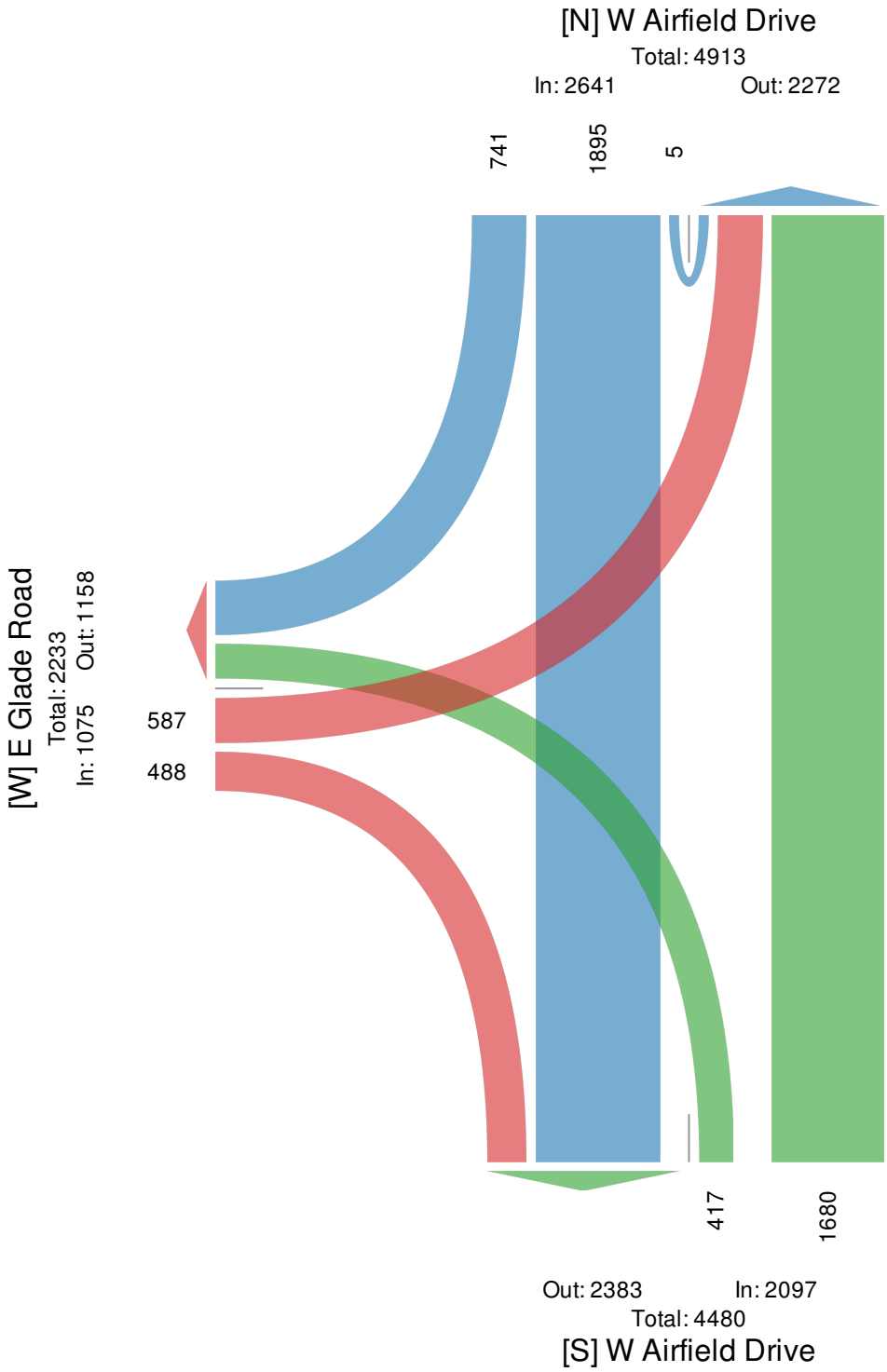
Leg Direction	W Airfield Drive Southbound					W Airfield Drive Northbound					E Glade Road Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2019-04-30 7:00AM	89	199	2	**290**	0	607	37	0	**644**	0	215	249	0	**464**	0	**1398**
8:00AM	67	214	0	**281**	0	530	40	0	**570**	0	133	191	0	**324**	0	**1175**
4:00PM	143	340	0	**483**	0	138	56	0	**194**	0	21	46	0	**67**	0	**744**
5:00PM	340	807	1	**1148**	0	317	239	0	**556**	0	89	83	0	**172**	0	**1876**
6:00PM	102	335	2	**439**	0	88	45	0	**133**	0	30	18	0	**48**	0	**620**
Total	741	1895	5	**2641**	0	1680	417	0	**2097**	0	488	587	0	**1075**	0	**5813**
% Approach	28.1%	71.8%	0.2%	**-**	-	80.1%	19.9%	0%	**-**	-	45.4%	54.6%	0%	**-**	-	-
% Total	12.7%	32.6%	0.1%	**45.4%**	-	28.9%	7.2%	0%	**36.1%**	-	8.4%	10.1%	0%	**18.5%**	-	-
Lights	737	1758	5	**2500**	-	1548	413	0	**1961**	-	486	584	0	**1070**	-	5531
% Lights	99.5%	92.8%	100%	**94.7%**	-	92.1%	99.0%	0%	**93.5%**	-	99.6%	99.5%	0%	**99.5%**	-	95.1%
Articulated Trucks	0	51	0	**51**	-	38	1	0	**39**	-	1	0	0	**1**	-	91
% Articulated Trucks	0%	2.7%	0%	**1.9%**	-	2.3%	0.2%	0%	**1.9%**	-	0.2%	0%	0%	**0.1%**	-	1.6%
Buses and Single-Unit Trucks	4	86	0	**90**	-	94	3	0	**97**	-	1	3	0	**4**	-	191
% Buses and Single-Unit Trucks	0.5%	4.5%	0%	**3.4%**	-	5.6%	0.7%	0%	**4.6%**	-	0.2%	0.5%	0%	**0.4%**	-	3.3%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

10. E Glade Road at W Airfield Drive - TMC

Tue Apr 30, 2019
Full Length (7 AM-9 AM, 4:30 PM-6:30 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645621, Location: 32.881219, -97.059902

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



10. E Glade Road at W Airfield Drive - TMC

Tue Apr 30, 2019
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645621, Location: 32.881219, -97.059902

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

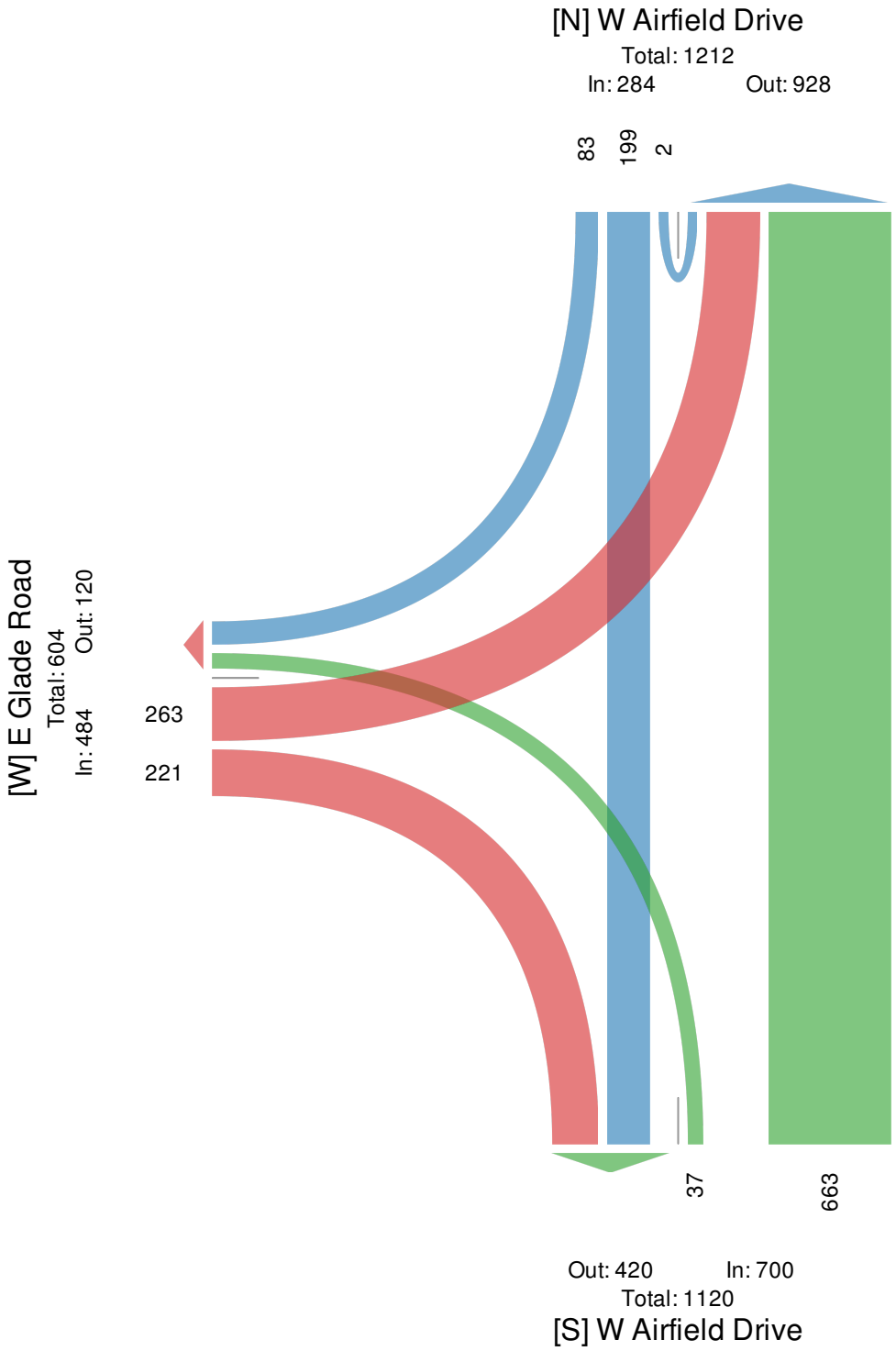
Leg Direction	W Airfield Drive Southbound					W Airfield Drive Northbound					E Glade Road Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2019-04-30 7:15AM	19	43	1	**63**	0	146	5	0	**151**	0	64	49	0	**113**	0	**327**
7:30AM	19	48	0	**67**	0	168	10	0	**178**	0	48	70	0	**118**	0	**363**
7:45AM	25	52	1	**78**	0	182	14	0	**196**	0	61	83	0	**144**	0	**418**
8:00AM	20	56	0	**76**	0	167	8	0	**175**	0	48	61	0	**109**	0	**360**
Total	83	199	2	**284**	0	663	37	0	**700**	0	221	263	0	**484**	0	**1468**
% Approach	29.2%	70.1%	0.7%	**-**	-	94.7%	5.3%	0%	**-**	-	45.7%	54.3%	0%	**-**	-	-
% Total	5.7%	13.6%	0.1%	**19.3%**	-	45.2%	2.5%	0%	**47.7%**	-	15.1%	17.9%	0%	**33.0%**	-	-
PHF	0.830	0.888	0.500	**0.910**	-	0.911	0.661	-	**0.893**	-	0.863	0.792	-	**0.840**	-	0.878
Lights	83	173	2	**258**	-	629	36	0	**665**	-	220	261	0	**481**	-	1404
% Lights	100%	86.9%	100%	**90.8%**	-	94.9%	97.3%	0%	**95.0%**	-	99.5%	99.2%	0%	**99.4%**	-	95.6%
Articulated Trucks	0	6	0	**6**	-	11	1	0	**12**	-	1	0	0	**1**	-	19
% Articulated Trucks	0%	3.0%	0%	**2.1%**	-	1.7%	2.7%	0%	**1.7%**	-	0.5%	0%	0%	**0.2%**	-	1.3%
Buses and Single-Unit Trucks	0	20	0	**20**	-	23	0	0	**23**	-	0	2	0	**2**	-	45
% Buses and Single-Unit Trucks	0%	10.1%	0%	**7.0%**	-	3.5%	0%	0%	**3.3%**	-	0%	0.8%	0%	**0.4%**	-	3.1%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

10. E Glade Road at W Airfield Drive - TMC

Tue Apr 30, 2019
AM Peak (7:15 AM - 8:15 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645621, Location: 32.881219, -97.059902

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



10. E Glade Road at W Airfield Drive - TMC

Tue Apr 30, 2019
PM Peak (5 PM - 6 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645621, Location: 32.881219, -97.059902

