Traffic Impact Analysis

Multi-Family Development

At the intersection of

Seagoville Road and South Belt Line Road

Dallas, Texas

Prepared for

City of Dallas, Texas

February 25, 2020

Prepared by

DUNAWAY

550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121 • Fax: 817.335.7437
(TX REG. F-1114)

Project #5642.001

Donald J. Szczesny
2/25/2020

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Executive Summary

LDG Development retained Dunaway Associates, L.P. (Dunaway) to prepare a traffic impact analysis (TIA) for a proposed Multi-Family development located on a 10.4-acre tract in the City of Dallas, Texas. **Exhibit 1** provides the vicinity map and intersections of study.

The site, as shown in the vicinity map (**Exhibit 1**) is bounded by South Belt Line Road to the north, residential homes to the east, retail stores to the south, and Seagoville Road to the west. Existing surrounding development consists of single-family residential developments and multi-family residential development. Notable developments near the site include Seagoville Middle School and Seagoville High School. Commercial development exists near the site location with the majority located along Seagoville Road further north and South Belt Line Road further south. The site plan for the proposed Multi-Family development (**Exhibit 2**) proposes two driveways, all within the City of Dallas.

Results of the traffic analysis for the proposed development indicate that all of the existing and proposed intersections are expected to operate at LOS C or better after full build-out through the horizon year 2027.

To improve operations along the roadway network and prevent future issues, Dunaway included the following improvements:

- Change the traffic control to a signal controlled intersection for the intersection of South Belt Line Road and Seagoville Road (Already Planned Improvement).
- Change the traffic control to a signal controlled intersection for the intersection of South Belt Line Road at Lawson Road and realigned Lawson Road (Already Planned Improvement).

While the proposed development adds to the increase in delay for the intersections along South Belt Line Road, the existing traffic conditions are the main attribute for the unacceptable LOS. Traffic signal warrant studies have already been performed for the two existing intersections and both signals at the intersections are recommended. For the purpose of this study, it is assumed that the traffic signals are installed at both intersections along South Belt Line Road.

Based on the V/C ratio for the South Belt Line and Seagoville Roads, no capacity improvements are required. Based on the traffic volume and the anticipated operations, no left turn lanes or right turn lanes improvements are recommended at the proposed driveways.

It is Dunaway's recommendation to permit the proposed roadway connections and improvements along South Belt Line Road and Seagoville Road as described within this TIS.

I, Don Szczesny, hereby certify that the information provided in this report is complete and accurate to the best of my knowledge.

Introduction

LDG Development retained Dunaway Associates, L.P. (Dunaway) to prepare a traffic impact analysis (TIA) for a proposed Multi-Family development located on a 10.4-acre tract in the City of Dallas, Texas. **Exhibit 1** provides the vicinity map and intersections of study.

Purpose

This analysis is being provided as required by the City of Dallas. The purpose of this TIA is to determine the impacts that the proposed development will have on the adjacent roadway's operations and analyze the performance of the proposed driveway connections after the opening of the development and the horizon year. The development proposes one driveway connection along South Belt Line Road and one driveway connection (gated exit/emergency entrance) along Seagoville Road. The proposed roadway connections can be found in **Exhibit 2**. After a review of the analysis, the potential level of service (LOS) impacts will be identified. Also, recommended improvements to the surrounding roadways and intersections will be proposed.

Methodology

The traffic impact analysis was performed in accordance with standard transportation engineering procedures. Existing traffic volumes were collected and predicted site traffic was distributed through the study area. Historical traffic volumes were evaluated to estimate an average growth rate for application to the existing traffic volumes. The predicted site related traffic was added to the forecasted background traffic volumes, and traffic analysis was performed for the year associated with the opening of the development in 2022 and the five year horizon in 2027.

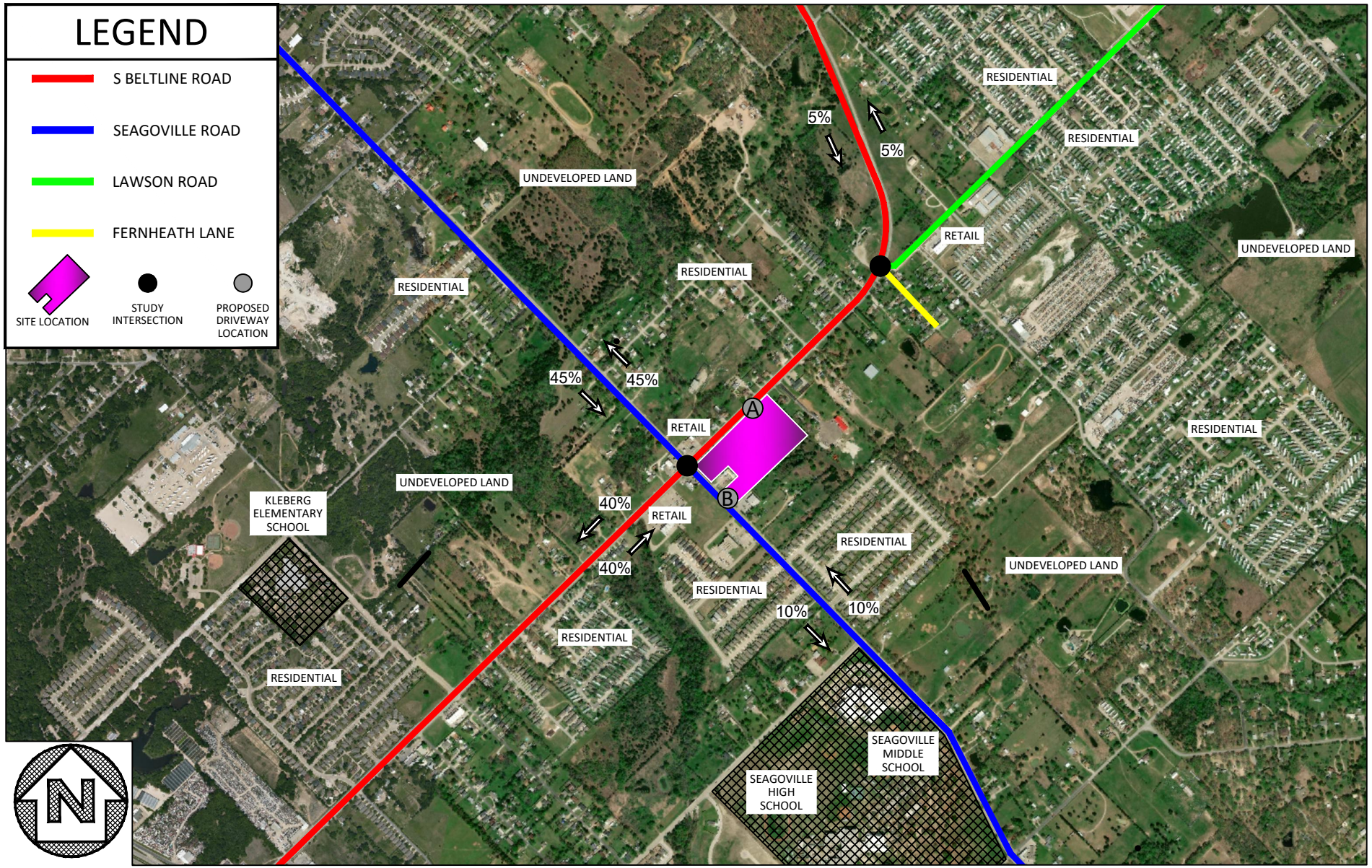
Site Location and Study Area

The site, as shown in the vicinity map (**Exhibit 1**) is bounded by South Belt Line Road to the north, residential homes to the east, retail stores to the south, and Seagoville Road to the west. The site plan for the proposed Multi-Family development (**Exhibit 2**) proposes two driveways, all within the City of Dallas.

