Traffic Impact Analysis

1027 S. Riverfront Boulevard Multifamily and Daycare
Dallas, Texas

September 14, 2021

Prepared for:
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Project #110DAL

LAMBETH ENGINEERING

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EXECUTIVE SUMMARY

Lambeth Engineering Associates, PLLC, conducted a traffic impact analysis for the proposed residential and child care development at Riverfront Boulevard, located southwest of the Riverfront Boulevard/Dearborn Street intersection in Dallas, Texas. This TIA is being conducted to support a zoning change. The property is currently zoned PD 784, with SUP 1484. The PD is being amended to accommodate the proposed development.

The project is planned to be completed in 2023 and is planned to contain 200 residential units, 90% affordable and 10% market rate, and a 3,468-SF daycare center. The site is less than 1,000 feet from the upcoming high speed rail station.

This study evaluated the impact that the proposed development will have on the surrounding roadway network and provides recommended mitigation measures needed to maintain acceptable roadway conditions.

The following roadway intersections were studied in this analysis:

- US 35 Exit Ramp at Riverfront Boulevard (signalized)
- Riverfront Boulevard at Cadiz Street (signalized)
- Riverfront Boulevard at Dearborn Street (unsignalized)
- Two (2) additional site driveways

A 2% annual growth rate was applied to the existing traffic volumes to project future background volumes. The following study scenarios were analyzed during the weekday AM and PM peak hours.

- 2021 Existing
- 2023 Background
- 2023 Background-Plus-Site
- 2028 Horizon Year Background
- 2028 Horizon Year Background-Plus-Site

After taking into consideration internal trips, the site is projected to generate 106 trips in the AM peak hour (38 inbound and 68 outbound), and 125 trips during the PM peak hour (70 inbound and 55 outbound). The projected weekday total (inbound and outbound) is 1,253 trips.

Below is a summary of findings from the analyses presented in this report.

- The roadway intersections are shown to operate with an overall LOS D or better considering existing, background, and background-plus-site traffic volumes, with the following exception.

  Riverfront Boulevard at Dearborn Street – The northbound approach is shown to operate at LOS F in the PM Peak hour considering the existing volumes. The delay worsens with the addition of the site traffic. Install “Do Not Block Intersection” sign, COD#116 M,at Driveway 1, the north driveway, so that motorists leaving the site during peak hours do not block Dearborn Street. It is not uncommon for minor roads along major roads to operate at LOS F. The signal at Riverfront Boulevard/Cadiz Street will provide gaps for traffic to leave via Dearborn Street. In addition, if motorists experience excessive delay they may turn right on Riverfront Boulevard and take an alternative route.

- The roadway links are shown to operate at LOS D or better considering existing, background, and background-plus-site traffic volumes with the existing roadway geometries.
- No deceleration lanes are recommended at the site driveways.
- The City of Dallas's desirable sight-distance requirements are satisfied at all driveways.
- It is recommended to trim the trees on the northwest bound approach of Rock Island Street approaching Dearborn Street to improve visibility.
- All driveways satisfy City of Dallas's driveway spacing criteria.
- It is recommended the City plan to provide additional sidewalks in the walkable area around the future high speed rail station.

This analysis shows that the proposed development is not expected to have a significant impact on the surrounding roadway network.

INTRODUCTION

Purpose

The services of Lambeth Engineering Associates, PLLC (herein Lambeth) were retained to conduct a traffic impact analysis (TIA) for a proposed residential and childcare development at 1027 S. Riverfront Boulevard in Dallas, Texas. The purpose of this study is to project the anticipated traffic that will be generated by the proposed development, determine the impact it will have on the surrounding roadway network, and determine necessary mitigation measures needed to maintain acceptable roadway conditions. This TIA is being conducted to support a zoning change. The property is currently zoned PD 784, with SUP 1484. The PD is being amended to accommodate the proposed development.

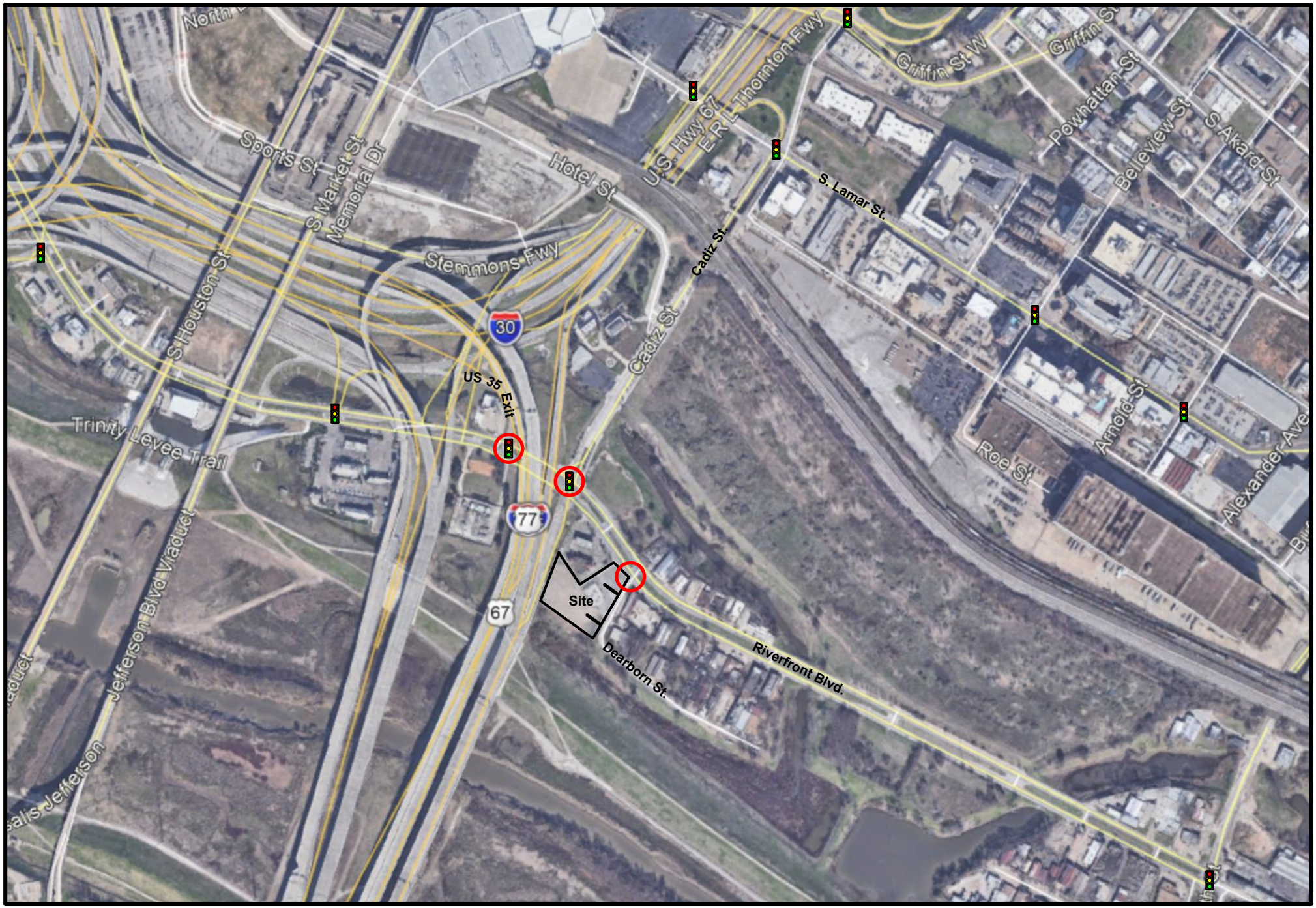
Project Description

The project site is located southeast of the Riverfront Boulevard/Dearborn Street intersection. There is a night club building on the site.

The project is projected to be completed in 2023 and will contain 200 multifamily units, 90% affordable housing and 10% market rate. There will also be a 3,468 SF daycare center.

The site will have two (2) driveways on Dearborn Street and one (1) driveway on Riverfront Boulevard. The northern driveway on Dearborn Street will primarily be used by multifamily units and the southern driveway will be primarily used to access the daycare center. The Riverfront Boulevard driveway will be gated and used for emergency access only.

A vicinity map is shown in **Exhibit 1**, and the site plan is shown in **Exhibit 2**.

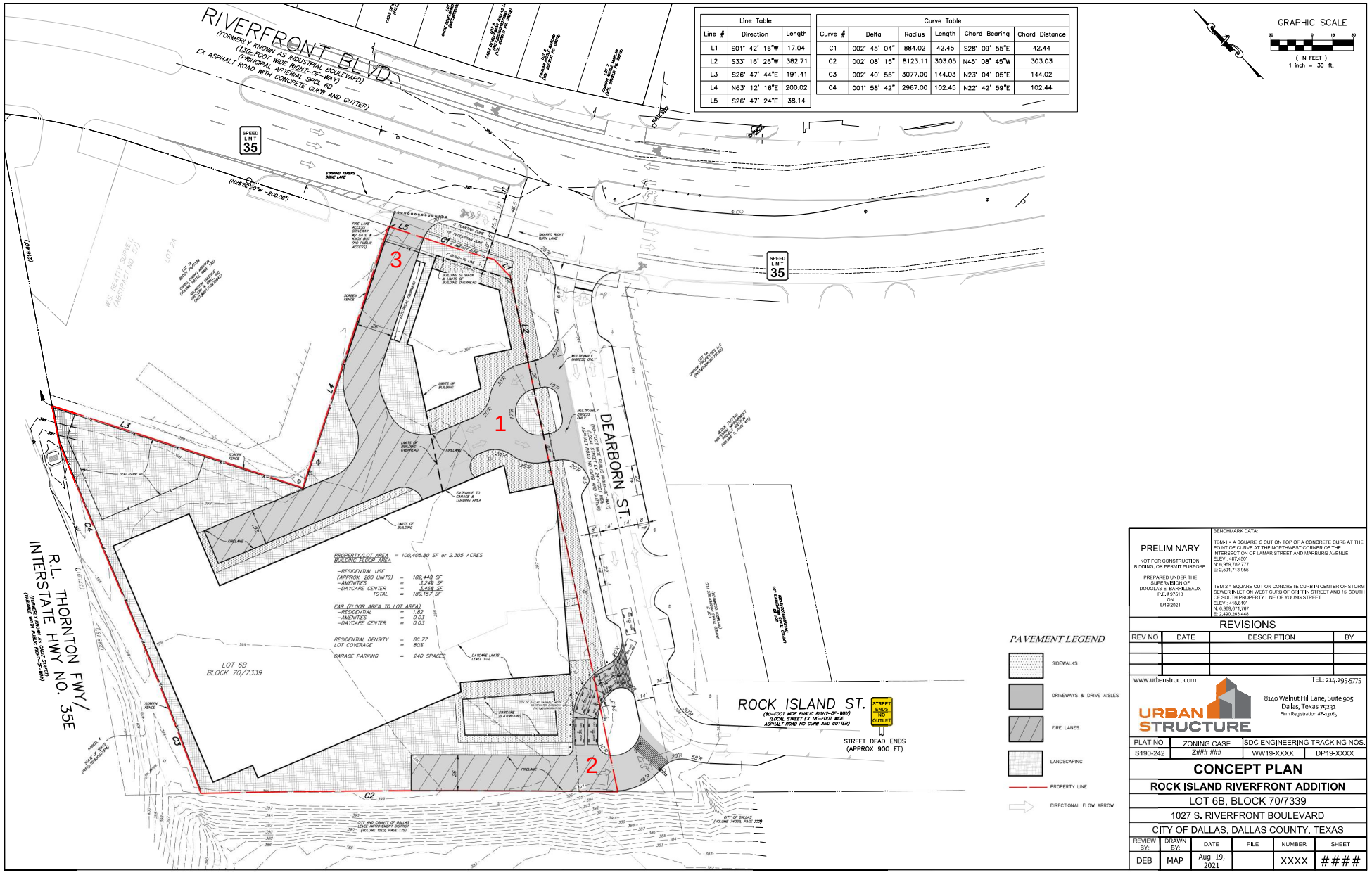


◯ = Turning Movement Counts

Exhibit 1. Vicinity Map

L.A.M.B.E.T.H. ENGINEERING
TEXAS REGISTERED ENGINEERING FIRM F-19508

Map Obtained from Google Earth 08.04.21



Line Table		
Line #	Direction	Length
L1	S01° 42' 16"W	17.04
L2	S33° 16' 26"W	382.71
L3	S26° 47' 44"E	191.41
L4	N63° 12' 16"E	200.02
L5	S26° 47' 24"E	38.14

Curve Table					
Curve #	Delta	Radius	Length	Chord Bearing	Chord Distance
C1	002° 45' 04"	884.02	42.45	S28° 09' 55"E	42.44
C2	002° 08' 15"	8123.11	303.05	N45° 08' 45"W	303.03
C3	002° 40' 55"	3077.00	144.03	N23° 04' 05"E	144.02
C4	001° 58' 42"	2967.00	102.45	N22° 42' 59"E	102.44

PRELIMINARY

NOT FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSE.

PREPARED UNDER THE SUPERVISION OF DOUGLAS E. BARRILLEAUX P.E.# 97518 ON 8/19/2021

BENCHMARK DATA:

TBM-1 = A SQUARE B CUT ON TOP OF A CONCRETE CURB AT THE POINT OF CURVE AT THE NORTHWEST CORNER OF THE INTERSECTION OF LAMAR STREET AND MARBURG AVENUE
ELEV.: 407.050'
N: 6,959,782.777
E: 2,501,713.950

TBM-2 = SQUARE CUT ON CONCRETE CURB IN CENTER OF STORM SEWER INLET ON WEST CURB OF GRIFFIN STREET AND 15' SOUTH OF SOUTH PROPERTY LINE OF YOUNG STREET
ELEV.: 418.610'
N: 6,959,671.767
E: 2,490,265.448

REVISIONS

REV NO.	DATE	DESCRIPTION	BY

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URBAN STRUCTURE
8140 Walnut Hill Lane, Suite 905
Dallas, Texas 75231
Firm Registration #F-13165

PLAT NO.	ZONING CASE	SDC ENGINEERING TRACKING NOS.	
S190-242	Z#######	WW19-XXXX	DP19-XXXX

CONCEPT PLAN

ROCK ISLAND RIVERFRONT ADDITION

LOT 6B, BLOCK 70/7339

1027 S. RIVERFRONT BOULEVARD

CITY OF DALLAS, DALLAS COUNTY, TEXAS

REVIEW BY:	DRAWN BY:	DATE	FILE	NUMBER	SHEET
DEB	MAP	Aug. 19, 2021		XXXX	####

Exhibit 2. Site Plan

Study Parameters

This TIA considered the following study parameters that were reviewed and approved by the City of Dallas at the onset of this TIA.

Study Scenarios

The following scenarios were studied in this analysis:

- Roadway Intersections: Weekday AM and PM peak hours of adjacent street traffic
- Roadway Links: Weekday AM and PM peak hours of adjacent street traffic
- Analysis Scenarios:
    - 2021 Existing
    - 2023 Background
    - 2023 Background-Plus-Site
    - 2028 Background
    - 2028 Background-Plus-Site

Study Area

The following roadway intersections were studied in this analysis:

- Riverfront Boulevard at the US 35 Exit Ramp (signalized)
- Riverfront Boulevard at Cadiz Street (signalized)
- Riverfront Boulevard at Dearborn Street (unsignalized)
- Two (2) additional site driveways

Roadway Network

Roadway Descriptions

The project includes the following roadways:

- Riverfront Boulevard
    - Existing Cross Section: Six-lane, divided roadway west of Cadiz Street and a four-lane, divided roadway with eastbound and westbound bicycle lanes east of Cadiz Street
    - Speed Limit: 35 MPH
    - Thoroughfare Plan Designation: Principal Arterial (SPCL 6D)
- Cadiz Street
    - Existing Cross Section: Four-lane, divided roadway with northbound and southbound bicycle lanes
    - Speed Limit: 30 MPH
    - Thoroughfare Plan Designation: On the CBD Plan as a Two-Way Road
- Dearborn Street
    - Existing Cross Section: Two-lane, undivided roadway
    - Speed Limit: Not posted (Assume 30 MPH for TIA)
    - Thoroughfare Plan Designation: Local Street
- Rock Island Street
    - Existing Cross Section: Two-lane, undivided roadway
    - Speed Limit: Not posted (Assume 30 MPH for TIA)
    - Thoroughfare Plan Designation: Local Street

- US 35 Exit Ramp
  - Existing Cross Section: One-lane, one-way roadway
  - Speed Limit: 25 MPH Warning Sign
  - Thoroughfare Plan Designation: Not designated on thoroughfare plan

A summary of the existing roadway geometry used in this analysis is shown in **Exhibit 3.**

Bicycle Facilities

As noted in the roadway description, bicycle routes are provided on Riverfront Boulevard and Cadiz Street.

Pedestrian Connections

There are a limited number of sidewalks throughout the study area roadways. Sidewalks exist on the eastbound side of Riverfront Boulevard between Cadiz Street and Dearborn Street. Additionally, sidewalks are present on both sides of Cadiz Street with access to downtown Dallas. Pictures documenting sidewalks at the study intersections are provided in the **Appendix**. It is recommended the City plan to provide sidewalks in the walkable area around the future high speed rail station.

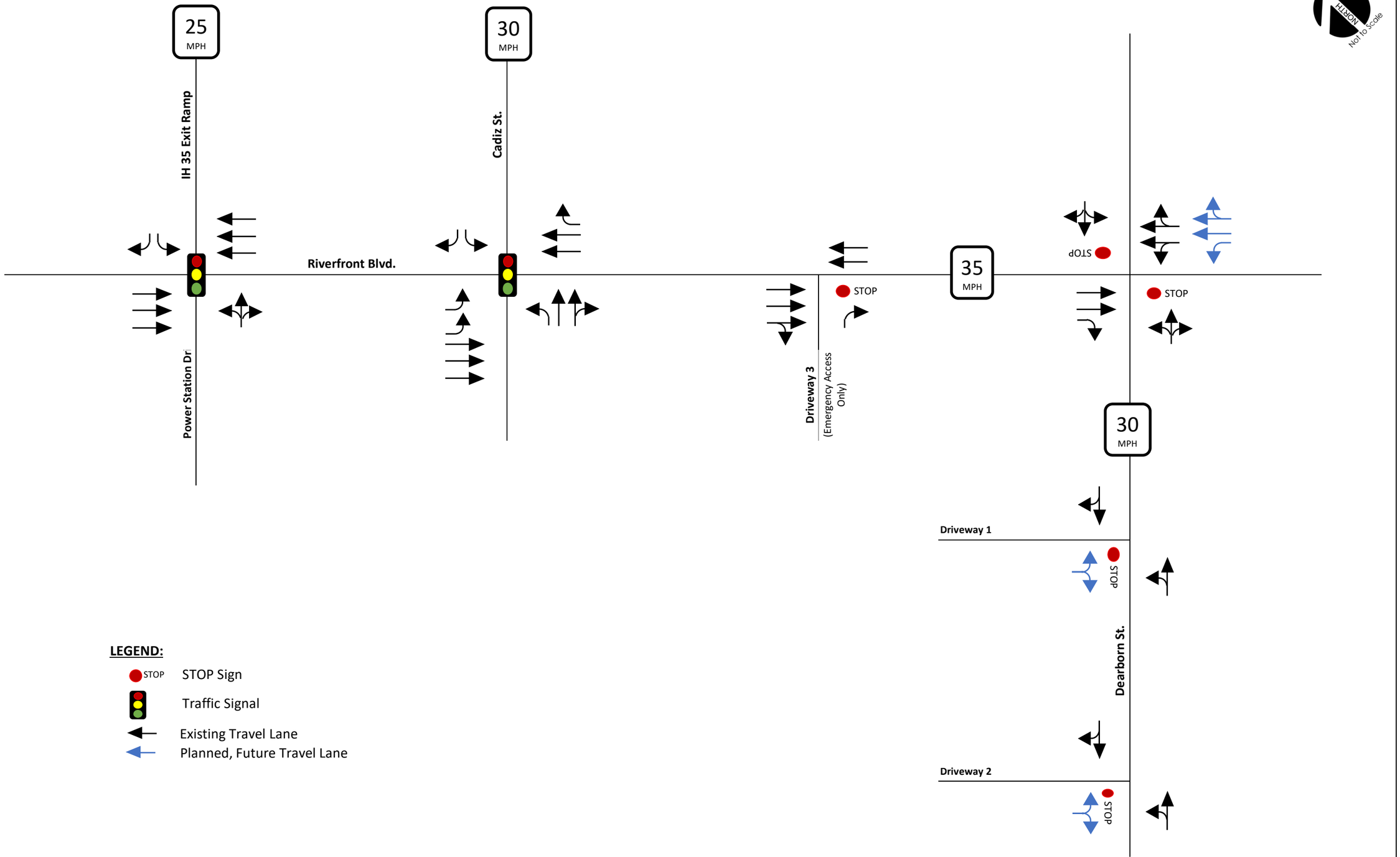


Exhibit 3. Existing and Planned Roadway Geometry

TRAFFIC VOLUMES

Existing Traffic Volumes

Intersection turning-movement volumes and roadway link traffic volumes were collected on August 19, 2021, from 7:00 to 9:00 AM and from 4:00 to 6:00 PM. Year 2021 traffic volumes are illustrated in **Exhibit 4**. Detailed data sheets are provided in the **Appendix**.

Traffic volumes are sometimes lower in 2021 than in typical years due to COVID-19. Therefore, year 2019 traffic volumes were obtained for Riverfront Boulevard east of Cadiz Street and Riverfront Boulevard west of N Corinth Street roadway links and compared to determine typical year 2021 traffic volumes. The 2021 traffic volumes were adjusted by growing 20% during the AM and PM peak hours to represent typical traffic volumes.

The existing traffic volumes are summarized in **Exhibit 4**, and the adjusted traffic volumes are summarized in **Exhibit 5**.

Background (No-Build) Traffic Volumes

Historical traffic volume data were obtained from TxDOT's online traffic counts[1], which show declining volumes on roadways in the area. To be conservative, a 2% annual growth rate was used for this analysis. Traffic forecasts were developed for the year 2023 no-build scenario by applying the 2% annual growth rate to the existing traffic volumes. The resulting year 2023 background (no-build) volumes are illustrated in **Exhibit 6**. The TxDOT historical volumes are provided in the **Appendix**.

A five-year horizon scenario was also considered. Year 2028 background (no-build) volumes were determined by increasing the background traffic using the 2% annual growth rate. The 2028 volumes are shown in **Exhibit 7**.

Site-Generated Traffic Volumes

Traffic generated by the development, known as trip generation, is calculated based upon methods and rates published in the *Institute of Transportation Engineers (ITE) Trip Generation Manual,* 10th Edition.

There are limited studies available for the affordable housing units. To be conservative, multifamily housing was used for the trip generation for the site.

Residential and daycare facilities do not generate pass-by trips. Internal capture were not considered in this study.

The resulting trip generation is shown in **Table 1**.

Table 1. Projected Trip Generation

ITE #	Use	Quantity	Weekday	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
221	Multifamily Housing (Mid-Rise), General Urban/Suburban	200 Units	1,088	68	18	50	86	52	34
565	Daycare Center	3,468 SF	165	38	20	18	39	18	21
		Total:	**1,253**	**106**	**38**	**68**	**125**	**70**	**55**

[1] Texas Department of Transportation Planning and Programming Division's Statewide Traffic Analysis and Reporting System II, https://txdot.ms2soft.com/tcds/tsearch.asp?loc=Txdot&mod=. Accessed August 2021.

The site-generated traffic was distributed through the study area based upon existing traffic volumes, roadway configurations, and study area. The overall distribution, as well as the traffic assignment to individual site access points, is shown in **Exhibit 8** and **Exhibit 9**.

The resulting site-related traffic volumes are shown in **Exhibit 10**.

Background-Plus-Site (Build) Traffic Volumes

Background-plus-site (build) traffic forecasts were developed for each analysis scenario by adding the projected traffic generated by the proposed development to the 2023 and 2028 background (no-build) volumes. The resulting background-plus-site volumes are summarized in **Exhibit 11** and **Exhibit 12**.