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

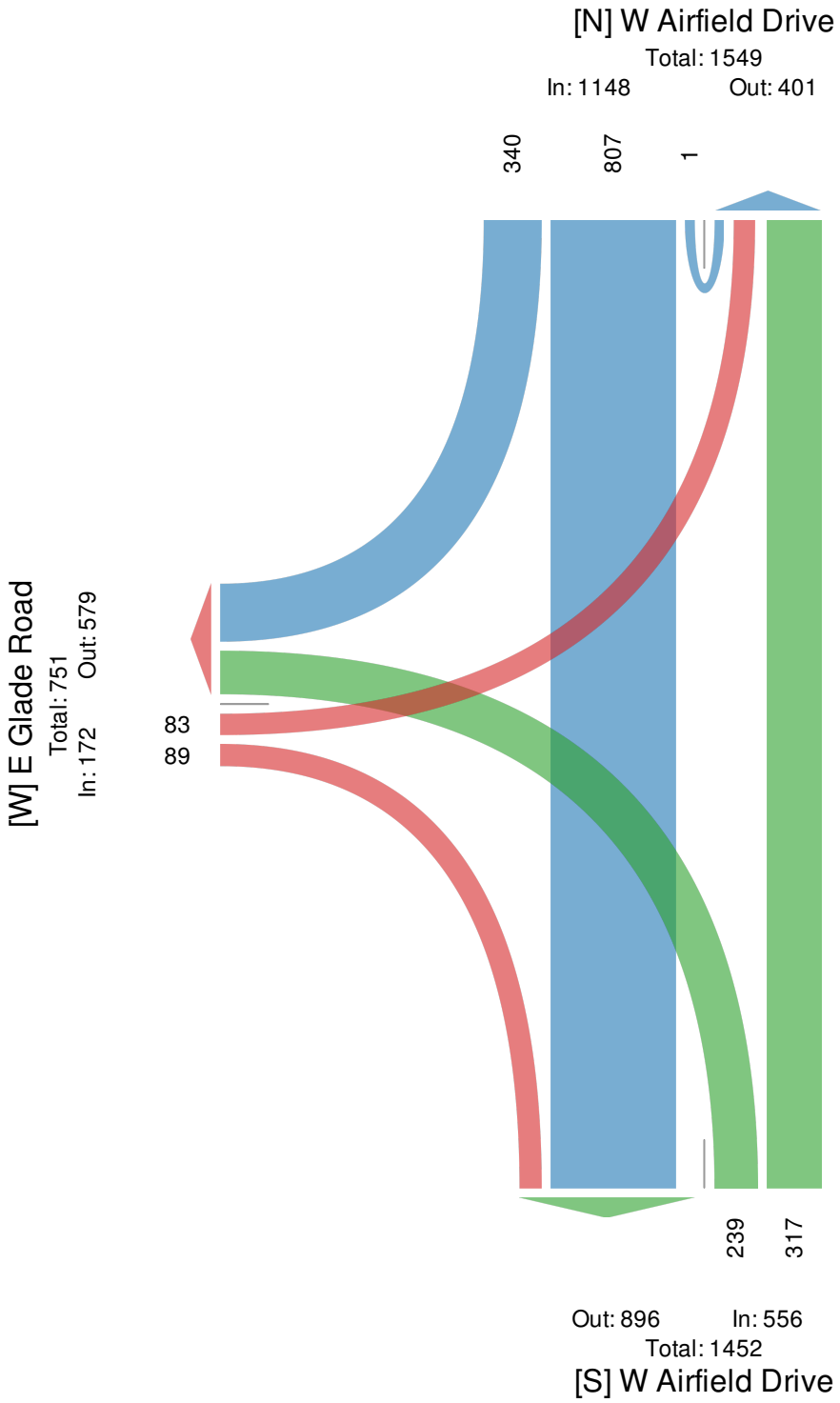
Leg Direction	W Airfield Drive Southbound					W Airfield Drive Northbound					E Glade Road Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2019-04-30 5:00PM	116	247	1	**364**	0	80	38	0	**118**	0	24	22	0	**46**	0	**528**
5:15PM	89	226	0	**315**	0	83	76	0	**159**	0	28	26	0	**54**	0	**528**
5:30PM	66	157	0	**223**	0	77	61	0	**138**	0	21	21	0	**42**	0	**403**
5:45PM	69	177	0	**246**	0	77	64	0	**141**	0	16	14	0	**30**	0	**417**
Total	340	807	1	**1148**	0	317	239	0	**556**	0	89	83	0	**172**	0	**1876**
% Approach	29.6%	70.3%	0.1%	**-**	-	57.0%	43.0%	0%	**-**	-	51.7%	48.3%	0%	**-**	-	-
% Total	18.1%	43.0%	0.1%	**61.2%**	-	16.9%	12.7%	0%	**29.6%**	-	4.7%	4.4%	0%	**9.2%**	-	-
PHF	0.733	0.817	0.250	**0.788**	-	0.955	0.786	-	**0.874**	-	0.795	0.798	-	**0.796**	-	0.888
Lights	339	768	1	**1108**	-	287	238	0	**525**	-	89	83	0	**172**	-	1805
% Lights	99.7%	95.2%	100%	**96.5%**	-	90.5%	99.6%	0%	**94.4%**	-	100%	100%	0%	**100%**	-	96.2%
Articulated Trucks	0	16	0	**16**	-	10	0	0	**10**	-	0	0	0	**0**	-	26
% Articulated Trucks	0%	2.0%	0%	**1.4%**	-	3.2%	0%	0%	**1.8%**	-	0%	0%	0%	**0%**	-	1.4%
Buses and Single-Unit Trucks	1	23	0	**24**	-	20	1	0	**21**	-	0	0	0	**0**	-	45
% Buses and Single-Unit Trucks	0.3%	2.9%	0%	**2.1%**	-	6.3%	0.4%	0%	**3.8%**	-	0%	0%	0%	**0%**	-	2.4%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

10. E Glade Road at W Airfield Drive - TMC

Tue Apr 30, 2019
PM Peak (5 PM - 6 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645621, Location: 32.881219, -97.059902

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



10. E Glade Road at W Airfield Drive - TMC

Wed May 1, 2019
Full Length (7 AM-9 AM, 4:30 PM-6:30 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645636, Location: 32.881183, -97.059951

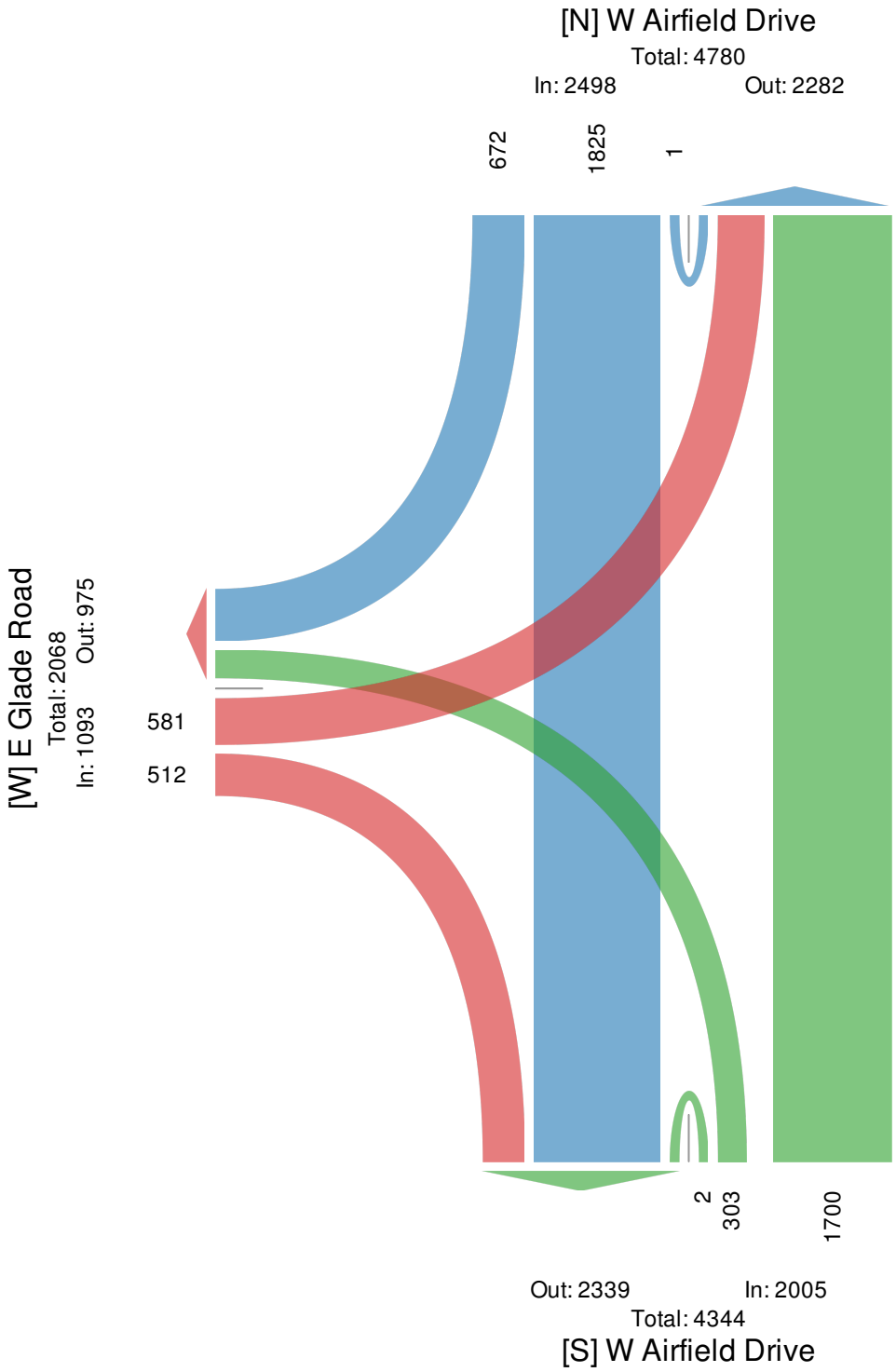
CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	W Airfield Drive Southbound					W Airfield Drive Northbound					E Glade Road Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2019-05-01 7:00AM	86	227	0	**313**	0	617	39	0	**656**	0	213	276	0	**489**	0	**1458**
8:00AM	63	225	0	**288**	0	540	39	1	**580**	0	127	165	0	**292**	0	**1160**
4:00PM	147	361	1	**509**	0	146	47	0	**193**	0	34	37	0	**71**	0	**773**
5:00PM	296	744	0	**1040**	0	295	131	0	**426**	0	105	74	0	**179**	0	**1645**
6:00PM	80	268	0	**348**	0	102	47	1	**150**	0	33	29	0	**62**	0	**560**
Total	672	1825	1	**2498**	0	1700	303	2	**2005**	0	512	581	0	**1093**	0	**5596**
% Approach	26.9%	73.1%	0%	**-**	-	84.8%	15.1%	0.1%	**-**	-	46.8%	53.2%	0%	**-**	-	-
% Total	12.0%	32.6%	0%	**44.6%**	-	30.4%	5.4%	0%	**35.8%**	-	9.1%	10.4%	0%	**19.5%**	-	-
Lights	666	1704	1	**2371**	-	1570	302	2	**1874**	-	508	580	0	**1088**	-	5333
% Lights	99.1%	93.4%	100%	**94.9%**	-	92.4%	99.7%	100%	**93.5%**	-	99.2%	99.8%	0%	**99.5%**	-	95.3%
Articulated Trucks	0	43	0	**43**	-	51	0	0	**51**	-	0	0	0	**0**	-	94
% Articulated Trucks	0%	2.4%	0%	**1.7%**	-	3.0%	0%	0%	**2.5%**	-	0%	0%	0%	**0%**	-	1.7%
Buses and Single-Unit Trucks	6	78	0	**84**	-	79	1	0	**80**	-	4	1	0	**5**	-	169
% Buses and Single-Unit Trucks	0.9%	4.3%	0%	**3.4%**	-	4.6%	0.3%	0%	**4.0%**	-	0.8%	0.2%	0%	**0.5%**	-	3.0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

10. E Glade Road at W Airfield Drive - TMC
Wed May 1, 2019
Full Length (7 AM-9 AM, 4:30 PM-6:30 PM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645636, Location: 32.881183, -97.059951

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



10. E Glade Road at W Airfield Drive - TMC

Wed May 1, 2019
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645636, Location: 32.881183, -97.059951

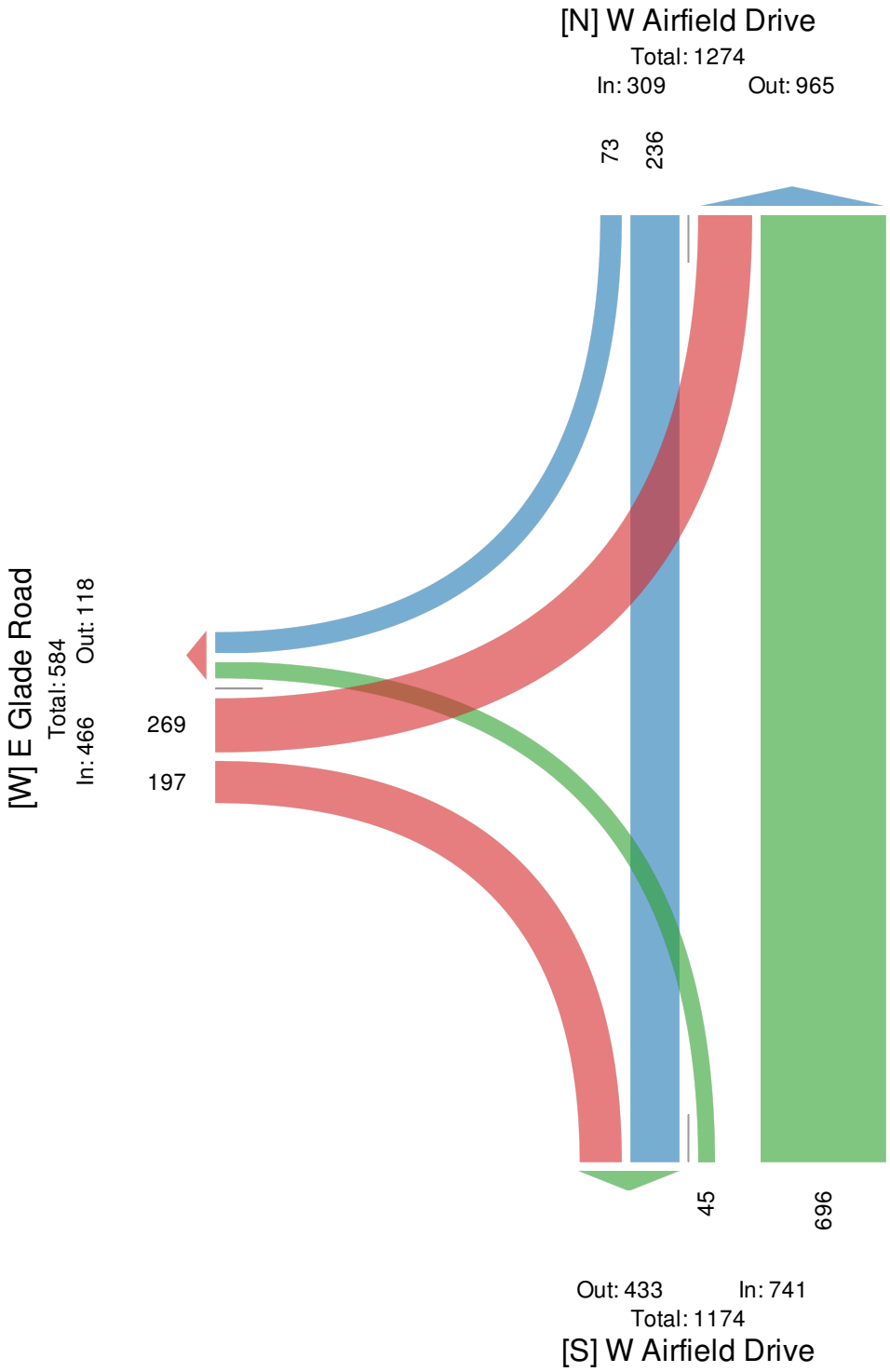
CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