Roadways in the Study Area:

- **South Belt Line Road** – is a two-way, median divided roadway heading northeast and southwest with six lanes west of Seagoville Road and four lanes east of Seagoville Road. This street intersects with Seagoville Road as an all-way stop controlled intersection. One of the proposed driveways into the proposed development will be located along this roadway. The posted speed limit is 40 mph.

- **Seagoville Road** – is a two-way, four-lane median divided roadway heading northwest and southeast. This street intersects with South Belt Line Road as a stop controlled intersections. One of the proposed driveways into the proposed development will be located along this roadway. The posted speed limit is 40 mph.



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550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121
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VICINITY MAP

MULTI-FAMILY DEVELOPMENT, DALLAS, TX

EXHIBIT 1

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EXIST. 3P OHE LINE LOCATION

S BELT LINE RD.

STOP 4-WAY

5' BLDG SETBACK/ LANDSCAPE BUFFER

950.99'

KEY PAD & GATED ENTRY

PROPOSED SEAGOVILLE RD MULTIFAMILY 240 UNITS 10.4 ACRES

5' LANDSCAPE BUFFER

209.12'

DETENTION POND AREA

F

E

A

A

A

A

A

A

CLUBHOUSE

GREEN SPACE / AMENITIES AREA

SWIMMING POOL AREA

211.30'

M&J TIRES AND AUTO REPAIR

130.11'

211.30'

SEAGOVILLE RD.

15' BLDG SETBACK

167.34'

F

E

GATED EXIT & EMERGENCY ENTRANCE

505.52'

5' LANDSCAPE BUFFER

15' BLDG SETBACK

5' LANDSCAPE BUFFER

950.99'

15' BLDG SETBACK

Building Type	Buildings	Units per Building	4 Bedroom Units		3 Bedroom Units		2 Bedroom Units		1 Bedroom Units		TOTAL
			per Building	Total Units	per Building	Total Units	per Building	Total Units	per Building	Total Units	
A	5	24	0	0	12	60	12	60	0	0	
E	2	36	0	0	0	0	24	48	12	24	
F	2	24	12	24	0	0	0	0	12	24	
-		0	0	0	0	0	0	0	0	0	
	9		Total Units:	24	Total Units:	60	Total Units:	108	Total Units:	48	240
			Total BRs:	96	Total BRs:	180	Total BRs:	216	Total BRs:	48	540

Site Acreage	10.4
Density	23
Required Parking	552
Provided Parking	450

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CONCEPT SITE PLAN

SEAGOVILLE RD & S. BELT LINE RD.
DALLAS, TX

0 100 200
GRAPHIC SCALE IN FEET

- **Fernheath Lane** – is a two-way, two-lane undivided roadway heading northwest and southeast. This street intersects with Lawson Road as stop controlled intersection. The assumed speed limit is 30 mph.

- **Lawson Road** – is a two-way, two-lane undivided roadway heading northeast and southwest. This street intersects with South Belt Line Road as a stop controlled intersection. The posted speed limit is 30 mph.

Intersections in the Study Area include: **(See EXHIBIT 2)**

South Belt Line Road (from Northeast to Southwest) at:

- **Seagoville Road** – [UNSIGNALIZED] exists as an all-way stop controlled intersection with four approaches. The northwest bound, and southeast bound approaches provide one left turn lane, one thru lane, and one shared thru-right turn lane. The southwest bound and northeast bound approaches provide one left turn lane, two thru lanes, and one shared thru-right turn lane. This intersection is also proposed to be signalized in the future.

- **Driveway A** – [UNSIGNALIZED] proposed as a two-way stop controlled intersection. The northwest bound approach will provide one left turn lane and one right turn lane. The southwest bound approach will provide one shared left turn lane and two thru lanes. The northeast bound approach will provide one shared left turn lane, one thru lane, and one shared thru-right turn lane. The intersection will serve as one of the two points of access into the site.

- **Lawson & Fernheath Lane** – [UNSIGNALIZED] exists as a stop-controlled intersection with four approaches. The northeast bound approach provides one thru lane and a shared thru-right turn lane. The southwest bound approach provides two thru lanes, and one left turn lane. The northwest bound approach provides a shared all-purpose lane. This intersection is also proposed to be signalized and realigned in the future.

Seagoville Road (from Northwest to Southeast) at

- **Driveway B** – [UNSIGNALIZED] proposed as a one-way stop-controlled T-intersection with approaches from the southeast, northwest, and southwest (stop controlled). The southeast bound approach is proposed with two thru lanes. The northwest bound approach is proposed with one thru lane and one shared thru-right turn lane. The southwest bound approach is proposed with one right turn lane. The intersection will serve as a gated exit/emergency entrance for the site.

Existing Development

Existing surrounding development consists of single-family residential developments and multi-family residential development. Notable developments near the site include Seagoville Middle School and Seagoville High School. Commercial development exists near the site location with the majority located along Seagoville Road further north and along South Belt Line Road further south.

Proposed Development

The proposed Multi-Family development is located on a 10.4-acre tract of land northeast of the intersection of South Belt Line Road and Seagoville Road. The development is expected to consist of 240 units of multifamily housing, with an anticipated build-out in 2022. **Exhibit 2** shows the proposed site plan for the Multi-Family development. **Table 1** summarizes the assumed land use.

Table 1. ITE Land Use Assumptions

ITE Land Use	ITE Code	Year Completed	Unit	Qty.
Multifamily Low-Rise (Apartments)	220	2022	Dwelling Units	240