Exhibit 4. Year 2021 Existing Traffic Volumes

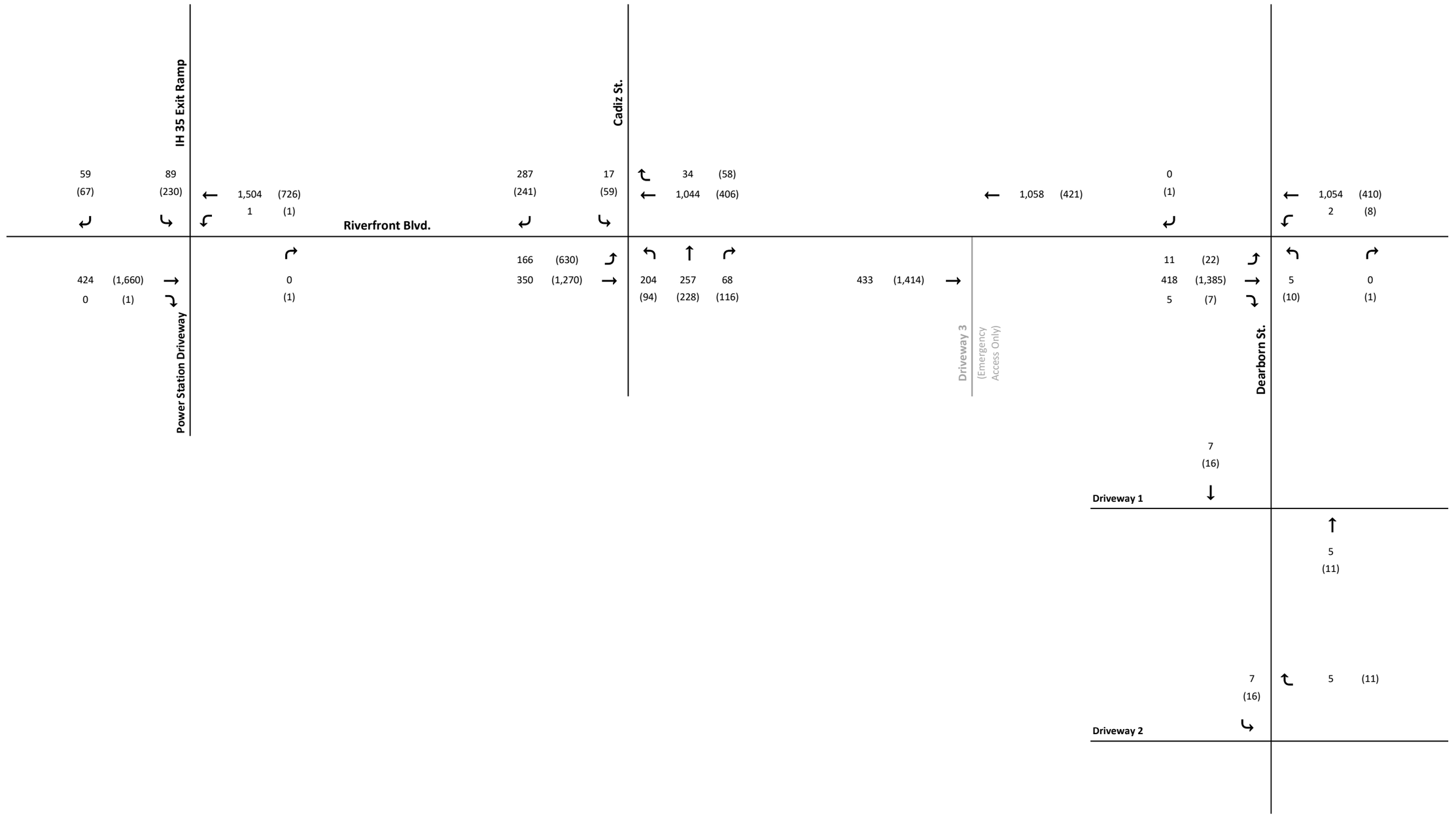


Exhibit 5. Year 2021 Existing Traffic Volumes Adjusted for COVID

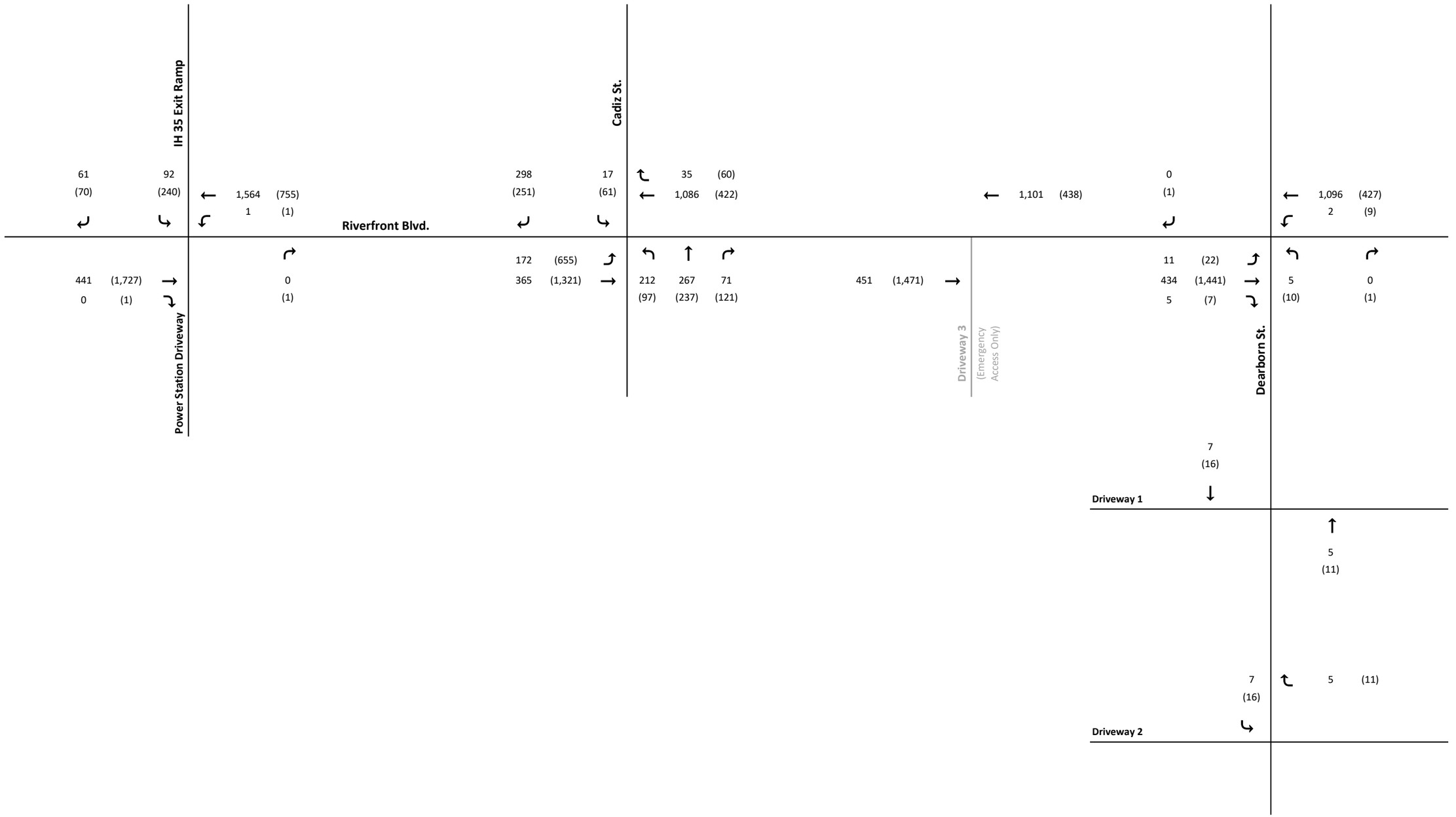


Exhibit 6. Year 2023 Background Traffic Volumes

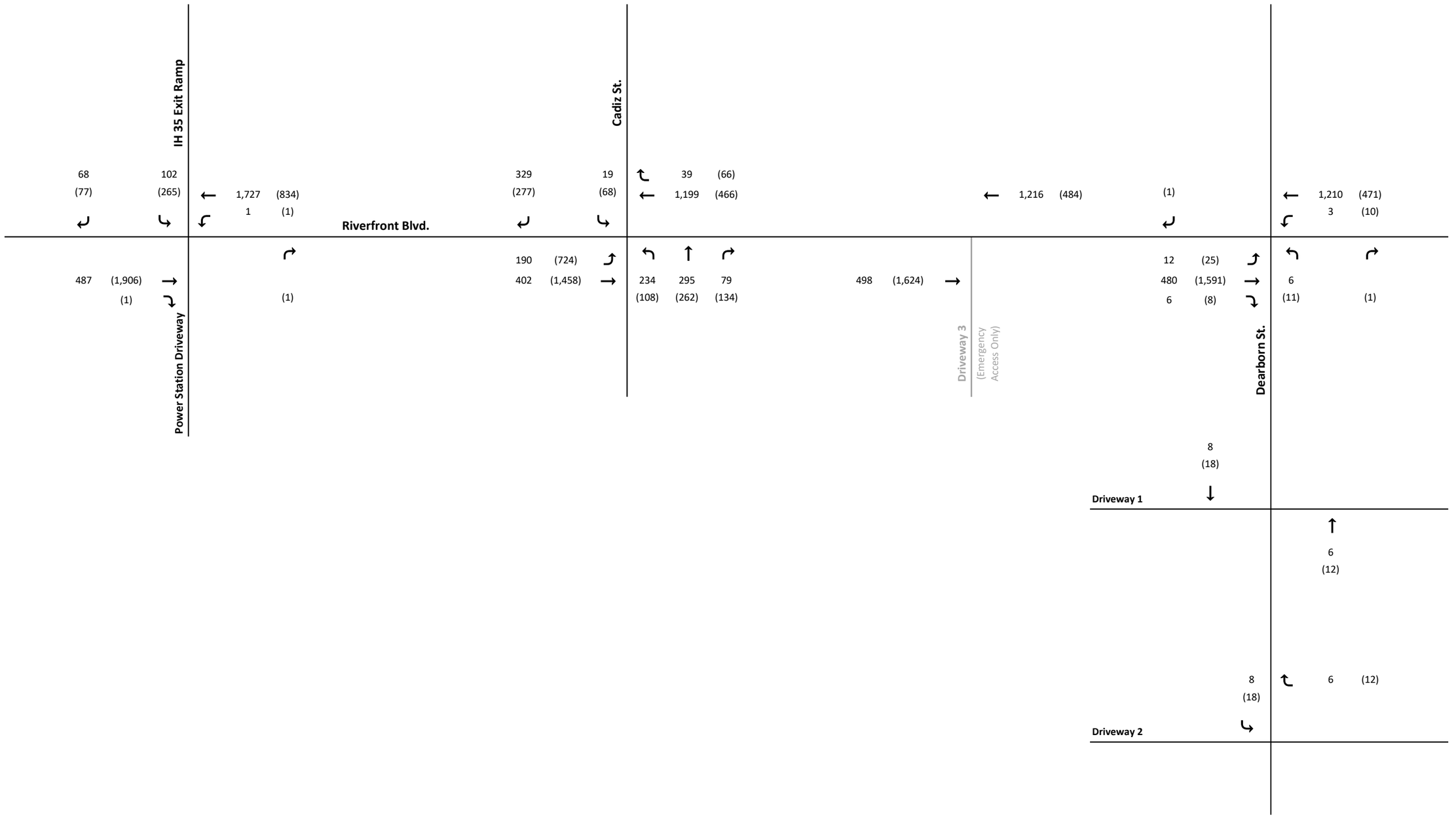


Exhibit 7. Year 2028 Background Traffic Volumes

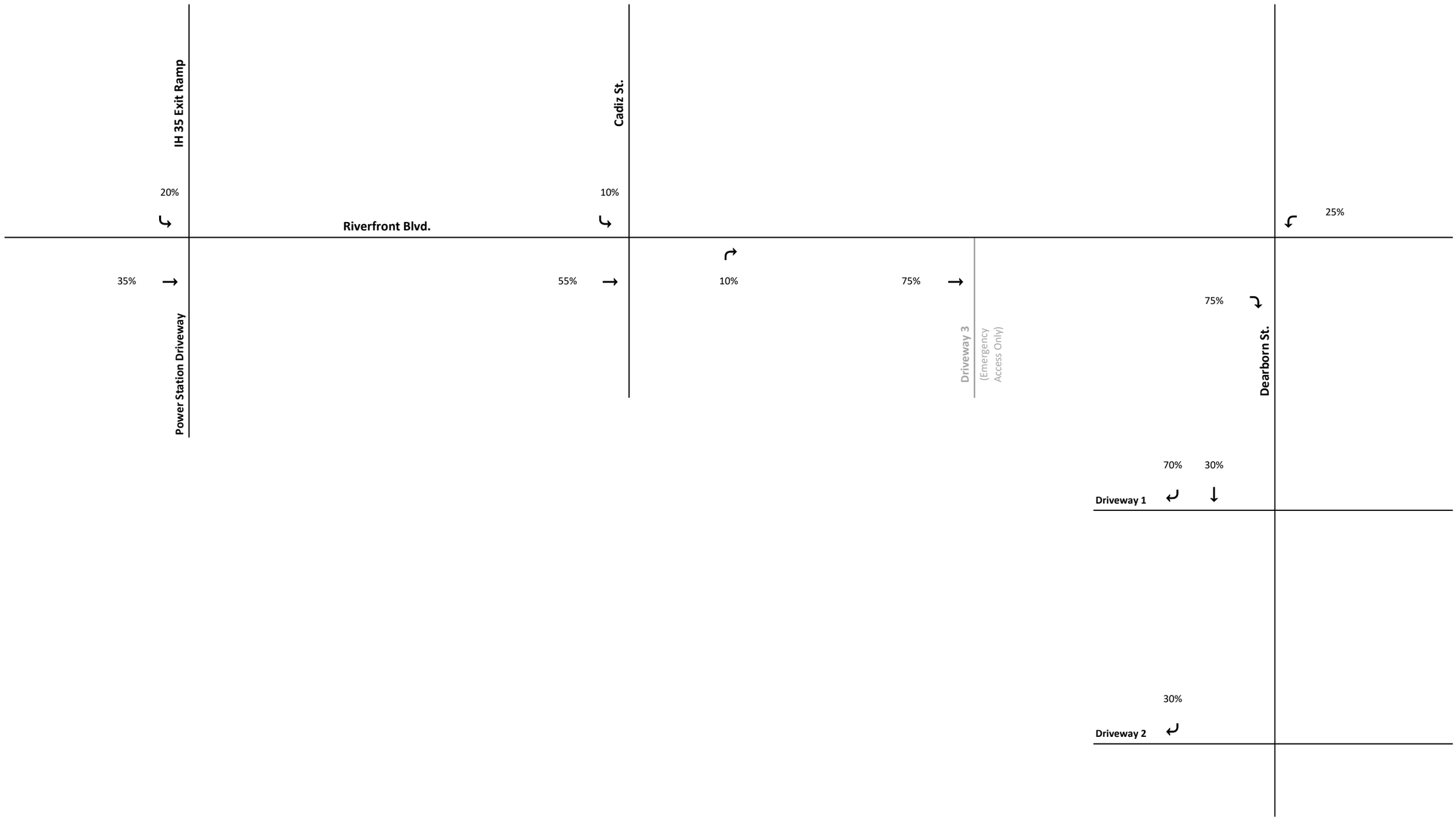


Exhibit 8. Site Traffic Inbound Trip Distribution

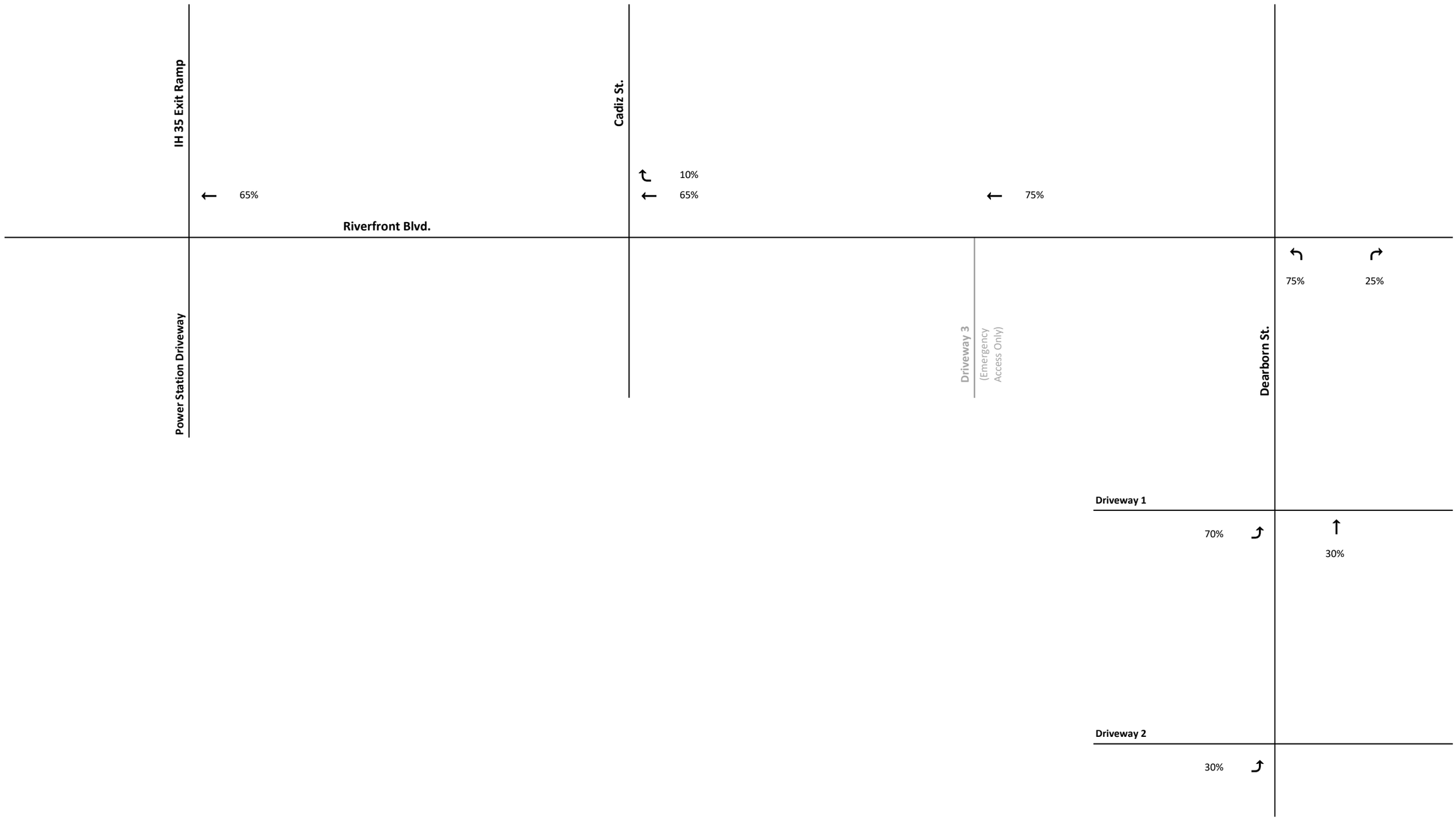


Exhibit 9. Site Traffic Outbound Trip Distribution

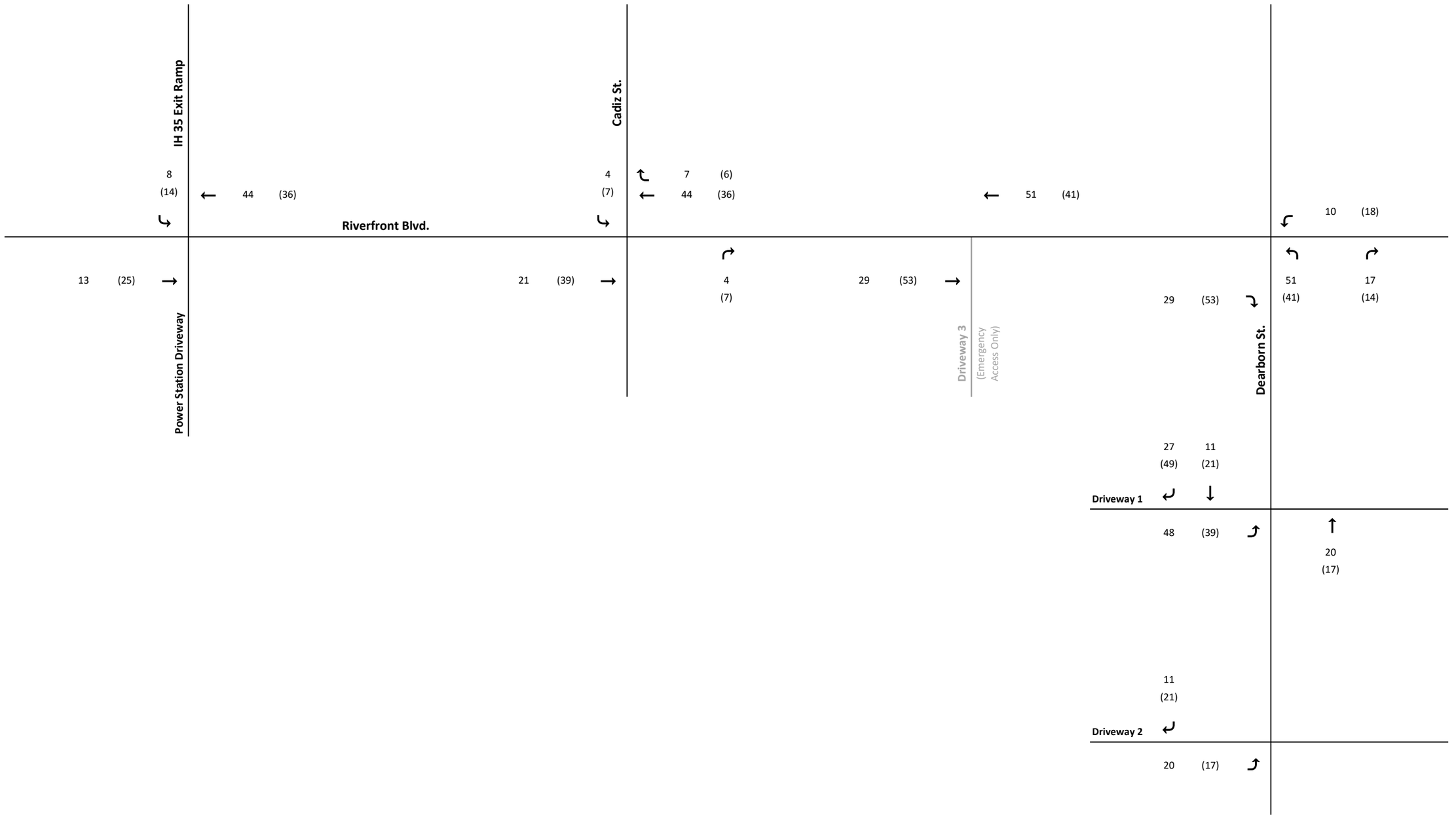


Exhibit 10. Site Traffic Volumes

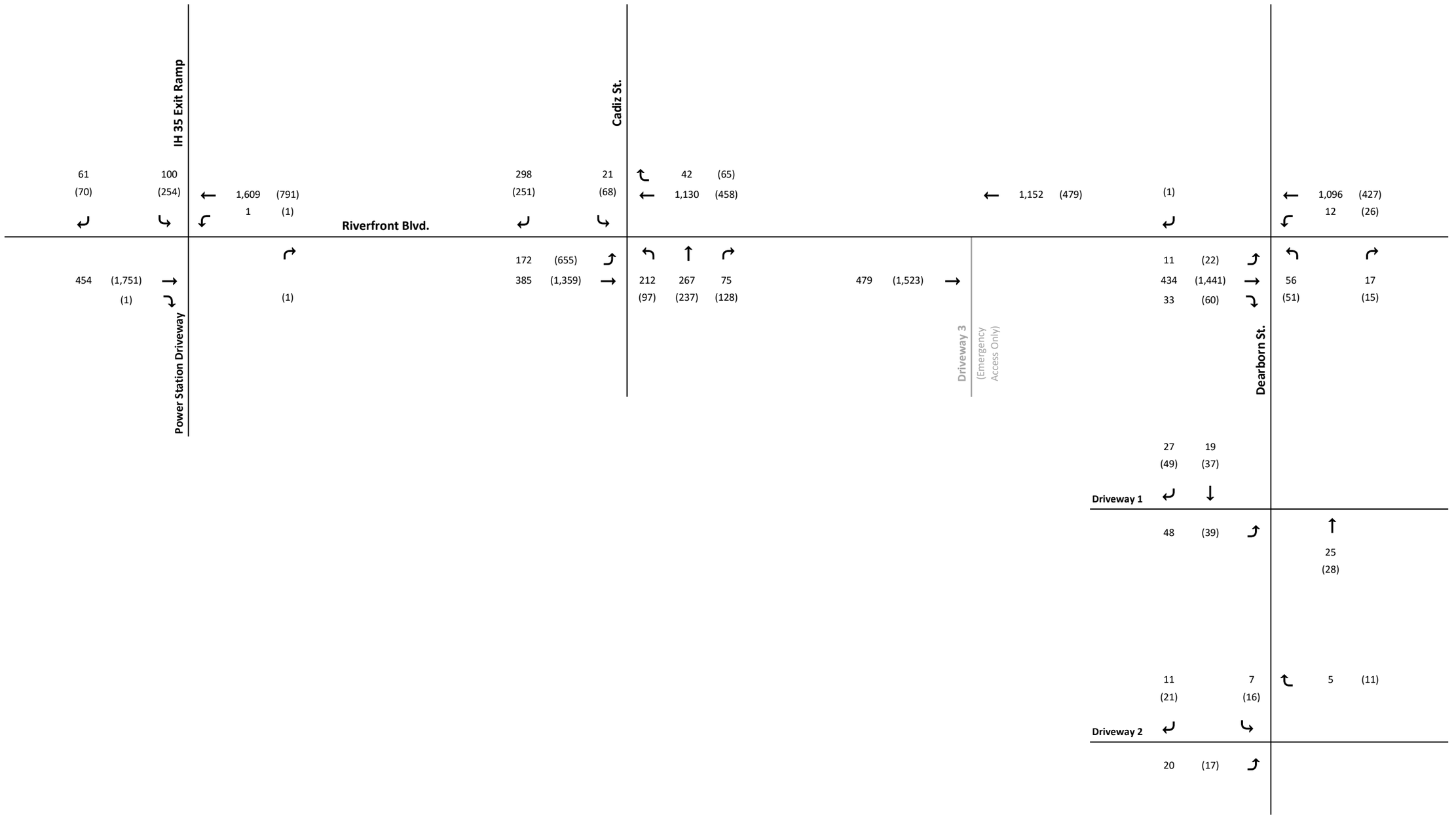


Exhibit 11. Year 2023 Background-Plus-Site Traffic Volumes

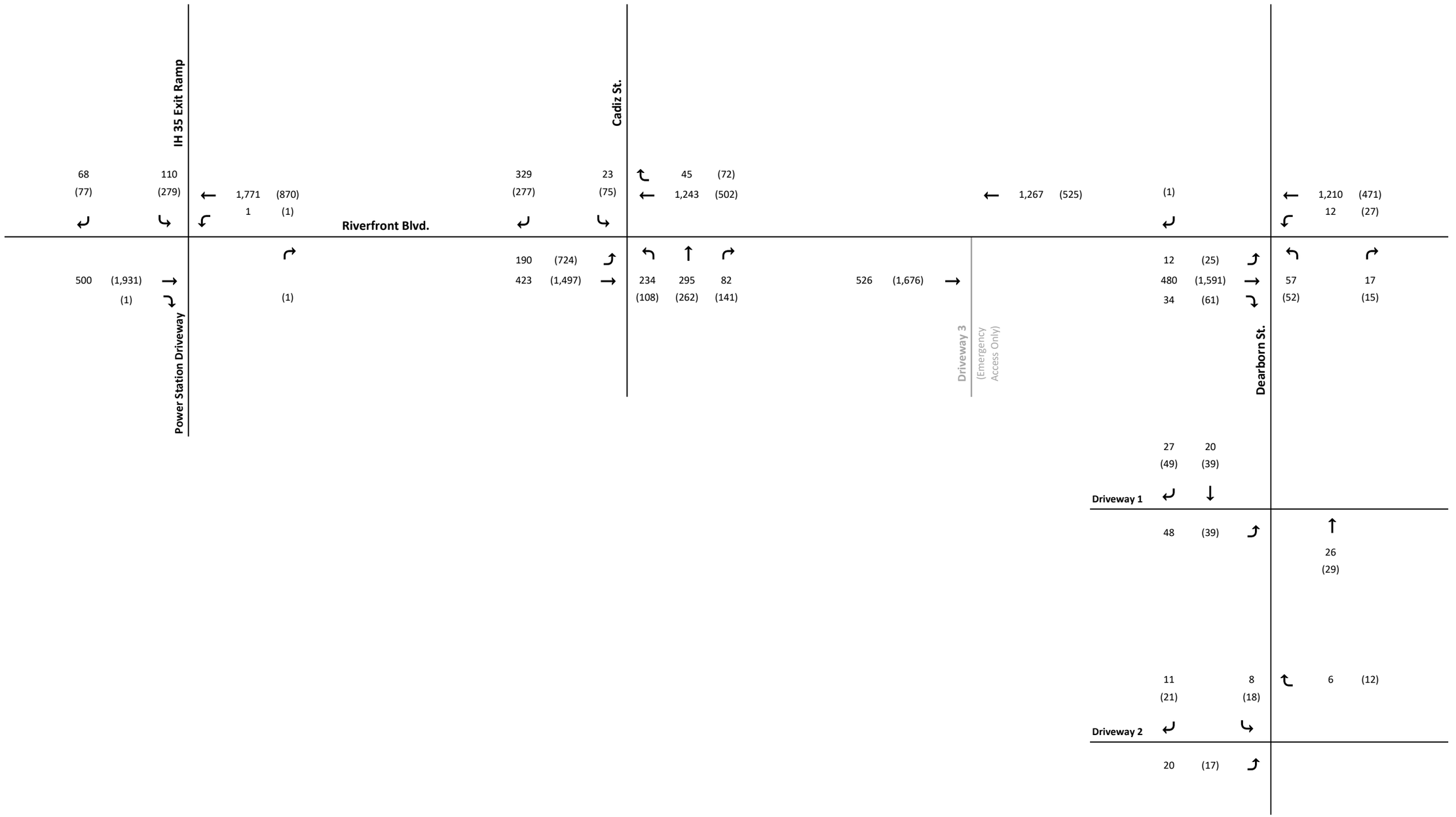


Exhibit 12. Year 2028 Background-Plus-Site Traffic Volumes

TRAFFIC IMPACT ANALYSIS

Intersection Capacity Analysis – Methodology

Intersection capacity analysis was conducted for the study intersections following the guidelines contained in the *Highway Capacity Manual*. Intersections are assigned a "level of service" (LOS) letter grade for the peak hour of traffic based upon the number of lanes at the intersection, traffic volumes, and traffic control. Level of Service A (LOS A) represents light traffic flow (free-flow conditions) while LOS F represents heavy traffic flow (over-capacity conditions). LOS D is typically considered acceptable in the region. Individual movements are also assigned LOS grades. It is important to note that one or more individual movement(s) typically operate at LOS F when the overall intersection is operating at LOS D.

The following table summarizes the LOS criteria for signalized and unsignalized intersections as defined in the *Highway Capacity Manual,* 6th Edition.