Leg Direction	W Airfield Drive Southbound					W Airfield Drive Northbound					E Glade Road Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2019-05-01 7:30AM	30	60	0	**90**	0	171	11	0	**182**	0	66	92	0	**158**	0	**430**
7:45AM	16	56	0	**72**	0	203	15	0	**218**	0	53	86	0	**139**	0	**429**
8:00AM	12	51	0	**63**	0	171	6	0	**177**	0	45	57	0	**102**	0	**342**
8:15AM	15	69	0	**84**	0	151	13	0	**164**	0	33	34	0	**67**	0	**315**
Total	73	236	0	**309**	0	696	45	0	**741**	0	197	269	0	**466**	0	**1516**
% Approach	23.6%	76.4%	0%	**-**	-	93.9%	6.1%	0%	**-**	-	42.3%	57.7%	0%	**-**	-	-
% Total	4.8%	15.6%	0%	**20.4%**	-	45.9%	3.0%	0%	**48.9%**	-	13.0%	17.7%	0%	**30.7%**	-	-
PHF	0.608	0.855	-	**0.858**	-	0.857	0.750	-	**0.850**	-	0.746	0.731	-	**0.737**	-	0.881
Lights	72	204	0	**276**	-	645	45	0	**690**	-	196	268	0	**464**	-	1430
% Lights	98.6%	86.4%	0%	**89.3%**	-	92.7%	100%	0%	**93.1%**	-	99.5%	99.6%	0%	**99.6%**	-	94.3%
Articulated Trucks	0	5	0	**5**	-	24	0	0	**24**	-	0	0	0	**0**	-	29
% Articulated Trucks	0%	2.1%	0%	**1.6%**	-	3.4%	0%	0%	**3.2%**	-	0%	0%	0%	**0%**	-	1.9%
Buses and Single-Unit Trucks	1	27	0	**28**	-	27	0	0	**27**	-	1	1	0	**2**	-	57
% Buses and Single-Unit Trucks	1.4%	11.4%	0%	**9.1%**	-	3.9%	0%	0%	**3.6%**	-	0.5%	0.4%	0%	**0.4%**	-	3.8%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

10. E Glade Road at W Airfield Drive - TMC
Wed May 1, 2019
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645636, Location: 32.881183, -97.059951

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



10. E Glade Road at W Airfield Drive - TMC

Wed May 1, 2019
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645636, Location: 32.881183, -97.059951

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US

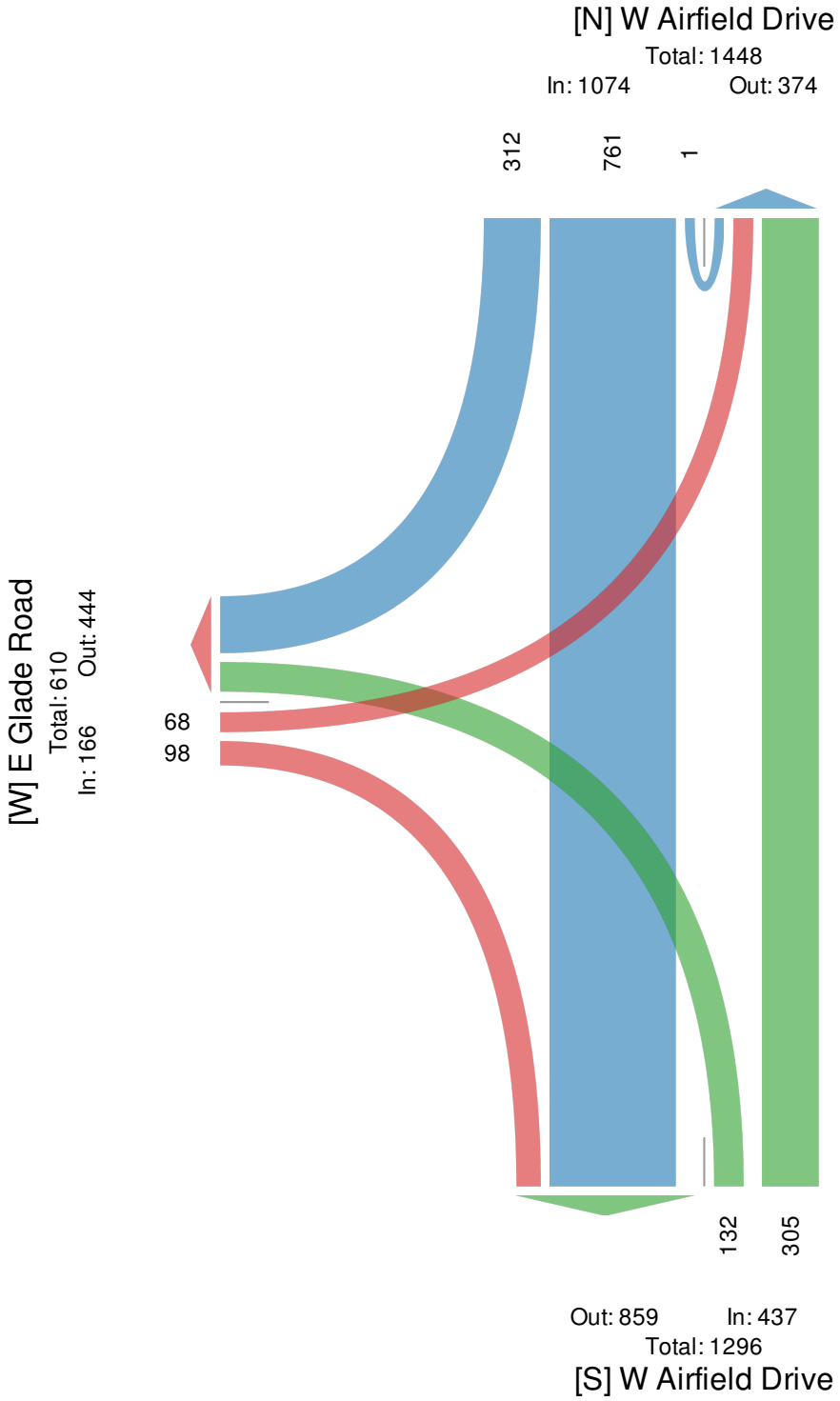
Leg	W Airfield Drive					W Airfield Drive					E Glade Road					
Direction	Southbound					Northbound					Eastbound					
Time	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	R	L	U	**App**	Ped*	**Int**
2019-05-01 4:45PM	71	172	1	**244**	0	73	28	0	**101**	0	17	13	0	**30**	0	**375**
5:00PM	77	208	0	**285**	0	70	26	0	**96**	0	14	19	0	**33**	0	**414**
5:15PM	79	195	0	**274**	0	83	45	0	**128**	0	31	17	0	**48**	0	**450**
5:30PM	85	186	0	**271**	0	79	33	0	**112**	0	36	19	0	**55**	0	**438**
Total	312	761	1	**1074**	0	305	132	0	**437**	0	98	68	0	**166**	0	**1677**
% Approach	29.1%	70.9%	0.1%	**-**	-	69.8%	30.2%	0%	**-**	-	59.0%	41.0%	0%	**-**	-	-
% Total	18.6%	45.4%	0.1%	**64.0%**	-	18.2%	7.9%	0%	**26.1%**	-	5.8%	4.1%	0%	**9.9%**	-	-
PHF	0.918	0.915	0.250	**0.942**	-	0.919	0.733	-	**0.854**	-	0.681	0.895	-	**0.755**	-	0.932
Lights	310	729	1	**1040**	-	278	131	0	**409**	-	97	68	0	**165**	-	1614
% Lights	99.4%	95.8%	100%	**96.8%**	-	91.1%	99.2%	0%	**93.6%**	-	99.0%	100%	0%	**99.4%**	-	96.2%
Articulated Trucks	0	12	0	**12**	-	8	0	0	**8**	-	0	0	0	**0**	-	20
% Articulated Trucks	0%	1.6%	0%	**1.1%**	-	2.6%	0%	0%	**1.8%**	-	0%	0%	0%	**0%**	-	1.2%
Buses and Single-Unit Trucks	2	20	0	**22**	-	19	1	0	**20**	-	1	0	0	**1**	-	43
% Buses and Single-Unit Trucks	0.6%	2.6%	0%	**2.0%**	-	6.2%	0.8%	0%	**4.6%**	-	1.0%	0%	0%	**0.6%**	-	2.6%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

10. E Glade Road at W Airfield Drive - TMC

Wed May 1, 2019
PM Peak (4:45 PM - 5:45 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Crosswalk)
All Movements
ID: 645636, Location: 32.881183, -97.059951

CJ Hensch & Associates, Inc.
Provided by: C. J. Hensch & Associates Inc.
5215 Sycamore Ave.,
Pasadena, TX, 77503, US



APPENDIX B

Operational Analysis Results

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	2	4	0	0	11	242	19	3	118	0
Future Vol, veh/h	0	0	2	4	0	0	11	242	19	3	118	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	2	4	0	0	11	249	20	3	122	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	275	419	61	348	409	135	122	0	0	269	0	0
Stage 1	128	128	-	281	281	-	-	-	-	-	-	-
Stage 2	147	291	-	67	128	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.58	6.98	7.58	6.58	6.98	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4.04	3.34	3.54	4.04	3.34	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	650	519	985	577	526	883	1448	-	-	1277	-	-
Stage 1	857	784	-	696	672	-	-	-	-	-	-	-
Stage 2	835	665	-	930	784	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	644	513	985	571	520	883	1448	-	-	1277	-	-
Mov Cap-2 Maneuver	644	513	-	571	520	-	-	-	-	-	-	-
Stage 1	849	782	-	690	666	-	-	-	-	-	-	-
Stage 2	827	659	-	925	782	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.7	11.4	0.3	0.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1448	-	-	985	571	1277	-	-
HCM Lane V/C Ratio	0.008	-	-	0.002	0.007	0.002	-	-
HCM Control Delay (s)	7.5	0	-	8.7	11.4	7.8	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

HCM 6th Signalized Intersection Summary
3: E Airfield Dr & W Walnut Hill Ln

06/17/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	54	82	4	163	144	179	13	244	1301	29	88	37
Future Volume (veh/h)	54	82	4	163	144	179	13	244	1301	29	88	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	500	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	61	92	0	183	162	0	15	274	0	33	99	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	801		294	861		343	552		275	611	
Arrive On Green	0.05	0.43	0.00	0.09	0.46	0.00	0.02	0.16	0.00	0.04	0.17	0.00
Sat Flow, veh/h	1781	1870	1585	3456	1870	0	1781	3554	1585	1781	3647	0
Grp Volume(v), veh/h	61	92	0	183	162	0	15	274	0	33	99	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	0	1781	1777	1585	1781	1777	0
Q Serve(g_s), s	2.0	1.8	0.0	3.1	3.1	0.0	0.4	4.3	0.0	0.9	1.4	0.0
Cycle Q Clear(g_c), s	2.0	1.8	0.0	3.1	3.1	0.0	0.4	4.3	0.0	0.9	1.4	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	94	801		294	861		343	552		275	611	
V/C Ratio(X)	0.65	0.11		0.62	0.19		0.04	0.50		0.12	0.16	
Avail Cap(c_a), veh/h	161	801		642	861		457	5465		359	5465	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.2	10.4	0.0	26.9	9.7	0.0	20.9	23.5	0.0	20.5	21.4	0.0
Incr Delay (d2), s/veh	7.3	0.3	0.0	2.1	0.5	0.0	0.1	0.7	0.0	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.7	0.0	1.2	1.1	0.0	0.2	1.6	0.0	0.4	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	10.7	0.0	29.0	10.2	0.0	21.0	24.2	0.0	20.6	21.6	0.0
LnGrp LOS	D	B		C	B		C	C		C	C	
Approach Vol, veh/h		153	A		345	A		289	A		132	A
Approach Delay, s/veh		20.6			20.2			24.0			21.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	32.5	6.6	13.9	9.7	30.5	5.6	15.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	28.0	5.0	93.5	11.3	22.2	5.0	93.5
Max Q Clear Time (g_c+I1), s	4.0	5.1	2.9	6.3	5.1	3.8	2.4	3.4
Green Ext Time (p_c), s	0.0	1.3	0.0	3.2	0.3	0.3	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [NER, NWR, SER, SWR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	12	7	0	1	1	44	1	0	232	0
Future Vol, veh/h	1	0	12	7	0	1	1	44	1	0	232	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	1	0	16	10	0	1	1	60	1	0	318	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	350	381	159	222	381	31	318	0	0	61	0	0
Stage 1	318	318	-	63	63	-	-	-	-	-	-	-
Stage 2	32	63	-	159	318	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.58	6.98	7.58	6.58	6.98	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4.04	3.34	3.54	4.04	3.34	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	575	546	852	709	546	1030	1224	-	-	1526	-	-
Stage 1	662	647	-	935	837	-	-	-	-	-	-	-
Stage 2	974	837	-	821	647	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	574	545	852	695	545	1030	1224	-	-	1526	-	-
Mov Cap-2 Maneuver	574	545	-	695	545	-	-	-	-	-	-	-
Stage 1	661	647	-	934	836	-	-	-	-	-	-	-
Stage 2	972	836	-	805	647	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	10	0.2	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1224	-	-	821	724	1526	-	-
HCM Lane V/C Ratio	0.001	-	-	0.022	0.015	-	-	-
HCM Control Delay (s)	7.9	0	-	9.5	10	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