Traffic Study Volumes

Existing Traffic Volumes

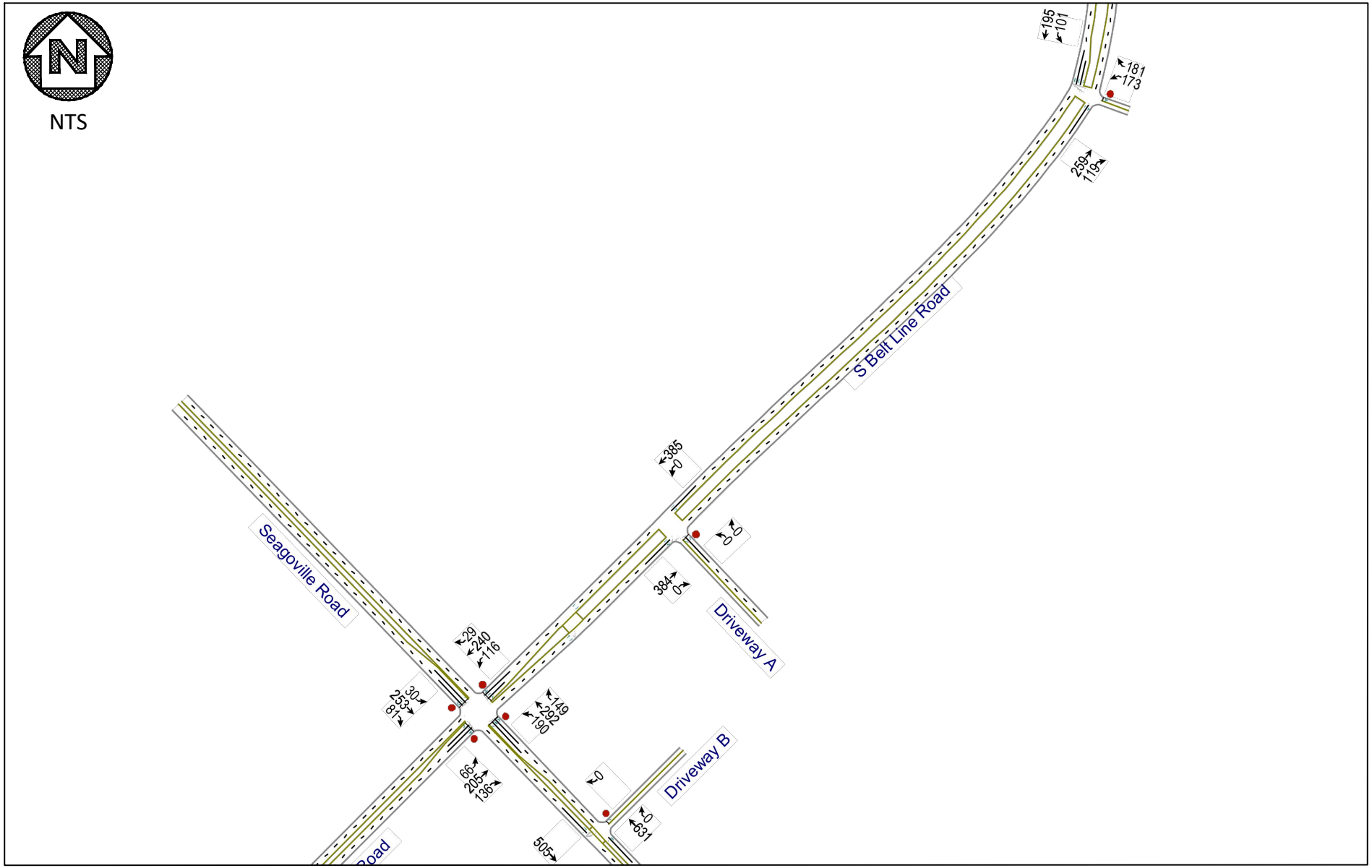
The traffic data was collected on consecutive weekdays in January 2020 at two existing intersections (TMC) and two mid-block locations (24-Hour Machine Count). The locations are as follows:

1. South Belt Line Road and Seagoville Road (TMC)
2. South Belt Line Road and Lawson Road (TMC)
3. South Belt Line Road, northeast Seagoville Road (24-Hour Machine Count)
4. Seagoville Road, southeast of South Belt Line Road (24-Hour Machine Count)

The peak turning movement volumes were used in the analysis of the study area intersections to reflect the existing conditions. Based on the collected data, the AM peak hour was determined to be between **7:30–8:30 AM,** and the PM peak hour was determined to be between **4:15–5:15 PM** on Wednesday. The raw traffic counts data is provided in the **Appendix. Exhibit 3a** and **3b** show the existing 2020 traffic counts. These traffic volumes were utilized for the background volumes in the *SYNCHRO* traffic model.

Forecasted Traffic Volumes

To assist in developing a predicted annual growth rate for the analysis of future traffic volumes, Dunaway reviewed the collected traffic volumes along with proposed developments in the vicinity of the site. **Table 2** shows the result from the 24-hour machine count along South Belt Line Road. After reviewing the collected and historical data from TxDOT AADT counts along with proposed developments, a growth rate of 5 percent per year was applied to the existing traffic volumes to project the volumes after the full build-out and the horizon year.



DUNAWAY
550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121
TX REG. F-1114

Existing 2020 Traffic Volumes (AM)

MULTI-FAMILY DEVELOPMENT, DALLAS, TX

EXHIBIT 3a

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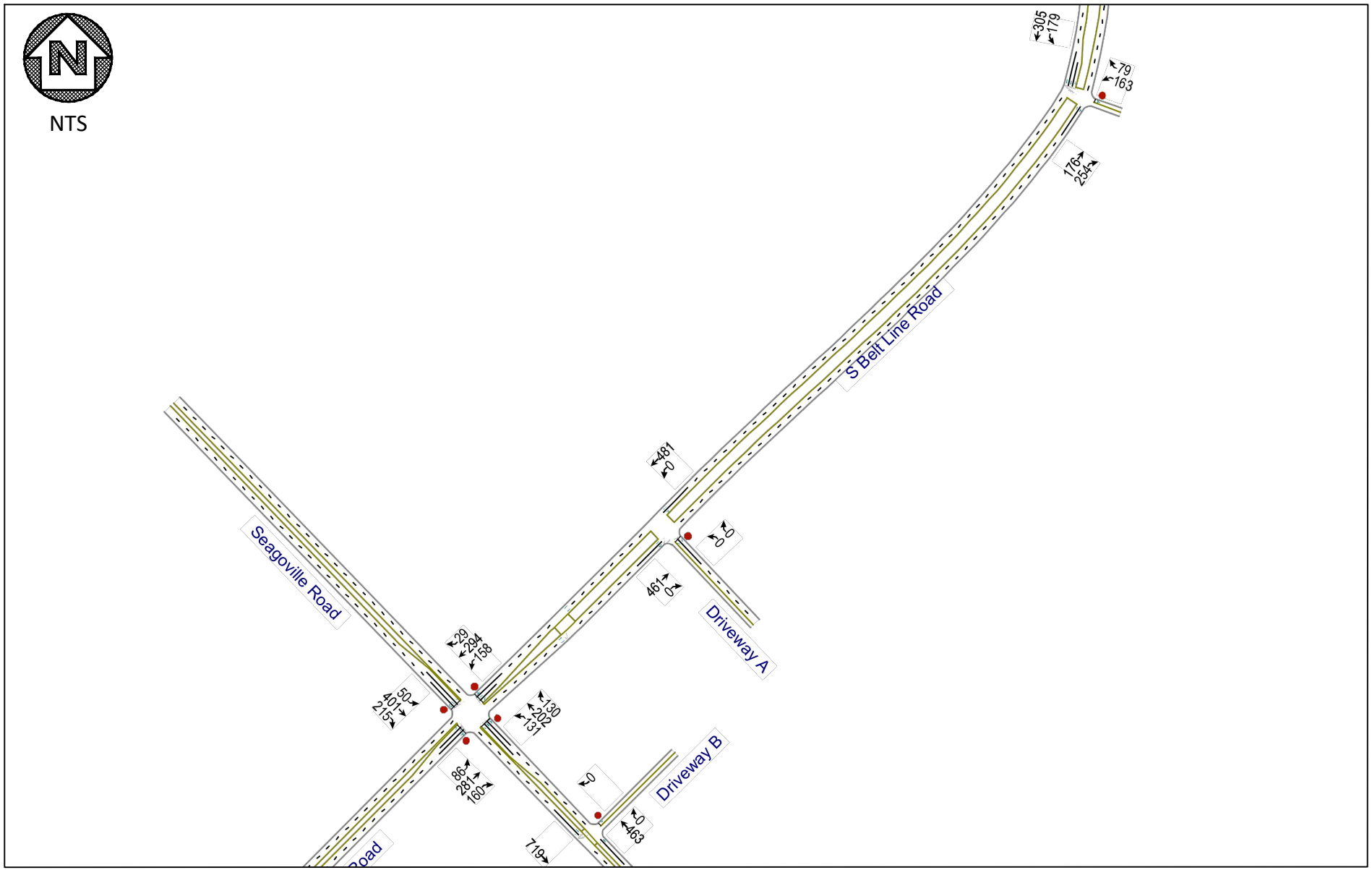

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Existing 2020 Traffic Volumes (PM)

MULTI-FAMILY DEVELOPMENT, DALLAS, TX

EXHIBIT 3b

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Table 2. Historical Daily Traffic Volumes – Dallas, Texas

South Belt Line Road (Between Seagoville Road & Lawson Road)			
Source	Year	AADT	Growth Rate
TxDOT	1999	6988	-
TxDOT	2004	6846	-0.4%
TxDOT	2009	7198	1.0%
TxDOT	2014	7765	1.5%
Gram	2020	9768	3.9%

Trip Generation

The Institute of Transportation Engineers (ITE) provides predicted trip generation rates and equations for several land uses as provided in ***ITE Trip Generation, 10th Edition***. These rates are based on individual sites to compute driveway volumes for particular land uses. The summary of trip generation rates used for the proposed site are provided in **Table 3**.