Intersection LOS Criteria

	Signalized Intersection Average Total Delay (Seconds/Vehicle)	**Unsignalized Intersection** Average Total Delay (Seconds/Vehicle)
LOS A	≤ 10	≤ 10
LOS B	>10 - ≤20	>10 - ≤15
LOS C	>20 - ≤35	>15 - ≤25
LOS D	>35 - ≤55	>25 - ≤35
LOS E	>55 - ≤80	>35 - ≤50
LOS F	>80	>50

Obtained from Highway Capacity Manual, 6th Edition, Exhibits 19-8, 20-2, and 21-8

The LOS calculations for this analysis were conducted in accordance with the *Highway Capacity Manual* using *Synchro 11*. Detailed Synchro reports summarizing analysis data for each scenario are provided in the **Appendix**.

Intersection Capacity Analysis

The study area was analyzed considering each scenario (existing, background, and background-plus-site) to determine the projected impact that the proposed development will have on the roadway system. The LOS results are shown in **Table 2** for the signalized and unsignalized intersections. LOS results are based upon the existing and planned traffic control and lane configurations using the current signal timing.

Table 2. Intersection Level of Service Summary with Existing and Currently Planned Geometry

Intersection #	Intersection		2021 Existing				2023 Background				2023 Bkgd-Plus-Site				2028 Background				2028 Bkgd-Plus-Site			
			AM		PM		AM		PM		AM		PM		AM		PM		AM		PM	
			LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)
Signalized Intersection:		**Approach**																				
101	Riverfront Boulevard at US 35 Exit Ramp	WBL	A	(4.9)	B	(18.4)	A	(4.9)	B	(18.8)	A	(5.0)	B	(18.9)	A	(5.0)	B	(19.7)	A	(5.0)	B	(19.9)
		NB	A	(2.9)	A	(10.0)	A	(3.0)	A	(10.0)	A	(2.9)	A	(9.7)	A	(3.3)	B	(10.1)	A	(3.2)	A	(9.8)
		SB	D	(40.3)	C	(33.9)	D	(40.5)	C	(34.2)	D	(40.9)	C	(34.7)	D	(41.2)	C	(34.8)	D	(41.6)	D	(35.5)
		Overall	**A**	**(6.0)**	**B**	**(17.9)**	**A**	**(6.0)**	**B**	**(18.1)**	**A**	**(6.1)**	**B**	**(18.1)**	**A**	**(6.3)**	**B**	**(18.8)**	**A**	**(6.4)**	**B**	**(18.8)**
102	Riverfront Boulevard at Cadiz Street	EB	B	(19.9)	B	(10.8)	C	(21.7)	B	(11.0)	C	(21.8)	B	(11.4)	C	(24.3)	B	(11.6)	C	(24.3)	B	(12.0)
		WB	C	(34.6)	D	(46.2)	D	(36.0)	D	(46.6)	D	(37.7)	D	(47.4)	D	(41.6)	D	(47.6)	D	(45.1)	D	(48.5)
		NB	D	(50.3)	D	(52.3)	D	(51.0)	D	(52.7)	D	(51.1)	D	(52.8)	D	(53.8)	D	(53.9)	D	(53.9)	D	(54.1)
		SB	D	(46.4)	D	(52.1)	D	(48.0)	D	(52.3)	D	(48.0)	D	(52.4)	D	(53.9)	D	(52.6)	D	(53.8)	D	(52.8)
		Overall	**D**	**(36.4)**	**C**	**(25.9)**	**D**	**(37.7)**	**C**	**(26.2)**	**D**	**(38.4)**	**C**	**(26.8)**	**D**	**(42.1)**	**C**	**(27.0)**	**D**	**(43.6)**	**C**	**(27.6)**
Unsignalized Intersection:		**Approach**																				
202	Riverfront Boulevard at Dearborn Street	EBL	B	(11.1)	A	(8.3)	B	(11.3)	A	(8.4)	B	(11.3)	A	(8.4)	B	(12.1)	A	(8.5)	B	(12.1)	A	(8.5)
		NB	D	(26.1)	F	(100.7)	D	(27.7)	F	(125.6)	E	(36.1)	F	>300	D	(33.2)	F	>300	E	(49.3)	F	>300
		95th % Veh Queue		0.1 veh		1 veh		0.1 veh		1 veh		2 veh		8 veh		0.1 veh		2 veh		3 veh		8 veh
		SB	A	(0.0)	A	(9.6)	A	(0.0)	A	(9.7)	A	(0.0)	A	(9.7)	A	(0.0)	A	(9.9)	A	(0.0)	A	(9.9)
203	Dearborn Street at Driveway 1	EB									A	(9.0)	A	(9.2)					A	(9.1)	A	(9.2)
		NBL									A	(0.0)	A	(0.0)					A	(0.0)	A	(0.0)
204	Dearborn Street at Driveway 2	EB									A	(8.6)	A	(8.6)					A	(8.6)	A	(8.6)
		NBL									A	(0.0)	A	(0.0)					A	(0.0)	A	(0.0)

a) A, B, C, D, E, or F represents the level of service for the turning movement.
b) The number in parenthesis is the average delay (in seconds) for the respective turning movement.
c) When there is no turning movement in the scenario, "--" is noted.
d) NB, SB, EB, WB = Northbound, Southbound, Eastbound, or Westbound; L, T, R = Left, Through, or Right

Intersection Analysis Results and Recommended Mitigations

The study intersections are all projected to operate with an overall LOS D or better with the existing and planned roadway geometry, with the following exception.

Riverfront Boulevard at Dearborn Street – The northbound approach is shown to operate at LOS F in the PM Peak hour considering the existing volumes. The delay worsens with the addition of the site traffic. Install "Do Not Block Intersection" sign, COD#116 M,at Driveway 1, the north driveway, so that motorists leaving the site during peak hours do not block Dearborn Street. It is not uncommon for minor roads along major roads to operate at LOS F. The signal at Riverfront Boulevard/Cadiz Street will provide gaps for traffic to leave via Dearborn Street. In addition, if motorists experience excessive delay they may turn right on Riverfront Boulevard and take an alternative route.

Roadway Link Capacity Analysis – Methodology

Roadway links are roadway segments between intersections. The North Central Texas Council of Governments' (NCTCOG) *Dallas-Fort Worth Regional Travel Model (DFWRTM): Description of the Multimodal Forecasting Process, 2000*, outlines hourly service volume capacities based upon type of roadway function and area. The table below summarizes the roadway link capacities.

NCTCOG Roadway Link Hourly Service Volumes (Capacity)

Area Type	Principal Arterial		Minor Arterial & Frontage Road		Collector & Local Street	
	Median-Divided or One-Way	Undivided, Two-Way	Median-Divided or One-Way	Undivided, Two-Way	Median-Divided or One-Way	Undivided, Two-Way
CBD	725	650	725	650	475	425
Urban/Commercial	850	775	825	750	525	475
Suburban Residential	925	875	900	825	575	525
Rural	1,025	925	975	875	600	550

Obtained from NCTCOG Regional Travel Model, Exhibits 23 and 24

To determine the LOS of a roadway link, the volume-to-capacity ratio (V/C) is calculated using the projected traffic volume and the roadway capacities noted above. A V/C below 1.0 indicates that the roadway is operating under capacity. The NCTCOG's roadway link LOS criteria are summarized in the table below.

NCTCOG Roadway Link LOS Criteria

LOS	Volume-to-Capacity Ratio (V/C)
A/B	≤ 45%
C	> 45% - ≤ 65%
D	> 65% - ≤ 80%
E	> 80% - ≤ 100%
F	> 100%

Obtained from NCTCOG Regional Travel Model, Exhibits 23 and 24

Roadway Link Capacity Analysis

A roadway link capacity analysis was performed considering the peak hour volumes. The LOS results are shown in **Table 3**. As shown, the study area roadway links will continue to operate at LOS D or better with the added site-generated traffic in both buildout year 2023 and horizon year 2028.

Table 3. Roadway Link Level of Service Summary

Roadway Link	Roadway Capacity			2021 Existing			2023 Background			2023 Bkgd-Plus-Site			2028 Background			2028 Bkgd-Plus-Site		
	Capacity Per Lane (Veh/Ln)	No. of Lanes	Roadway Capacity	Veh/Hr	V/C	LOS	Veh/Hr	V/C	LOS	Veh/Hr	V/C	LOS	Veh/Hr	V/C	LOS	Veh/Hr	V/C	LOS
Riverfront Boulevard, North of Median Opening																		
Eastbound	775	3	2,325	1,445	62%	C	1,503	65%	C	1,556	67%	D	1,660	71%	D	1,712	74%	D
Westbound	775	3	2,325	1,078	46%	C	1,121	48%	C	1,172	50%	C	1,238	53%	C	1,289	55%	C
Dearborn Street, North of Rock Island Street																		
Northbound	450	1	450	11	2%	A/B	11	2%	A/B	28	6%	A/B	12	3%	A/B	29	6%	A/B
Southbound	450	1	450	16	3%	A/B	16	4%	A/B	37	8%	A/B	18	4%	A/B	39	9%	A/B

Veh/Hr = Vehicles per Hour; V/C = Volume-to-Capacity Ratio; LOS = Level of Service

SITE ACCESS REVIEW

Auxiliary Lane Analysis

The City of Dallas requires right-turn deceleration lanes at driveways when the right-turning volume into the driveway exceeds 120 vehicles in the peak hour (as noted in the 2004 *Off-Street Parking and Driveways Handbook*.)

Projected turning-movement volumes into the driveways are all below 50 vehicles per hour during the peak hour. Considering the projected site-generated volumes and existing through volumes, no right- or left-turn, deceleration lanes are needed at the site driveways.

Sight Distance Analysis

Sight distances were evaluated, as required by the City of Dallas, to ensure that motorists can safely maneuver to/from the site driveways. The required sight distances as provided in the *City of Dallas Street Design Manual, Table 4.6* are provided in **Table 4**. Based upon a review of the driveway locations and a site visit, all driveways satisfy the City's desirable sight distance requirements.

Table 4. Sight Distance Summary

Classification	Intersection	Speed Limit	Left Side (Feet)				Right Side (Feet)			
			Desireable Minimum	Safety Minimum	Provided	Criteria?	Desirable Minimum	Safety Minimum	Provided	Criteria?
S-2-U	Dearborn Street at Driveway 1	30 MPH	315	145	~235	Visible to end of Dearborn St.	315	200	~230	Visible to end of Dearborn St.
	Dearborn Street at Driveway 2	30 MPH	315	145	~355	YES	315	200	~540	YES

It is recommended to trim the trees on the northwest bound approach of Rock Island Street approaching Dearborn Street to improve visibility.

Access Spacing Review

The City of Dallas requires driveways to be spaced a minimum distance from streets and other driveways (noted in Section 3.4.4). Section 3.4.3 of the 2019 City of Dallas *Street Design Manual* notes, "No more than two driveway approaches should be designed on any parcel of property with a frontage of 150 feet or less." Section 3.4.2 of the design manual notes, "Maximum number of driveways onto public streets shall not be greater than two, unless supported by a traffic study approved by the City."

The site currently has three (3) driveways. Two (2) are shown on Dearborn Street, which are spread out over approximately 153 linear feet. Due to the length of frontage the site has on Dearborn Street, the two driveways on Dearborn Street will work satisfactorily for the site.

The access spacing review for the proposed development is summarized below in **Table 8**. As shown, all driveways satisfy the City's driveway spacing criteria.

Table 5. Access Driveway Spacing Summary

Spacing Between	City of Dallas Access Spacing Distance (Feet)	Provided Access Spacing Distance (Feet)	Satisfies Spacing Criteria?
Riverfront Boulevard:			
7-Eleven Southern Driveway and Driveway 3	20	~20	YES
Driveway 3 and Dearborn Street	100	~100	YES
Dearborn Street:			
Riverfront Boulevard and Driveway 1	100	~100	YES
Driveway 1 and Driveway 2	20	~155	YES

*Driveway spacing distance between driveway to streets was obtained from the 2019 *Street Design Manual*.

Pedestrian Access

Currently, there are very few pedestrians in the study area. Detailed data on existing pedestrian crossings at each intersection is provided in the **Appendix**. As a portion of the development is expected to be affordable housing the City expects the site to generate additional pedestrian activity in the area. This section of the report addresses the current pedestrian infrastructure in the vicinity of the site.

Sidewalks

As noted in the roadway network section sidewalks are present on the eastbound side of Riverfront Boulevard between Cadiz Street and Dearborn Street, and on both sides of Cadiz Street with access to downtown Dallas. The conditions of the sidewalk are acceptable.

As shown in the pictures in the Appendix, there are may sections along the study area roads that do not have sidewalks, such as Riverfront Boulevard under the IH 35E bridge and on the southbound section of Cadiz Street, north of Riverfront Boulevard. It is recommended the City plan to provide additional sidewalks in the walkable area around the future high speed rail station.

Crosswalks

There are crosswalks located on the north, south, and east legs of Cadiz Street and S. Riverfront Boulevard and the north leg of S. Riverfront Boulevard at IH 35E exit ramp. The sidewalk landings on the southeast corner of Cadiz Street and Riverfront and the northeast and northwest corners of S. Riverfront Boulevard at IH 35E exit ramp do not continue to sidewalks.

Pedestrian Signals

The pedestrian push button at the northeast corner of Riverfront Boulevard at I 35 Exit Ramp did not active the crosswalk signal during testing on a site visit. The signal button to cross the south leg of the Cadiz Street and Riverfront Boulevard intersection was dislodged from its housing and hanging by wires and signs are not facing the correct positions. Additionally, the signal buttons to cross the east leg in the southeast corner and to cross the north leg in the northwest corner did not make the activation sound. It is recommended the pedestrian signals in the walkable area of high speed rail station be re-evaluated prior to the stations opening.

Bike Lanes

Bike lanes are present on Riverfront Boulevard between Cadiz Street and Corinth St and are present on Cadiz Street from Riverfront Boulevard to S Lamar Street. In both cases the lanes are stripped on both sides of the street and the road surface is in acceptable condition. The bike line on northbound, S. Riverfront Boulevard is striped to proceed on the sidewalk under the IH 35E bridge, however, there is no sidewalk extending past the corner of the intersection. It is recommended that bike lanes around the high speed rail station be re-evaluated prior to the station opening.

CONCLUSIONS AND RECOMMENDATIONS

Lambeth Engineering Associates, PLLC, conducted a traffic impact analysis for the proposed mixed-use development, 1027 S. Riverfront Blvd. Multifamily and Daycare, located southwest of the Riverfront Boulevard/Dearborn Street intersection in Dallas, Texas. This TIA is being conducted to support a zoning change. The property is currently zoned PD 784, with SUP 1484. The PD is being amended to accommodate the proposed development.

The project is planned to be completed in 2023 and is planned to contain 200 housing units and a 3,468-SF daycare center.

This study evaluated the impact that the proposed development will have on the surrounding roadway network and provides recommended mitigation measures needed to maintain acceptable roadway conditions. Below is a summary of findings from the analyses presented in this report.

- The roadway intersections are shown to operate with an overall LOS D or better considering existing, background, and background-plus-site traffic volumes, with the following exception.

  Riverfront Boulevard at Dearborn Street – The northbound approach is shown to operate at LOS F in the PM Peak hour considering the existing volumes. The delay worsens with the addition of the site traffic. Install "Do Not Block Intersection" sign, COD#116 M,at Driveway 1, the north driveway, so that motorists leaving the site during peak hours do not block Dearborn Street. It is not uncommon for minor roads along major roads to operate at LOS F. The signal at Riverfront Boulevard/Cadiz Street will provide gaps for traffic to leave via Dearborn Street. In addition, if motorists experience excessive delay they may turn right on Riverfront Boulevard and take an alternative route.

- The roadway links are shown to operate at LOS D or better considering existing, background, and background-plus-site traffic volumes with the existing roadway geometries.
- No deceleration lanes are recommended at the site driveways.
- The City of Dallas's desirable sight-distance requirements are satisfied at all driveways.
- It is recommended to trim the trees on the northwest bound approach of Rock Island Street approaching Dearborn Street to improve visibility.
- All driveways satisfy City of Dallas's driveway spacing criteria.
- It is recommended the City plan to provide additional sidewalks in the walkable area around the future high speed rail station.

This analysis shows that the proposed development is not expected to have a significant impact on the surrounding roadway network.

END

Appendix

A. Site Pictures
B. Existing Traffic Volumes
C. TxDOT Historical Traffic Volume Data
D. COVID Factor
E. Synchro Analysis Results
F. DART Bus Stops
G. Pedestrian Counts
H. Supplemental Information

Appendix A
Site Pictures

Riverfront Multifamily and Daycare
Riverfront Boulevard

Riverfront Blvd.
West of IH 35E, Eastbound

Riverfront Blvd. and Cadiz St.
West of IH 35E, Eastbound

Dearborn St. and Riverfront Blvd.
West of Dearborn St., Eastbound

L.A.M.B.E.T.H. ENGINEERING

Riverfront Multifamily and Daycare

Dearborn Street

Riverfront Blvd. and Dearborn St.
Looking Northwest

Riverfront Blvd. and Dearborn St.
Looking North

Riverfront Blvd. and Dearborn St.
Looking Southeast

Looking Northwest on Dearborn St.
North Portion of Site

Looking Southwest on Dearborn St.
South Portion of Site

Dearborn St. and Driveway 1
Looking Northeast

Riverfront Multifamily and Daycare

Dearborn Street

Dearborn St. and Driveway 1
Looking East, Across from Driveway

Dearborn St. and Driveway 1
Looking Southwest

Driveway 2 at Dearborn St. and Rock Island St.
Looking North

Dearborn St. and Rock Island St.
Looking East, Across from Driveway 2

Dearborn St. at Rock Island St. and Driveway 2
Looking Southeast

Rock Island St., Northbound Approaching
Dearborn St. — Trim Trees to Increase Visibility

Riverfront Multifamily and Daycare

Pedestrian Access

Riverfront Blvd. and Cadiz St.
Looking Northwest

Riverfront Blvd. and Cadiz St.
Southeast Corner, Looking West

IH 35E Exit Ramp at Riverfront Blvd. and Cadiz St.
Southeast Corner, Looking South

Riverfront Blvd. and Cadiz St.
Southeast Corner, Looking North

Riverfront Blvd.
Southbound Sidewalk, West of Site

Riverfront Blvd. and Cadiz St., Southeast Corner
Pedestrian Crossing Push Button Broken and Signs Need to be Replace and Repositioned for Proper Crossing Direction

Riverfront Multifamily and Daycare

Pedestrian Access

Riverfront Blvd. and Cadiz St., Northbound Approach, Westside — No Sidewalk Under IH 35E and No Crossing Riverfront Blvd.

Riverfront Blvd. and Cadiz St. Southwest Corner, Looking South

Riverfront Blvd. and Cadiz St., Southwest Corner, Eastbound — No Sidewalk Under IH 35E Bridge

Riverfront Blvd. and Cadiz St., Northwest Corner, Westbound — No Sidewalk and Bike Lane Ends

Riverfront Blvd. and Cadiz St., Northwest Corner — Sidewalk Ends at Intersection

Riverfront Blvd. and Cadiz St., Northwest Corner, Southbound Approach — No Sidewalk to the North

Riverfront Multifamily and Daycare

Pedestrian Access

Riverfront Blvd. and Cadiz St., Northeast Corner
Overgrown Weeds around Push Button

Riverfront Blvd., Northeast Corner, Between Cadiz St. and IH 35E Exit Ramp — No Sidewalk Under Bridge

IH 35E Exit Ramp at Riverfront Blvd., Northeast Corner — No Sidewalk Northeast of Intersection

IH 35E Exit Ramp at Riverfront Blvd. — No Sidewalk West of Intersection

IH 35E Exit Ramp and Riverfront Blvd. — No Sidewalk on Southside of Riverfront Blvd.

Appendix B
Existing Traffic Volumes

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: US 35 EXIT RAMP @ RIVERFRONT BLVD
Site Code:
Start Date: 08/19/2021
Page No: 1

Turning Movement Data

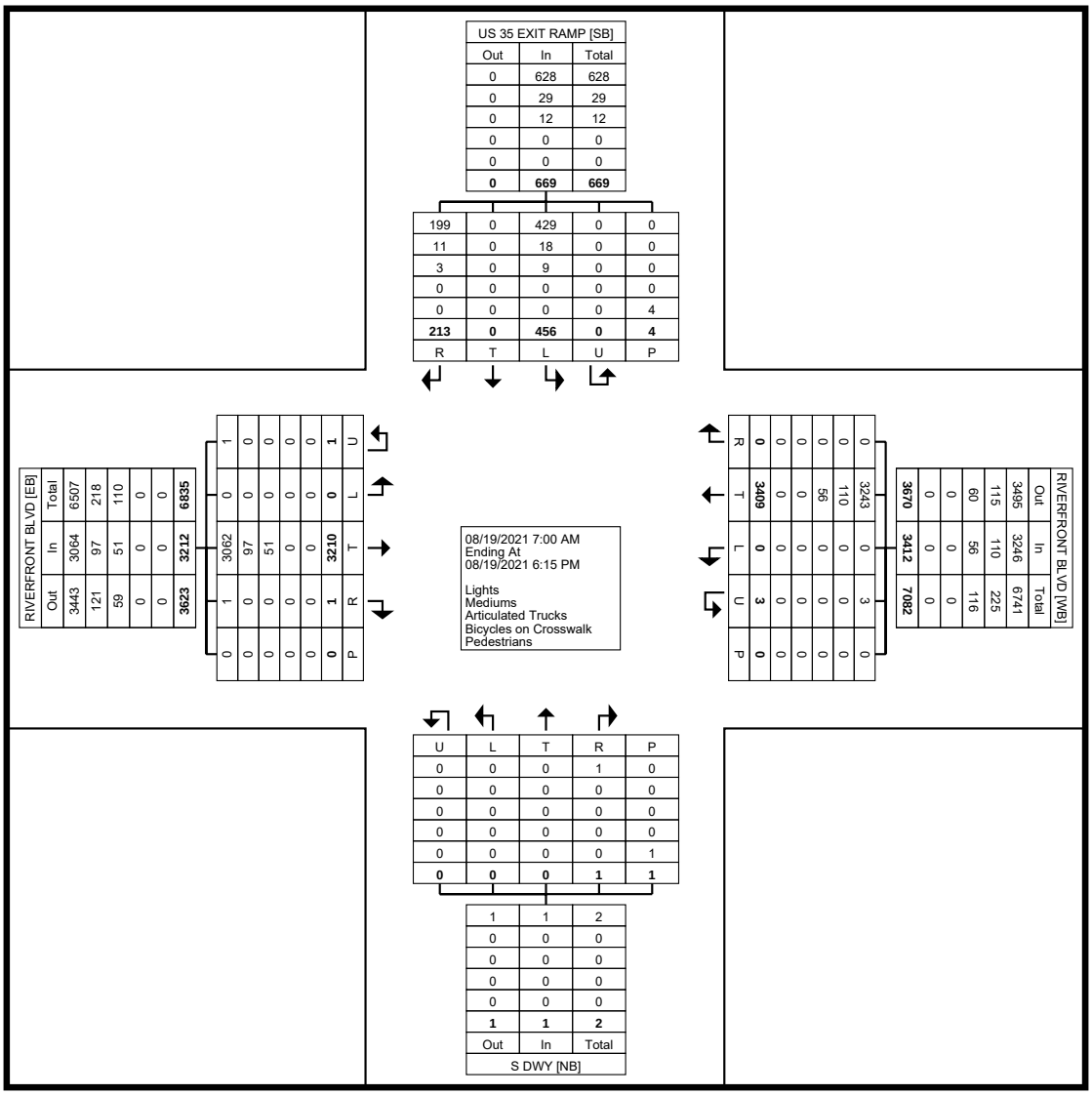
Start Time	US 35 EXIT RAMP Southbound						RIVERFRONT BLVD Westbound						S DWY Northbound						RIVERFRONT BLVD Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	12	0	9	0	0	21	0	221	0	0	0	221	0	0	0	0	1	0	0	60	0	0	0	60	302
7:15 AM	16	0	12	0	0	28	0	257	0	0	0	257	0	0	0	0	0	0	0	84	0	0	0	84	369
7:30 AM	12	0	4	0	0	16	0	320	0	0	0	320	0	0	0	0	0	0	0	72	0	0	0	72	408
7:45 AM	12	0	11	0	0	23	0	317	0	0	0	317	0	0	0	0	0	0	0	90	0	0	0	90	430
Hourly Total	52	0	36	0	0	88	0	1115	0	0	0	1115	0	0	0	0	1	0	0	306	0	0	0	306	1509
8:00 AM	23	0	15	0	0	38	0	332	0	1	0	333	0	0	0	0	0	0	0	114	0	0	0	114	485
8:15 AM	27	0	19	0	0	46	0	284	0	0	0	284	0	0	0	0	0	0	0	77	0	0	0	77	407
8:30 AM	14	0	17	0	0	31	0	281	0	0	0	281	0	0	0	0	0	0	0	79	0	0	0	79	391
8:45 AM	17	0	20	0	0	37	0	282	0	0	0	282	0	0	0	0	0	0	0	71	0	0	0	71	390
Hourly Total	81	0	71	0	0	152	0	1179	0	1	0	1180	0	0	0	0	0	0	0	341	0	0	0	341	1673
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	32	0	8	0	1	40	0	146	0	0	0	146	0	0	0	0	0	0	0	296	0	0	0	296	482
4:15 PM	28	0	12	0	0	40	0	136	0	1	0	137	0	0	0	0	0	0	0	295	0	0	0	295	472
4:30 PM	26	0	6	0	1	32	0	167	0	1	0	168	0	0	0	0	0	0	0	324	0	1	0	325	525
4:45 PM	56	0	18	0	1	74	0	156	0	0	0	156	0	0	1	0	0	1	0	342	1	0	0	343	574
Hourly Total	142	0	44	0	3	186	0	605	0	2	0	607	0	0	1	0	0	1	0	1257	1	1	0	1259	2053
5:00 PM	67	0	18	0	1	85	0	149	0	0	0	149	0	0	0	0	0	0	0	307	0	0	0	307	541
5:15 PM	43	0	14	0	0	57	0	133	0	0	0	133	0	0	0	0	0	0	0	410	0	0	0	410	600
5:30 PM	34	0	13	0	0	47	0	126	0	0	0	126	0	0	0	0	0	0	0	328	0	0	0	328	501
5:45 PM	37	0	17	0	0	54	0	102	0	0	0	102	0	0	0	0	0	0	0	261	0	0	0	261	417
Hourly Total	181	0	62	0	1	243	0	510	0	0	0	510	0	0	0	0	0	0	0	1306	0	0	0	1306	2059
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	456	0	213	0	4	669	0	3409	0	3	0	3412	0	0	1	0	1	1	0	3210	1	1	0	3212	7294
Approach %	68.2	0.0	31.8	0.0	-	-	0.0	99.9	0.0	0.1	-	-	0.0	0.0	100.0	0.0	-	-	0.0	99.9	0.0	0.0	-	-	-
Total %	6.3	0.0	2.9	0.0	-	9.2	0.0	46.7	0.0	0.0	-	46.8	0.0	0.0	0.0	0.0	-	0.0	0.0	44.0	0.0	0.0	-	44.0	-
Lights	429	0	199	0	-	628	0	3243	0	3	-	3246	0	0	1	0	-	1	0	3062	1	1	-	3064	6939
% Lights	94.1	-	93.4	-	-	93.9	-	95.1	-	100.0	-	95.1	-	-	100.0	-	-	100.0	-	95.4	100.0	100.0	-	95.4	95.1
Mediums	18	0	11	0	-	29	0	110	0	0	-	110	0	0	0	0	-	0	0	97	0	0	-	97	236
% Mediums	3.9	-	5.2	-	-	4.3	-	3.2	-	0.0	-	3.2	-	-	0.0	-	-	0.0	-	3.0	0.0	0.0	-	3.0	3.2
Articulated Trucks	9	0	3	0	-	12	0	56	0	0	-	56	0	0	0	0	-	0	0	51	0	0	-	51	119
% Articulated Trucks	2.0	-	1.4	-	-	1.8	-	1.6	-	0.0	-	1.6	-	-	0.0	-	-	0.0	-	1.6	0.0	0.0	-	1.6	1.6
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: US 35 EXIT RAMP @ RIVERFRONT BLVD
Site Code:
Start Date: 08/19/2021
Page No: 2