HCM 6th Signalized Intersection Summary
3: E Airfield Dr & W Walnut Hill Ln

06/17/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	17	129	23	1426	189	16	0	24	321	146	134	35
Future Volume (veh/h)	17	129	23	1426	189	16	0	24	321	146	134	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	210	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	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	18	139	0	1533	203	0	0	26	0	157	144	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	36	398		1618	1236		157	204		258	599	
Arrive On Green	0.02	0.21	0.00	0.46	0.66	0.00	0.00	0.06	0.00	0.06	0.17	0.00
Sat Flow, veh/h	1795	1885	1598	3483	1885	0	1795	3582	1598	1795	3676	0
Grp Volume(v), veh/h	18	139	0	1533	203	0	0	26	0	157	144	0
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1742	1885	0	1795	1791	1598	1795	1791	0
Q Serve(g_s), s	0.9	5.4	0.0	36.3	3.6	0.0	0.0	0.6	0.0	5.0	3.0	0.0
Cycle Q Clear(g_c), s	0.9	5.4	0.0	36.3	3.6	0.0	0.0	0.6	0.0	5.0	3.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	36	398		1618	1236		157	204		258	599	
V/C Ratio(X)	0.49	0.35		0.95	0.16		0.00	0.13		0.61	0.24	
Avail Cap(c_a), veh/h	110	398		1650	1236		259	748		258	748	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	41.8	28.9	0.0	22.0	5.7	0.0	0.0	38.6	0.0	35.9	31.1	0.0
Incr Delay (d2), s/veh	10.0	2.4	0.0	11.8	0.3	0.0	0.0	0.3	0.0	4.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.6	0.0	15.3	1.2	0.0	0.0	0.3	0.0	3.4	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.7	31.3	0.0	33.9	6.0	0.0	0.0	38.9	0.0	40.0	31.3	0.0
LnGrp LOS	D	C		C	A		A	D		D	C	
Approach Vol, veh/h		157	A		1736	A		26	A		301	A
Approach Delay, s/veh		33.7			30.6			38.9			35.9	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	61.0	9.5	9.4	44.5	22.7	0.0	18.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.3	53.7	5.0	18.0	40.8	18.2	5.0	18.0
Max Q Clear Time (g_c+I1), s	2.9	5.6	7.0	2.6	38.3	7.4	0.0	5.0
Green Ext Time (p_c), s	0.0	2.1	0.0	0.1	1.8	0.4	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	31.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [NER, NWR, SER, SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
3: W 21st St & W Airfield-Braniff Dr

06/17/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	43	539	12	2	645	27	4	0	1	15	1	15
Future Volume (veh/h)	43	539	12	2	645	27	4	0	1	15	1	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	50	627	14	2	750	0	5	0	1	17	1	17
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	91	2078	927	5	1905		208	0	8	242	4	70
Arrive On Green	0.05	0.61	0.61	0.00	0.56	0.00	0.05	0.00	0.05	0.05	0.05	0.05
Sat Flow, veh/h	1711	3413	1522	1711	3413	1522	888	0	178	1402	82	1522
Grp Volume(v), veh/h	50	627	14	2	750	0	6	0	0	18	0	17
Grp Sat Flow(s),veh/h/ln	1711	1706	1522	1711	1706	1522	1065	0	0	1484	0	1522
Q Serve(g_s), s	1.1	3.5	0.1	0.0	4.9	0.0	0.2	0.0	0.0	0.0	0.0	0.4
Cycle Q Clear(g_c), s	1.1	3.5	0.1	0.0	4.9	0.0	0.6	0.0	0.0	0.4	0.0	0.4
Prop In Lane	1.00		1.00	1.00		1.00	0.83		0.17	0.94		1.00
Lane Grp Cap(c), veh/h	91	2078	927	5	1905		216	0	0	246	0	70
V/C Ratio(X)	0.55	0.30	0.02	0.43	0.39		0.03	0.00	0.00	0.07	0.00	0.24
Avail Cap(c_a), veh/h	282	2078	927	217	1905		778	0	0	812	0	695
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.2	3.7	3.0	19.6	4.9	0.0	18.4	0.0	0.0	18.1	0.0	18.1
Incr Delay (d2), s/veh	5.0	0.4	0.0	51.2	0.6	0.0	0.1	0.0	0.0	0.1	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.4	0.0	0.1	0.8	0.0	0.1	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.2	4.1	3.1	70.8	5.5	0.0	18.5	0.0	0.0	18.3	0.0	19.9
LnGrp LOS	C	A	A	E	A		B	A	A	B	A	B
Approach Vol, veh/h		691			752	A		6			35	
Approach Delay, s/veh		5.4			5.7			18.5			19.1	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.6	26.5		6.3	4.6	28.5		6.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	6.5	22.0		18.0	5.0	23.5		18.0
Max Q Clear Time (g_c+I1), s	3.1	6.9		2.6	2.0	5.5		2.4
Green Ext Time (p_c), s	0.0	6.4		0.0	0.0	5.9		0.1

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

Notes

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

HCM 6th Signalized Intersection Summary
3: W 21st St & W Airfield-Braniff Dr

06/17/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	13	872	3	0	600	10	22	0	5	14	0	21
Future Volume (veh/h)	13	872	3	0	600	10	22	0	5	14	0	21
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	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	14	918	3	0	632	0	23	0	5	15	0	22
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	31	2412	1076	4	1973		225	0	13	275	0	97
Arrive On Green	0.02	0.71	0.71	0.00	0.58	0.00	0.06	0.00	0.06	0.06	0.00	0.06
Sat Flow, veh/h	1697	3385	1510	1697	3385	1510	967	0	210	1500	0	1510
Grp Volume(v), veh/h	14	918	3	0	632	0	28	0	0	15	0	22
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1510	1177	0	0	1500	0	1510
Q Serve(g_s), s	0.3	4.3	0.0	0.0	3.9	0.0	0.8	0.0	0.0	0.0	0.0	0.6
Cycle Q Clear(g_c), s	0.3	4.3	0.0	0.0	3.9	0.0	1.1	0.0	0.0	0.3	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	0.82		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	31	2412	1076	4	1973		238	0	0	275	0	97
V/C Ratio(X)	0.46	0.38	0.00	0.00	0.32		0.12	0.00	0.00	0.05	0.00	0.23
Avail Cap(c_a), veh/h	210	2412	1076	210	1973		756	0	0	789	0	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	2.3	1.7	0.0	4.3	0.0	18.3	0.0	0.0	17.8	0.0	17.9
Incr Delay (d2), s/veh	10.3	0.5	0.0	0.0	0.4	0.0	0.2	0.0	0.0	0.1	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	0.0	0.5	0.0	0.2	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	2.7	1.7	0.0	4.7	0.0	18.6	0.0	0.0	17.9	0.0	19.1
LnGrp LOS	C	A	A	A	A		B	A	A	B	A	B
Approach Vol, veh/h		935			632	A		28			37	
Approach Delay, s/veh		3.1			4.7			18.6			18.6	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.2	28.0		7.1	0.0	33.2		7.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	23.5		18.0	5.0	23.5		18.0
Max Q Clear Time (g_c+I1), s	2.3	5.9		3.1	0.0	6.3		2.6
Green Ext Time (p_c), s	0.0	5.9		0.1	0.0	8.6		0.1

Intersection Summary	
HCM 6th Ctrl Delay	4.4
HCM 6th LOS	A

Notes

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

HCM 6th Signalized Intersection Summary
12: W Airfield-Braniff Dr & W 23rd St

06/17/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	17	21	828	105	72	326
Future Volume (veh/h)	17	21	828	105	72	326
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1796	1796	1796	1796
Adj Flow Rate, veh/h	20	0	998	0	87	393
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	7	7	7	7
Cap, veh/h	43		1841		514	2515
Arrive On Green	0.03	0.00	0.54	0.00	0.08	0.74
Sat Flow, veh/h	1633	0	3503	1522	1711	3503
Grp Volume(v), veh/h	21	0	998	0	87	393
Grp Sat Flow(s),veh/h/ln	1715	0	1706	1522	1711	1706
Q Serve(g_s), s	0.5	0.0	7.2	0.0	0.7	1.3
Cycle Q Clear(g_c), s	0.5	0.0	7.2	0.0	0.7	1.3
Prop In Lane	0.95	0.00		1.00	1.00	
Lane Grp Cap(c), veh/h	45		1841		514	2515
V/C Ratio(X)	0.47		0.54		0.17	0.16
Avail Cap(c_a), veh/h	812		1841		604	2515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.2	0.0	5.7	0.0	3.5	1.5
Incr Delay (d2), s/veh	7.4	0.0	1.2	0.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	1.2	0.0	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.6	0.0	6.8	0.0	3.7	1.6
LnGrp LOS	C		A		A	A
Approach Vol, veh/h	21	A	998	A		480
Approach Delay, s/veh	25.6		6.8			2.0
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.5	25.0			32.5	5.5
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.0	18.5			28.0	18.0
Max Q Clear Time (g_c+I1), s	2.7	9.2			3.3	2.5
Green Ext Time (p_c), s	0.0	5.9			4.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.6
HCM 6th LOS	A

Notes

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

HCM 6th Signalized Intersection Summary
12: W Airfield-Braniff Dr & W 23rd St

06/17/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	63	65	397	34	45	967
Future Volume (veh/h)	63	65	397	34	45	967
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1781	1781	1781	1781
Adj Flow Rate, veh/h	67	0	422	0	48	1029
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	8	8	8	8
Cap, veh/h	111		1832		707	2391
Arrive On Green	0.07	0.00	0.54	0.00	0.05	0.71
Sat Flow, veh/h	1673	0	3474	1510	1697	3474
Grp Volume(v), veh/h	68	0	422	0	48	1029
Grp Sat Flow(s),veh/h/ln	1698	0	1692	1510	1697	1692
Q Serve(g_s), s	1.5	0.0	2.6	0.0	0.4	5.1
Cycle Q Clear(g_c), s	1.5	0.0	2.6	0.0	0.4	5.1
Prop In Lane	0.99	0.00		1.00	1.00	
Lane Grp Cap(c), veh/h	113		1832		707	2391
V/C Ratio(X)	0.60		0.23		0.07	0.43
Avail Cap(c_a), veh/h	771		1832		833	2391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	0.0	4.8	0.0	2.9	2.5
Incr Delay (d2), s/veh	5.1	0.0	0.3	0.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.4	0.0	0.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.1	0.0	5.1	0.0	2.9	3.0
LnGrp LOS	C		A		A	A
Approach Vol, veh/h	68	A	422	A		1077
Approach Delay, s/veh	23.1		5.1			3.0
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.6	25.9			32.5	7.1
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.0	18.5			28.0	18.0
Max Q Clear Time (g_c+I1), s	2.4	4.6			7.1	3.5
Green Ext Time (p_c), s	0.0	3.3			10.8	0.1

Intersection Summary	
HCM 6th Ctrl Delay	4.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary
18: W Airfield-Braniff Dr & E Glade Rd

06/17/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	276	202	46	713	242	75
Future Volume (veh/h)	276	202	46	713	242	75
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	314	0	52	810	275	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	6	6	6	6	6	6
Cap, veh/h	387		666	2045	1555	
Arrive On Green	0.22	0.00	0.05	0.59	0.45	0.00
Sat Flow, veh/h	1725	1535	1725	3532	3532	1535
Grp Volume(v), veh/h	314	0	52	810	275	0
Grp Sat Flow(s),veh/h/ln	1725	1535	1725	1721	1721	1535
Q Serve(g_s), s	8.6	0.0	0.7	6.2	2.4	0.0
Cycle Q Clear(g_c), s	8.6	0.0	0.7	6.2	2.4	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	387		666	2045	1555	
V/C Ratio(X)	0.81		0.08	0.40	0.18	
Avail Cap(c_a), veh/h	747		768	2045	1555	
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	18.3	0.0	5.5	5.3	8.1	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.0	0.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.2	1.2	0.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.4	0.0	5.6	5.9	8.4	0.0
LnGrp LOS	C		A	A	A	
Approach Vol, veh/h	314	A		862	275	A
Approach Delay, s/veh	22.4			5.9	8.4	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		34.0		15.6	7.1	26.9
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		29.5		21.5	5.5	19.5
Max Q Clear Time (g_c+I1), s		8.2		10.6	2.7	4.4
Green Ext Time (p_c), s		5.2		0.7	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

Notes

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

HCM 6th Signalized Intersection Summary
18: W Airfield-Braniff Dr & E Glade Rd

06/17/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	70	100	135	313	780	320
Future Volume (veh/h)	70	100	135	313	780	320
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	75	0	145	337	839	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	118		573	2542	1873	
Arrive On Green	0.07	0.00	0.09	0.73	0.54	0.00
Sat Flow, veh/h	1739	1547	1739	3561	3561	1547
Grp Volume(v), veh/h	75	0	145	337	839	0
Grp Sat Flow(s),veh/h/ln	1739	1547	1739	1735	1735	1547
Q Serve(g_s), s	1.9	0.0	1.3	1.3	6.6	0.0
Cycle Q Clear(g_c), s	1.9	0.0	1.3	1.3	6.6	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	118		573	2542	1873	
V/C Ratio(X)	0.64		0.25	0.13	0.45	
Avail Cap(c_a), veh/h	695		662	2542	1873	
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	20.5	0.0	3.6	1.8	6.3	0.0
Incr Delay (d2), s/veh	5.6	0.0	0.2	0.1	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.1	0.0	1.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.1	0.0	3.9	1.9	7.1	0.0
LnGrp LOS	C		A	A	A	
Approach Vol, veh/h	75	A		482	839	A
Approach Delay, s/veh	26.1			2.5	7.1	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		7.5	8.7	28.8
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	6.5	22.0
Max Q Clear Time (g_c+I1), s		3.3		3.9	3.3	8.6
Green Ext Time (p_c), s		2.0		0.1	0.1	4.4

Intersection Summary	
HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A

Notes

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

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	2	5	0	0	11	260	20	3	127	0
Future Vol, veh/h	0	0	2	5	0	0	11	260	20	3	127	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	2	5	0	0	11	268	21	3	131	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	293	448	66	373	438	145	131	0	0	289	0	0
Stage 1	137	137	-	301	301	-	-	-	-	-	-	-
Stage 2	156	311	-	72	137	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.58	6.98	7.58	6.58	6.98	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4.04	3.34	3.54	4.04	3.34	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	632	500	978	554	507	870	1437	-	-	1255	-	-
Stage 1	846	777	-	678	659	-	-	-	-	-	-	-
Stage 2	825	652	-	923	777	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	626	494	978	548	501	870	1437	-	-	1255	-	-
Mov Cap-2 Maneuver	626	494	-	548	501	-	-	-	-	-	-	-
Stage 1	838	775	-	672	653	-	-	-	-	-	-	-
Stage 2	818	646	-	918	775	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.7	11.6	0.3	0.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1437	-	-	978	548	1255	-	-
HCM Lane V/C Ratio	0.008	-	-	0.002	0.009	0.002	-	-
HCM Control Delay (s)	7.5	0	-	8.7	11.6	7.9	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