Table 3. Summary of Trip Generation Rates

Land Use	ITE Code	Unit	Trip Rate		Pass-By (%)		Distribution Rate (%)			
			AM	PM	AM	PM	AM Hour		PM Hour	
							In	Out	In	Out
Multifamily Low-Rise (Apartments)	220	DU	0.46	0.56	-	-	23	77	63	37

Net Change in Additional Traffic Volumes

The ***ITE Trip Generation Handbook, 3rd Edition*** describes a common phenomenon of internal capture which is the probability that a customer or resident will visit various locations within the multi-use development in one trip. ***ITE Trip Generation Handbook, 3rd Edition*** provides that significant pass-by trips are associated with particular land uses located adjacent to highly traveled roadways and states "The pass-by trip-making phenomenon, if estimated to be significant, should be recognized when examining the traffic impact of a development on the adjacent street system." Due to the land use, pass-by phenomenon and internal capture were not considered in the analysis. **Table 4** provides the summary of gross generated trips.

Table 4. Summary of Gross Primary Trips

ITE Land Use	ITE Code	Unit	Qty.	Year	AM Peak Hour		PM Peak Hour	
					Enter	Exit	Enter	Exit
Multifamily Low-Rise (Apartments)	220	DU	240	2022	25	85	85	50
Subtotal					**110**		**135**	

Trip Distribution and Traffic Assignment

The assumed trip origin and destination of peak hour site traffic to and from the development were based on site location along major routes. Below are the general orientation assumptions:

- Multi-Family Development
  - 45 percent to/from the southwest along South Belt Line Road
  - 40 percent to/from the northwest along Seagoville Road
  - 10 percent to/from the northeast along South Belt Line Road
  - 5 percent to/from the southeast along Seagoville Road

The *SYNCHRO* report in the **Appendix** provides the trip distribution percentages for the entering (inbound) and exiting (outbound) site traffic between destination/origin. Consideration of several factors for specific trip assignment to and from the driveways and intersections include:

- Location of driveway,
- Location and density of land uses within the development, and
- Engineering judgment.

Entering and exiting primary site trip assignment was calculated by multiplying the predicted percentages by the total entering and exiting primary trip generation for both the AM and PM peak hours.

Traffic Analysis

Level of Service

For intersection analysis, Level of Service (LOS) is defined by delay in seconds per vehicle at an intersection within a critical peak hour as detailed in **Table 5** for both signalized and unsignalized intersections.

Table 5. Intersection Level of Service (LOS)

Level of Service, LOS	Signalized Intersection Average Delay per Vehicle, seconds	Unsignalized Intersection Average Delay per Vehicle, seconds
A	≤ 10	≤ 10
B	> 10 ≤ 20	> 10 ≤ 15
C	> 20 ≤ 35	> 15 ≤ 25
D	> 35 ≤ 55	> 25 ≤ 35
E	> 55 ≤ 80	>35 ≤ 50
F	> 80	> 50

Source: Highway Capacity Manual, Transportation Research Board, 6th Edition

Intersection Analysis

AM and PM peak hour intersection analyses were performed for all study intersections, as discussed below, utilizing *SYNCHRO* software. The LOS of the approaches are shown, along with the delay, and the longest queue for each approach.

Existing 2020 Analysis

The peak turning movement volumes collected at the intersection mentioned previously reflect the existing 2020 traffic conditions and the existing 2020 traffic counts can be seen in **Exhibit 3a** and **3b**.

The intersection volumes were analyzed within *SYNCHRO.* Due to software limitations the intersection of South Belt Line Road at Seagoville Road was analyzed utilizing two thru lane along South Belt Line Road instead of the existing three thru lanes. To account for the reduction in thru lanes, the northeast and southwest thru volumes along South Belt Line Road was calculated per lane basis and reentered with two thru lanes instead of three thru lanes.

For the existing conditions, South Belt Line Road at Seagoville Road operates at LOS F for the PM peak hour and South Belt Line Road at Lawson Road operates at a LOS F for both peak hours. The results of the intersection capacity analyses are provided in **Table 6** and the *SYNCHRO* analysis reports are in the **Appendix**.

2022 Forecasted Analysis

As previously discussed, proposed Multi-Family development is expected to be opened in 2022. To analyze the impacts of the proposed site, the existing traffic was grown using the 5 percent growth rate to estimate the traffic volume just before the opening of the proposed development. The traffic control for the intersections of South Belt Line Road at Seagoville Road and South Belt Line Road at Lawson Road was assumed to be constructed and upgraded to traffic signal control. The 2022 forecasted traffic volumes can be seen in **Exhibits 4a** and **4b**.

The intersection volumes were analyzed within *SYNCHRO.* Just before the opening of the first phase of the development, all the existing intersections are anticipated to operate at LOS C, or better, during both the AM and PM peaks. The results of the intersection capacity analyses are provided in **Table 6**.