Turning Movement Data Plot

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: US 35 EXIT RAMP @ RIVERFRONT BLVD
Site Code:
Start Date: 08/19/2021
Page No: 3

Turning Movement Peak Hour Data (7:30 AM)

Start Time	US 35 EXIT RAMP Southbound						RIVERFRONT BLVD Westbound						S DWY Northbound						RIVERFRONT BLVD Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:30 AM	12	0	4	0	0	16	0	320	0	0	0	320	0	0	0	0	0	0	0	72	0	0	0	72	408
7:45 AM	12	0	11	0	0	23	0	317	0	0	0	317	0	0	0	0	0	0	0	90	0	0	0	90	430
8:00 AM	23	0	15	0	0	38	0	332	0	1	0	333	0	0	0	0	0	0	0	114	0	0	0	114	485
8:15 AM	27	0	19	0	0	46	0	284	0	0	0	284	0	0	0	0	0	0	0	77	0	0	0	77	407
Total	74	0	49	0	0	123	0	1253	0	1	0	1254	0	0	0	0	0	0	0	353	0	0	0	353	1730
Approach %	60.2	0.0	39.8	0.0	-	-	0.0	99.9	0.0	0.1	-	-	0.0	0.0	0.0	0.0	-	-	0.0	100.0	0.0	0.0	-	-	-
Total %	4.3	0.0	2.8	0.0	-	7.1	0.0	72.4	0.0	0.1	-	72.5	0.0	0.0	0.0	0.0	-	0.0	0.0	20.4	0.0	0.0	-	20.4	-
PHF	0.685	0.000	0.645	0.000	-	0.668	0.000	0.944	0.000	0.250	-	0.941	0.000	0.000	0.000	0.000	-	0.000	0.000	0.774	0.000	0.000	-	0.774	0.892
Lights	67	0	44	0	-	111	0	1186	0	1	-	1187	0	0	0	0	-	0	0	318	0	0	-	318	1616
% Lights	90.5	-	89.8	-	-	90.2	-	94.7	-	100.0	-	94.7	-	-	-	-	-	-	-	90.1	-	-	-	90.1	93.4
Mediums	5	0	3	0	-	8	0	43	0	0	-	43	0	0	0	0	-	0	0	23	0	0	-	23	74
% Mediums	6.8	-	6.1	-	-	6.5	-	3.4	-	0.0	-	3.4	-	-	-	-	-	-	-	6.5	-	-	-	6.5	4.3
Articulated Trucks	2	0	2	0	-	4	0	24	0	0	-	24	0	0	0	0	-	0	0	12	0	0	-	12	40
% Articulated Trucks	2.7	-	4.1	-	-	3.3	-	1.9	-	0.0	-	1.9	-	-	-	-	-	-	-	3.4	-	-	-	3.4	2.3
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

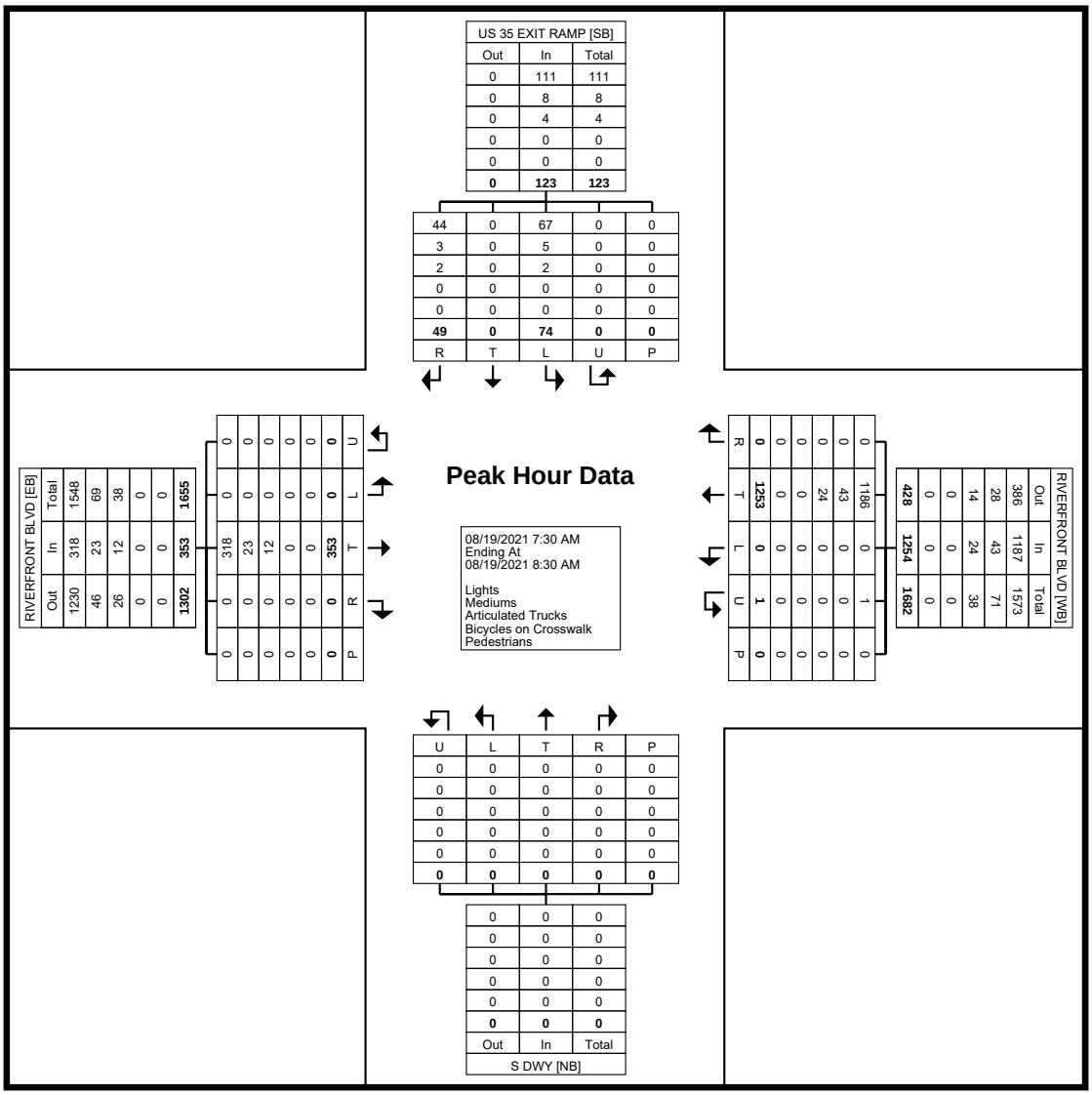
101 AM

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: US 35 EXIT RAMP @ RIVERFRONT BLVD
Site Code:
Start Date: 08/19/2021
Page No: 4



Turning Movement Peak Hour Data Plot (7:30 AM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: US 35 EXIT RAMP @ RIVERFRONT BLVD
Site Code:
Start Date: 08/19/2021
Page No: 5

Turning Movement Peak Hour Data (4:30 PM)

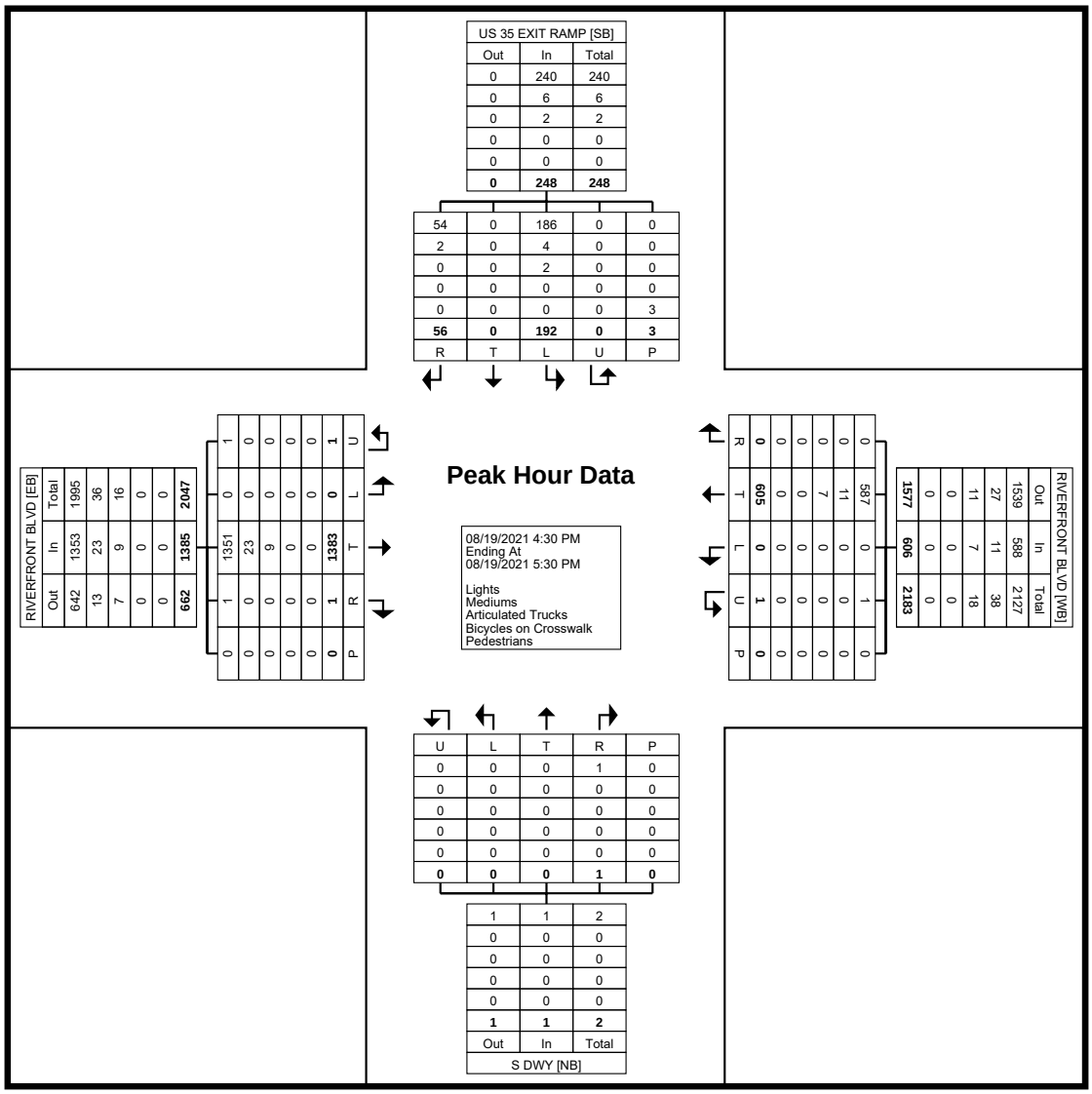
Start Time	US 35 EXIT RAMP Southbound						RIVERFRONT BLVD Westbound						S DWY Northbound						RIVERFRONT BLVD Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
4:30 PM	26	0	6	0	1	32	0	167	0	1	0	168	0	0	0	0	0	0	0	324	0	1	0	325	525
4:45 PM	56	0	18	0	1	74	0	156	0	0	0	156	0	0	1	0	0	1	0	342	1	0	0	343	574
5:00 PM	67	0	18	0	1	85	0	149	0	0	0	149	0	0	0	0	0	0	0	307	0	0	0	307	541
5:15 PM	43	0	14	0	0	57	0	133	0	0	0	133	0	0	0	0	0	0	0	410	0	0	0	410	600
Total	192	0	56	0	3	248	0	605	0	1	0	606	0	0	1	0	0	1	0	1383	1	1	0	1385	2240
Approach %	77.4	0.0	22.6	0.0	-	-	0.0	99.8	0.0	0.2	-	-	0.0	0.0	100.0	0.0	-	-	0.0	99.9	0.1	0.1	-	-	-
Total %	8.6	0.0	2.5	0.0	-	11.1	0.0	27.0	0.0	0.0	-	27.1	0.0	0.0	0.0	0.0	-	0.0	0.0	61.7	0.0	0.0	-	61.8	-
PHF	0.716	0.000	0.778	0.000	-	0.729	0.000	0.906	0.000	0.250	-	0.902	0.000	0.000	0.250	0.000	-	0.250	0.000	0.843	0.250	0.250	-	0.845	0.933
Lights	186	0	54	0	-	240	0	587	0	1	-	588	0	0	1	0	-	1	0	1351	1	1	-	1353	2182
% Lights	96.9	-	96.4	-	-	96.8	-	97.0	-	100.0	-	97.0	-	-	100.0	-	-	100.0	-	97.7	100.0	100.0	-	97.7	97.4
Mediums	4	0	2	0	-	6	0	11	0	0	-	11	0	0	0	0	-	0	0	23	0	0	-	23	40
% Mediums	2.1	-	3.6	-	-	2.4	-	1.8	-	0.0	-	1.8	-	-	0.0	-	-	0.0	-	1.7	0.0	0.0	-	1.7	1.8
Articulated Trucks	2	0	0	0	-	2	0	7	0	0	-	7	0	0	0	0	-	0	0	9	0	0	-	9	18
% Articulated Trucks	1.0	-	0.0	-	-	0.8	-	1.2	-	0.0	-	1.2	-	-	0.0	-	-	0.0	-	0.7	0.0	0.0	-	0.6	0.8
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: US 35 EXIT RAMP @ RIVERFRONT BLVD
Site Code:
Start Date: 08/19/2021
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

Count Name: RIVERFRONT BLVD @ CADIZ ST
Site Code:
Start Date: 08/19/2021
Page No: 1

Turning Movement Data

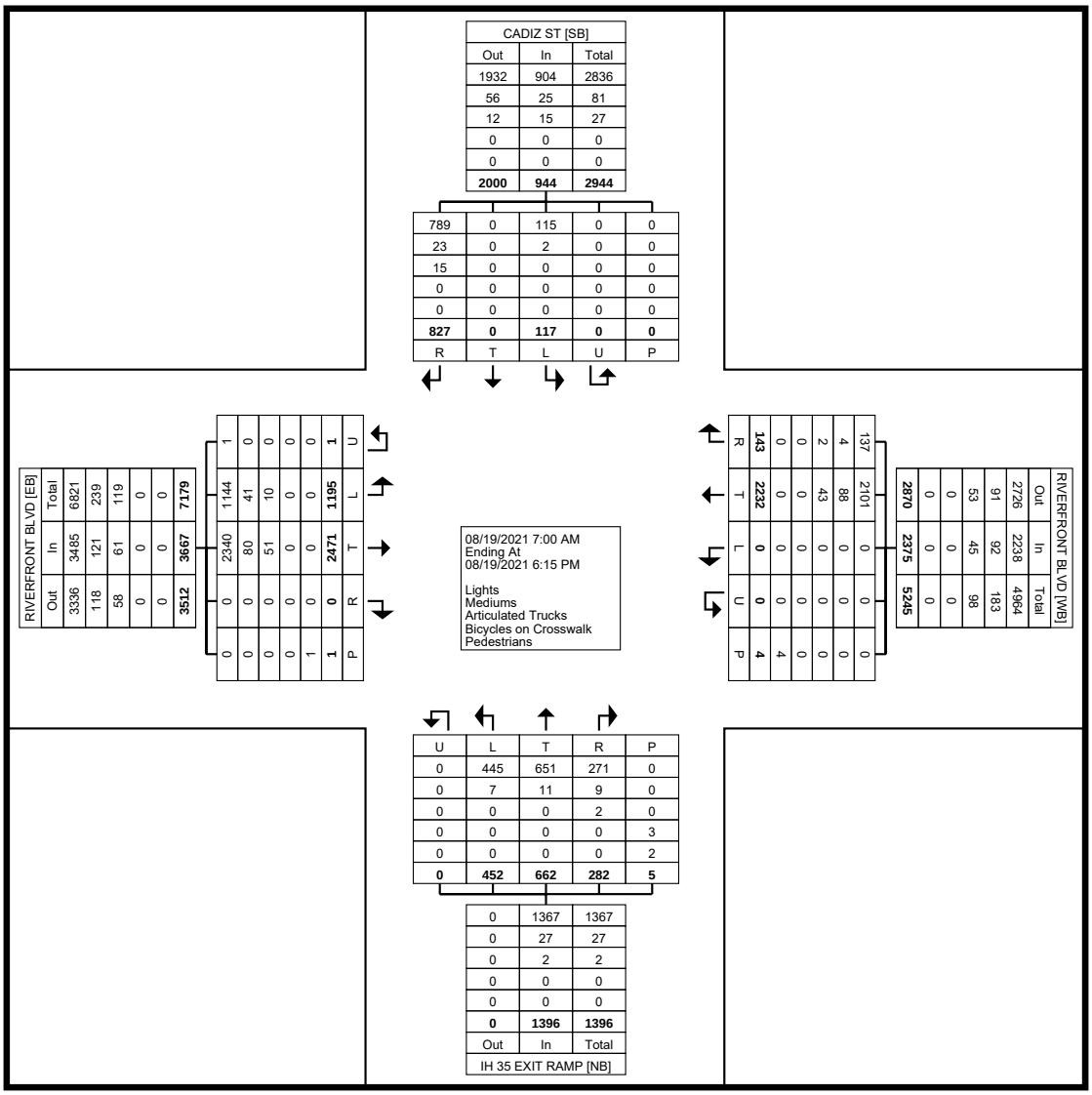
Start Time	CADIZ ST Southbound						RIVERFRONT BLVD Westbound						IH 35 EXIT RAMP Northbound						RIVERFRONT BLVD Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	2	0	53	0	0	55	0	127	3	0	0	130	41	33	14	0	1	88	13	54	0	0	0	67	340
7:15 AM	3	0	42	0	0	45	0	200	6	0	0	206	36	39	15	0	0	90	17	84	0	0	0	101	442
7:30 AM	3	0	64	0	0	67	0	207	7	0	0	214	47	45	18	0	0	110	26	53	0	0	0	79	470
7:45 AM	2	0	54	0	0	56	0	234	6	0	0	240	53	64	15	0	0	132	34	68	0	0	0	102	530
Hourly Total	10	0	213	0	0	223	0	768	22	0	0	790	177	181	62	0	1	420	90	259	0	0	0	349	1782
8:00 AM	8	0	50	0	0	58	0	236	11	0	0	247	41	66	11	0	2	118	47	96	0	0	0	143	566
8:15 AM	1	0	71	0	0	72	0	193	4	0	1	197	29	39	13	0	0	81	31	75	0	0	0	106	456
8:30 AM	7	0	53	0	0	60	0	200	7	0	0	207	30	30	14	0	1	74	25	62	0	0	0	87	428
8:45 AM	1	0	46	0	0	47	0	227	10	0	0	237	29	37	19	0	0	85	27	63	0	0	0	90	459
Hourly Total	17	0	220	0	0	237	0	856	32	0	1	888	129	172	57	0	3	358	130	296	0	0	0	426	1909
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	4	0	61	0	0	65	0	74	10	0	0	84	23	22	19	0	1	64	127	214	0	0	0	341	554
4:15 PM	11	0	48	0	0	59	0	78	10	0	1	88	12	29	16	0	0	57	90	233	0	0	0	323	527
4:30 PM	18	0	54	0	0	72	0	99	16	0	0	115	19	36	20	0	0	75	115	235	0	0	1	350	612
4:45 PM	8	0	42	0	0	50	0	89	8	0	0	97	27	70	31	0	0	128	131	267	0	1	0	399	674
Hourly Total	41	0	205	0	0	246	0	340	44	0	1	384	81	157	86	0	1	324	463	949	0	1	1	1413	2367
5:00 PM	10	0	55	0	0	65	0	86	12	0	2	98	19	36	21	0	0	76	138	240	0	0	0	378	617
5:15 PM	13	0	50	0	0	63	0	64	12	0	0	76	13	48	25	0	0	86	141	316	0	0	0	457	682
5:30 PM	14	0	46	0	0	60	0	64	13	0	0	77	21	37	15	0	0	73	141	213	0	0	0	354	564
5:45 PM	12	0	38	0	0	50	0	54	8	0	0	62	12	31	16	0	0	59	92	198	0	0	0	290	461
Hourly Total	49	0	189	0	0	238	0	268	45	0	2	313	65	152	77	0	0	294	512	967	0	0	0	1479	2324
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	117	0	827	0	0	944	0	2232	143	0	4	2375	452	662	282	0	5	1396	1195	2471	0	1	1	3667	8382
Approach %	12.4	0.0	87.6	0.0	-	-	0.0	94.0	6.0	0.0	-	-	32.4	47.4	20.2	0.0	-	-	32.6	67.4	0.0	0.0	-	-	-
Total %	1.4	0.0	9.9	0.0	-	11.3	0.0	26.6	1.7	0.0	-	28.3	5.4	7.9	3.4	0.0	-	16.7	14.3	29.5	0.0	0.0	-	43.7	-
Lights	115	0	789	0	-	904	0	2101	137	0	-	2238	445	651	271	0	-	1367	1144	2340	0	1	-	3485	7994
% Lights	98.3	-	95.4	-	-	95.8	-	94.1	95.8	-	-	94.2	98.5	98.3	96.1	-	-	97.9	95.7	94.7	-	100.0	-	95.0	95.4
Mediums	2	0	23	0	-	25	0	88	4	0	-	92	7	11	9	0	-	27	41	80	0	0	-	121	265
% Mediums	1.7	-	2.8	-	-	2.6	-	3.9	2.8	-	-	3.9	1.5	1.7	3.2	-	-	1.9	3.4	3.2	-	0.0	-	3.3	3.2
Articulated Trucks	0	0	15	0	-	15	0	43	2	0	-	45	0	0	2	0	-	2	10	51	0	0	-	61	123
% Articulated Trucks	0.0	-	1.8	-	-	1.6	-	1.9	1.4	-	-	1.9	0.0	0.0	0.7	-	-	0.1	0.8	2.1	-	0.0	-	1.7	1.5
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	60.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	2	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	40.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: RIVERFRONT BLVD @ CADIZ ST
Site Code:
Start Date: 08/19/2021
Page No: 2



Turning Movement Data Plot

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: RIVERFRONT BLVD @ CADIZ ST
Site Code:
Start Date: 08/19/2021

Turning Movement Peak Hour Data (7:30 AM)

Start Time	CADIZ ST Southbound						RIVERFRONT BLVD Westbound						IH 35 EXIT RAMP Northbound						RIVERFRONT BLVD Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:30 AM	3	0	64	0	0	67	0	207	7	0	0	214	47	45	18	0	0	110	26	53	0	0	0	79	470
7:45 AM	2	0	54	0	0	56	0	234	6	0	0	240	53	64	15	0	0	132	34	68	0	0	0	102	530
8:00 AM	8	0	50	0	0	58	0	236	11	0	0	247	41	66	11	0	2	118	47	96	0	0	0	143	566
8:15 AM	1	0	71	0	0	72	0	193	4	0	1	197	29	39	13	0	0	81	31	75	0	0	0	106	456
Total	14	0	239	0	0	253	0	870	28	0	1	898	170	214	57	0	2	441	138	292	0	0	0	430	2022
Approach %	5.5	0.0	94.5	0.0	-	-	0.0	96.9	3.1	0.0	-	-	38.5	48.5	12.9	0.0	-	-	32.1	67.9	0.0	0.0	-	-	-
Total %	0.7	0.0	11.8	0.0	-	12.5	0.0	43.0	1.4	0.0	-	44.4	8.4	10.6	2.8	0.0	-	21.8	6.8	14.4	0.0	0.0	-	21.3	-
PHF	0.438	0.000	0.842	0.000	-	0.878	0.000	0.922	0.636	0.000	-	0.909	0.802	0.811	0.792	0.000	-	0.835	0.734	0.760	0.000	0.000	-	0.752	0.893
Lights	14	0	219	0	-	233	0	821	26	0	-	847	168	212	54	0	-	434	130	255	0	0	-	385	1899
% Lights	100.0	-	91.6	-	-	92.1	-	94.4	92.9	-	-	94.3	98.8	99.1	94.7	-	-	98.4	94.2	87.3	-	-	-	89.5	93.9
Mediums	0	0	11	0	-	11	0	33	2	0	-	35	2	2	3	0	-	7	8	23	0	0	-	31	84
% Mediums	0.0	-	4.6	-	-	4.3	-	3.8	7.1	-	-	3.9	1.2	0.9	5.3	-	-	1.6	5.8	7.9	-	-	-	7.2	4.2
Articulated Trucks	0	0	9	0	-	9	0	16	0	0	-	16	0	0	0	0	-	0	0	14	0	0	-	14	39
% Articulated Trucks	0.0	-	3.8	-	-	3.6	-	1.8	0.0	-	-	1.8	0.0	0.0	0.0	-	-	0.0	0.0	4.8	-	-	-	3.3	1.9
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-

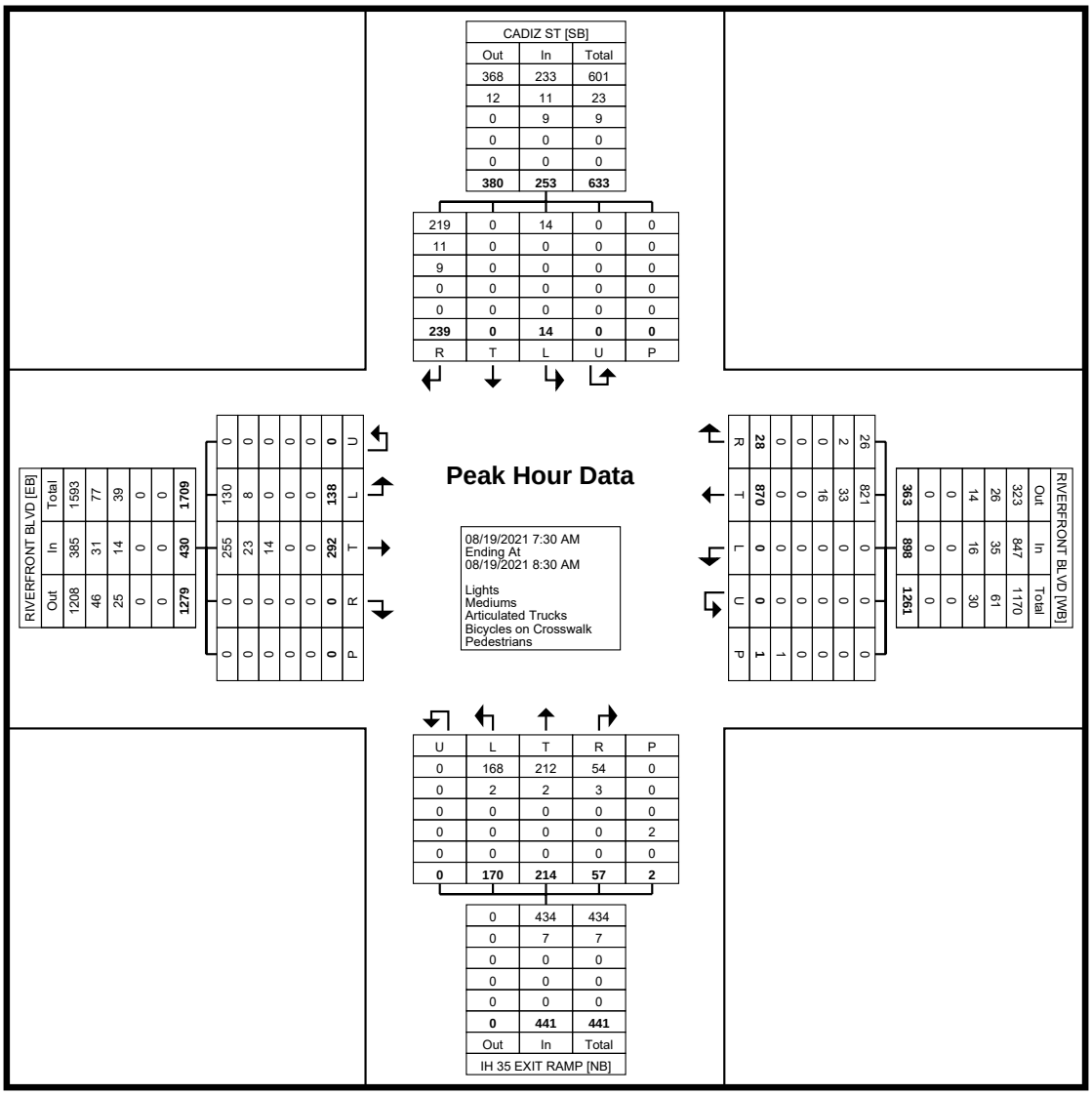
102 AM

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: RIVERFRONT BLVD @ CADIZ ST
Site Code:
Start Date: 08/19/2021
Page No: 4