HCM 6th Signalized Intersection Summary
3: E Airfield Dr & W Walnut Hill Ln

06/17/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	58	88	5	175	155	192	14	262	1401	32	95	40
Future Volume (veh/h)	58	88	5	175	155	192	14	262	1401	32	95	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	700	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	99	0	197	174	0	16	294	0	36	107	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	796		309	862		347	574		274	637	
Arrive On Green	0.05	0.43	0.00	0.09	0.46	0.00	0.02	0.16	0.00	0.04	0.18	0.00
Sat Flow, veh/h	1781	1870	1585	3456	1870	0	1781	3554	1585	1781	3647	0
Grp Volume(v), veh/h	65	99	0	197	174	0	16	294	0	36	107	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	0	1781	1777	1585	1781	1777	0
Q Serve(g_s), s	2.3	2.0	0.0	3.5	3.5	0.0	0.5	4.8	0.0	1.0	1.6	0.0
Cycle Q Clear(g_c), s	2.3	2.0	0.0	3.5	3.5	0.0	0.5	4.8	0.0	1.0	1.6	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	96	796		309	862		347	574		274	637	
V/C Ratio(X)	0.68	0.12		0.64	0.20		0.05	0.51		0.13	0.17	
Avail Cap(c_a), veh/h	156	796		632	862		454	5226		349	5226	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	29.2	11.0	0.0	27.7	10.1	0.0	21.3	24.1	0.0	20.8	21.8	0.0
Incr Delay (d2), s/veh	8.0	0.3	0.0	2.2	0.5	0.0	0.1	0.7	0.0	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.8	0.0	1.4	1.2	0.0	0.2	1.8	0.0	0.4	0.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	11.3	0.0	29.9	10.6	0.0	21.3	24.8	0.0	21.0	22.0	0.0
LnGrp LOS	D	B		C	B		C	C		C	C	
Approach Vol, veh/h		164	A		371	A		310	A		143	A
Approach Delay, s/veh		21.6			20.8			24.6			21.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	33.5	6.8	14.7	10.1	31.3	5.7	15.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	29.0	5.0	92.5	11.5	23.0	5.0	92.5
Max Q Clear Time (g_c+I1), s	4.3	5.5	3.0	6.8	5.5	4.0	2.5	3.6
Green Ext Time (p_c), s	0.0	1.4	0.0	3.4	0.3	0.4	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [NER, NWR, SER, SWR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	12	8	0	1	1	48	1	0	250	0
Future Vol, veh/h	1	0	12	8	0	1	1	48	1	0	250	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	1	0	16	11	0	1	1	66	1	0	342	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	377	411	171	240	411	34	342	0	0	67	0	0
Stage 1	342	342	-	69	69	-	-	-	-	-	-	-
Stage 2	35	69	-	171	342	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.58	6.98	7.58	6.58	6.98	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4.04	3.34	3.54	4.04	3.34	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	550	525	837	689	525	1025	1199	-	-	1518	-	-
Stage 1	641	632	-	927	832	-	-	-	-	-	-	-
Stage 2	970	832	-	808	632	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	549	524	837	675	524	1025	1199	-	-	1518	-	-
Mov Cap-2 Maneuver	549	524	-	675	524	-	-	-	-	-	-	-
Stage 1	640	632	-	926	831	-	-	-	-	-	-	-
Stage 2	968	831	-	792	632	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.6	10.2	0.2	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1199	-	-	805	702	1518	-	-
HCM Lane V/C Ratio	0.001	-	-	0.022	0.018	-	-	-
HCM Control Delay (s)	8	0	-	9.6	10.2	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

HCM 6th Signalized Intersection Summary
3: E Airfield Dr & W Walnut Hill Ln

06/17/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	18	139	25	1535	204	17	0	26	346	157	145	37
Future Volume (veh/h)	18	139	25	1535	204	17	0	26	346	157	145	37
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	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	19	149	0	1651	219	0	0	28	0	169	156	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	37	383		1751	1292		142	186		233	546	
Arrive On Green	0.02	0.20	0.00	0.50	0.69	0.00	0.00	0.05	0.00	0.05	0.15	0.00
Sat Flow, veh/h	1795	1885	1598	3483	1885	0	1795	3582	1598	1795	3676	0
Grp Volume(v), veh/h	19	149	0	1651	219	0	0	28	0	169	156	0
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1742	1885	0	1795	1791	1598	1795	1791	0
Q Serve(g_s), s	1.0	6.5	0.0	42.8	3.9	0.0	0.0	0.7	0.0	5.1	3.7	0.0
Cycle Q Clear(g_c), s	1.0	6.5	0.0	42.8	3.9	0.0	0.0	0.7	0.0	5.1	3.7	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	37	383		1751	1292		142	186		233	546	
V/C Ratio(X)	0.51	0.39		0.94	0.17		0.00	0.15		0.72	0.29	
Avail Cap(c_a), veh/h	103	383		1806	1292		234	675		233	679	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.3	32.9	0.0	22.4	5.3	0.0	0.0	43.2	0.0	41.6	35.8	0.0
Incr Delay (d2), s/veh	10.4	3.0	0.0	10.4	0.3	0.0	0.0	0.4	0.0	10.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.2	0.0	17.6	1.3	0.0	0.0	0.3	0.0	4.5	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	35.9	0.0	32.8	5.6	0.0	0.0	43.6	0.0	52.2	36.1	0.0
LnGrp LOS	E	D		C	A		A	D		D	D	
Approach Vol, veh/h		168	A		1870	A		28	A		325	A
Approach Delay, s/veh		38.2			29.7			43.6			44.5	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	69.9	9.6	9.5	52.5	23.9	0.0	19.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	63.4	5.1	18.0	49.5	19.4	5.0	18.1
Max Q Clear Time (g_c+I1), s	3.0	5.9	7.1	2.7	44.8	8.5	0.0	5.7
Green Ext Time (p_c), s	0.0	2.3	0.0	0.1	3.2	0.4	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	32.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [NER, NWR, SER, SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
3: W 21st St & W Airfield-Braniff Dr

06/17/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	14	939	3	0	646	11	23	0	6	15	0	22
Future Volume (veh/h)	14	939	3	0	646	11	23	0	6	15	0	22
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	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	15	988	3	0	680	0	24	0	6	16	0	18
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	33	2415	1077	4	1972		220	0	15	274	0	96
Arrive On Green	0.02	0.71	0.71	0.00	0.58	0.00	0.06	0.00	0.06	0.06	0.00	0.06
Sat Flow, veh/h	1697	3385	1510	1697	3385	1510	936	0	234	1511	0	1510
Grp Volume(v), veh/h	15	988	3	0	680	0	30	0	0	16	0	18
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1510	1170	0	0	1511	0	1510
Q Serve(g_s), s	0.4	4.8	0.0	0.0	4.2	0.0	0.9	0.0	0.0	0.0	0.0	0.5
Cycle Q Clear(g_c), s	0.4	4.8	0.0	0.0	4.2	0.0	1.2	0.0	0.0	0.4	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	0.80		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	33	2415	1077	4	1972		235	0	0	274	0	96
V/C Ratio(X)	0.46	0.41	0.00	0.00	0.34		0.13	0.00	0.00	0.06	0.00	0.19
Avail Cap(c_a), veh/h	210	2415	1077	210	1972		756	0	0	789	0	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	2.3	1.7	0.0	4.4	0.0	18.4	0.0	0.0	17.9	0.0	17.9
Incr Delay (d2), s/veh	9.8	0.5	0.0	0.0	0.5	0.0	0.2	0.0	0.0	0.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	0.0	0.6	0.0	0.3	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.4	2.9	1.7	0.0	4.9	0.0	18.7	0.0	0.0	17.9	0.0	18.8
LnGrp LOS	C	A	A	A	A		B	A	A	B	A	B
Approach Vol, veh/h		1006			680	A		30			34	
Approach Delay, s/veh		3.2			4.9			18.7			18.4	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	28.0		7.1	0.0	33.3		7.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	23.5		18.0	5.0	23.5		18.0
Max Q Clear Time (g_c+I1), s	2.4	6.2		3.2	0.0	6.8		2.5
Green Ext Time (p_c), s	0.0	6.3		0.1	0.0	9.0		0.1

Intersection Summary	
HCM 6th Ctrl Delay	4.4
HCM 6th LOS	A

Notes

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

HCM 6th Signalized Intersection Summary
3: W 21st St & W Airfield-Braniff Dr

06/17/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	46	581	13	2	694	29	4	0	1	17	1	17
Future Volume (veh/h)	46	581	13	2	694	29	4	0	1	17	1	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	53	676	15	2	807	0	5	0	1	20	1	20
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	98	1943	867	5	1757		230	0	9	269	4	79
Arrive On Green	0.06	0.57	0.57	0.00	0.51	0.00	0.05	0.00	0.05	0.05	0.05	0.05
Sat Flow, veh/h	1711	3413	1522	1711	3413	1522	880	0	176	1409	70	1522
Grp Volume(v), veh/h	53	676	15	2	807	0	6	0	0	21	0	20
Grp Sat Flow(s),veh/h/ln	1711	1706	1522	1711	1706	1522	1056	0	0	1480	0	1522
Q Serve(g_s), s	1.1	3.8	0.2	0.0	5.4	0.0	0.2	0.0	0.0	0.0	0.0	0.5
Cycle Q Clear(g_c), s	1.1	3.8	0.2	0.0	5.4	0.0	0.6	0.0	0.0	0.4	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	0.83		0.17	0.95		1.00
Lane Grp Cap(c), veh/h	98	1943	867	5	1757		239	0	0	273	0	79
V/C Ratio(X)	0.54	0.35	0.02	0.42	0.46		0.03	0.00	0.00	0.08	0.00	0.25
Avail Cap(c_a), veh/h	238	1943	867	238	1757		851	0	0	891	0	763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.5	4.2	3.4	17.9	5.5	0.0	16.6	0.0	0.0	16.3	0.0	16.4
Incr Delay (d2), s/veh	4.6	0.5	0.0	49.7	0.9	0.0	0.0	0.0	0.0	0.1	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.0	0.1	0.9	0.0	0.0	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	4.6	3.4	67.6	6.4	0.0	16.7	0.0	0.0	16.5	0.0	18.0
LnGrp LOS	C	A	A	E	A		B	A	A	B	A	B
Approach Vol, veh/h		744			809	A		6			41	
Approach Delay, s/veh		5.8			6.6			16.7			17.2	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.6	23.0		6.4	4.6	25.0		6.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	18.5		18.0	5.0	18.5		18.0
Max Q Clear Time (g_c+I1), s	3.1	7.4		2.6	2.0	5.8		2.5
Green Ext Time (p_c), s	0.0	5.6		0.0	0.0	5.2		0.1

Intersection Summary	
HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A

Notes

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

HCM 6th Signalized Intersection Summary
12: W Airfield-Braniff Dr & W 23rd St

06/17/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	22	892	113	77	351
Future Volume (veh/h)	19	22	892	113	77	351
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1796	1796	1796	1796
Adj Flow Rate, veh/h	23	0	1075	0	93	423
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	7	7	7	7
Cap, veh/h	48		1983		495	2604
Arrive On Green	0.03	0.00	0.58	0.00	0.08	0.76
Sat Flow, veh/h	1643	0	3503	1522	1711	3503
Grp Volume(v), veh/h	24	0	1075	0	93	423
Grp Sat Flow(s),veh/h/ln	1714	0	1706	1522	1711	1706
Q Serve(g_s), s	0.6	0.0	8.3	0.0	0.7	1.5
Cycle Q Clear(g_c), s	0.6	0.0	8.3	0.0	0.7	1.5
Prop In Lane	0.96	0.00		1.00	1.00	
Lane Grp Cap(c), veh/h	50		1983		495	2604
V/C Ratio(X)	0.48		0.54		0.19	0.16
Avail Cap(c_a), veh/h	713		1983		580	2604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	5.5	0.0	3.5	1.4
Incr Delay (d2), s/veh	7.1	0.0	1.1	0.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.4	0.0	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.8	0.0	6.6	0.0	3.7	1.5
LnGrp LOS	C		A		A	A
Approach Vol, veh/h	24	A	1075	A		516
Approach Delay, s/veh	27.8		6.6			1.9
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.9	29.6			37.5	5.8
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.5	23.0			33.0	18.0
Max Q Clear Time (g_c+I1), s	2.7	10.3			3.5	2.6
Green Ext Time (p_c), s	0.1	8.0			4.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary
12: W Airfield-Braniff Dr & W 23rd St

06/17/2020

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	67	70	427	36	49	1041
Future Volume (veh/h)	67	70	427	36	49	1041
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1781	1781	1781	1781
Adj Flow Rate, veh/h	71	0	454	0	52	1107
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	8	8	8	8
Cap, veh/h	115		1815		689	2385
Arrive On Green	0.07	0.00	0.54	0.00	0.05	0.70
Sat Flow, veh/h	1674	0	3474	1510	1697	3474
Grp Volume(v), veh/h	72	0	454	0	52	1107
Grp Sat Flow(s),veh/h/ln	1698	0	1692	1510	1697	1692
Q Serve(g_s), s	1.6	0.0	2.9	0.0	0.5	5.7
Cycle Q Clear(g_c), s	1.6	0.0	2.9	0.0	0.5	5.7
Prop In Lane	0.99	0.00		1.00	1.00	
Lane Grp Cap(c), veh/h	117		1815		689	2385
V/C Ratio(X)	0.61		0.25		0.08	0.46
Avail Cap(c_a), veh/h	769		1815		809	2385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	0.0	4.9	0.0	2.9	2.6
Incr Delay (d2), s/veh	5.1	0.0	0.3	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.5	0.0	0.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.1	0.0	5.3	0.0	3.0	3.2
LnGrp LOS	C		A		A	A
Approach Vol, veh/h	72	A	454	A		1159
Approach Delay, s/veh	23.1		5.3			3.2
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.7	25.8			32.5	7.2
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.0	18.5			28.0	18.0
Max Q Clear Time (g_c+I1), s	2.5	4.9			7.7	3.6
Green Ext Time (p_c), s	0.0	3.6			11.5	0.1

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary
18: W Airfield-Braniff Dr & E Glade Rd