2022 Forecasted + SITE Analysis

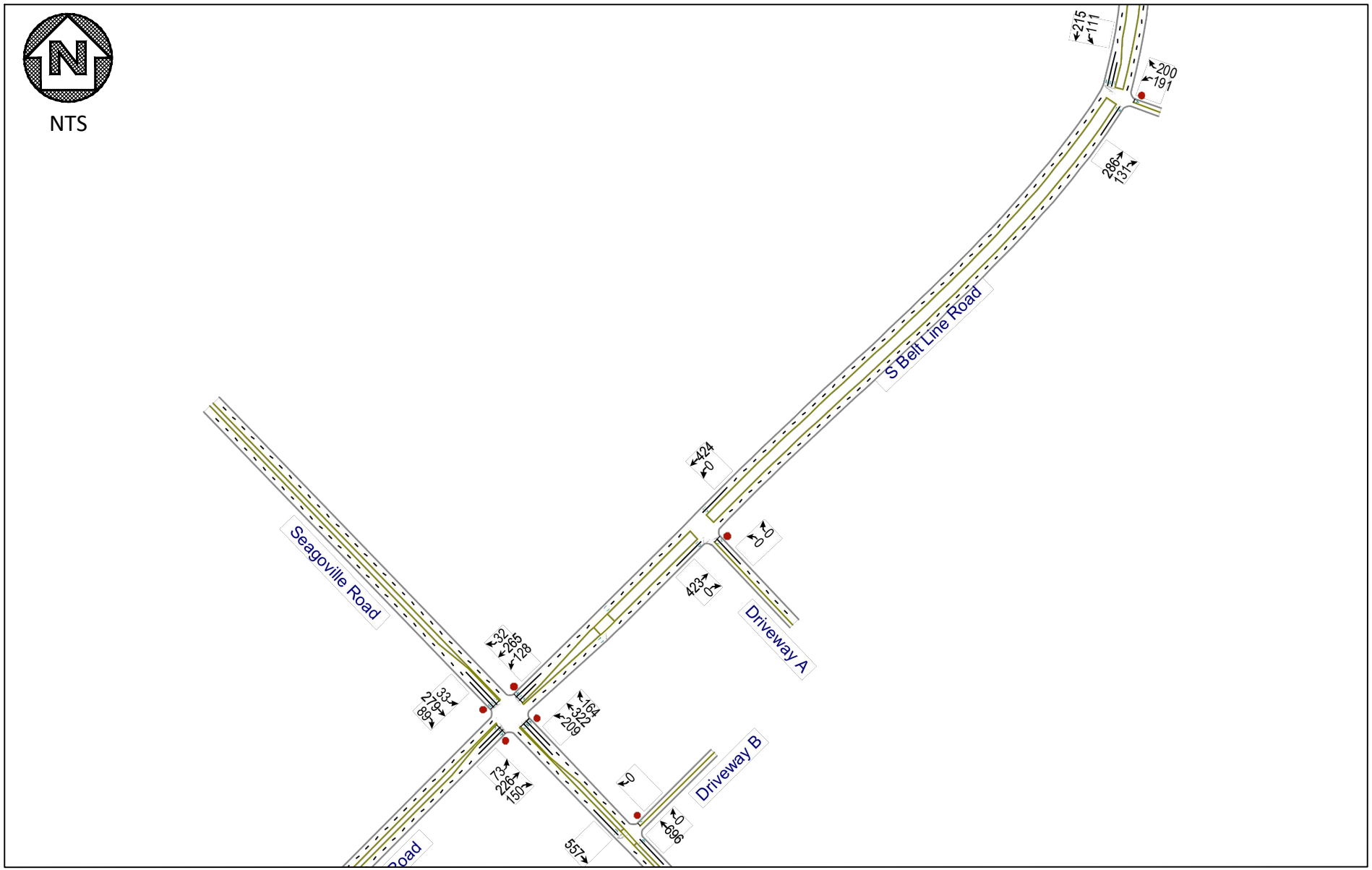
The proposed Multi-Family development is expected to be opened in 2022. To analyze the impacts of the proposed site, the site traffic generated was added to the previous roadway network and study intersections. As previously mentioned, the traffic control for South Belt Line Road at Seagoville Road and South Belt Line Road at Lawson Road was modified to signal controlled. The 2022 forecasted + site traffic volumes can be seen in **Exhibits 5a** and **5b**.

The intersections were analyzed within *SYNCHRO.* After the build-out of the proposed development all the existing and proposed intersections are anticipated to operate at LOS C, or better, during both the AM and PM peaks. The results of the intersection capacity analyses are provided in **Table 6**.

Table 6. Peak Hour Intersection Capacity Analysis Results, Level Of Service (LOS)

Intersection		2020 Existing		2022 Forecasted		2022 Forecasted + Site		2027 Horizon	
Belt Line Road at Seagoville Road		**AM[1]**	**PM[1]**	**AM[3*]**	**PM[3*]**	**AM[3*]**	**PM[3*]**	**AM[3*]**	**PM[3*]**
Southeast	**LOS Delay; Queue**	D 29.5	F 103.0	B 19.3; 79	C 25.3; 157	B 19.1; 81	C 24.9; 159	C 28.7; 140	D 48.5; 332
Northwest		E 39.1	E 39.0	B 16.9; 94	B 15.7; 56	B 18.0; 116	B 17.0; 61	C 23.0; 213	C 24.9; 108
Northeast		D 28.6	E 39.5	B 17.5; 46	C 20.2; 63	B 17.6; 48	C 20.3; 68	C 25.9; 75	C 33.4; 130
Southwest		C 22.6	D 27.6	B 15.3; 62	B 18.7; 105	B 15.7; 67	B 19.0; 113	C 20.9; 94	C 27.8; 176
Overall Approach	**LOS Delay**	D 31.4	F 57.1	B 17.2	C 20.2	B 17.6	C 20.5	C 24.4	C 34.4
Belt Line Road at Driveway A[2]		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Northwest	**LOS Delay; Queue**	-	-	-	-	B 13.5	B 14.8	C 15.4	C 17.3
Northeast		-	-	-	-	A	A	A	A
Southwest		-	-	-	-	A 8.4	A 8.8	A 8.7	A 9.4
Belt Line Road at Lawson Road		**AM[2]**	**PM[2]**	**AM[3*]**	**PM[3*]**	**AM[3*]**	**PM[3*]**	**AM[3*]**	**AM[3*]**
Westbound	**LOS Delay; Queue**	F 69; 173	F 130.6; 140	A 13.6; 93	A 15.0; 96	A 13.7; 94	A 15.0; 96	A 16.5; 168	A 19.0; 172
Northbound		A	A	B 12.3; 63	B 11.4; 51	B 12.3; 64	B 11.4; 51	B 14.8; 134	B 13.9; 94
Southbound		A 8.9; 11	A 9.4; 22	A 5.5; 36	A 5.0; 56	A 5.5; 36	A 5.0; 56	A 6.8; 55	A 6.3; 90
Overall Approach	**LOS Delay**	-	-	B 10.8	A 9.4	B 10.8	A 9.4	B 12.8	B 11.6
Seagoville Road at Driveway B[2]		**AM**	**PM**	**AM**	**PM**	**AM**	**PM**	**AM**	**PM**
Southeast	**LOS Delay; Queue**	-	-	-	-	A	A	A	A
Northwest		-	-	-	-	A	A	A	A
Southwest		-	-	-	-	B 11.2; 5	B 10.2; 2	B 12.3; 6	B 10.9; 3

Note: [1] – All-way Stop Controlled, [2] – Two-way Stop Controlled, [3] – Signal Controlled, * - Signal Timings Optimized, A, B, C, D, E, F = LOS, 95th Percentile Delay in Seconds,



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550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
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Forecasted 2022 Traffic Volumes (AM)