Turning Movement Peak Hour Data Plot (7:30 AM)

GRAM Traffic NTX Inc.
1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: RIVERFRONT BLVD @ CADIZ ST
Site Code:
Start Date: 08/19/2021

Turning Movement Peak Hour Data (4:30 PM)

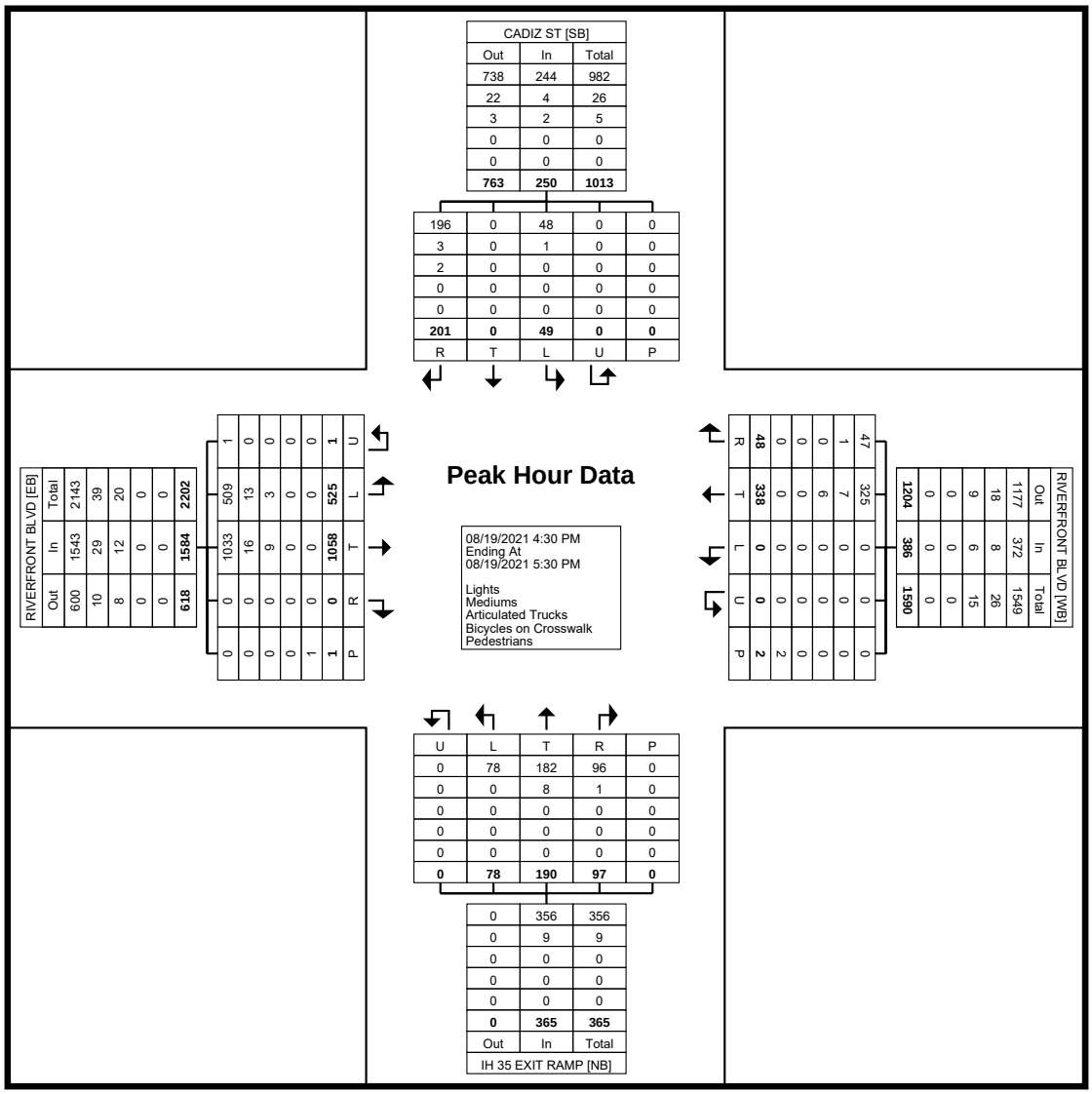
Start Time	CADIZ ST Southbound						RIVERFRONT BLVD Westbound						IH 35 EXIT RAMP Northbound						RIVERFRONT BLVD Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
4:30 PM	18	0	54	0	0	72	0	99	16	0	0	115	19	36	20	0	0	75	115	235	0	0	1	350	612
4:45 PM	8	0	42	0	0	50	0	89	8	0	0	97	27	70	31	0	0	128	131	267	0	1	0	399	674
5:00 PM	10	0	55	0	0	65	0	86	12	0	2	98	19	36	21	0	0	76	138	240	0	0	0	378	617
5:15 PM	13	0	50	0	0	63	0	64	12	0	0	76	13	48	25	0	0	86	141	316	0	0	0	457	682
Total	49	0	201	0	0	250	0	338	48	0	2	386	78	190	97	0	0	365	525	1058	0	1	1	1584	2585
Approach %	19.6	0.0	80.4	0.0	-	-	0.0	87.6	12.4	0.0	-	-	21.4	52.1	26.6	0.0	-	-	33.1	66.8	0.0	0.1	-	-	-
Total %	1.9	0.0	7.8	0.0	-	9.7	0.0	13.1	1.9	0.0	-	14.9	3.0	7.4	3.8	0.0	-	14.1	20.3	40.9	0.0	0.0	-	61.3	-
PHF	0.681	0.000	0.914	0.000	-	0.868	0.000	0.854	0.750	0.000	-	0.839	0.722	0.679	0.782	0.000	-	0.713	0.931	0.837	0.000	0.250	-	0.867	0.948
Lights	48	0	196	0	-	244	0	325	47	0	-	372	78	182	96	0	-	356	509	1033	0	1	-	1543	2515
% Lights	98.0	-	97.5	-	-	97.6	-	96.2	97.9	-	-	96.4	100.0	95.8	99.0	-	-	97.5	97.0	97.6	-	100.0	-	97.4	97.3
Mediums	1	0	3	0	-	4	0	7	1	0	-	8	0	8	1	0	-	9	13	16	0	0	-	29	50
% Mediums	2.0	-	1.5	-	-	1.6	-	2.1	2.1	-	-	2.1	0.0	4.2	1.0	-	-	2.5	2.5	1.5	-	0.0	-	1.8	1.9
Articulated Trucks	0	0	2	0	-	2	0	6	0	0	-	6	0	0	0	0	-	0	3	9	0	0	-	12	20
% Articulated Trucks	0.0	-	1.0	-	-	0.8	-	1.8	0.0	-	-	1.6	0.0	0.0	0.0	-	-	0.0	0.6	0.9	-	0.0	-	0.8	0.8
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	-	-	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: RIVERFRONT BLVD @ CADIZ ST
Site Code:
Start Date: 08/19/2021
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

Count Name: RIVERFRONT BLVD @ DEARBORN ST
Site Code:
Start Date: 08/19/2021
Page No: 1

Turning Movement Data

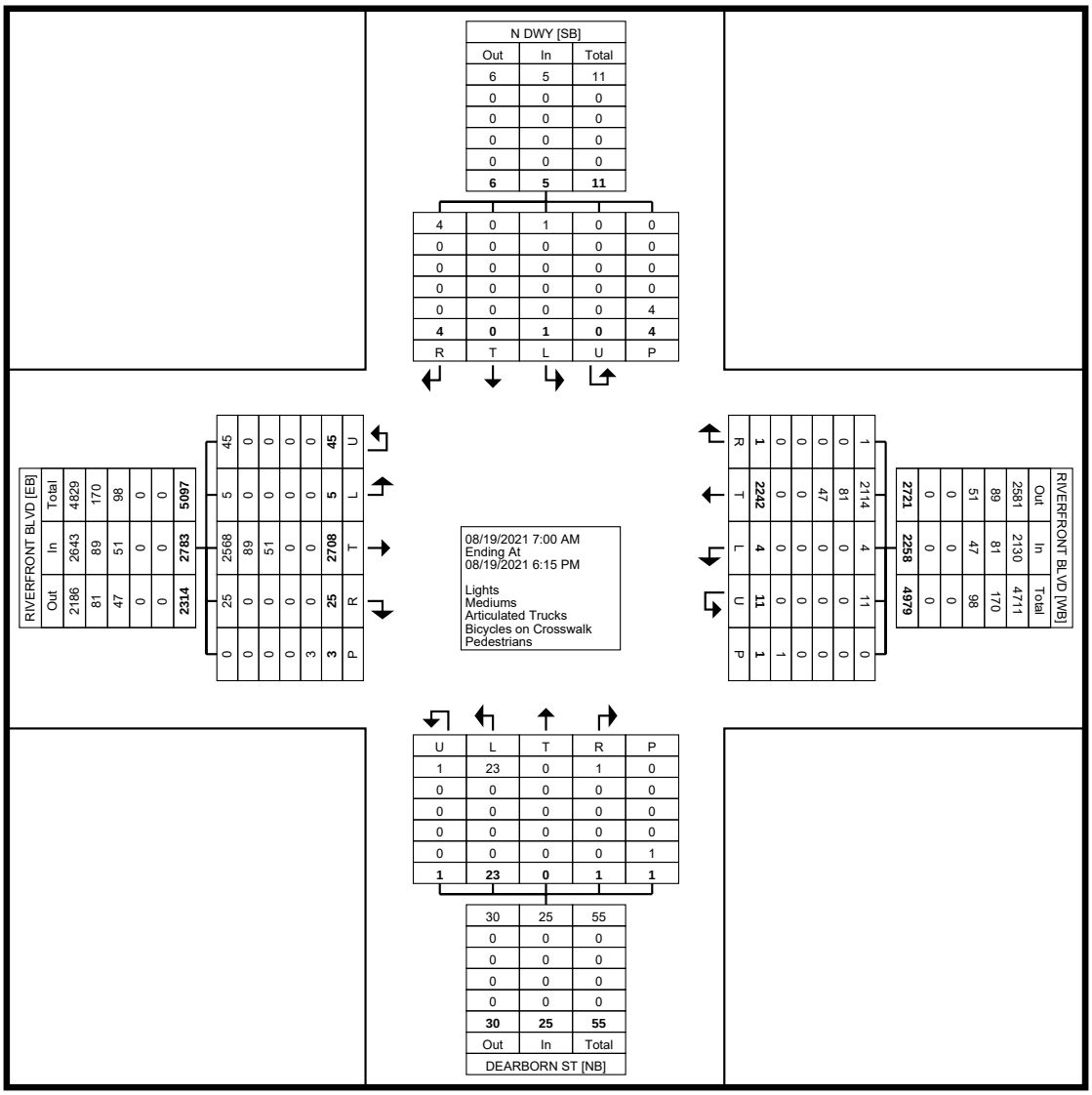
Start Time	N DWY Southbound						RIVERFRONT BLVD Westbound						DEARBORN ST Northbound						RIVERFRONT BLVD Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	135	0	0	0	135	0	0	0	0	0	0	0	63	0	0	0	63	198
7:15 AM	0	0	0	0	0	0	2	198	0	0	0	200	2	0	0	0	0	2	0	94	2	1	0	97	299
7:30 AM	0	0	0	0	0	0	0	212	0	0	0	212	1	0	0	0	0	1	0	66	0	3	0	69	282
7:45 AM	0	0	0	0	0	0	0	240	0	0	0	240	1	0	0	0	0	1	0	86	1	4	0	91	332
Hourly Total	0	0	0	0	0	0	2	785	0	0	0	787	4	0	0	0	0	4	0	309	3	8	0	320	1111
8:00 AM	0	0	0	0	1	0	0	228	0	0	0	228	0	0	0	0	0	0	0	102	1	1	1	104	332
8:15 AM	0	0	0	0	0	0	0	191	0	0	0	191	2	0	0	0	0	2	0	79	3	1	0	83	276
8:30 AM	0	0	0	0	2	0	0	221	0	0	0	221	0	0	0	0	0	0	0	77	5	0	0	82	303
8:45 AM	0	0	0	0	0	0	0	208	0	0	1	208	2	0	0	0	1	2	0	68	1	4	0	73	283
Hourly Total	0	0	0	0	3	0	0	848	0	0	1	848	4	0	0	0	1	4	0	326	10	6	1	342	1194
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	1	0	0	1	0	75	1	0	0	76	0	0	0	0	0	0	0	218	3	4	0	225	302
4:15 PM	1	0	1	0	0	2	0	67	0	0	0	67	5	0	0	1	0	6	2	230	2	5	0	239	314
4:30 PM	0	0	0	0	0	0	0	102	0	1	0	103	5	0	0	0	0	5	0	281	1	3	1	285	393
4:45 PM	0	0	0	0	0	0	0	92	0	1	0	93	1	0	0	0	0	1	0	300	2	4	1	306	400
Hourly Total	1	0	2	0	0	3	0	336	1	2	0	339	11	0	0	1	0	12	2	1029	8	16	2	1055	1409
5:00 PM	0	0	1	0	1	1	0	88	0	3	0	91	1	0	0	0	0	1	1	245	3	5	0	254	347
5:15 PM	0	0	0	0	0	0	1	60	0	1	0	62	1	0	1	0	0	2	0	328	0	5	0	333	397
5:30 PM	0	0	0	0	0	0	0	70	0	3	0	73	0	0	0	0	0	0	1	257	0	1	0	259	332
5:45 PM	0	0	1	0	0	1	1	55	0	2	0	58	2	0	0	0	0	2	1	214	1	4	0	220	281
Hourly Total	0	0	2	0	1	2	2	273	0	9	0	284	4	0	1	0	0	5	3	1044	4	15	0	1066	1357
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	1	0	4	0	4	5	4	2242	1	11	1	2258	23	0	1	1	1	25	5	2708	25	45	3	2783	5071
Approach %	20.0	0.0	80.0	0.0	-	-	0.2	99.3	0.0	0.5	-	-	92.0	0.0	4.0	4.0	-	-	0.2	97.3	0.9	1.6	-	-	-
Total %	0.0	0.0	0.1	0.0	-	0.1	0.1	44.2	0.0	0.2	-	44.5	0.5	0.0	0.0	0.0	-	0.5	0.1	53.4	0.5	0.9	-	54.9	-
Lights	1	0	4	0	-	5	4	2114	1	11	-	2130	23	0	1	1	-	25	5	2568	25	45	-	2643	4803
% Lights	100.0	-	100.0	-	-	100.0	100.0	94.3	100.0	100.0	-	94.3	100.0	-	100.0	100.0	-	100.0	100.0	94.8	100.0	100.0	-	95.0	94.7
Mediums	0	0	0	0	-	0	0	81	0	0	-	81	0	0	0	0	-	0	0	89	0	0	-	89	170
% Mediums	0.0	-	0.0	-	-	0.0	0.0	3.6	0.0	0.0	-	3.6	0.0	-	0.0	0.0	-	0.0	0.0	3.3	0.0	0.0	-	3.2	3.4
Articulated Trucks	0	0	0	0	-	0	0	47	0	0	-	47	0	0	0	0	-	0	0	51	0	0	-	51	98
% Articulated Trucks	0.0	-	0.0	-	-	0.0	0.0	2.1	0.0	0.0	-	2.1	0.0	-	0.0	0.0	-	0.0	0.0	1.9	0.0	0.0	-	1.8	1.9
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	4	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: RIVERFRONT BLVD @ DEARBORN ST
Site Code:
Start Date: 08/19/2021
Page No: 2



Turning Movement Data Plot

202 AM

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: RIVERFRONT BLVD @ DEARBORN ST
Site Code:
Start Date: 08/19/2021

Turning Movement Peak Hour Data (7:15 AM)

Start Time	N DWY Southbound						RIVERFRONT BLVD Westbound						DEARBORN ST Northbound						RIVERFRONT BLVD Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
7:15 AM	0	0	0	0	0	0	2	198	0	0	0	200	2	0	0	0	0	2	0	94	2	1	0	97	299
7:30 AM	0	0	0	0	0	0	0	212	0	0	0	212	1	0	0	0	0	1	0	66	0	3	0	69	282
7:45 AM	0	0	0	0	0	0	0	240	0	0	0	240	1	0	0	0	0	1	0	86	1	4	0	91	332
8:00 AM	0	0	0	0	1	0	0	228	0	0	0	228	0	0	0	0	0	0	0	102	1	1	1	104	332
Total	0	0	0	0	1	0	2	878	0	0	0	880	4	0	0	0	0	4	0	348	4	9	1	361	1245
Approach %	0.0	0.0	0.0	0.0	-	-	0.2	99.8	0.0	0.0	-	-	100.0	0.0	0.0	0.0	-	-	0.0	96.4	1.1	2.5	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.2	70.5	0.0	0.0	-	70.7	0.3	0.0	0.0	0.0	-	0.3	0.0	28.0	0.3	0.7	-	29.0	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.250	0.915	0.000	0.000	-	0.917	0.500	0.000	0.000	0.000	-	0.500	0.000	0.853	0.500	0.563	-	0.868	0.938
Lights	0	0	0	0	-	0	2	829	0	0	-	831	4	0	0	0	-	4	0	312	4	9	-	325	1160
% Lights	-	-	-	-	-	-	100.0	94.4	-	-	-	94.4	100.0	-	-	-	-	100.0	-	89.7	100.0	100.0	-	90.0	93.2
Mediums	0	0	0	0	-	0	0	35	0	0	-	35	0	0	0	0	-	0	0	24	0	0	-	24	59
% Mediums	-	-	-	-	-	-	0.0	4.0	-	-	-	4.0	0.0	-	-	-	-	0.0	-	6.9	0.0	0.0	-	6.6	4.7
Articulated Trucks	0	0	0	0	-	0	0	14	0	0	-	14	0	0	0	0	-	0	0	12	0	0	-	12	26
% Articulated Trucks	-	-	-	-	-	-	0.0	1.6	-	-	-	1.6	0.0	-	-	-	-	0.0	-	3.4	0.0	0.0	-	3.3	2.1
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

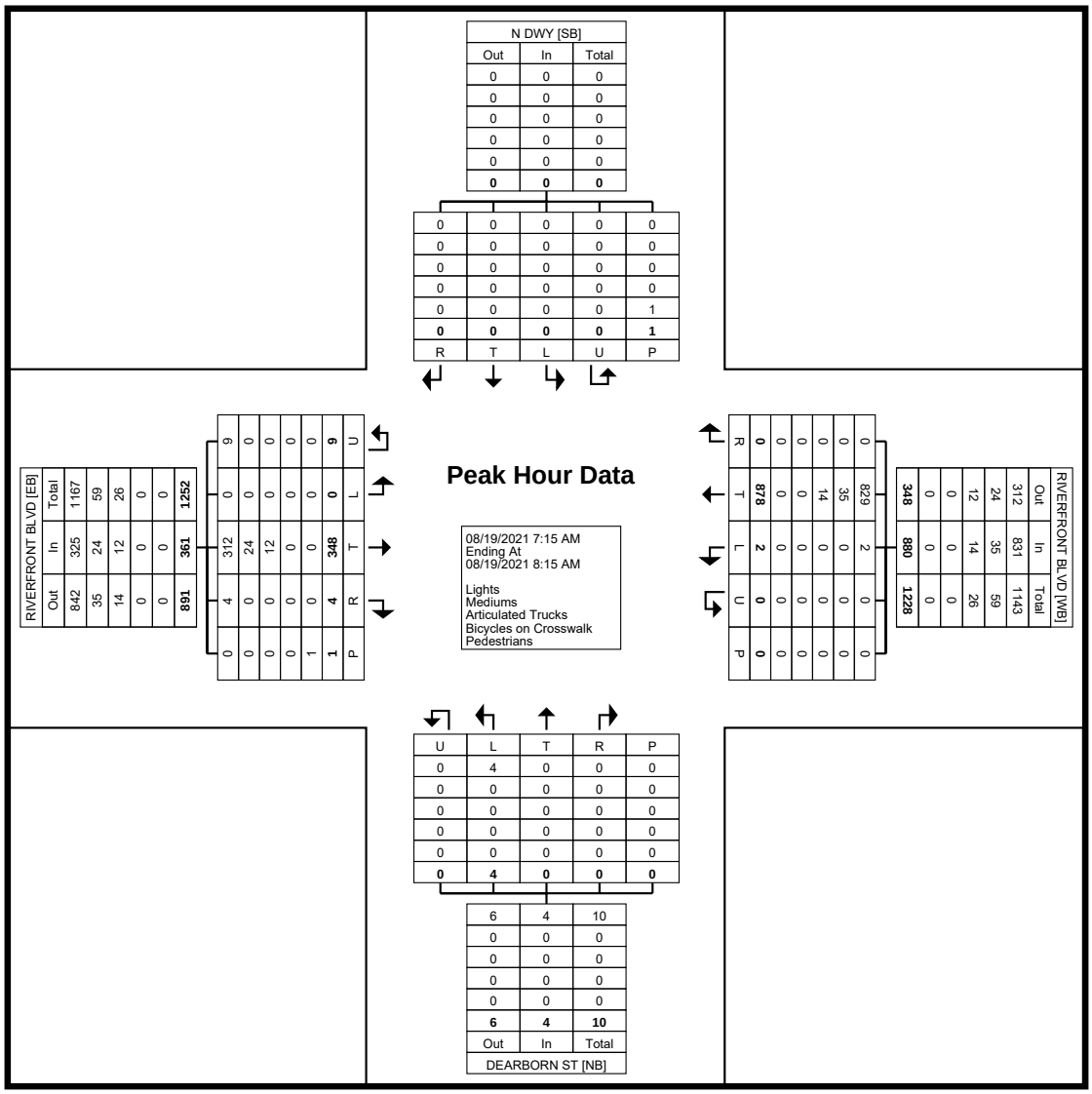
202 AM

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: RIVERFRONT BLVD @ DEARBORN ST
Site Code:
Start Date: 08/19/2021
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

Count Name: RIVERFRONT BLVD @ DEARBORN ST
Site Code:
Start Date: 08/19/2021

Turning Movement Peak Hour Data (4:30 PM)

Start Time	N DWY Southbound						RIVERFRONT BLVD Westbound						DEARBORN ST Northbound						RIVERFRONT BLVD Eastbound						Int. Total
	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	Left	Thru	Right	U-Turn	Peds	App. Total	
4:30 PM	0	0	0	0	0	0	0	102	0	1	0	103	5	0	0	0	0	5	0	281	1	3	1	285	393
4:45 PM	0	0	0	0	0	0	0	92	0	1	0	93	1	0	0	0	0	1	0	300	2	4	1	306	400
5:00 PM	0	0	1	0	1	1	0	88	0	3	0	91	1	0	0	0	0	1	1	245	3	5	0	254	347
5:15 PM	0	0	0	0	0	0	1	60	0	1	0	62	1	0	1	0	0	2	0	328	0	5	0	333	397
Total	0	0	1	0	1	1	1	342	0	6	0	349	8	0	1	0	0	9	1	1154	6	17	2	1178	1537
Approach %	0.0	0.0	100.0	0.0	-	-	0.3	98.0	0.0	1.7	-	-	88.9	0.0	11.1	0.0	-	-	0.1	98.0	0.5	1.4	-	-	-
Total %	0.0	0.0	0.1	0.0	-	0.1	0.1	22.3	0.0	0.4	-	22.7	0.5	0.0	0.1	0.0	-	0.6	0.1	75.1	0.4	1.1	-	76.6	-
PHF	0.000	0.000	0.250	0.000	-	0.250	0.250	0.838	0.000	0.500	-	0.847	0.400	0.000	0.250	0.000	-	0.450	0.250	0.880	0.500	0.850	-	0.884	0.961
Lights	0	0	1	0	-	1	1	328	0	6	-	335	8	0	1	0	-	9	1	1126	6	17	-	1150	1495
% Lights	-	-	100.0	-	-	100.0	100.0	95.9	-	100.0	-	96.0	100.0	-	100.0	-	-	100.0	100.0	97.6	100.0	100.0	-	97.6	97.3
Mediums	0	0	0	0	-	0	0	7	0	0	-	7	0	0	0	0	-	0	0	19	0	0	-	19	26
% Mediums	-	-	0.0	-	-	0.0	0.0	2.0	-	0.0	-	2.0	0.0	-	0.0	-	-	0.0	0.0	1.6	0.0	0.0	-	1.6	1.7
Articulated Trucks	0	0	0	0	-	0	0	7	0	0	-	7	0	0	0	0	-	0	0	9	0	0	-	9	16
% Articulated Trucks	-	-	0.0	-	-	0.0	0.0	2.0	-	0.0	-	2.0	0.0	-	0.0	-	-	0.0	0.0	0.8	0.0	0.0	-	0.8	1.0
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Bicycles on Crosswalk	-	-	-	-	0.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

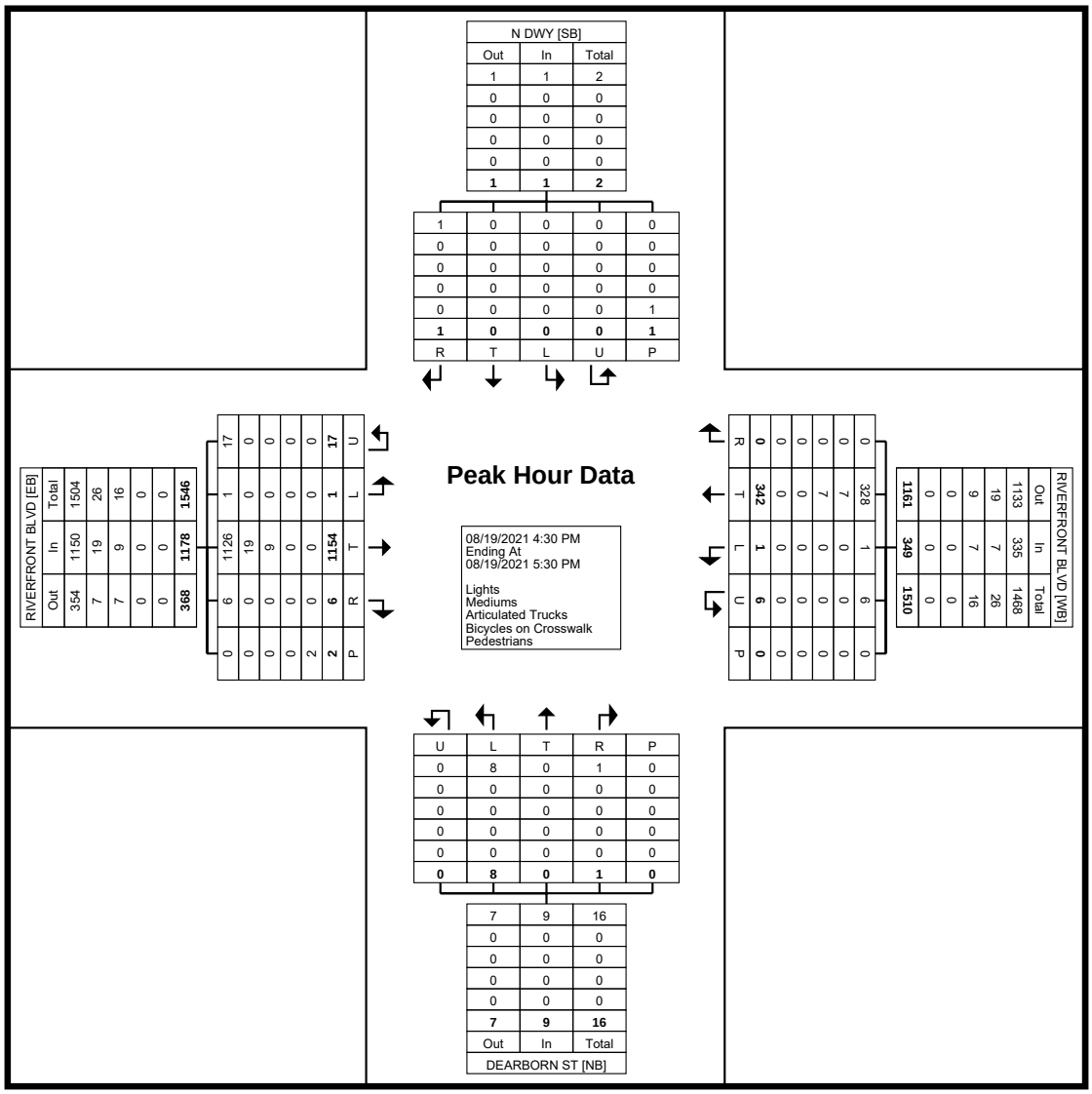
202 PM

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: RIVERFRONT BLVD @ DEARBORN ST
Site Code:
Start Date: 08/19/2021
Page No: 6