06/17/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	297	217	50	768	260	81
Future Volume (veh/h)	297	217	50	768	260	81
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	338	0	57	873	295	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	6	6	6	6	6	6
Cap, veh/h	415		634	1975	1467	
Arrive On Green	0.24	0.00	0.06	0.57	0.43	0.00
Sat Flow, veh/h	1725	1535	1725	3532	3532	1535
Grp Volume(v), veh/h	338	0	57	873	295	0
Grp Sat Flow(s),veh/h/ln	1725	1535	1725	1721	1721	1535
Q Serve(g_s), s	9.0	0.0	0.8	7.0	2.6	0.0
Cycle Q Clear(g_c), s	9.0	0.0	0.8	7.0	2.6	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	415		634	1975	1467	
V/C Ratio(X)	0.81		0.09	0.44	0.20	
Avail Cap(c_a), veh/h	820		720	1975	1467	
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	17.4	0.0	6.0	5.9	8.8	0.0
Incr Delay (d2), s/veh	3.9	0.0	0.1	0.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	0.0	0.2	1.5	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.3	0.0	6.0	6.6	9.1	0.0
LnGrp LOS	C		A	A	A	
Approach Vol, veh/h	338	A		930	295	A
Approach Delay, s/veh	21.3			6.6	9.1	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		32.4		16.2	7.2	25.2
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		27.9		23.1	5.1	18.3
Max Q Clear Time (g_c+I1), s		9.0		11.0	2.8	4.6
Green Ext Time (p_c), s		5.4		0.8	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

Notes

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

HCM 6th Signalized Intersection Summary
18: W Airfield-Braniff Dr & E Glade Rd

06/17/2020

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	108	146	337	840	344
Future Volume (veh/h)	75	108	146	337	840	344
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	81	0	157	362	903	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	123		549	2533	1858	
Arrive On Green	0.07	0.00	0.10	0.73	0.54	0.00
Sat Flow, veh/h	1739	1547	1739	3561	3561	1547
Grp Volume(v), veh/h	81	0	157	362	903	0
Grp Sat Flow(s),veh/h/ln	1739	1547	1739	1735	1735	1547
Q Serve(g_s), s	2.1	0.0	1.5	1.4	7.4	0.0
Cycle Q Clear(g_c), s	2.1	0.0	1.5	1.4	7.4	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	123		549	2533	1858	
V/C Ratio(X)	0.66		0.29	0.14	0.49	
Avail Cap(c_a), veh/h	693		634	2533	1858	
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	20.5	0.0	3.9	1.8	6.6	0.0
Incr Delay (d2), s/veh	5.9	0.0	0.3	0.1	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.1	0.0	1.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.4	0.0	4.2	2.0	7.5	0.0
LnGrp LOS	C		A	A	A	
Approach Vol, veh/h	81	A		519	903	A
Approach Delay, s/veh	26.4			2.6	7.5	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		7.7	8.8	28.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	6.5	22.0
Max Q Clear Time (g_c+I1), s		3.4		4.1	3.5	9.4
Green Ext Time (p_c), s		2.2		0.1	0.1	4.7

Intersection Summary	
HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

Notes

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

HCM 6th Signalized Intersection Summary
3: W 21st St & W Airfield-Braniff Dr

06/19/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	46	587	13	2	710	29	4	0	1	17	1	17
Future Volume (veh/h)	46	587	13	2	710	29	4	0	1	17	1	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	53	683	15	2	826	0	5	0	1	20	1	20
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	98	1943	867	5	1757		230	0	9	269	4	79
Arrive On Green	0.06	0.57	0.57	0.00	0.51	0.00	0.05	0.00	0.05	0.05	0.05	0.05
Sat Flow, veh/h	1711	3413	1522	1711	3413	1522	880	0	176	1409	70	1522
Grp Volume(v), veh/h	53	683	15	2	826	0	6	0	0	21	0	20
Grp Sat Flow(s),veh/h/ln	1711	1706	1522	1711	1706	1522	1056	0	0	1480	0	1522
Q Serve(g_s), s	1.1	3.9	0.2	0.0	5.6	0.0	0.2	0.0	0.0	0.0	0.0	0.5
Cycle Q Clear(g_c), s	1.1	3.9	0.2	0.0	5.6	0.0	0.6	0.0	0.0	0.4	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	0.83		0.17	0.95		1.00
Lane Grp Cap(c), veh/h	98	1943	867	5	1757		239	0	0	273	0	79
V/C Ratio(X)	0.54	0.35	0.02	0.42	0.47		0.03	0.00	0.00	0.08	0.00	0.25
Avail Cap(c_a), veh/h	238	1943	867	238	1757		851	0	0	891	0	763
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.5	4.2	3.4	17.9	5.6	0.0	16.6	0.0	0.0	16.3	0.0	16.4
Incr Delay (d2), s/veh	4.6	0.5	0.0	49.7	0.9	0.0	0.0	0.0	0.0	0.1	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.8	0.0	0.1	1.7	0.0	0.1	0.0	0.0	0.3	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.1	4.7	3.4	67.6	6.5	0.0	16.7	0.0	0.0	16.5	0.0	18.0
LnGrp LOS	C	A	A	E	A		B	A	A	B	A	B
Approach Vol, veh/h		751			828	A		6			41	
Approach Delay, s/veh		5.8			6.6			16.7			17.2	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	6.6	23.0		6.4	4.6	25.0		6.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	18.5		18.0	5.0	18.5		18.0
Max Q Clear Time (g_c+I1), s	3.1	7.6		2.6	2.0	5.9		2.5
Green Ext Time (p_c), s	0.0	5.7		0.0	0.0	5.3		0.1

Intersection Summary	
HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	19	23	907	114	77	357
Future Volume (veh/h)	19	23	907	114	77	357
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1796	1796	1796	1796
Adj Flow Rate, veh/h	23	0	1093	0	93	430
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	7	7	7	7
Cap, veh/h	48		1983		490	2604
Arrive On Green	0.03	0.00	0.58	0.00	0.08	0.76
Sat Flow, veh/h	1643	0	3503	1522	1711	3503
Grp Volume(v), veh/h	24	0	1093	0	93	430
Grp Sat Flow(s),veh/h/ln	1714	0	1706	1522	1711	1706
Q Serve(g_s), s	0.6	0.0	8.5	0.0	0.7	1.5
Cycle Q Clear(g_c), s	0.6	0.0	8.5	0.0	0.7	1.5
Prop In Lane	0.96	0.00		1.00	1.00	
Lane Grp Cap(c), veh/h	50		1983		490	2604
V/C Ratio(X)	0.48		0.55		0.19	0.17
Avail Cap(c_a), veh/h	713		1983		554	2604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	5.6	0.0	3.6	1.4
Incr Delay (d2), s/veh	7.1	0.0	1.1	0.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	2.7	0.0	0.0	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.8	0.0	6.7	0.0	3.8	1.5
LnGrp LOS	C		A		A	A
Approach Vol, veh/h	24	A	1093	A		523
Approach Delay, s/veh	27.8		6.7			1.9
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.9	29.6			37.5	5.8
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.0	23.5			33.0	18.0
Max Q Clear Time (g_c+I1), s	2.7	10.5			3.5	2.6
Green Ext Time (p_c), s	0.0	8.2			4.7	0.0

Intersection Summary	
HCM 6th Ctrl Delay	5.5
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	301	217	50	780	265	82
Future Volume (veh/h)	301	217	50	780	265	82
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	342	0	57	886	301	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	6	6	6	6	6	6
Cap, veh/h	415		629	1969	1456	
Arrive On Green	0.24	0.00	0.06	0.57	0.42	0.00
Sat Flow, veh/h	1725	1535	1725	3532	3532	1535
Grp Volume(v), veh/h	342	0	57	886	301	0
Grp Sat Flow(s),veh/h/ln	1725	1535	1725	1721	1721	1535
Q Serve(g_s), s	9.0	0.0	0.8	7.1	2.7	0.0
Cycle Q Clear(g_c), s	9.0	0.0	0.8	7.1	2.7	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	415		629	1969	1456	
V/C Ratio(X)	0.82		0.09	0.45	0.21	
Avail Cap(c_a), veh/h	664		713	1969	1456	
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	17.3	0.0	6.0	5.9	8.8	0.0
Incr Delay (d2), s/veh	4.6	0.0	0.1	0.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.5	0.0	0.3	2.7	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.9	0.0	6.0	6.7	9.1	0.0
LnGrp LOS	C		A	A	A	
Approach Vol, veh/h	342	A		943	301	A
Approach Delay, s/veh	21.9			6.6	9.1	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		32.0		16.1	7.2	24.8
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		27.5		18.5	5.0	18.0
Max Q Clear Time (g_c+I1), s		9.1		11.0	2.8	4.7
Green Ext Time (p_c), s		5.5		0.7	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Notes

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

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	17	26	46	330	994	87
Future Vol, veh/h	17	26	46	330	994	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	430	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	28	50	359	1080	95

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1324	540	1080	0	-	0
Stage 1	1080	-	-	-	-	-
Stage 2	244	-	-	-	-	-
Critical Hdwy	6.29	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	177	486	641	-	-	-
Stage 1	281	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	163	486	641	-	-	-
Mov Cap-2 Maneuver	163	-	-	-	-	-
Stage 1	259	-	-	-	-	-
Stage 2	736	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s	14.9	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NWT	NWR	WBLn1	SEL	SET
Capacity (veh/h)	-	-	412	641	-
HCM Lane V/C Ratio	-	-	0.113	0.078	-
HCM Control Delay (s)	-	-	14.9	11.1	-
HCM Lane LOS	-	-	B	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.3	-

HCM 6th Signalized Intersection Summary
3: W 21st St & W Airfield-Braniff Dr

06/19/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	14	939	3	0	646	11	23	0	6	15	0	22
Future Volume (veh/h)	14	939	3	0	646	11	23	0	6	15	0	22
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	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	15	988	3	0	680	0	24	0	6	16	0	18
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	33	2415	1077	4	1972		220	0	15	274	0	96
Arrive On Green	0.02	0.71	0.71	0.00	0.58	0.00	0.06	0.00	0.06	0.06	0.00	0.06
Sat Flow, veh/h	1697	3385	1510	1697	3385	1510	936	0	234	1511	0	1510
Grp Volume(v), veh/h	15	988	3	0	680	0	30	0	0	16	0	18
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1510	1170	0	0	1511	0	1510
Q Serve(g_s), s	0.4	4.8	0.0	0.0	4.2	0.0	0.9	0.0	0.0	0.0	0.0	0.5
Cycle Q Clear(g_c), s	0.4	4.8	0.0	0.0	4.2	0.0	1.2	0.0	0.0	0.4	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	0.80		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	33	2415	1077	4	1972		235	0	0	274	0	96
V/C Ratio(X)	0.46	0.41	0.00	0.00	0.34		0.13	0.00	0.00	0.06	0.00	0.19
Avail Cap(c_a), veh/h	210	2415	1077	210	1972		756	0	0	789	0	674
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.6	2.3	1.7	0.0	4.4	0.0	18.4	0.0	0.0	17.9	0.0	17.9
Incr Delay (d2), s/veh	9.8	0.5	0.0	0.0	0.5	0.0	0.2	0.0	0.0	0.1	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.3	0.0	0.0	1.1	0.0	0.5	0.0	0.0	0.2	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.4	2.9	1.7	0.0	4.9	0.0	18.7	0.0	0.0	17.9	0.0	18.8
LnGrp LOS	C	A	A	A	A		B	A	A	B	A	B
Approach Vol, veh/h		1006			680	A		30			34	
Approach Delay, s/veh		3.2			4.9			18.7			18.4	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.3	28.0		7.1	0.0	33.3		7.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	23.5		18.0	5.0	23.5		18.0
Max Q Clear Time (g_c+I1), s	2.4	6.2		3.2	0.0	6.8		2.5
Green Ext Time (p_c), s	0.0	6.3		0.1	0.0	9.0		0.1

Intersection Summary	
HCM 6th Ctrl Delay	4.4
HCM 6th LOS	A

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	67	70	427	36	49	1041
Future Volume (veh/h)	67	70	427	36	49	1041
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1781	1781	1781	1781
Adj Flow Rate, veh/h	71	0	454	0	52	1107
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	8	8	8	8
Cap, veh/h	115		1815		689	2385
Arrive On Green	0.07	0.00	0.54	0.00	0.05	0.70
Sat Flow, veh/h	1674	0	3474	1510	1697	3474
Grp Volume(v), veh/h	72	0	454	0	52	1107
Grp Sat Flow(s),veh/h/ln	1698	0	1692	1510	1697	1692
Q Serve(g_s), s	1.6	0.0	2.9	0.0	0.5	5.7
Cycle Q Clear(g_c), s	1.6	0.0	2.9	0.0	0.5	5.7
Prop In Lane	0.99	0.00		1.00	1.00	
Lane Grp Cap(c), veh/h	117		1815		689	2385
V/C Ratio(X)	0.61		0.25		0.08	0.46
Avail Cap(c_a), veh/h	769		1815		809	2385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	0.0	4.9	0.0	2.9	2.6
Incr Delay (d2), s/veh	5.1	0.0	0.3	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	0.0	0.9	0.0	0.0	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.1	0.0	5.3	0.0	3.0	3.2
LnGrp LOS	C		A		A	A
Approach Vol, veh/h	72	A	454	A		1159
Approach Delay, s/veh	23.1		5.3			3.2
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.7	25.8			32.5	7.2
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.0	18.5			28.0	18.0
Max Q Clear Time (g_c+I1), s	2.5	4.9			7.7	3.6
Green Ext Time (p_c), s	0.0	3.6			11.5	0.1

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	75	108	146	337	840	344
Future Volume (veh/h)	75	108	146	337	840	344
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	81	0	157	362	903	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	123		549	2533	1858	
Arrive On Green	0.07	0.00	0.10	0.73	0.54	0.00
Sat Flow, veh/h	1739	1547	1739	3561	3561	1547
Grp Volume(v), veh/h	81	0	157	362	903	0
Grp Sat Flow(s),veh/h/ln	1739	1547	1739	1735	1735	1547
Q Serve(g_s), s	2.1	0.0	1.5	1.4	7.4	0.0
Cycle Q Clear(g_c), s	2.1	0.0	1.5	1.4	7.4	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	123		549	2533	1858	
V/C Ratio(X)	0.66		0.29	0.14	0.49	
Avail Cap(c_a), veh/h	693		634	2533	1858	
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	20.5	0.0	3.9	1.8	6.6	0.0
Incr Delay (d2), s/veh	5.9	0.0	0.3	0.1	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.2	0.1	2.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.4	0.0	4.2	2.0	7.5	0.0
LnGrp LOS	C		A	A	A	
Approach Vol, veh/h	81	A		519	903	A
Approach Delay, s/veh	26.4			2.6	7.5	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		7.7	8.8	28.7
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	6.5	22.0
Max Q Clear Time (g_c+I1), s		3.4		4.1	3.5	9.4
Green Ext Time (p_c), s		2.2		0.1	0.1	4.7