MULTI-FAMILY DEVELOPMENT, DALLAS, TX

EXHIBIT 4a

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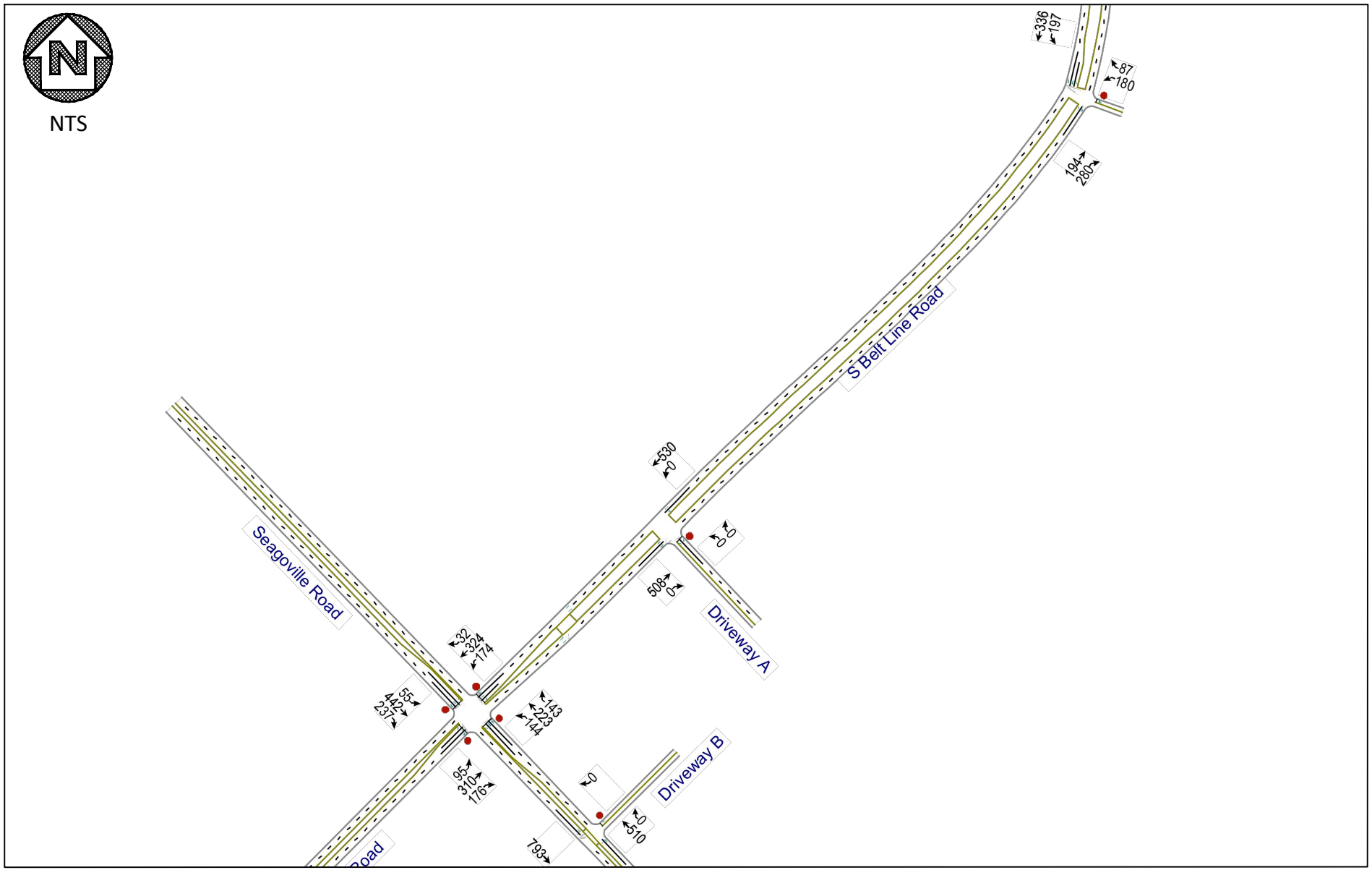

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Forecasted 2022 Traffic Volumes (PM)

MULTI-FAMILY DEVELOPMENT, DALLAS, TX

EXHIBIT 4b

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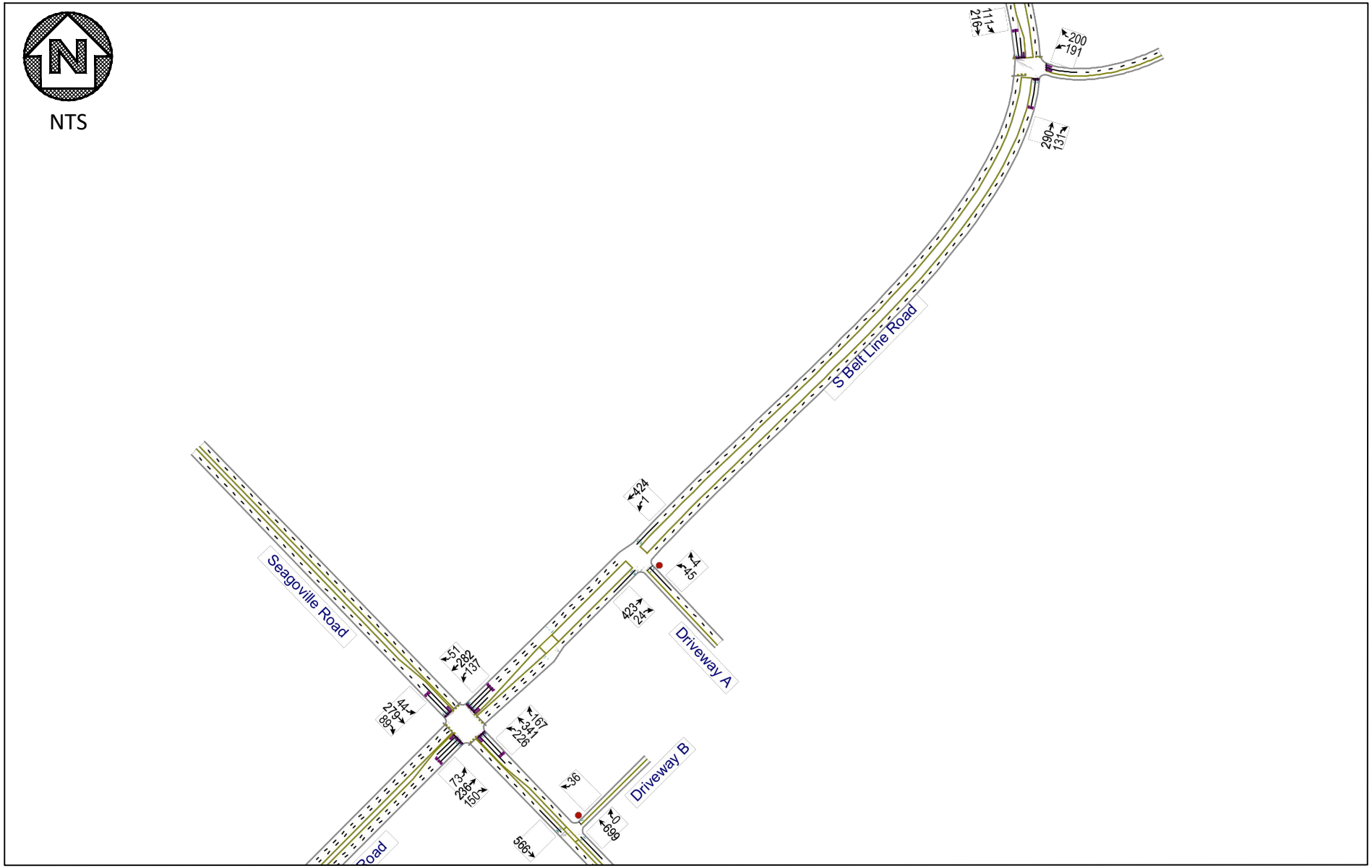

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Forecasted 2022 + Site Traffic Volumes (AM)