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

DEARBORN ST N OF ROCK ISLAND ST

Start Date: 8/19/2021
Start Time: 12:00:00 AM
Site Code: 959

Collected by: Gram Traffic NTX Inc.
Ordered by: Christy Lambeth

Start Time	Eastbound		Westbound	
	15 Min Total	Hour Total	15 Min Total	Hour Total
12:00 AM	2		3	
12:15 AM	0		1	
12:30 AM	1		1	
12:45 AM	1	4	0	5
01:00 AM	2	4	0	2
01:15 AM	1	5	2	3
01:30 AM	3	7	4	6
01:45 AM	2	8	0	6
02:00 AM	4	**10**	4	**10**
02:15 AM	1	10	0	8
02:30 AM	1	8	0	4
02:45 AM	0	6	1	5
03:00 AM	0	2	1	2
03:15 AM	2	3	0	2
03:30 AM	1	3	0	2
03:45 AM	1	4	0	1
04:00 AM	0	4	2	2
04:15 AM	0	2	0	2
04:30 AM	0	1	1	3
04:45 AM	3	3	0	3
05:00 AM	3	6	3	4
05:15 AM	0	6	1	5
05:30 AM	1	7	0	4
05:45 AM	0	4	0	4
06:00 AM	0	1	1	2
06:15 AM	0	1	1	2
06:30 AM	1	1	0	2
06:45 AM	1	2	0	2
07:00 AM	0	2	0	1
07:15 AM	1	3	3	3
07:30 AM	2	4	1	4
07:45 AM	1	4	1	5
08:00 AM	0	4	1	6
08:15 AM	1	4	3	6
08:30 AM	2	4	5	10
08:45 AM	1	4	1	10
09:00 AM	3	7	1	10
09:15 AM	2	8	2	9
09:30 AM	2	8	3	7
09:45 AM	1	8	0	6
10:00 AM	3	8	2	7
10:15 AM	2	8	3	8
10:30 AM	2	8	2	7
10:45 AM	0	7	1	8
11:00 AM	2	6	2	8
11:15 AM	3	7	0	5
11:30 AM	4	9	1	4
11:45 AM	0	9	3	6

Start Time	Eastbound		Westbound	
	15 Min Total	Hour Total	15 Min Total	Hour Total
12:00 PM	2	9	0	4
12:15 PM	1	7	2	6
12:30 PM	3	6	6	11
12:45 PM	0	6	2	10
01:00 PM	0	4	1	11
01:15 PM	2	5	4	13
01:30 PM	2	4	3	10
01:45 PM	4	8	2	10
02:00 PM	1	9	6	**15**
02:15 PM	4	11	4	15
02:30 PM	4	13	2	14
02:45 PM	2	11	0	12
03:00 PM	1	11	4	10
03:15 PM	1	8	1	7
03:30 PM	1	5	3	8
03:45 PM	4	7	1	9
04:00 PM	0	6	5	10
04:15 PM	4	9	4	13
04:30 PM	8	**16**	1	11
04:45 PM	1	13	2	12
05:00 PM	1	14	3	10
05:15 PM	2	12	0	6
05:30 PM	0	4	1	6
05:45 PM	2	5	2	6
06:00 PM	2	6	1	4
06:15 PM	6	10	4	8
06:30 PM	1	11	2	9
06:45 PM	5	14	3	10
07:00 PM	0	12	0	9
07:15 PM	0	6	2	7
07:30 PM	4	9	2	7
07:45 PM	2	6	0	4
08:00 PM	0	6	3	7
08:15 PM	2	8	2	7
08:30 PM	1	5	2	7
08:45 PM	2	5	2	9
09:00 PM	2	7	6	12
09:15 PM	2	7	2	12
09:30 PM	1	7	1	11
09:45 PM	2	7	1	10
10:00 PM	1	6	4	8
10:15 PM	6	10	2	8
10:30 PM	2	11	1	8
10:45 PM	0	9	2	9
11:00 PM	2	10	2	7
11:15 PM	4	8	1	6
11:30 PM	0	6	1	6
11:45 PM	4	10	1	5
	NB	164	SB	167
	Total: 331			

RIVERFRONT BLVD N OF MEDIAN OPENING

Start Date: 8/19/2021
Start Time: 12:00:00 AM
Site Code: 903 902

Collected by: Gram Traffic NTX Inc.
Ordered by: Christy Lambeth

Start Time	Eastbound		Westbound	
	15 Min Total	Hour Total	15 Min Total	Hour Total
12:00 AM	17		11	
12:15 AM	18		12	
12:30 AM	16		2	
12:45 AM	9	60	4	29
01:00 AM	10	53	7	25
01:15 AM	11	46	10	23
01:30 AM	6	36	4	25
01:45 AM	10	37	8	29
02:00 AM	7	34	12	34
02:15 AM	6	29	10	34
02:30 AM	11	34	3	33
02:45 AM	12	36	14	39
03:00 AM	3	32	14	41
03:15 AM	7	33	8	39
03:30 AM	2	24	9	45
03:45 AM	14	26	4	35
04:00 AM	5	28	7	28
04:15 AM	10	31	10	30
04:30 AM	10	39	21	42
04:45 AM	12	37	26	64
05:00 AM	19	51	22	79
05:15 AM	10	51	42	111
05:30 AM	18	59	70	160
05:45 AM	33	80	74	208
06:00 AM	40	101	88	274
06:15 AM	72	163	102	334
06:30 AM	50	195	129	393
06:45 AM	58	220	144	463
07:00 AM	72	252	140	515
07:15 AM	106	286	204	617
07:30 AM	82	318	208	696
07:45 AM	96	356	232	784
08:00 AM	120	**404**	226	870
08:15 AM	88	386	202	868
08:30 AM	99	403	228	**888**
08:45 AM	74	381	214	870
09:00 AM	98	359	140	784
09:15 AM	100	371	88	670
09:30 AM	70	342	70	512
09:45 AM	68	336	94	392
10:00 AM	58	296	63	315
10:15 AM	56	252	52	279
10:30 AM	90	272	57	266
10:45 AM	85	289	57	229
11:00 AM	90	321	55	221
11:15 AM	92	357	68	237
11:30 AM	91	358	64	244
11:45 AM	126	399	68	255

Start Time	Eastbound		Westbound	
	15 Min Total	Hour Total	15 Min Total	Hour Total
12:00 PM	162	471	70	270
12:15 PM	172	551	56	258
12:30 PM	208	668	64	258
12:45 PM	172	714	64	254
01:00 PM	132	684	69	253
01:15 PM	104	616	72	269
01:30 PM	131	539	81	286
01:45 PM	122	489	68	290
02:00 PM	106	463	74	295
02:15 PM	139	498	79	302
02:30 PM	176	543	96	317
02:45 PM	218	639	72	321
03:00 PM	192	725	81	328
03:15 PM	230	816	58	307
03:30 PM	236	876	76	287
03:45 PM	287	945	76	291
04:00 PM	248	1001	86	296
04:15 PM	238	1009	77	315
04:30 PM	273	1046	110	349
04:45 PM	314	1073	98	371
05:00 PM	252	1077	92	**377**
05:15 PM	348	**1187**	72	372
05:30 PM	236	1150	71	333
05:45 PM	237	1073	64	299
06:00 PM	266	1087	52	259
06:15 PM	240	979	61	248
06:30 PM	136	879	46	223
06:45 PM	150	792	54	213
07:00 PM	131	657	38	199
07:15 PM	133	550	42	180
07:30 PM	103	517	53	187
07:45 PM	86	453	42	175
08:00 PM	66	388	70	207
08:15 PM	70	325	36	201
08:30 PM	54	276	38	186
08:45 PM	64	254	40	184
09:00 PM	67	255	39	153
09:15 PM	76	261	46	163
09:30 PM	70	277	44	169
09:45 PM	64	277	44	173
10:00 PM	59	269	34	168
10:15 PM	50	243	30	152
10:30 PM	54	227	29	137
10:45 PM	41	204	21	114
11:00 PM	42	187	24	104
11:15 PM	45	182	18	92
11:30 PM	31	159	18	81
11:45 PM	20	138	25	85
	EB	9,308	WB	6,167
	Total: 15,475			

Appendix C
Historical Traffic Volumes

Histrocial Traffic Volumes

Riverfront Boulevard, Northwest of Site

Year	AADT	% Growth	Traffic Count	% Growth
2019	13,782	-8.8%	17,222	-5.5%
2014	21,898	1.3%	22,810	
2004	19,150			
	2004 - 2019:	-2.2%		-5.5%

Traffic Volumes obtained from TxDOT TCDS on August 19, 2021.

Riverfront Boulevard, Southwest of Site

Year	AADT	% Growth	Traffic Count	% Growth
2019	13,483	-1.2%	16,912	2.6%
2014	14,303	6.0%	14,899	
2009	10,670	-9.0%		
2004	17,060			
	2004 - 2019:	-1.6%		2.6%

Traffic Volumes obtained from TxDOT TCDS on August 19, 2021.

Riverfront Boulevard, East of S. Houston Street

Year	AADT	% Growth	Traffic Count	% Growth
2019	20,087	-6.7%	25,203	-3.1%
2014	28,374	12.0%	29,556	
2009	16,120	-10.5%		
2004	28,040			
	2004 - 2019:	-2.2%		-3.1%

Traffic Volumes obtained from TxDOT TCDS on August 19, 2021.

Assume a 2.0% annual growth rate for TIA

Appendix D
COVID Factor

COVID Adjustment Factor

Riverfront Blvd. East of Cadiz St.

	2019 TxDOT Link Count (EB + WB)	2021 Counts (EB + WB)	Difference	% Difference	COVID Factor
AM	1,496	1,251	-245	-19.58%	1.20
(PM)	(1,644)	(1,372)	-(272)	-19.83%	1.20

Riverfront Blvd. West of N. Corinth St.

	2019 TxDOT Link Count (EB + WB)	2021 Counts (EB + WB)	Difference	% Difference	COVID Factor
AM	1,442	1,251	-191	-15.27%	1.15
(PM)	(1,540)	(1,372)	-(168)	-12.24%	1.12

COVID Factor Used in TIA:

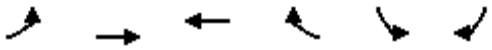
AM - 1.2

PM - 1.2

Appendix E
Synchro Analysis

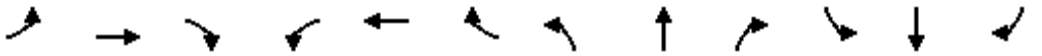
Synchro Scenarios:

1. 2021 Existing Adjusted AM
2. 2021 Existing Adjusted PM
3. 2023 Bkgd AM
4. 2023 Bkgd PM
5. 2023 Bkgd + Site AM
6. 2023 Bkgd + Site PM
7. 2028 Bkgd AM
8. 2028 Bkgd PM
9. 2028 Bkgd + Site AM
10. 2028 Bkgd + Site PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	424	1504	0	89	59
Future Volume (vph)	0	424	1504	0	89	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.91		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6408	5085		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6408	5085		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	461	1635	0	97	64
RTOR Reduction (vph)	0	0	0	0	0	42
Lane Group Flow (vph)	0	461	1635	0	97	22
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2		4	
Permitted Phases		6				4
Actuated Green, G (s)		87.0	87.0		25.0	25.0
Effective Green, g (s)		87.0	87.0		25.0	25.0
Actuated g/C Ratio		0.72	0.72		0.21	0.21
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		4645	3686		368	329
v/s Ratio Prot		0.07	c0.32		c0.05	
v/s Ratio Perm						0.01
v/c Ratio		0.10	0.44		0.26	0.07
Uniform Delay, d1		4.9	6.7		39.8	38.1
Progression Factor		1.00	0.39		1.00	1.00
Incremental Delay, d2		0.0	0.3		1.7	0.4
Delay (s)		4.9	2.9		41.5	38.5
Level of Service		A	A		D	D
Approach Delay (s)		4.9	2.9		40.3	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	166	350	0	0	1044	34	204	257	68	17	0	287
Future Volume (vph)	166	350	0	0	1044	34	204	257	68	17	0	287
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Util. Factor	0.97	0.91			0.95	1.00	1.00	0.95		1.00		1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.97		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (prot)	3433	5085			3539	1583	1770	3428		1770		1583
Flt Permitted	0.09	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (perm)	320	5085			3539	1583	1770	3428		1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	180	380	0	0	1135	37	222	279	74	18	0	312
RTOR Reduction (vph)	0	0	0	0	0	22	0	20	0	0	0	120
Lane Group Flow (vph)	180	380	0	0	1135	15	222	334	0	18	0	192
Turn Type	pm+pt	NA			NA	Perm	Split	NA		Prot		Perm
Protected Phases	1	6			2		3	3		4		
Permitted Phases	6					2						4
Actuated Green, G (s)	58.2	58.2			49.2	49.2	22.5	22.5		26.9		26.9
Effective Green, g (s)	58.2	58.2			49.2	49.2	22.5	22.5		26.9		26.9
Actuated g/C Ratio	0.49	0.49			0.41	0.41	0.19	0.19		0.22		0.22
Clearance Time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Grp Cap (vph)	284	2466			1450	649	331	642		396		354
v/s Ratio Prot	c0.03	0.07			c0.32		c0.13	0.10		0.01		
v/s Ratio Perm	0.28					0.01						c0.12
v/c Ratio	0.63	0.15			0.78	0.02	0.67	0.52		0.05		0.54
Uniform Delay, d1	22.9	17.2			30.8	21.1	45.3	43.9		36.5		41.1
Progression Factor	0.88	0.86			1.00	1.00	1.00	1.00		1.00		1.00
Incremental Delay, d2	10.3	0.1			4.3	0.1	10.4	3.0		0.2		5.8
Delay (s)	30.5	14.9			35.0	21.2	55.7	46.9		36.7		46.9
Level of Service	C	B			D	C	E	D		D		D
Approach Delay (s)		19.9			34.6			50.3			46.4	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	36.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	418	5	2	1054	0	5	0	0	0	0	0
Future Vol, veh/h	11	418	5	2	1054	0	5	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	454	5	2	1146	0	5	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1146	0	0	459	0	0	1055	1628	227	1401	1633	573
Stage 1	-	-	-	-	-	-	478	478	-	1150	1150	-
Stage 2	-	-	-	-	-	-	577	1150	-	251	483	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	605	-	-	1098	-	-	180	101	776	100	100	463
Stage 1	-	-	-	-	-	-	537	554	-	211	271	-
Stage 2	-	-	-	-	-	-	469	271	-	731	551	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	605	-	-	1098	-	-	176	98	776	98	97	463
Mov Cap-2 Maneuver	-	-	-	-	-	-	176	98	-	98	97	-
Stage 1	-	-	-	-	-	-	523	539	-	205	270	-
Stage 2	-	-	-	-	-	-	467	270	-	711	536	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	26.1	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	176	605	-	-	1098	-	-	-
HCM Lane V/C Ratio	0.031	0.02	-	-	0.002	-	-	-
HCM Control Delay (s)	26.1	11.1	-	-	8.3	0	-	0
HCM Lane LOS	D	B	-	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	5	7	0
Future Vol, veh/h	0	0	0	5	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	5	8	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	13	8	8	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	5	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1006	1074	1612	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	1018	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1006	1074	1612	-	-	-
Mov Cap-2 Maneuver	1006	-	-	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	1018	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1612	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

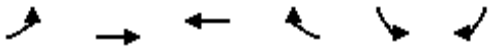
Intersection	
Int Delay, s/veh	0

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

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

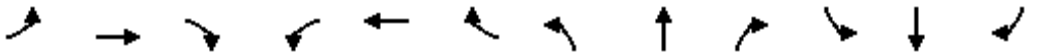
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1660	726	0	230	67
Future Volume (vph)	0	1660	726	0	230	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.91		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6408	5085		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6408	5085		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1804	789	0	250	73
RTOR Reduction (vph)	0	0	0	0	0	46
Lane Group Flow (vph)	0	1804	789	0	250	27
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2		4	
Permitted Phases		6				4
Actuated Green, G (s)		83.0	83.0		53.0	53.0
Effective Green, g (s)		83.0	83.0		53.0	53.0
Actuated g/C Ratio		0.58	0.58		0.37	0.37
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		3693	2930		651	582
v/s Ratio Prot		c0.28	0.16		c0.14	
v/s Ratio Perm						0.02
v/c Ratio		0.49	0.27		0.38	0.05
Uniform Delay, d1		18.0	15.3		33.5	29.3
Progression Factor		1.00	0.64		1.00	1.00
Incremental Delay, d2		0.5	0.2		1.7	0.1
Delay (s)		18.4	10.0		35.2	29.4
Level of Service		B	A		D	C
Approach Delay (s)		18.4	10.0		33.9	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	144.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	630	1270	0	0	406	58	94	228	116	59	0	241
Future Volume (vph)	630	1270	0	0	406	58	94	228	116	59	0	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Util. Factor	0.97	0.91			0.95	1.00	1.00	0.95		1.00		1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.95		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (prot)	3433	5085			3539	1583	1770	3360		1770		1583
Flt Permitted	0.32	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (perm)	1140	5085			3539	1583	1770	3360		1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	685	1380	0	0	441	63	102	248	126	64	0	262
RTOR Reduction (vph)	0	0	0	0	0	47	0	45	0	0	0	217
Lane Group Flow (vph)	685	1380	0	0	441	16	102	329	0	64	0	45
Turn Type	pm+pt	NA			NA	Perm	Split	NA		Prot		Perm
Protected Phases	1	6			2		3	3		4		
Permitted Phases	6					2						4
Actuated Green, G (s)	77.2	77.2			37.2	37.2	29.5	29.5		24.9		24.9
Effective Green, g (s)	77.2	77.2			37.2	37.2	29.5	29.5		24.9		24.9
Actuated g/C Ratio	0.54	0.54			0.26	0.26	0.20	0.20		0.17		0.17
Clearance Time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Grp Cap (vph)	1184	2726			914	408	362	688		306		273
v/s Ratio Prot	c0.14	0.27			0.12		0.06	c0.10		c0.04		
v/s Ratio Perm	c0.17					0.01						0.03
v/c Ratio	0.58	0.51			0.48	0.04	0.28	0.48		0.21		0.17
Uniform Delay, d1	20.6	21.3			45.2	40.0	48.3	50.5		51.1		50.7
Progression Factor	0.43	0.48			1.00	1.00	1.00	1.00		1.00		1.00
Incremental Delay, d2	1.9	0.6			1.8	0.2	1.9	2.4		1.5		1.3
Delay (s)	10.6	10.8			47.1	40.2	50.2	52.9		52.6		52.0
Level of Service	B	B			D	D	D	D		D		D
Approach Delay (s)		10.8			46.2			52.3			52.1	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	144.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	1385	7	8	410	0	10	0	1	0	0	1
Future Vol, veh/h	22	1385	7	8	410	0	10	0	1	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	1505	8	9	446	0	11	0	1	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	446	0	0	1513	0	0	1794	2017	753	1265	2025	223
Stage 1	-	-	-	-	-	-	1553	1553	-	464	464	-
Stage 2	-	-	-	-	-	-	241	464	-	801	1561	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1111	-	-	438	-	-	51	58	352	126	57	780
Stage 1	-	-	-	-	-	-	118	173	-	548	562	-
Stage 2	-	-	-	-	-	-	741	562	-	344	171	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1111	-	-	438	-	-	45	49	352	110	48	780
Mov Cap-2 Maneuver	-	-	-	-	-	-	45	49	-	110	48	-
Stage 1	-	-	-	-	-	-	102	149	-	473	547	-
Stage 2	-	-	-	-	-	-	720	547	-	296	148	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	100.7	9.6
HCM LOS			F	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	49	1111	-	-	438	-	-	780
HCM Lane V/C Ratio	0.244	0.022	-	-	0.02	-	-	0.001
HCM Control Delay (s)	100.7	8.3	-	-	13.4	0.2	-	9.6
HCM Lane LOS	F	A	-	-	B	A	-	A
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0.1	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	11	16	0
Future Vol, veh/h	0	0	0	11	16	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	12	17	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	29	17	17	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	12	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	986	1062	1600	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	986	1062	1600	-	-	-
Mov Cap-2 Maneuver	986	-	-	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	1011	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1600	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

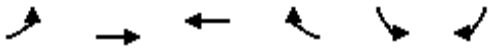
Intersection	
Int Delay, s/veh	0

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

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

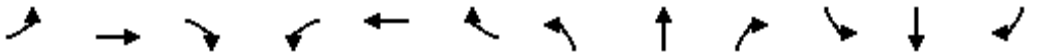
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	441	1564	0	92	61
Future Volume (vph)	0	441	1564	0	92	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.91		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6408	5085		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6408	5085		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	479	1700	0	100	66
RTOR Reduction (vph)	0	0	0	0	0	37
Lane Group Flow (vph)	0	479	1700	0	100	29
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2		4	
Permitted Phases		6				4
Actuated Green, G (s)		87.0	87.0		25.0	25.0
Effective Green, g (s)		87.0	87.0		25.0	25.0
Actuated g/C Ratio		0.72	0.72		0.21	0.21
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		4645	3686		368	329
v/s Ratio Prot		0.07	c0.33		c0.06	
v/s Ratio Perm						0.02
v/c Ratio		0.10	0.46		0.27	0.09
Uniform Delay, d1		4.9	6.8		39.9	38.3
Progression Factor		1.00	0.40		1.00	1.00
Incremental Delay, d2		0.0	0.3		1.8	0.5
Delay (s)		4.9	3.0		41.7	38.8
Level of Service		A	A		D	D
Approach Delay (s)		4.9	3.0		40.5	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	365	0	0	1086	35	212	267	71	17	0	298
Future Volume (vph)	172	365	0	0	1086	35	212	267	71	17	0	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Util. Factor	0.97	0.91			0.95	1.00	1.00	0.95		1.00		1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.97		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (prot)	3433	5085			3539	1583	1770	3428		1770		1583
Flt Permitted	0.08	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (perm)	272	5085			3539	1583	1770	3428		1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	397	0	0	1180	38	230	290	77	18	0	324
RTOR Reduction (vph)	0	0	0	0	0	22	0	20	0	0	0	116
Lane Group Flow (vph)	187	397	0	0	1180	16	230	347	0	18	0	208
Turn Type	pm+pt	NA			NA	Perm	Split	NA		Prot		Perm
Protected Phases	1	6			2		3	3		4		
Permitted Phases	6					2						4
Actuated Green, G (s)	58.2	58.2			49.2	49.2	22.5	22.5		26.9		26.9
Effective Green, g (s)	58.2	58.2			49.2	49.2	22.5	22.5		26.9		26.9
Actuated g/C Ratio	0.49	0.49			0.41	0.41	0.19	0.19		0.22		0.22
Clearance Time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Grp Cap (vph)	263	2466			1450	649	331	642		396		354
v/s Ratio Prot	c0.03	0.08			c0.33		c0.13	0.10		0.01		
v/s Ratio Perm	0.31					0.01						c0.13
v/c Ratio	0.71	0.16			0.81	0.02	0.69	0.54		0.05		0.59
Uniform Delay, d1	23.9	17.3			31.3	21.1	45.5	44.1		36.5		41.6
Progression Factor	0.89	0.86			1.00	1.00	1.00	1.00		1.00		1.00
Incremental Delay, d2	15.0	0.1			5.1	0.1	11.4	3.2		0.2		7.0
Delay (s)	36.2	14.9			36.5	21.2	57.0	47.3		36.7		48.6
Level of Service	D	B			D	C	E	D		D		D
Approach Delay (s)		21.7			36.0			51.0			48.0	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	434	5	2	1096	0	5	0	0	0	0	0
Future Vol, veh/h	11	434	5	2	1096	0	5	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	90	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	472	5	2	1191	0	5	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1191	0	0	477	0	0	1096	1691	236	1455	1696	596
Stage 1	-	-	-	-	-	-	496	496	-	1195	1195	-
Stage 2	-	-	-	-	-	-	600	1195	-	260	501	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	582	-	-	1082	-	-	168	92	766	91	92	447
Stage 1	-	-	-	-	-	-	524	544	-	198	258	-
Stage 2	-	-	-	-	-	-	455	258	-	722	541	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	582	-	-	1082	-	-	164	89	766	89	89	447
Mov Cap-2 Maneuver	-	-	-	-	-	-	164	89	-	89	89	-
Stage 1	-	-	-	-	-	-	509	529	-	192	257	-
Stage 2	-	-	-	-	-	-	454	257	-	702	526	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	27.7	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	164	582	-	-	1082	-	-	-
HCM Lane V/C Ratio	0.033	0.021	-	-	0.002	-	-	-
HCM Control Delay (s)	27.7	11.3	-	-	8.3	-	-	0
HCM Lane LOS	D	B	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	5	7	0
Future Vol, veh/h	0	0	0	5	7	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	5	8	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	13	8	8	0	-	0
Stage 1	8	-	-	-	-	-
Stage 2	5	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1006	1074	1612	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	1018	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1006	1074	1612	-	-	-
Mov Cap-2 Maneuver	1006	-	-	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	1018	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1612	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