Intersection Summary	
HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

Notes

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

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	104	68	28	1081	395	17
Future Vol, veh/h	104	68	28	1081	395	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	430	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	113	74	30	1175	429	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	959	215	429	0	-	0
Stage 1	429	-	-	-	-	-
Stage 2	530	-	-	-	-	-
Critical Hdwy	6.29	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	288	790	1127	-	-	-
Stage 1	604	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	280	790	1127	-	-	-
Mov Cap-2 Maneuver	280	-	-	-	-	-
Stage 1	588	-	-	-	-	-
Stage 2	522	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s	17.9	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NWT	NWR	WBLn1	SEL	SET
Capacity (veh/h)	-	-	463	1127	-
HCM Lane V/C Ratio	-	-	0.404	0.027	-
HCM Control Delay (s)	-	-	17.9	8.3	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	1.9	0.1	-

HCM 6th Signalized Intersection Summary
3: W 21st St & W Airfield-Braniff Dr

06/19/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	52	663	15	2	802	32	5	0	1	19	1	19
Future Volume (veh/h)	52	663	15	2	802	32	5	0	1	19	1	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	60	771	17	2	933	0	6	0	1	22	1	22
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	103	2100	937	5	1904		211	0	8	248	4	83
Arrive On Green	0.06	0.62	0.62	0.00	0.56	0.00	0.05	0.00	0.05	0.05	0.05	0.05
Sat Flow, veh/h	1711	3413	1522	1711	3413	1522	889	0	148	1421	65	1522
Grp Volume(v), veh/h	60	771	17	2	933	0	7	0	0	23	0	22
Grp Sat Flow(s),veh/h/ln	1711	1706	1522	1711	1706	1522	1037	0	0	1486	0	1522
Q Serve(g_s), s	1.4	4.6	0.2	0.0	6.9	0.0	0.2	0.0	0.0	0.0	0.0	0.6
Cycle Q Clear(g_c), s	1.4	4.6	0.2	0.0	6.9	0.0	0.7	0.0	0.0	0.5	0.0	0.6
Prop In Lane	1.00		1.00	1.00		1.00	0.86		0.14	0.96		1.00
Lane Grp Cap(c), veh/h	103	2100	937	5	1904		219	0	0	252	0	83
V/C Ratio(X)	0.58	0.37	0.02	0.43	0.49		0.03	0.00	0.00	0.09	0.00	0.27
Avail Cap(c_a), veh/h	228	2100	937	207	1904		737	0	0	777	0	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.9	3.9	3.1	20.5	5.5	0.0	19.0	0.0	0.0	18.7	0.0	18.7
Incr Delay (d2), s/veh	5.1	0.5	0.0	51.2	0.9	0.0	0.1	0.0	0.0	0.2	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	1.0	0.0	0.1	2.2	0.0	0.1	0.0	0.0	0.4	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	4.4	3.1	71.7	6.5	0.0	19.1	0.0	0.0	18.8	0.0	20.4
LnGrp LOS	C	A	A	E	A		B	A	A	B	A	C
Approach Vol, veh/h		848			935	A		7			45	
Approach Delay, s/veh		5.8			6.6			19.1			19.6	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.0	27.5		6.7	4.6	29.9		6.7
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.5	23.0		18.0	5.0	23.5		18.0
Max Q Clear Time (g_c+I1), s	3.4	8.9		2.7	2.0	6.6		2.6
Green Ext Time (p_c), s	0.0	7.6		0.0	0.0	7.1		0.1

Intersection Summary	
HCM 6th Ctrl Delay	6.6
HCM 6th LOS	A

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	21	26	1024	128	87	403
Future Volume (veh/h)	21	26	1024	128	87	403
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1796	1796	1796	1796
Adj Flow Rate, veh/h	25	0	1234	0	105	486
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	7	7	7	7
Cap, veh/h	51		1962		452	2598
Arrive On Green	0.03	0.00	0.57	0.00	0.08	0.76
Sat Flow, veh/h	1648	0	3503	1522	1711	3503
Grp Volume(v), veh/h	26	0	1234	0	105	486
Grp Sat Flow(s),veh/h/ln	1714	0	1706	1522	1711	1706
Q Serve(g_s), s	0.6	0.0	10.4	0.0	0.8	1.7
Cycle Q Clear(g_c), s	0.6	0.0	10.4	0.0	0.8	1.7
Prop In Lane	0.96	0.00		1.00	1.00	
Lane Grp Cap(c), veh/h	53		1962		452	2598
V/C Ratio(X)	0.49		0.63		0.23	0.19
Avail Cap(c_a), veh/h	712		1962		508	2598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	0.0	6.1	0.0	4.4	1.4
Incr Delay (d2), s/veh	6.8	0.0	1.5	0.0	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	3.5	0.0	0.1	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.5	0.0	7.7	0.0	4.6	1.6
LnGrp LOS	C		A		A	A
Approach Vol, veh/h	26	A	1234	A		591
Approach Delay, s/veh	27.5		7.7			2.1
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.1	29.4			37.5	5.8
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.0	23.5			33.0	18.0
Max Q Clear Time (g_c+I1), s	2.8	12.4			3.7	2.6
Green Ext Time (p_c), s	0.0	8.0			5.4	0.0

Intersection Summary	
HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	340	246	56	881	300	92
Future Volume (veh/h)	340	246	56	881	300	92
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1811	1811	1811
Adj Flow Rate, veh/h	386	0	64	1001	341	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	6	6	6	6	6	6
Cap, veh/h	456		588	1907	1391	
Arrive On Green	0.26	0.00	0.06	0.55	0.40	0.00
Sat Flow, veh/h	1725	1535	1725	3532	3532	1535
Grp Volume(v), veh/h	386	0	64	1001	341	0
Grp Sat Flow(s),veh/h/ln	1725	1535	1725	1721	1721	1535
Q Serve(g_s), s	10.5	0.0	0.9	9.1	3.3	0.0
Cycle Q Clear(g_c), s	10.5	0.0	0.9	9.1	3.3	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	456		588	1907	1391	
V/C Ratio(X)	0.85		0.11	0.52	0.25	
Avail Cap(c_a), veh/h	643		660	1907	1391	
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	17.3	0.0	6.6	7.0	9.8	0.0
Incr Delay (d2), s/veh	7.3	0.0	0.1	1.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.0	0.0	0.4	3.8	1.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.6	0.0	6.7	8.0	10.2	0.0
LnGrp LOS	C		A	A	B	
Approach Vol, veh/h	386	A		1065	341	A
Approach Delay, s/veh	24.6			7.9	10.2	
Approach LOS	C			A	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		32.0		17.6	7.4	24.6
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		27.5		18.5	5.0	18.0
Max Q Clear Time (g_c+I1), s		11.1		12.5	2.9	5.3
Green Ext Time (p_c), s		6.0		0.7	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes

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

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	18	27	51	373	1125	96
Future Vol, veh/h	18	27	51	373	1125	96
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	430	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	29	55	405	1223	104

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1495	612	1223	0	-	0
Stage 1	1223	-	-	-	-	-
Stage 2	272	-	-	-	-	-
Critical Hdwy	6.29	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	140	436	566	-	-	-
Stage 1	236	-	-	-	-	-
Stage 2	712	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	126	436	566	-	-	-
Mov Cap-2 Maneuver	126	-	-	-	-	-
Stage 1	213	-	-	-	-	-
Stage 2	712	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s	18.5	1.4	0
HCM LOS	C		

Minor Lane/Major Mvmt	NWT	NWR	WBLn1	SEL	SET
Capacity (veh/h)	-	-	315	566	-
HCM Lane V/C Ratio	-	-	0.155	0.098	-
HCM Control Delay (s)	-	-	18.5	12.1	-
HCM Lane LOS	-	-	C	B	-
HCM 95th %tile Q(veh)	-	-	0.5	0.3	-

HCM 6th Signalized Intersection Summary
3: W 21st St & W Airfield-Braniff Dr

06/19/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	16	1063	4	0	731	12	26	0	6	17	0	25
Future Volume (veh/h)	16	1063	4	0	731	12	26	0	6	17	0	25
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	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781	1781
Adj Flow Rate, veh/h	17	1119	4	0	769	0	27	0	6	18	0	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	36	2404	1072	4	1956		226	0	14	281	0	103
Arrive On Green	0.02	0.71	0.71	0.00	0.58	0.00	0.07	0.00	0.07	0.07	0.00	0.07
Sat Flow, veh/h	1697	3385	1510	1697	3385	1510	947	0	210	1516	0	1510
Grp Volume(v), veh/h	17	1119	4	0	769	0	33	0	0	18	0	21
Grp Sat Flow(s),veh/h/ln	1697	1692	1510	1697	1692	1510	1157	0	0	1516	0	1510
Q Serve(g_s), s	0.4	5.8	0.0	0.0	5.0	0.0	1.0	0.0	0.0	0.0	0.0	0.5
Cycle Q Clear(g_c), s	0.4	5.8	0.0	0.0	5.0	0.0	1.4	0.0	0.0	0.4	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	0.82		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	36	2404	1072	4	1956		240	0	0	281	0	103
V/C Ratio(X)	0.47	0.47	0.00	0.00	0.39		0.14	0.00	0.00	0.06	0.00	0.20
Avail Cap(c_a), veh/h	209	2404	1072	209	1956		747	0	0	783	0	668
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.7	2.6	1.7	0.0	4.7	0.0	18.5	0.0	0.0	17.8	0.0	17.9
Incr Delay (d2), s/veh	9.0	0.7	0.0	0.0	0.6	0.0	0.3	0.0	0.0	0.1	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.0	0.0	0.7	0.0	0.3	0.0	0.0	0.1	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	3.2	1.7	0.0	5.3	0.0	18.7	0.0	0.0	17.9	0.0	18.8
LnGrp LOS	C	A	A	A	A		B	A	A	B	A	B
Approach Vol, veh/h		1140			769	A		33			39	
Approach Delay, s/veh		3.6			5.3			18.7			18.4	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	5.4	28.0		7.3	0.0	33.4		7.3
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	5.0	23.5		18.0	5.0	23.5		18.0
Max Q Clear Time (g_c+I1), s	2.4	7.0		3.4	0.0	7.8		2.5
Green Ext Time (p_c), s	0.0	6.9		0.1	0.0	9.7		0.1

Intersection Summary	
HCM 6th Ctrl Delay	4.8
HCM 6th LOS	A

Notes

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

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	76	79	483	41	55	1178
Future Volume (veh/h)	76	79	483	41	55	1178
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1781	1781	1781	1781
Adj Flow Rate, veh/h	81	0	514	0	59	1253
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	8	8	8	8
Cap, veh/h	125		1786		656	2370
Arrive On Green	0.07	0.00	0.53	0.00	0.06	0.70
Sat Flow, veh/h	1677	0	3474	1510	1697	3474
Grp Volume(v), veh/h	82	0	514	0	59	1253
Grp Sat Flow(s),veh/h/ln	1698	0	1692	1510	1697	1692
Q Serve(g_s), s	1.9	0.0	3.4	0.0	0.5	7.0
Cycle Q Clear(g_c), s	1.9	0.0	3.4	0.0	0.5	7.0
Prop In Lane	0.99	0.00		1.00	1.00	
Lane Grp Cap(c), veh/h	127		1786		656	2370
V/C Ratio(X)	0.65		0.29		0.09	0.53
Avail Cap(c_a), veh/h	764		1786		766	2370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	0.0	5.3	0.0	3.1	2.9
Incr Delay (d2), s/veh	5.4	0.0	0.4	0.0	0.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.6	0.0	0.0	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.4	0.0	5.7	0.0	3.2	3.7
LnGrp LOS	C		A		A	A
Approach Vol, veh/h	82	A	514	A		1312
Approach Delay, s/veh	23.4		5.7			3.7
Approach LOS	C		A			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	6.9	25.6			32.5	7.5
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.0	18.5			28.0	18.0
Max Q Clear Time (g_c+I1), s	2.9	5.4			9.0	3.9
Green Ext Time (p_c), s	0.0	4.0			12.3	0.2

Intersection Summary	
HCM 6th Ctrl Delay	5.1
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	122	165	381	950	390
Future Volume (veh/h)	85	122	165	381	950	390
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1826	1826	1826	1826	1826	1826
Adj Flow Rate, veh/h	91	0	177	410	1022	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	5	5	5	5	5	5
Cap, veh/h	131		509	2521	1836	
Arrive On Green	0.08	0.00	0.10	0.73	0.53	0.00
Sat Flow, veh/h	1739	1547	1739	3561	3561	1547
Grp Volume(v), veh/h	91	0	177	410	1022	0
Grp Sat Flow(s),veh/h/ln	1739	1547	1739	1735	1735	1547
Q Serve(g_s), s	2.3	0.0	1.7	1.7	8.9	0.0
Cycle Q Clear(g_c), s	2.3	0.0	1.7	1.7	8.9	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	131		509	2521	1836	
V/C Ratio(X)	0.70		0.35	0.16	0.56	
Avail Cap(c_a), veh/h	689		579	2521	1836	
HCM Platoon Ratio	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	0.00
Uniform Delay (d), s/veh	20.5	0.0	4.7	1.9	7.1	0.0
Incr Delay (d2), s/veh	6.5	0.0	0.4	0.1	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.2	0.0	2.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.0	0.0	5.1	2.1	8.4	0.0
LnGrp LOS	C		A	A	A	
Approach Vol, veh/h	91	A		587	1022	A
Approach Delay, s/veh	27.0			3.0	8.4	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		37.5		7.9	9.0	28.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	6.3	22.2
Max Q Clear Time (g_c+I1), s		3.7		4.3	3.7	10.9
Green Ext Time (p_c), s		2.5		0.2	0.1	5.0