MULTI-FAMILY DEVELOPMENT, DALLAS, TX

EXHIBIT 5a

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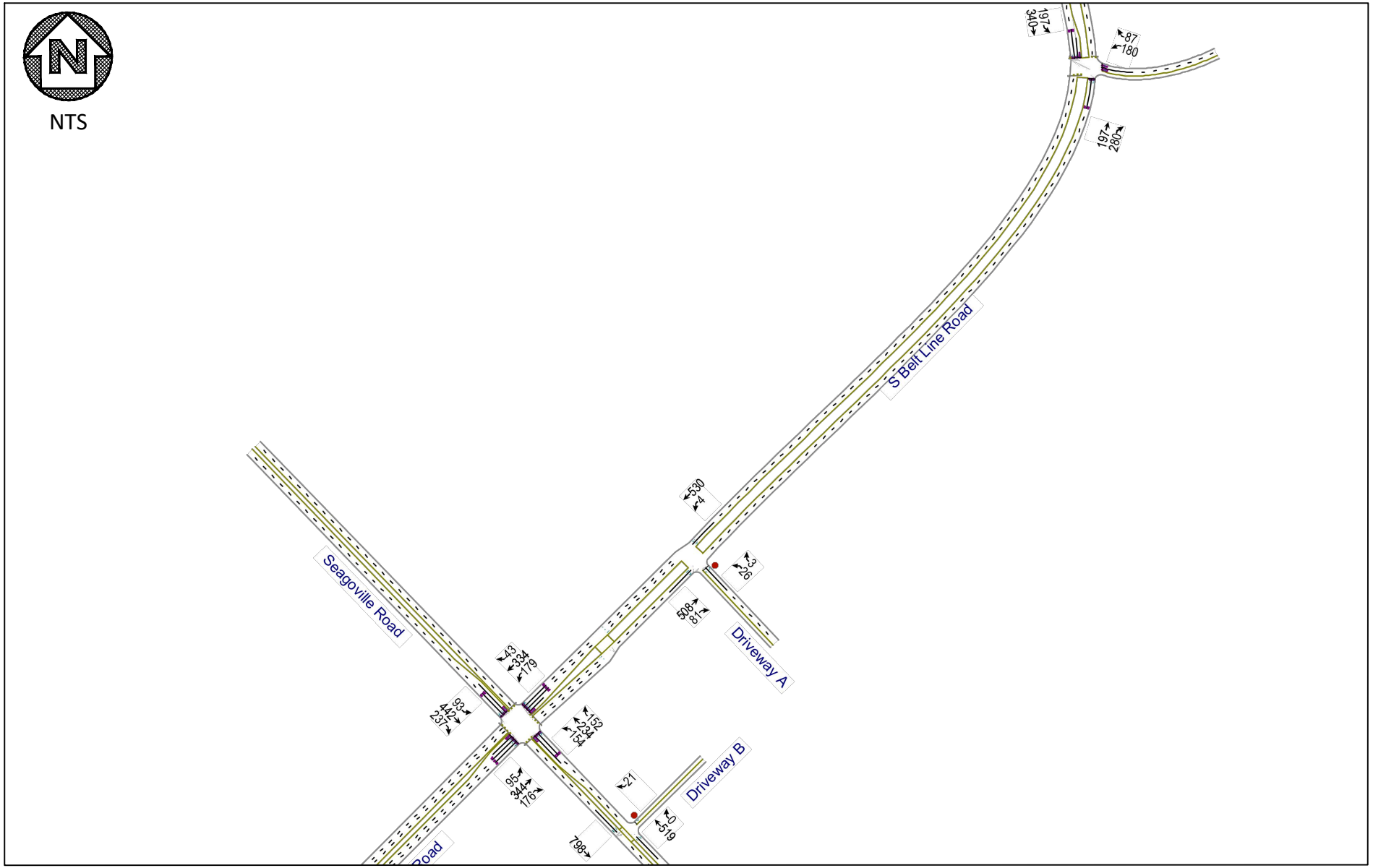

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Forecasted 2022 + Site Traffic Volumes (PM)

MULTI-FAMILY DEVELOPMENT, DALLAS, TX

EXHIBIT 5b

2027 Horizon Analysis

To further analyze the impacts of the proposed site, the five-year horizon (2027) was also analyzed using the previously discussed growth rate. The 2027 horizon traffic volumes can be seen in **Exhibits 6a** and **6b**.

Five years after the full build-out, all the existing and proposed intersections are anticipated to operate at LOS C or better during both the AM and PM peak hours. The results of the intersection capacity analyses are provided in **Table 6.**

Roadway Link Analysis

The roadway link analysis examines the operating conditions of roadways segments based on hourly roadway capacities. Utilizing the 24-hour machine count along South Belt Line Road and Seagoville Road the peak hour volume was determined. The capacity is based on the ***North Central Texas Council of Governments (NCTCOG)'s Dallas-Fort Worth Regional Travel Model (DFWRTM), 2009.*** The area type for both roadways was determined to be suburban residential with South Belt Line Road classified as a principal arterial, and Seagoville Road classified as a minor arterial. The results of the roadway capacity analyses are provided in **Table 7**. Both Roadways have an acceptable V/C ratio, so no capacity improvements are required.

Table 7. Peak Hour Rodway Capacity Analysis Results

Roadway	Peak Hour Volume	Lane Configuration	Divided	Capacity Per Direction	Total Capacity	V/C Ratio
South Belt Line Road	918	4 Lanes	Yes	1800	3600	**0.26**
Seagoville Road	1169	4 Lanes	Yes	1800	3600	**0.32**

Site Access Evaluation

Right Turn Lane Analysis

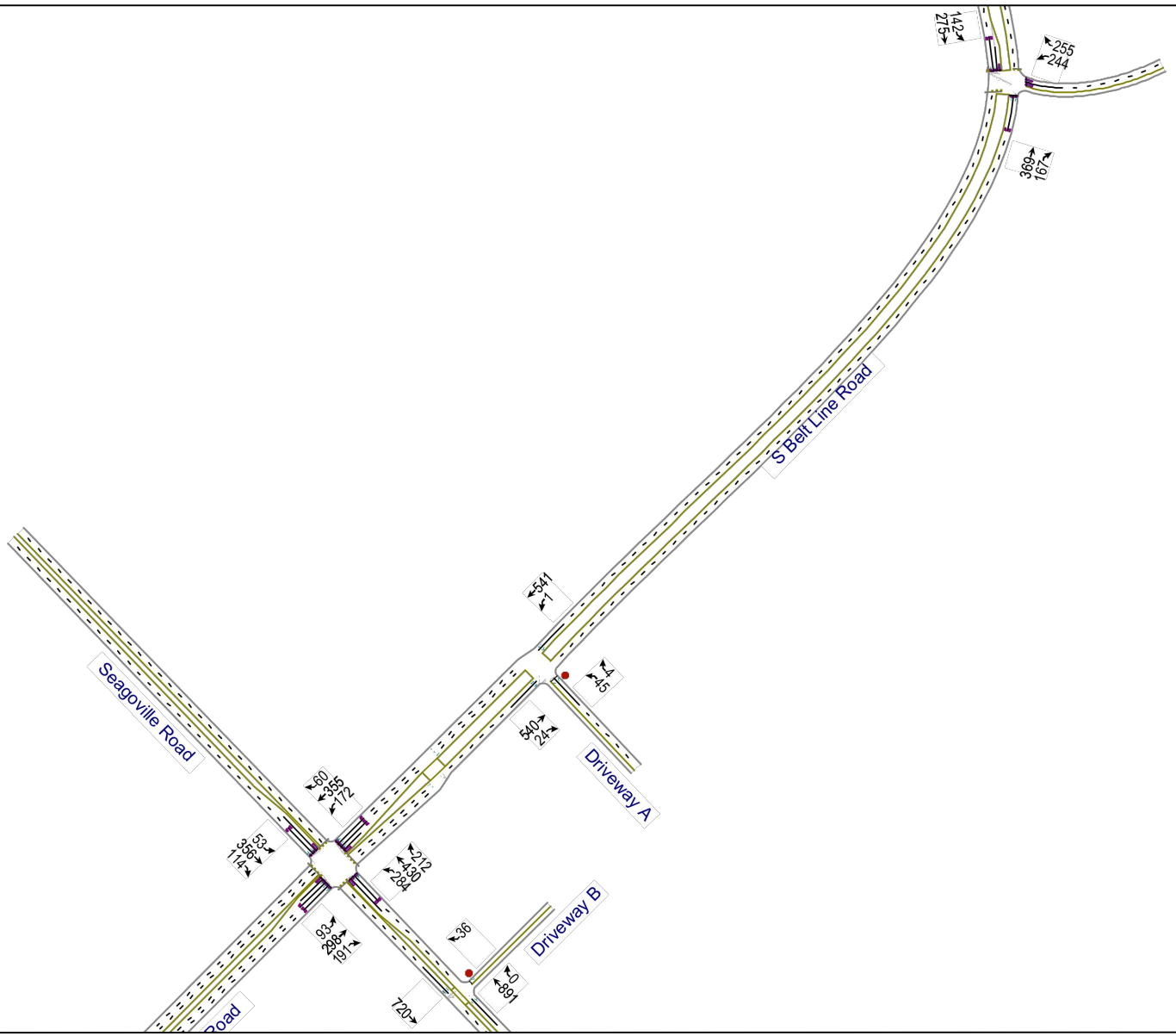
According to the City of Dallas Off-Street Parking and Driveways Handbook, right-turn deceleration lanes should be considered at driveways on an arterial roadway with operating speeds higher than 35 MPH or when the average peak hour right-turning volumes are more than 120 vehicles in the peak hour. **Table 8** shows the projected right-turn volumes at the proposed Driveway during the AM and PM peak hours for the full build-out conditions of the site.