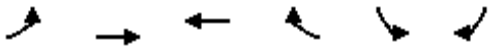
Intersection	
Int Delay, s/veh	0

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

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

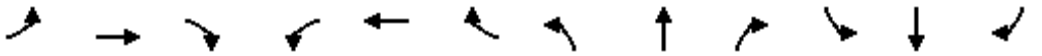
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1727	755	0	240	70
Future Volume (vph)	0	1727	755	0	240	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.91		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6408	5085		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6408	5085		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1877	821	0	261	76
RTOR Reduction (vph)	0	0	0	0	0	48
Lane Group Flow (vph)	0	1877	821	0	261	28
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2		4	
Permitted Phases		6				4
Actuated Green, G (s)		83.0	83.0		53.0	53.0
Effective Green, g (s)		83.0	83.0		53.0	53.0
Actuated g/C Ratio		0.58	0.58		0.37	0.37
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		3693	2930		651	582
v/s Ratio Prot		c0.29	0.16		c0.15	
v/s Ratio Perm						0.02
v/c Ratio		0.51	0.28		0.40	0.05
Uniform Delay, d1		18.3	15.4		33.7	29.3
Progression Factor		1.00	0.63		1.00	1.00
Incremental Delay, d2		0.5	0.2		1.8	0.2
Delay (s)		18.8	10.0		35.6	29.4
Level of Service		B	A		D	C
Approach Delay (s)		18.8	10.0		34.2	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	144.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	655	1321	0	0	422	60	97	237	121	61	0	251
Future Volume (vph)	655	1321	0	0	422	60	97	237	121	61	0	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Util. Factor	0.97	0.91			0.95	1.00	1.00	0.95		1.00		1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.95		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (prot)	3433	5085			3539	1583	1770	3360		1770		1583
Flt Permitted	0.30	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (perm)	1088	5085			3539	1583	1770	3360		1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	712	1436	0	0	459	65	105	258	132	66	0	273
RTOR Reduction (vph)	0	0	0	0	0	48	0	45	0	0	0	226
Lane Group Flow (vph)	712	1436	0	0	459	17	105	345	0	66	0	47
Turn Type	pm+pt	NA			NA	Perm	Split	NA		Prot		Perm
Protected Phases	1	6			2		3	3		4		
Permitted Phases	6					2						4
Actuated Green, G (s)	77.2	77.2			37.2	37.2	29.5	29.5		24.9		24.9
Effective Green, g (s)	77.2	77.2			37.2	37.2	29.5	29.5		24.9		24.9
Actuated g/C Ratio	0.54	0.54			0.26	0.26	0.20	0.20		0.17		0.17
Clearance Time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Grp Cap (vph)	1169	2726			914	408	362	688		306		273
v/s Ratio Prot	c0.15	0.28			0.13		0.06	c0.10		c0.04		
v/s Ratio Perm	c0.17					0.01						0.03
v/c Ratio	0.61	0.53			0.50	0.04	0.29	0.50		0.22		0.17
Uniform Delay, d1	21.0	21.6			45.5	40.0	48.4	50.7		51.2		50.8
Progression Factor	0.42	0.48			1.00	1.00	1.00	1.00		1.00		1.00
Incremental Delay, d2	2.1	0.6			2.0	0.2	2.0	2.6		1.6		1.4
Delay (s)	10.9	11.0			47.5	40.2	50.4	53.3		52.8		52.1
Level of Service	B	B			D	D	D	D		D		D
Approach Delay (s)		11.0			46.6			52.7			52.3	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	26.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	144.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	58.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑↳			↕			↕	
Traffic Vol, veh/h	22	1441	7	9	427	0	10	0	1	0	0	1
Future Vol, veh/h	22	1441	7	9	427	0	10	0	1	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	90	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	1566	8	10	464	0	11	0	1	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	464	0	0	1574	0	0	1866	2098	783	1315	2106	232
Stage 1	-	-	-	-	-	-	1614	1614	-	484	484	-
Stage 2	-	-	-	-	-	-	252	484	-	831	1622	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1094	-	-	415	-	-	45	51	337	116	51	770
Stage 1	-	-	-	-	-	-	108	161	-	533	550	-
Stage 2	-	-	-	-	-	-	730	550	-	330	160	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1094	-	-	415	-	-	38	41	337	98	41	770
Mov Cap-2 Maneuver	-	-	-	-	-	-	38	41	-	98	41	-
Stage 1	-	-	-	-	-	-	89	133	-	439	537	-
Stage 2	-	-	-	-	-	-	711	537	-	271	132	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	125.6	9.7
HCM LOS			F	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	41	1094	-	-	415	-	-	770
HCM Lane V/C Ratio	0.292	0.022	-	-	0.024	-	-	0.001
HCM Control Delay (s)	125.6	8.4	-	-	13.9	-	-	9.7
HCM Lane LOS	F	A	-	-	B	-	-	A
HCM 95th %tile Q(veh)	1	0.1	-	-	0.1	-	-	0

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	11	16	0
Future Vol, veh/h	0	0	0	11	16	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	12	17	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	29	17	17	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	12	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	986	1062	1600	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	1011	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	986	1062	1600	-	-	-
Mov Cap-2 Maneuver	986	-	-	-	-	-
Stage 1	1006	-	-	-	-	-
Stage 2	1011	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1600	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

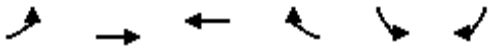
Intersection	
Int Delay, s/veh	0

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

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

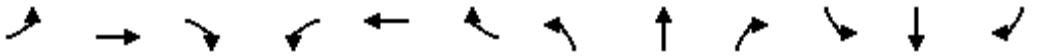
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑		↰	↱
Traffic Volume (vph)	0	454	1609	0	100	61
Future Volume (vph)	0	454	1609	0	100	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.91		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6408	5085		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6408	5085		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	493	1749	0	109	66
RTOR Reduction (vph)	0	0	0	0	0	33
Lane Group Flow (vph)	0	493	1749	0	109	33
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2		4	
Permitted Phases		6				4
Actuated Green, G (s)		87.0	87.0		25.0	25.0
Effective Green, g (s)		87.0	87.0		25.0	25.0
Actuated g/C Ratio		0.72	0.72		0.21	0.21
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		4645	3686		368	329
v/s Ratio Prot		0.08	c0.34		c0.06	
v/s Ratio Perm						0.02
v/c Ratio		0.11	0.47		0.30	0.10
Uniform Delay, d1		4.9	6.9		40.1	38.4
Progression Factor		1.00	0.39		1.00	1.00
Incremental Delay, d2		0.0	0.3		2.0	0.6
Delay (s)		5.0	2.9		42.1	39.0
Level of Service		A	A		D	D
Approach Delay (s)		5.0	2.9		40.9	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	385	0	0	1130	42	212	267	75	21	0	298
Future Volume (vph)	172	385	0	0	1130	42	212	267	75	21	0	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Util. Factor	0.97	0.91			0.95	1.00	1.00	0.95		1.00		1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.97		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (prot)	3433	5085			3539	1583	1770	3422		1770		1583
Flt Permitted	0.08	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (perm)	272	5085			3539	1583	1770	3422		1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	418	0	0	1228	46	230	290	82	23	0	324
RTOR Reduction (vph)	0	0	0	0	0	27	0	22	0	0	0	114
Lane Group Flow (vph)	187	418	0	0	1228	19	230	350	0	23	0	210
Turn Type	pm+pt	NA			NA	Perm	Split	NA		Prot		Perm
Protected Phases	1	6			2		3	3		4		
Permitted Phases	6					2						4
Actuated Green, G (s)	58.2	58.2			49.2	49.2	22.5	22.5		26.9		26.9
Effective Green, g (s)	58.2	58.2			49.2	49.2	22.5	22.5		26.9		26.9
Actuated g/C Ratio	0.49	0.49			0.41	0.41	0.19	0.19		0.22		0.22
Clearance Time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Grp Cap (vph)	263	2466			1450	649	331	641		396		354
v/s Ratio Prot	c0.03	0.08			c0.35		c0.13	0.10		0.01		
v/s Ratio Perm	0.31					0.01						c0.13
v/c Ratio	0.71	0.17			0.85	0.03	0.69	0.55		0.06		0.59
Uniform Delay, d1	24.6	17.3			32.0	21.1	45.5	44.1		36.6		41.7
Progression Factor	0.89	0.86			1.00	1.00	1.00	1.00		1.00		1.00
Incremental Delay, d2	15.0	0.1			6.3	0.1	11.4	3.3		0.3		7.1
Delay (s)	36.9	15.1			38.3	21.2	57.0	47.5		36.9		48.8
Level of Service	D	B			D	C	E	D		D		D
Approach Delay (s)		21.8			37.7			51.1			48.0	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	434	33	12	1096	0	56	0	17	0	0	0
Future Vol, veh/h	11	434	33	12	1096	0	56	0	17	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	90	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	472	36	13	1191	0	61	0	18	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1191	0	0	508	0	0	1118	1713	236	1477	1749	596
Stage 1	-	-	-	-	-	-	496	496	-	1217	1217	-
Stage 2	-	-	-	-	-	-	622	1217	-	260	532	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	582	-	-	1053	-	-	162	89	766	88	85	447
Stage 1	-	-	-	-	-	-	524	544	-	192	252	-
Stage 2	-	-	-	-	-	-	441	252	-	722	524	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	582	-	-	1053	-	-	157	85	766	83	82	447
Mov Cap-2 Maneuver	-	-	-	-	-	-	157	85	-	83	82	-
Stage 1	-	-	-	-	-	-	509	528	-	186	249	-
Stage 2	-	-	-	-	-	-	436	249	-	684	509	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	36.1	0
HCM LOS			E	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	193	582	-	-	1053	-	-	-
HCM Lane V/C Ratio	0.411	0.021	-	-	0.012	-	-	-
HCM Control Delay (s)	36.1	11.3	-	-	8.5	-	-	0
HCM Lane LOS	E	B	-	-	A	-	-	A
HCM 95th %tile Q(veh)	1.9	0.1	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	0	0	25	19	27
Future Vol, veh/h	48	0	0	25	19	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	0	0	27	21	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	63	36	50	0	-	0
Stage 1	36	-	-	-	-	-
Stage 2	27	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	943	1037	1557	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	996	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	943	1037	1557	-	-	-
Mov Cap-2 Maneuver	943	-	-	-	-	-
Stage 1	986	-	-	-	-	-
Stage 2	996	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1557	-	943	-	-
HCM Lane V/C Ratio	-	-	0.055	-	-
HCM Control Delay (s)	0	-	9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

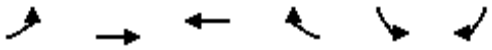
Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	0	0	0	0	11
Future Vol, veh/h	20	0	0	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	0	0	0	0	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	6	6	12	0	-	0
Stage 1	6	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1015	1077	1607	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1015	1077	1607	-	-	-
Mov Cap-2 Maneuver	1015	-	-	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	-	-	-	-	-	-

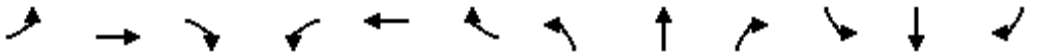
Approach	EB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1607	-	1015	-	-
HCM Lane V/C Ratio	-	-	0.021	-	-
HCM Control Delay (s)	0	-	8.6	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1751	791	0	254	70
Future Volume (vph)	0	1751	791	0	254	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.91		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6408	5085		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6408	5085		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1903	860	0	276	76
RTOR Reduction (vph)	0	0	0	0	0	48
Lane Group Flow (vph)	0	1903	860	0	276	28
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2		4	
Permitted Phases		6				4
Actuated Green, G (s)		83.0	83.0		53.0	53.0
Effective Green, g (s)		83.0	83.0		53.0	53.0
Actuated g/C Ratio		0.58	0.58		0.37	0.37
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		3693	2930		651	582
v/s Ratio Prot		c0.30	0.17		c0.16	
v/s Ratio Perm						0.02
v/c Ratio		0.52	0.29		0.42	0.05
Uniform Delay, d1		18.4	15.6		34.1	29.3
Progression Factor		1.00	0.61		1.00	1.00
Incremental Delay, d2		0.5	0.2		2.0	0.2
Delay (s)		18.9	9.7		36.1	29.4
Level of Service		B	A		D	C
Approach Delay (s)		18.9	9.7		34.7	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	144.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	655	1359	0	0	458	65	97	237	128	68	0	251
Future Volume (vph)	655	1359	0	0	458	65	97	237	128	68	0	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Util. Factor	0.97	0.91			0.95	1.00	1.00	0.95		1.00		1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.95		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (prot)	3433	5085			3539	1583	1770	3353		1770		1583
Flt Permitted	0.27	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (perm)	980	5085			3539	1583	1770	3353		1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	712	1477	0	0	498	71	105	258	139	74	0	273
RTOR Reduction (vph)	0	0	0	0	0	53	0	49	0	0	0	226
Lane Group Flow (vph)	712	1477	0	0	498	18	105	348	0	74	0	47
Turn Type	pm+pt	NA			NA	Perm	Split	NA		Prot		Perm
Protected Phases	1	6			2		3	3		4		
Permitted Phases	6					2						4
Actuated Green, G (s)	77.2	77.2			37.2	37.2	29.5	29.5		24.9		24.9
Effective Green, g (s)	77.2	77.2			37.2	37.2	29.5	29.5		24.9		24.9
Actuated g/C Ratio	0.54	0.54			0.26	0.26	0.20	0.20		0.17		0.17
Clearance Time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Grp Cap (vph)	1138	2726			914	408	362	686		306		273
v/s Ratio Prot	c0.16	0.29			0.14		0.06	c0.10		c0.04		
v/s Ratio Perm	c0.18					0.01						0.03
v/c Ratio	0.63	0.54			0.54	0.04	0.29	0.51		0.24		0.17
Uniform Delay, d1	21.4	21.8			46.1	40.1	48.4	50.8		51.4		50.8
Progression Factor	0.43	0.49			1.00	1.00	1.00	1.00		1.00		1.00
Incremental Delay, d2	2.3	0.7			2.3	0.2	2.0	2.7		1.9		1.4
Delay (s)	11.5	11.4			48.4	40.3	50.4	53.5		53.3		52.1
Level of Service	B	B			D	D	D	D		D		D
Approach Delay (s)		11.4			47.4			52.8			52.4	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	26.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	144.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	19.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑↳			↕			↕	
Traffic Vol, veh/h	22	1441	60	26	427	0	51	0	15	0	0	1
Future Vol, veh/h	22	1441	60	26	427	0	51	0	15	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	90	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	1566	65	28	464	0	55	0	16	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	464	0	0	1631	0	0	1902	2134	783	1351	2199	232
Stage 1	-	-	-	-	-	-	1614	1614	-	520	520	-
Stage 2	-	-	-	-	-	-	288	520	-	831	1679	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1094	-	-	394	-	-	~ 42	49	337	109	44	770
Stage 1	-	-	-	-	-	-	108	161	-	507	530	-
Stage 2	-	-	-	-	-	-	695	530	-	330	150	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1094	-	-	394	-	-	~ 32	34	337	79	30	770
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 32	34	-	79	30	-
Stage 1	-	-	-	-	-	-	81	120	-	378	492	-
Stage 2	-	-	-	-	-	-	645	492	-	234	112	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.9	$ 596.8	9.7
HCM LOS			F	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	40	1094	-	-	394	-	-	770
HCM Lane V/C Ratio	1.793	0.022	-	-	0.072	-	-	0.001
HCM Control Delay (s)	$ 596.8	8.4	-	-	14.8	-	-	9.7
HCM Lane LOS	F	A	-	-	B	-	-	A
HCM 95th %tile Q(veh)	7.5	0.1	-	-	0.2	-	-	0

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

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	39	0	0	28	37	49
Future Vol, veh/h	39	0	0	28	37	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	0	0	30	40	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	97	67	93	0	-	0
Stage 1	67	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	902	997	1501	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	993	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	902	997	1501	-	-	-
Mov Cap-2 Maneuver	902	-	-	-	-	-
Stage 1	956	-	-	-	-	-
Stage 2	993	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1501	-	902	-	-
HCM Lane V/C Ratio	-	-	0.047	-	-
HCM Control Delay (s)	0	-	9.2	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

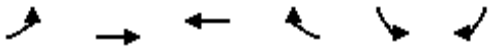
Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	0	0	0	0	21
Future Vol, veh/h	17	0	0	0	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	0	0	0	0	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	12	12	23	0	-	0
Stage 1	12	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1008	1069	1592	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1008	1069	1592	-	-	-
Mov Cap-2 Maneuver	1008	-	-	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	-	-	-	-	-	-

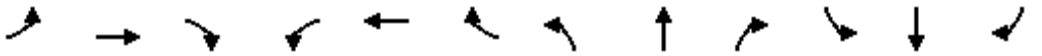
Approach	EB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1592	-	1008	-	-
HCM Lane V/C Ratio	-	-	0.018	-	-
HCM Control Delay (s)	0	-	8.6	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	487	1727	0	102	68
Future Volume (vph)	0	487	1727	0	102	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.91		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6408	5085		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6408	5085		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	529	1877	0	111	74
RTOR Reduction (vph)	0	0	0	0	0	26
Lane Group Flow (vph)	0	529	1877	0	111	48
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2		4	
Permitted Phases		6				4
Actuated Green, G (s)		87.0	87.0		25.0	25.0
Effective Green, g (s)		87.0	87.0		25.0	25.0
Actuated g/C Ratio		0.72	0.72		0.21	0.21
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		4645	3686		368	329
v/s Ratio Prot		0.08	c0.37		c0.06	
v/s Ratio Perm						0.03
v/c Ratio		0.11	0.51		0.30	0.15
Uniform Delay, d1		4.9	7.2		40.1	38.8
Progression Factor		1.00	0.42		1.00	1.00
Incremental Delay, d2		0.0	0.2		2.1	0.9
Delay (s)		5.0	3.3		42.2	39.7
Level of Service		A	A		D	D
Approach Delay (s)		5.0	3.3		41.2	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	402	0	0	1199	39	234	295	79	19	0	329
Future Volume (vph)	190	402	0	0	1199	39	234	295	79	19	0	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Util. Factor	0.97	0.91			0.95	1.00	1.00	0.95		1.00		1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.97		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (prot)	3433	5085			3539	1583	1770	3427		1770		1583
Flt Permitted	0.08	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (perm)	272	5085			3539	1583	1770	3427		1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	437	0	0	1303	42	254	321	86	21	0	358
RTOR Reduction (vph)	0	0	0	0	0	25	0	20	0	0	0	104
Lane Group Flow (vph)	207	437	0	0	1303	17	254	387	0	21	0	254
Turn Type	pm+pt	NA			NA	Perm	Split	NA		Prot		Perm
Protected Phases	1	6			2		3	3		4		
Permitted Phases	6					2						4
Actuated Green, G (s)	58.2	58.2			49.2	49.2	22.5	22.5		26.9		26.9
Effective Green, g (s)	58.2	58.2			49.2	49.2	22.5	22.5		26.9		26.9
Actuated g/C Ratio	0.49	0.49			0.41	0.41	0.19	0.19		0.22		0.22
Clearance Time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Grp Cap (vph)	263	2466			1450	649	331	642		396		354
v/s Ratio Prot	c0.03	0.09			c0.37		c0.14	0.11		0.01		
v/s Ratio Perm	0.35					0.01						c0.16
v/c Ratio	0.79	0.18			0.90	0.03	0.77	0.60		0.05		0.72
Uniform Delay, d1	25.9	17.4			33.1	21.1	46.3	44.7		36.5		43.0
Progression Factor	0.89	0.86			1.00	1.00	1.00	1.00		1.00		1.00
Incremental Delay, d2	20.7	0.2			9.2	0.1	15.6	4.2		0.3		11.8
Delay (s)	43.7	15.1			42.2	21.2	61.9	48.8		36.8		54.9
Level of Service	D	B			D	C	E	D		D		D
Approach Delay (s)		24.3			41.6			53.8			53.9	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	480	6	3	1210	0	6	0	0	0	0	0
Future Vol, veh/h	12	480	6	3	1210	0	6	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	90	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	522	7	3	1315	0	7	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1315	0	0	529	0	0	1212	1869	261	1608	1876	658
Stage 1	-	-	-	-	-	-	548	548	-	1321	1321	-
Stage 2	-	-	-	-	-	-	664	1321	-	287	555	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	522	-	-	1034	-	-	138	72	738	70	71	407
Stage 1	-	-	-	-	-	-	488	515	-	165	224	-
Stage 2	-	-	-	-	-	-	416	224	-	696	511	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	522	-	-	1034	-	-	134	69	738	68	68	407
Mov Cap-2 Maneuver	-	-	-	-	-	-	134	69	-	68	68	-
Stage 1	-	-	-	-	-	-	471	497	-	159	223	-
Stage 2	-	-	-	-	-	-	415	223	-	672	493	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0	33.2	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	134	522	-	-	1034	-	-	-
HCM Lane V/C Ratio	0.049	0.025	-	-	0.003	-	-	-
HCM Control Delay (s)	33.2	12.1	-	-	8.5	-	-	0
HCM Lane LOS	D	B	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	6	8	0
Future Vol, veh/h	0	0	0	6	8	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	7	9	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	16	9	9	0	-	0
Stage 1	9	-	-	-	-	-
Stage 2	7	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1002	1073	1611	-	-	-
Stage 1	1014	-	-	-	-	-
Stage 2	1016	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1002	1073	1611	-	-	-
Mov Cap-2 Maneuver	1002	-	-	-	-	-
Stage 1	1014	-	-	-	-	-
Stage 2	1016	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1611	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

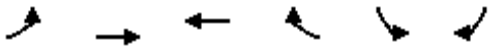
Intersection	
Int Delay, s/veh	0

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

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

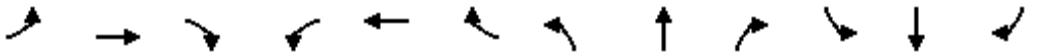
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1906	834	0	265	77
Future Volume (vph)	0	1906	834	0	265	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.91		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6408	5085		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6408	5085		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2072	907	0	288	84
RTOR Reduction (vph)	0	0	0	0	0	51
Lane Group Flow (vph)	0	2072	907	0	288	33
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2		4	
Permitted Phases		6				4
Actuated Green, G (s)		83.0	83.0		53.0	53.0
Effective Green, g (s)		83.0	83.0		53.0	53.0
Actuated g/C Ratio		0.58	0.58		0.37	0.37
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		3693	2930		651	582
v/s Ratio Prot		c0.32	0.18		c0.16	
v/s Ratio Perm						0.02
v/c Ratio		0.56	0.31		0.44	0.06
Uniform Delay, d1		19.1	15.7		34.3	29.4
Progression Factor		1.00	0.62		1.00	1.00
Incremental Delay, d2		0.6	0.2		2.2	0.2
Delay (s)		19.7	10.1		36.5	29.5
Level of Service		B	B		D	C
Approach Delay (s)		19.7	10.1		34.9	
Approach LOS		B	B		C	

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	144.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	724	1458	0	0	466	66	108	262	134	68	0	277
Future Volume (vph)	724	1458	0	0	466	66	108	262	134	68	0	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Util. Factor	0.97	0.91			0.95	1.00	1.00	0.95		1.00		1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.95		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (prot)	3433	5085			3539	1583	1770	3359		1770		1583
Flt Permitted	0.26	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (perm)	956	5085			3539	1583	1770	3359		1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	787	1585	0	0	507	72	117	285	146	74	0	301
RTOR Reduction (vph)	0	0	0	0	0	53	0	45	0	0	0	249
Lane Group Flow (vph)	787	1585	0	0	507	19	117	386	0	74	0	52
Turn Type	pm+pt	NA			NA	Perm	Split	NA		Prot		Perm
Protected Phases	1	6			2		3	3		4		
Permitted Phases	6					2						4
Actuated Green, G (s)	77.2	77.2			37.2	37.2	29.5	29.5		24.9		24.9
Effective Green, g (s)	77.2	77.2			37.2	37.2	29.5	29.5		24.9		24.9
Actuated g/C Ratio	0.54	0.54			0.26	0.26	0.20	0.20		0.17		0.17
Clearance Time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Grp Cap (vph)	1131	2726			914	408	362	688		306		273
v/s Ratio Prot	c0.17	0.31			0.14		0.07	c0.11		c0.04		
v/s Ratio Perm	c0.20					0.01						0.03
v/c Ratio	0.70	0.58			0.55	0.05	0.32	0.56		0.24		0.19
Uniform Delay, d1	22.2	22.5			46.2	40.1	48.7	51.4		51.4		50.9
Progression Factor	0.41	0.47			1.00	1.00	1.00	1.00		1.00		1.00
Incremental Delay, d2	3.0	0.8			2.4	0.2	2.4	3.3		1.9		1.5
Delay (s)	12.1	11.4			48.7	40.3	51.1	54.7		53.3		52.5
Level of Service	B	B			D	D	D	D		D		D
Approach Delay (s)		11.6			47.6			53.9			52.6	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	144.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑↳			↕			↕	
Traffic Vol, veh/h	25	1591	8	10	471	0	11	0	1	0	0	1
Future Vol, veh/h	25	1591	8	10	471	0	11	0	1	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	90	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	1729	9	11	512	0	12	0	1	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	512	0	0	1738	0	0	2061	2317	865	1453	2326	256
Stage 1	-	-	-	-	-	-	1783	1783	-	534	534	-
Stage 2	-	-	-	-	-	-	278	534	-	919	1792	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1050	-	-	358	-	-	32	37	297	91	37	743
Stage 1	-	-	-	-	-	-	85	133	-	498	523	-
Stage 2	-	-	-	-	-	-	705	523	-	292	131	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1050	-	-	358	-	-	~ 11	8	297	33	8	743
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 11	8	-	33	8	-
Stage 1	-	-	-	-	-	-	20	31	-	115	507	-
Stage 2	-	-	-	-	-	-	682	507	-	67	30	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	$ 708.1	9.9
HCM LOS			F	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	12	1050	-	-	358	-	-	743
HCM Lane V/C Ratio	1.087	0.026	-	-	0.03	-	-	0.001
HCM Control Delay (s)	$ 708.1	8.5	-	-	15.4	-	-	9.9
HCM Lane LOS	F	A	-	-	C	-	-	A
HCM 95th %tile Q(veh)	2.3	0.1	-	-	0.1	-	-	0

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

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	12	18	0
Future Vol, veh/h	0	0	0	12	18	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	13	20	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	33	20	20	0	-	0
Stage 1	20	-	-	-	-	-
Stage 2	13	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	980	1058	1596	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	1010	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	980	1058	1596	-	-	-
Mov Cap-2 Maneuver	980	-	-	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	1010	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1596	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

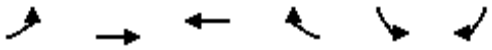
Intersection	
Int Delay, s/veh	0

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

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

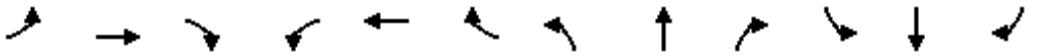
Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	500	1771	0	110	68
Future Volume (vph)	0	500	1771	0	110	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.91		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6408	5085		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6408	5085		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	543	1925	0	120	74
RTOR Reduction (vph)	0	0	0	0	0	24
Lane Group Flow (vph)	0	543	1925	0	120	50
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2		4	
Permitted Phases		6				4
Actuated Green, G (s)		87.0	87.0		25.0	25.0
Effective Green, g (s)		87.0	87.0		25.0	25.0
Actuated g/C Ratio		0.72	0.72		0.21	0.21
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		4645	3686		368	329
v/s Ratio Prot		0.08	c0.38		c0.07	
v/s Ratio Perm						0.03
v/c Ratio		0.12	0.52		0.33	0.15
Uniform Delay, d1		5.0	7.3		40.3	38.8
Progression Factor		1.00	0.41		1.00	1.00
Incremental Delay, d2		0.1	0.2		2.3	1.0
Delay (s)		5.0	3.2		42.7	39.8
Level of Service		A	A		D	D
Approach Delay (s)		5.0	3.2		41.6	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	423	0	0	1243	45	234	295	82	23	0	329
Future Volume (vph)	190	423	0	0	1243	45	234	295	82	23	0	329
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Util. Factor	0.97	0.91			0.95	1.00	1.00	0.95		1.00		1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.97		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (prot)	3433	5085			3539	1583	1770	3424		1770		1583
Flt Permitted	0.08	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (perm)	272	5085			3539	1583	1770	3424		1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	460	0	0	1351	49	254	321	89	25	0	358
RTOR Reduction (vph)	0	0	0	0	0	29	0	21	0	0	0	103
Lane Group Flow (vph)	207	460	0	0	1351	20	254	389	0	25	0	255
Turn Type	pm+pt	NA			NA	Perm	Split	NA		Prot		Perm
Protected Phases	1	6			2		3	3		4		
Permitted Phases	6					2						4
Actuated Green, G (s)	58.2	58.2			49.2	49.2	22.5	22.5		26.9		26.9
Effective Green, g (s)	58.2	58.2			49.2	49.2	22.5	22.5		26.9		26.9
Actuated g/C Ratio	0.49	0.49			0.41	0.41	0.19	0.19		0.22		0.22
Clearance Time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Grp Cap (vph)	263	2466			1450	649	331	642		396		354
v/s Ratio Prot	c0.03	0.09			c0.38		c0.14	0.11		0.01		
v/s Ratio Perm	0.35					0.01						c0.16
v/c Ratio	0.79	0.19			0.93	0.03	0.77	0.61		0.06		0.72
Uniform Delay, d1	26.6	17.5			33.8	21.2	46.3	44.7		36.6		43.1
Progression Factor	0.89	0.86			1.00	1.00	1.00	1.00		1.00		1.00
Incremental Delay, d2	20.7	0.2			12.1	0.1	15.6	4.2		0.3		11.9
Delay (s)	44.5	15.2			45.9	21.2	61.9	48.9		36.9		55.0
Level of Service	D	B			D	C	E	D		D		D
Approach Delay (s)		24.3			45.1			53.9			53.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	43.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	480	34	12	1210	0	57	0	17	0	0	0
Future Vol, veh/h	12	480	34	12	1210	0	57	0	17	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	90	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	522	37	13	1315	0	62	0	18	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1315	0	0	559	0	0	1232	1889	261	1628	1926	658
Stage 1	-	-	-	-	-	-	548	548	-	1341	1341	-
Stage 2	-	-	-	-	-	-	684	1341	-	287	585	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	522	-	-	1008	-	-	133	70	738	68	66	407
Stage 1	-	-	-	-	-	-	488	515	-	161	219	-
Stage 2	-	-	-	-	-	-	405	219	-	696	496	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	522	-	-	1008	-	-	128	67	738	64	63	407
Mov Cap-2 Maneuver	-	-	-	-	-	-	128	67	-	64	63	-
Stage 1	-	-	-	-	-	-	470	496	-	155	216	-
Stage 2	-	-	-	-	-	-	400	216	-	654	478	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	49.3	0
HCM LOS			E	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	158	522	-	-	1008	-	-	-
HCM Lane V/C Ratio	0.509	0.025	-	-	0.013	-	-	-
HCM Control Delay (s)	49.3	12.1	-	-	8.6	-	-	0
HCM Lane LOS	E	B	-	-	A	-	-	A
HCM 95th %tile Q(veh)	2.5	0.1	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	0	0	26	20	27
Future Vol, veh/h	48	0	0	26	20	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	0	0	28	22	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	65	37	51	0	-	0
Stage 1	37	-	-	-	-	-
Stage 2	28	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	941	1035	1555	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	995	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	941	1035	1555	-	-	-
Mov Cap-2 Maneuver	941	-	-	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	995	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1555	-	941	-	-
HCM Lane V/C Ratio	-	-	0.055	-	-
HCM Control Delay (s)	0	-	9.1	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