Intersection Summary	
HCM 6th Ctrl Delay	7.5
HCM 6th LOS	A

Notes

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

Intersection	
Int Delay, s/veh	2.6

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Vol, veh/h	117	77	31	1223	447	19
Future Vol, veh/h	117	77	31	1223	447	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	-	430	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	127	84	34	1329	486	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1086	243	486	0	-	0
Stage 1	486	-	-	-	-	-
Stage 2	600	-	-	-	-	-
Critical Hdwy	6.29	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.67	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	243	758	1073	-	-	-
Stage 1	565	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	235	758	1073	-	-	-
Mov Cap-2 Maneuver	235	-	-	-	-	-
Stage 1	547	-	-	-	-	-
Stage 2	479	-	-	-	-	-

Approach	WB	SE	NW
HCM Control Delay, s	24.6	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NWT	NWR	WBLn1	SEL	SET
Capacity (veh/h)	-	-	390	1073	-
HCM Lane V/C Ratio	-	-	0.541	0.031	-
HCM Control Delay (s)	-	-	24.6	8.5	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	3.1	0.1	-

HCM 6th Signalized Intersection Summary
3: E Airfield Dr & W Walnut Hill Ln

06/19/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	60	88	5	175	155	200	14	273	1401	36	107	45
Future Volume (veh/h)	60	88	5	175	155	200	14	273	1401	36	107	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	700	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	67	99	0	197	174	0	16	307	0	40	120	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	799		311	866		345	587		274	659	
Arrive On Green	0.05	0.43	0.00	0.09	0.46	0.00	0.02	0.17	0.00	0.04	0.19	0.00
Sat Flow, veh/h	1781	1870	1585	3456	1870	0	1781	3554	1585	1781	3647	0
Grp Volume(v), veh/h	67	99	0	197	174	0	16	307	0	40	120	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	0	1781	1777	1585	1781	1777	0
Q Serve(g_s), s	2.4	2.1	0.0	3.6	3.6	0.0	0.5	5.1	0.0	1.2	1.8	0.0
Cycle Q Clear(g_c), s	2.4	2.1	0.0	3.6	3.6	0.0	0.5	5.1	0.0	1.2	1.8	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	96	799		311	866		345	587		274	659	
V/C Ratio(X)	0.70	0.12		0.63	0.20		0.05	0.52		0.15	0.18	
Avail Cap(c_a), veh/h	151	799		752	866		448	5021		341	5021	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.1	11.2	0.0	28.4	10.3	0.0	21.7	24.7	0.0	21.2	22.2	0.0
Incr Delay (d2), s/veh	8.7	0.3	0.0	2.1	0.5	0.0	0.1	0.7	0.0	0.2	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.1	1.4	0.0	2.6	2.3	0.0	0.3	3.6	0.0	0.8	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	11.5	0.0	30.6	10.8	0.0	21.8	25.4	0.0	21.4	22.4	0.0
LnGrp LOS	D	B		C	B		C	C		C	C	
Approach Vol, veh/h		166	A		371	A		323	A		160	A
Approach Delay, s/veh		22.5			21.3			25.2			22.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	34.5	7.1	15.2	10.3	32.2	5.8	16.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	30.0	5.0	91.5	14.1	21.4	5.0	91.5
Max Q Clear Time (g_c+I1), s	4.4	5.6	3.2	7.1	5.6	4.1	2.5	3.8
Green Ext Time (p_c), s	0.0	1.4	0.0	3.6	0.4	0.3	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [NER, NWR, SER, SWR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	2	5	0	0	11	281	20	3	148	0
Future Vol, veh/h	0	0	2	5	0	0	11	281	20	3	148	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	2	5	0	0	11	290	21	3	153	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	326	492	77	406	482	156	153	0	0	311	0	0
Stage 1	159	159	-	323	323	-	-	-	-	-	-	-
Stage 2	167	333	-	83	159	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.58	6.98	7.58	6.58	6.98	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4.04	3.34	3.54	4.04	3.34	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	598	472	962	525	478	856	1411	-	-	1232	-	-
Stage 1	821	760	-	658	644	-	-	-	-	-	-	-
Stage 2	813	637	-	910	760	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	593	466	962	519	472	856	1411	-	-	1232	-	-
Mov Cap-2 Maneuver	593	466	-	519	472	-	-	-	-	-	-	-
Stage 1	814	758	-	652	638	-	-	-	-	-	-	-
Stage 2	806	631	-	905	758	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.8	12	0.3	0.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1411	-	-	962	519	1232	-	-
HCM Lane V/C Ratio	0.008	-	-	0.002	0.01	0.003	-	-
HCM Control Delay (s)	7.6	0	-	8.8	12	7.9	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

HCM 6th Signalized Intersection Summary
3: E Airfield Dr & W Walnut Hill Ln

06/19/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	18	139	25	1535	204	17	0	26	346	157	145	37
Future Volume (veh/h)	18	139	25	1535	204	17	0	26	346	157	145	37
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	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	19	149	0	1651	219	0	0	28	0	169	156	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	37	383		1751	1292		142	186		233	546	
Arrive On Green	0.02	0.20	0.00	0.50	0.69	0.00	0.00	0.05	0.00	0.05	0.15	0.00
Sat Flow, veh/h	1795	1885	1598	3483	1885	0	1795	3582	1598	1795	3676	0
Grp Volume(v), veh/h	19	149	0	1651	219	0	0	28	0	169	156	0
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1742	1885	0	1795	1791	1598	1795	1791	0
Q Serve(g_s), s	1.0	6.5	0.0	42.8	3.9	0.0	0.0	0.7	0.0	5.1	3.7	0.0
Cycle Q Clear(g_c), s	1.0	6.5	0.0	42.8	3.9	0.0	0.0	0.7	0.0	5.1	3.7	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	37	383		1751	1292		142	186		233	546	
V/C Ratio(X)	0.51	0.39		0.94	0.17		0.00	0.15		0.72	0.29	
Avail Cap(c_a), veh/h	103	383		1806	1292		234	675		233	679	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.3	32.9	0.0	22.4	5.3	0.0	0.0	43.2	0.0	41.6	35.8	0.0
Incr Delay (d2), s/veh	10.4	3.0	0.0	10.4	0.3	0.0	0.0	0.4	0.0	10.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	5.7	0.0	24.5	2.3	0.0	0.0	0.6	0.0	8.0	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	35.9	0.0	32.8	5.6	0.0	0.0	43.6	0.0	52.2	36.1	0.0
LnGrp LOS	E	D		C	A		A	D		D	D	
Approach Vol, veh/h		168	A		1870	A		28	A		325	A
Approach Delay, s/veh		38.2			29.7			43.6			44.5	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	69.9	9.6	9.5	52.5	23.9	0.0	19.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	63.4	5.1	18.0	49.5	19.4	5.0	18.1
Max Q Clear Time (g_c+I1), s	3.0	5.9	7.1	2.7	44.8	8.5	0.0	5.7
Green Ext Time (p_c), s	0.0	2.3	0.0	0.1	3.2	0.4	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	32.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [NER, NWR, SER, SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
3: E Airfield Dr & W Walnut Hill Ln

06/19/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	67	100	5	198	175	226	15	308	1585	40	120	50
Future Volume (veh/h)	67	100	5	198	175	226	15	308	1585	40	120	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	700	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	75	112	0	222	197	0	17	346	0	45	135	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	766		338	843		358	639		278	718	
Arrive On Green	0.06	0.41	0.00	0.10	0.45	0.00	0.02	0.18	0.00	0.04	0.20	0.00
Sat Flow, veh/h	1781	1870	1585	3456	1870	0	1781	3554	1585	1781	3647	0
Grp Volume(v), veh/h	75	112	0	222	197	0	17	346	0	45	135	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	1870	0	1781	1777	1585	1781	1777	0
Q Serve(g_s), s	2.8	2.5	0.0	4.1	4.3	0.0	0.5	5.9	0.0	1.3	2.1	0.0
Cycle Q Clear(g_c), s	2.8	2.5	0.0	4.1	4.3	0.0	0.5	5.9	0.0	1.3	2.1	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	100	766		338	843		358	639		278	718	
V/C Ratio(X)	0.75	0.15		0.66	0.23		0.05	0.54		0.16	0.19	
Avail Cap(c_a), veh/h	147	766		732	843		456	4886		337	4886	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	30.9	12.3	0.0	29.0	11.2	0.0	21.5	24.8	0.0	20.9	22.0	0.0
Incr Delay (d2), s/veh	11.1	0.4	0.0	2.2	0.6	0.0	0.1	0.7	0.0	0.3	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.5	1.7	0.0	3.0	2.9	0.0	0.4	4.1	0.0	0.9	1.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	12.7	0.0	31.1	11.9	0.0	21.5	25.5	0.0	21.2	22.1	0.0
LnGrp LOS	D	B		C	B		C	C		C	C	
Approach Vol, veh/h		187	A		419	A		363	A		180	A
Approach Delay, s/veh		24.5			22.1			25.3			21.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	34.5	7.3	16.5	11.0	31.7	5.8	18.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.5	30.0	5.0	91.5	14.1	21.4	5.0	91.5
Max Q Clear Time (g_c+I1), s	4.8	6.3	3.3	7.9	6.1	4.5	2.5	4.1
Green Ext Time (p_c), s	0.0	1.7	0.0	4.1	0.5	0.4	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	23.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [NER, NWR, SER, SWR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	5	0	0	13	315	23	4	164	0
Future Vol, veh/h	0	0	3	5	0	0	13	315	23	4	164	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	0	0	3	5	0	0	13	325	24	4	169	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	366	552	85	456	540	175	169	0	0	349	0	0
Stage 1	177	177	-	363	363	-	-	-	-	-	-	-
Stage 2	189	375	-	93	177	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.58	6.98	7.58	6.58	6.98	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4.04	3.34	3.54	4.04	3.34	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	560	436	951	483	443	832	1391	-	-	1192	-	-
Stage 1	802	747	-	623	618	-	-	-	-	-	-	-
Stage 2	789	610	-	898	747	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	553	429	951	476	436	832	1391	-	-	1192	-	-
Mov Cap-2 Maneuver	553	429	-	476	436	-	-	-	-	-	-	-
Stage 1	792	744	-	616	611	-	-	-	-	-	-	-
Stage 2	780	603	-	891	744	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.8	12.6	0.3	0.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1391	-	-	951	476	1192	-	-
HCM Lane V/C Ratio	0.01	-	-	0.003	0.011	0.003	-	-
HCM Control Delay (s)	7.6	0	-	8.8	12.6	8	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

HCM 6th Signalized Intersection Summary
3: E Airfield Dr & W Walnut Hill Ln

06/19/2020

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	20	157	28	1737	230	19	0	29	392	178	164	42
Future Volume (veh/h)	20	157	28	1737	230	19	0	29	392	178	164	42
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	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	22	169	0	1868	247	0	0	31	0	191	176	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	1	1	1
Cap, veh/h	39	301		1922	1300		116	154		273	617	
Arrive On Green	0.02	0.16	0.00	0.55	0.69	0.00	0.00	0.04	0.00	0.09	0.17	0.00
Sat Flow, veh/h	1795	1885	1598	3483	1885	0	1795	3582	1598	1795	3676	0
Grp Volume(v), veh/h	22	169	0	1868	247	0	0	31	0	191	176	0
Grp Sat Flow(s),veh/h/ln	1795	1885	1598	1742	1885	0	1795	1791	1598	1795	1791	0
Q Serve(g_s), s	1.4	9.6	0.0	60.1	5.4	0.0	0.0	1.0	0.0	10.5	5.0	0.0
Cycle Q Clear(g_c), s	1.4	9.6	0.0	60.1	5.4	0.0	0.0	1.0	0.0	10.5	5.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	39	301		1922	1300		116	154		273	617	
V/C Ratio(X)	0.56	0.56		0.97	0.19		0.00	0.20		0.70	0.29	
Avail Cap(c_a), veh/h	147	301		1936	1300		266	571		273	617	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	56.2	45.0	0.0	25.1	6.4	0.0	0.0	53.6	0.0	47.2	41.8	0.0
Incr Delay (d2), s/veh	11.9	7.4	0.0	14.3	0.3	0.0	0.0	0.6	0.0	7.7	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	8.6	0.0	34.0	3.5	0.0	0.0	0.8	0.0	9.6	3.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.1	52.4	0.0	39.5	6.8	0.0	0.0	54.2	0.0	54.9	42.0	0.0
LnGrp LOS	E	D		D	A		A	D		D	D	
Approach Vol, veh/h		191	A		2115	A		31	A		367	A
Approach Delay, s/veh		54.2			35.6			54.2			48.7	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	84.5	15.0	9.5	68.5	23.0	0.0	24.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	9.5	73.5	10.5	18.5	64.5	18.5	9.8	19.2
Max Q Clear Time (g_c+I1), s	3.4	7.4	12.5	3.0	62.1	11.6	0.0	7.0
Green Ext Time (p_c), s	0.0	2.6	0.0	0.1	1.9	0.4	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	38.9
HCM 6th LOS	D

Notes

Unsignalized Delay for [NER, NWR, SER, SWR] is excluded from calculations of the approach delay and intersection delay.

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	14	9	0	1	1	54	1	0	283	0
Future Vol, veh/h	1	0	14	9	0	1	1	54	1	0	283	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	4	4	4	4	4	4	4	4	4	4	4	4
Mvmt Flow	1	0	19	12	0	1	1	74	1	0	388	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	427	465	194	271	465	38	388	0	0	75	0	0
Stage 1	388	388	-	77	77	-	-	-	-	-	-	-
Stage 2	39	77	-	194	388	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.58	6.98	7.58	6.58	6.98	4.18	-	-	4.18	-	-
Critical Hdwy Stg 1	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.58	-	6.58	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4.04	3.34	3.54	4.04	3.34	2.24	-	-	2.24	-	-
Pot Cap-1 Maneuver	507	489	809	655	489	1019	1153	-	-	1508	-	-
Stage 1	602	602	-	917	825	-	-	-	-	-	-	-
Stage 2	965	825	-	784	602	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	506	489	809	639	489	1019	1153	-	-	1508	-	-
Mov Cap-2 Maneuver	506	489	-	639	489	-	-	-	-	-	-	-
Stage 1	601	602	-	916	824	-	-	-	-	-	-	-
Stage 2	963	824	-	765	602	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	10.5	0.1	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1153	-	-	778	664	1508	-	-
HCM Lane V/C Ratio	0.001	-	-	0.026	0.021	-	-	-
HCM Control Delay (s)	8.1	0	-	9.8	10.5	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

verizon ARENA
GARVER