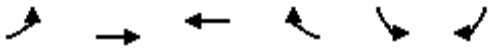
Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	0	0	0	0	11
Future Vol, veh/h	20	0	0	0	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	0	0	0	0	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	6	6	12	0	-	0
Stage 1	6	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1015	1077	1607	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1015	1077	1607	-	-	-
Mov Cap-2 Maneuver	1015	-	-	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1607	-	1015	-	-
HCM Lane V/C Ratio	-	-	0.021	-	-
HCM Control Delay (s)	0	-	8.6	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	1931	870	0	279	77
Future Volume (vph)	0	1931	870	0	279	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.86	0.91		1.00	1.00
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6408	5085		1770	1583
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6408	5085		1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2099	946	0	303	84
RTOR Reduction (vph)	0	0	0	0	0	49
Lane Group Flow (vph)	0	2099	946	0	303	35
Turn Type		NA	NA		Prot	Perm
Protected Phases		6	2		4	
Permitted Phases		6				4
Actuated Green, G (s)		83.0	83.0		53.0	53.0
Effective Green, g (s)		83.0	83.0		53.0	53.0
Actuated g/C Ratio		0.58	0.58		0.37	0.37
Clearance Time (s)		4.0	4.0		4.0	4.0
Lane Grp Cap (vph)		3693	2930		651	582
v/s Ratio Prot		c0.33	0.19		c0.17	
v/s Ratio Perm						0.02
v/c Ratio		0.57	0.32		0.47	0.06
Uniform Delay, d1		19.2	15.9		34.7	29.4
Progression Factor		1.00	0.60		1.00	1.00
Incremental Delay, d2		0.6	0.2		2.4	0.2
Delay (s)		19.9	9.8		37.1	29.6
Level of Service		B	A		D	C
Approach Delay (s)		19.9	9.8		35.5	
Approach LOS		B	A		D	

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	144.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	724	1497	0	0	502	72	108	262	141	75	0	277
Future Volume (vph)	724	1497	0	0	502	72	108	262	141	75	0	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Util. Factor	0.97	0.91			0.95	1.00	1.00	0.95		1.00		1.00
Frt	1.00	1.00			1.00	0.85	1.00	0.95		1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (prot)	3433	5085			3539	1583	1770	3354		1770		1583
Flt Permitted	0.24	1.00			1.00	1.00	0.95	1.00		0.95		1.00
Satd. Flow (perm)	853	5085			3539	1583	1770	3354		1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	787	1627	0	0	546	78	117	285	153	82	0	301
RTOR Reduction (vph)	0	0	0	0	0	58	0	49	0	0	0	249
Lane Group Flow (vph)	787	1627	0	0	546	20	117	389	0	82	0	52
Turn Type	pm+pt	NA			NA	Perm	Split	NA		Prot		Perm
Protected Phases	1	6			2		3	3		4		
Permitted Phases	6					2						4
Actuated Green, G (s)	77.2	77.2			37.2	37.2	29.5	29.5		24.9		24.9
Effective Green, g (s)	77.2	77.2			37.2	37.2	29.5	29.5		24.9		24.9
Actuated g/C Ratio	0.54	0.54			0.26	0.26	0.20	0.20		0.17		0.17
Clearance Time (s)	4.0	4.8			4.8	4.8	3.5	3.5		4.1		4.1
Lane Grp Cap (vph)	1102	2726			914	408	362	687		306		273
v/s Ratio Prot	c0.18	0.32			0.15		0.07	c0.12		c0.05		
v/s Ratio Perm	c0.20					0.01						0.03
v/c Ratio	0.71	0.60			0.60	0.05	0.32	0.57		0.27		0.19
Uniform Delay, d1	22.7	22.8			46.8	40.1	48.7	51.5		51.6		50.9
Progression Factor	0.40	0.48			1.00	1.00	1.00	1.00		1.00		1.00
Incremental Delay, d2	3.3	0.8			2.9	0.2	2.4	3.4		2.1		1.5
Delay (s)	12.5	11.8			49.7	40.3	51.1	54.8		53.8		52.5
Level of Service	B	B			D	D	D	D		D		D
Approach Delay (s)		12.0			48.5			54.1			52.8	
Approach LOS		B			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	144.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	22.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱	↰	↑↑↳			↕			↕	
Traffic Vol, veh/h	25	1591	61	27	471	0	52	0	15	0	0	1
Future Vol, veh/h	25	1591	61	27	471	0	52	0	15	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	90	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	1729	66	29	512	0	57	0	16	0	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	512	0	0	1795	0	0	2097	2353	865	1489	2419	256
Stage 1	-	-	-	-	-	-	1783	1783	-	570	570	-
Stage 2	-	-	-	-	-	-	314	570	-	919	1849	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1050	-	-	340	-	-	~ 30	35	297	86	32	743
Stage 1	-	-	-	-	-	-	85	133	-	474	504	-
Stage 2	-	-	-	-	-	-	671	504	-	292	123	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1050	-	-	340	-	-	~ 28	32	297	76	29	743
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 28	32	-	76	29	-
Stage 1	-	-	-	-	-	-	85	133	-	474	461	-
Stage 2	-	-	-	-	-	-	613	461	-	276	123	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.9	$ 745.3	9.9
HCM LOS			F	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	35	1050	-	-	340	-	-	743
HCM Lane V/C Ratio	2.081	0.026	-	-	0.086	-	-	0.001
HCM Control Delay (s)	$ 745.3	8.5	-	-	16.6	-	-	9.9
HCM Lane LOS	F	A	-	-	C	-	-	A
HCM 95th %tile Q(veh)	8.1	0.1	-	-	0.3	-	-	0

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

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	39	0	0	29	39	49
Future Vol, veh/h	39	0	0	29	39	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	0	0	32	42	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	101	69	95	0	-	0
Stage 1	69	-	-	-	-	-
Stage 2	32	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	898	994	1499	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	991	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	898	994	1499	-	-	-
Mov Cap-2 Maneuver	898	-	-	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	991	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1499	-	898	-	-
HCM Lane V/C Ratio	-	-	0.047	-	-
HCM Control Delay (s)	0	-	9.2	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.8

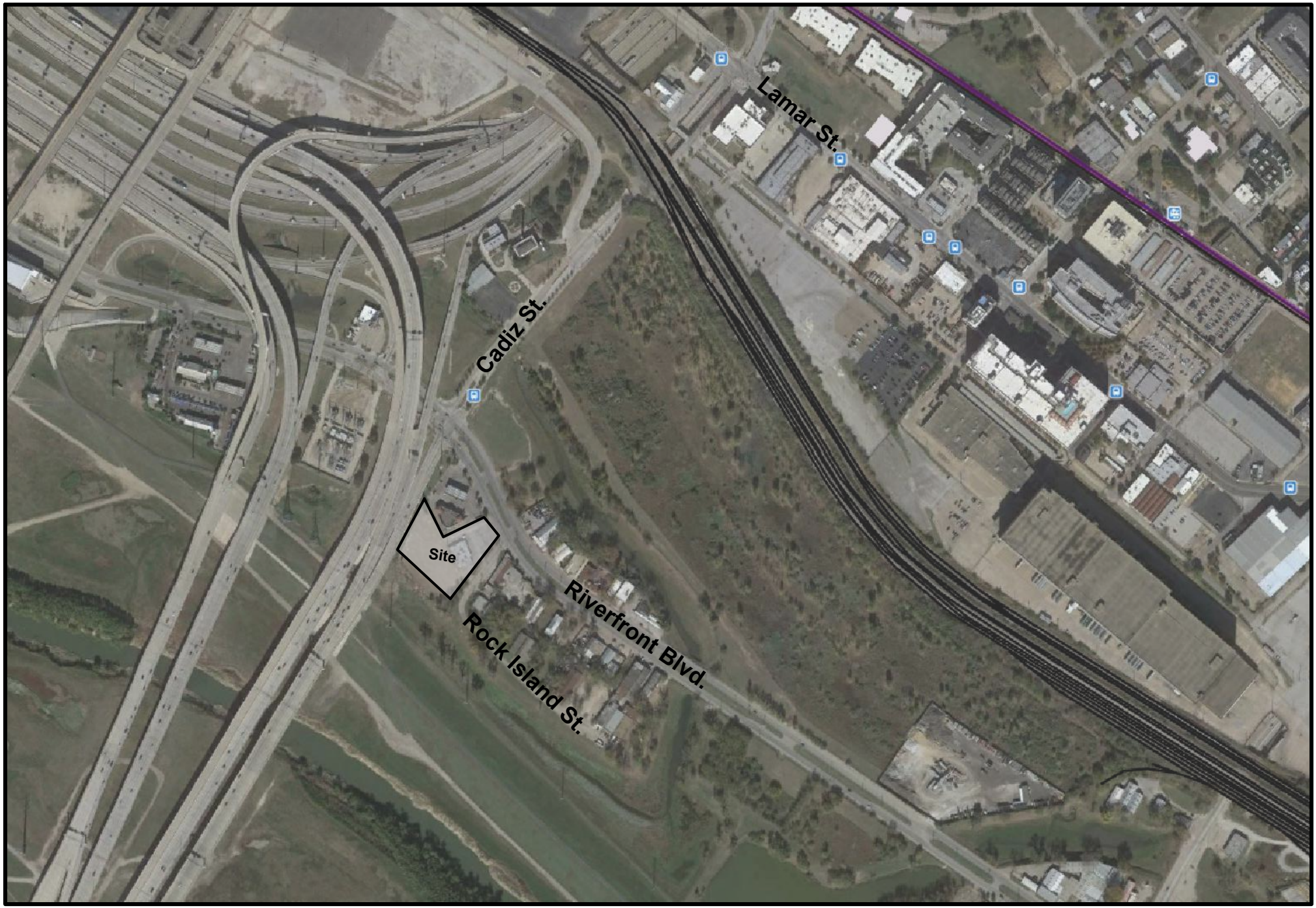
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	0	0	0	0	21
Future Vol, veh/h	17	0	0	0	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	0	0	0	0	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	12	12	23	0	-	0
Stage 1	12	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1008	1069	1592	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1008	1069	1592	-	-	-
Mov Cap-2 Maneuver	1008	-	-	-	-	-
Stage 1	1011	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1592	-	1008	-	-
HCM Lane V/C Ratio	-	-	0.018	-	-
HCM Control Delay (s)	0	-	8.6	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Appendix E
DART Bus Stops



NORTH

DART Bus Stops

L.A.M.B.E.T.H. ENGINEERING
TEXAS REGISTERED ENGINEERING FIRM F-19508

Map Obtained from Google Earth 09.13.21

High Speed Rail Update – Station Zone Assessment

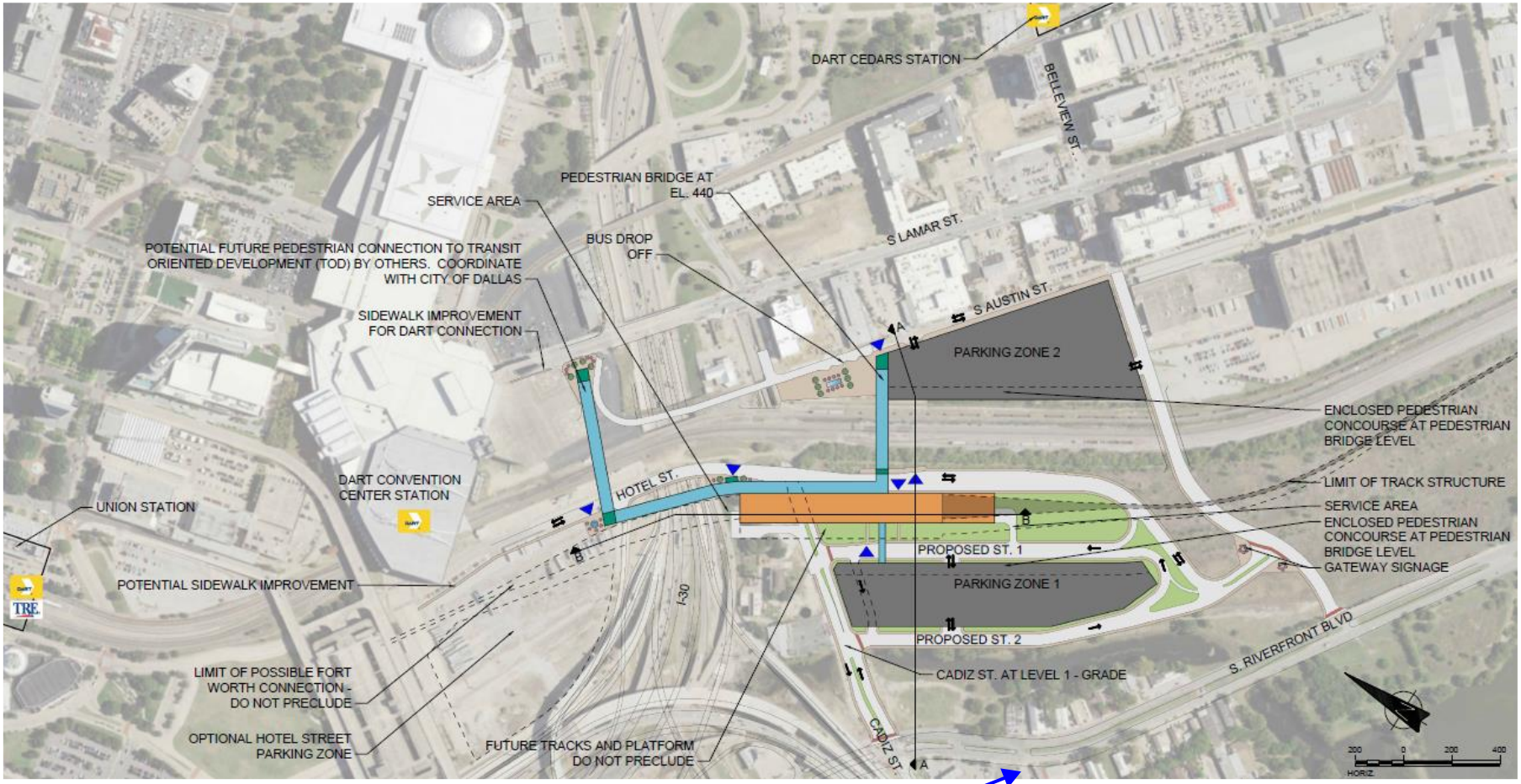
Mobility Solutions, Infrastructure and Sustainability

November 13, 2017

Mark Duebner,
Project Manager

City of Dallas

High Speed Rail Station



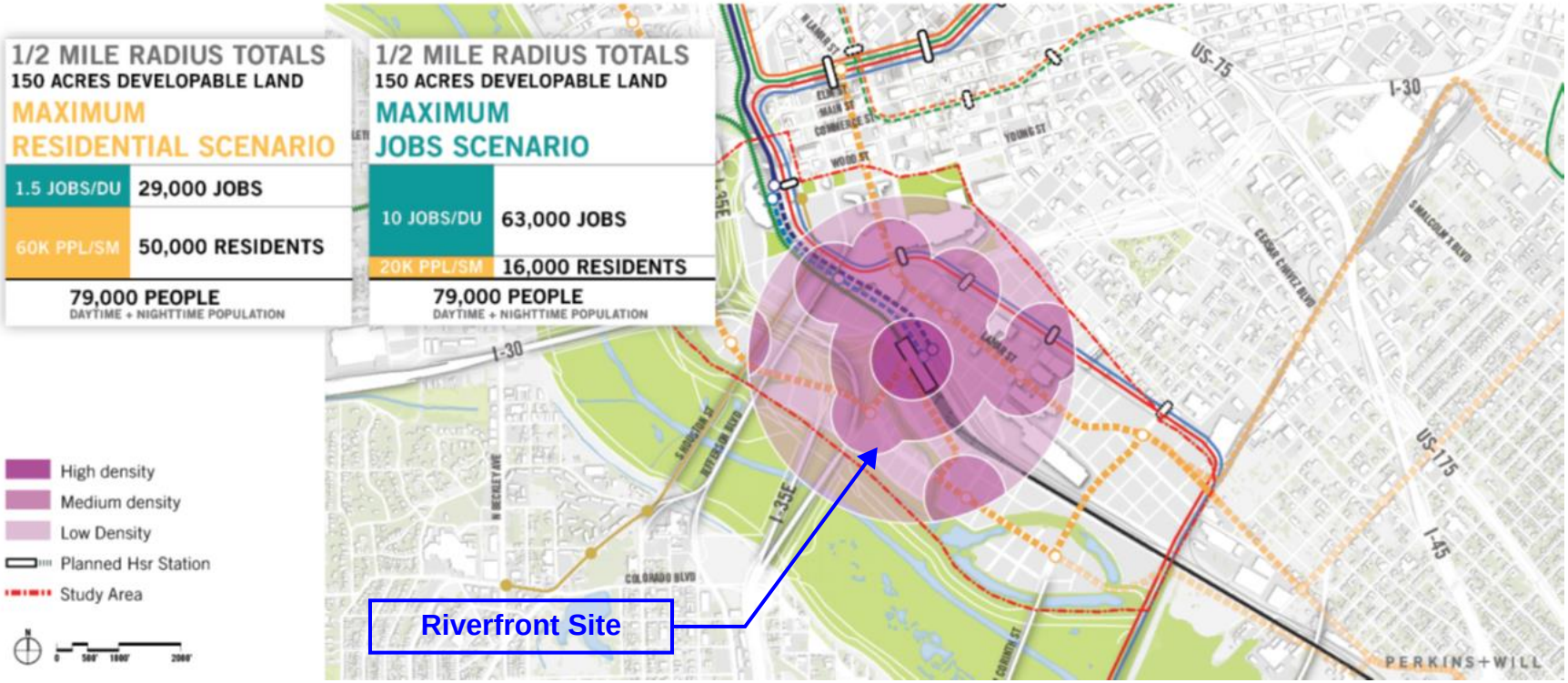
Riverfront Site

Multi-modal Transportation Connections

Revenue Enhancements

HIGH-SPEED RAIL DISTRICTS

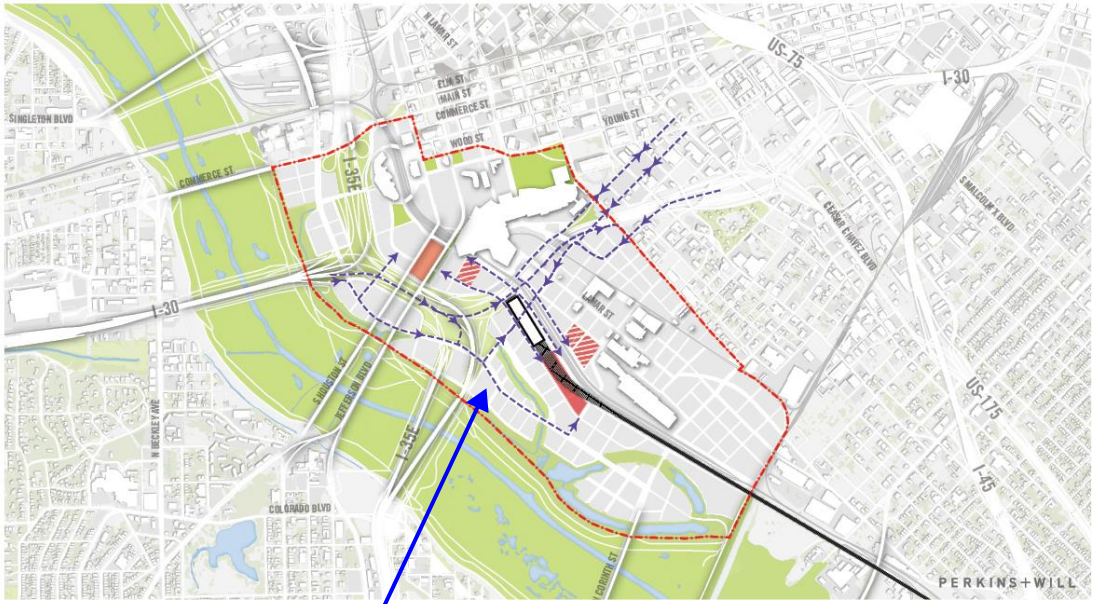
JOBS AND RESIDENTIAL PROGRAM TARGETS



Infrastructure and Circulation

VEHICULAR ACCESS

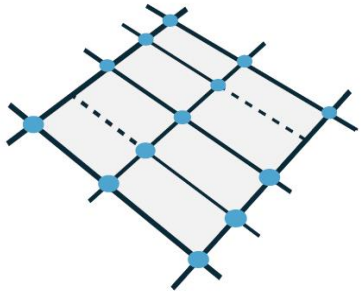
ACCESS AND PARKING



- Vehicular Access
- Existing Parking
- Interim Parking
- Potential Parking Facilities
- HSR Station
- Study Area

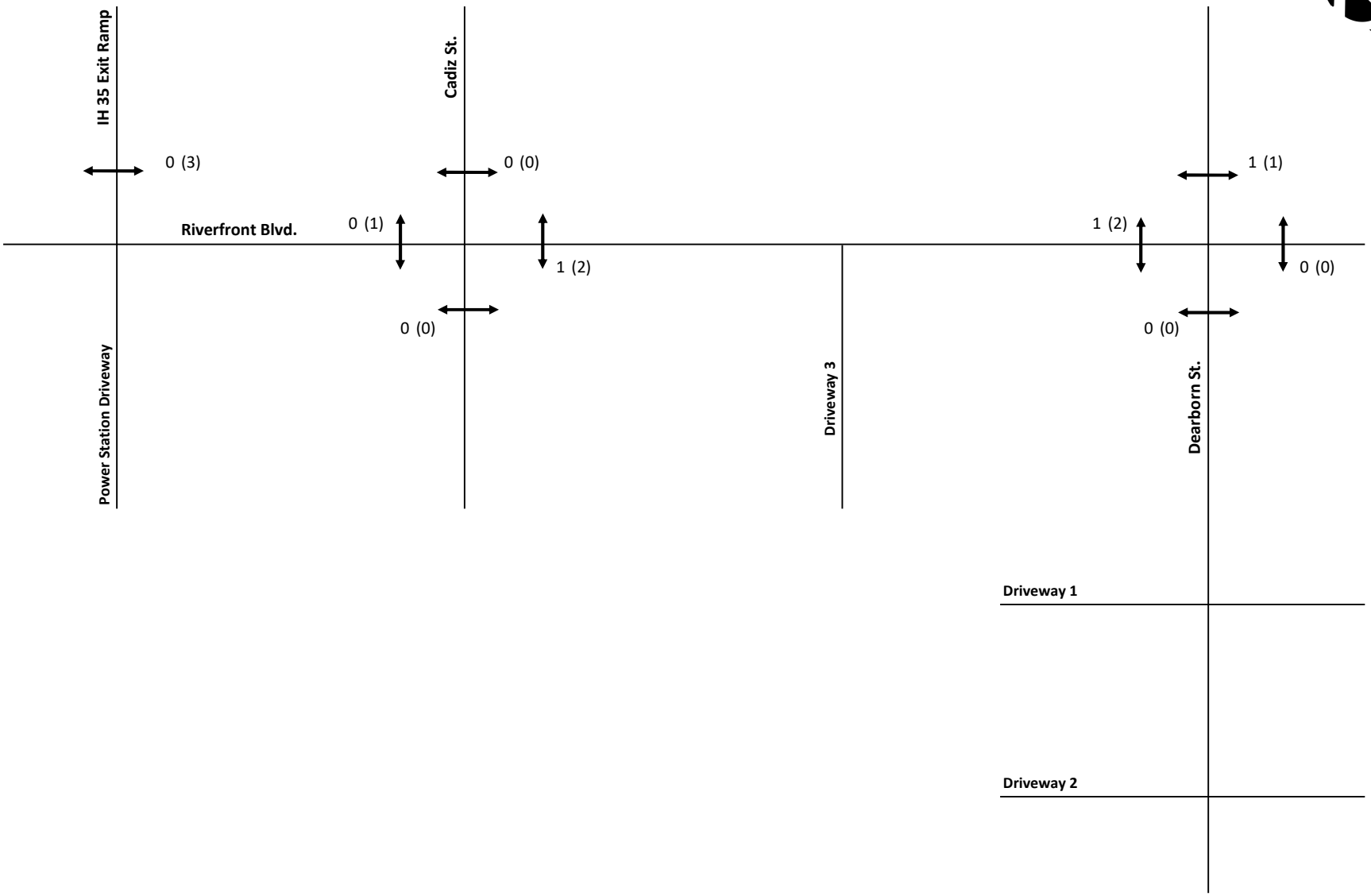
Riverfront Site

WALKABILITY



THE MOST WALKABLE DOWNTOWNS RANGE FROM:
140 - 400 INTERSECTIONS PER SQUARE MILE

Appendix F
Pedestrian Counts



LEGEND:

XX (YY) = AM (PM) Peak Hour Pedestrian Volume

9/13/2021

Existing Pedestrian Counts

Appendix H
Supplemental Information

Updated Daycare Size

The daycare SF was updated after the analysis was conducted. The 751 SF increase results in an increase of 4 inbound trips and 4 outbound trips in the AM and PM peak hour. This will not have a significant impact on the results. The trip generation comparison is provided below.

Original Daycare SF Trip Generation

ITE #	Use	Quantity	Weekday	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
221	Multifamily Housing (Mid-Rise), General Urban/Suburban	200 Units	1,088	68	18	50	86	52	34
565	Daycare Center	3,468 SF	165	38	20	18	39	18	21
		Total:	**1,253**	**106**	**38**	**68**	**125**	**70**	**55**

Expanded Daycare SF Trip Generation

ITE #	Use	Quantity	Weekday	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
221	Multifamily Housing (Mid-Rise), General Urban/Suburban	200 Units	1,088	68	18	50	86	52	34
565	Daycare Center	4,219 SF	201	46	24	22	47	22	25
		Total:	**1,289**	**114**	**42**	**72**	**133**	**74**	**59**