Table 8. Right Turn Lane Analysis

Intersection / Roadway	Projected 2027 Volumes, (vph)		Posted Speed Limit	City of Dallas Criterion	Recommended
	AM	PM			
South Belt Line Road at Driveway A	24	81	40	>120	**NO**

Based on the results a right turn deceleration lane is not recommended for the intersection at Driveway A, and a right turn deceleration lane is not recommended for the intersection at Driveway B since it operates only as a gated exit/emergency entrance.

NTS



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Horizon 2027 Traffic Volumes (AM)

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EXHIBIT 6a

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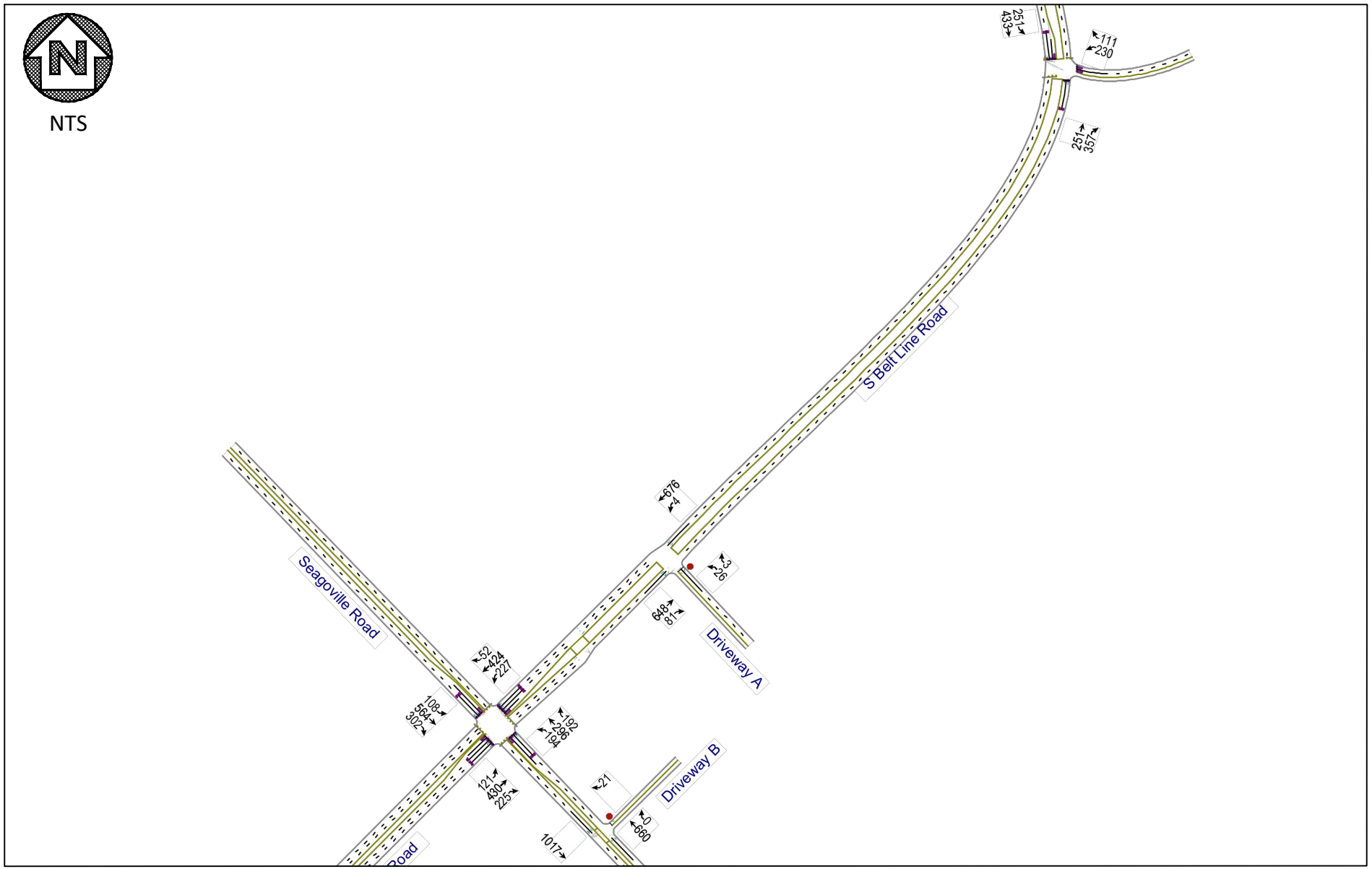
NTS



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Horizon 2027 Traffic Volumes (PM)

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EXHIBIT 6b

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Left Turn Lane Analysis

South Belt Line Road is classified as a principal arterial, and a left-turn lane does not exist. In order to determine if a left turn lane is needed for the proposed Driveway A, the operational impact of left turns was evaluated using *SYNCHRO.* **Table 9** shows the projected level of service. Since the proposed traffic volumes do not create a significant traffic impact in the five-year horizon, a left turn lane is not recommended.

Table 9. Left Turn Lane Analysis

Intersection/ Driveway	Projected 2029 Volumes, (vph)		LOS (Approach)	Significant Impact
	AM	PM		
Driveway A	1	4	**A**	**NO**

Conclusions/Recommendations

Results of the traffic analysis for the proposed development indicate that all of the existing and proposed intersections are expected to operate at LOS C or better after full build-out through the horizon year 2027.

To improve operations along the roadway network and prevent future issues Dunaway included the following improvements:

- Change the traffic control to a signal controlled intersection for the intersection of South Belt Line Road and Seagoville Road (Already Planned Improvement).
- Change the traffic control to a signal controlled intersection for the intersection of South Belt Line Road at Lawson Road and realigned Lawson Road (Already Planned Improvement).

While the proposed development adds to the increase in delay for the intersections along South Belt Line Road, the existing traffic conditions are the main attribute for the unacceptable LOS. Traffic signal warrant studies have already been performed for the two existing intersections and both signals at the intersections are recommended.

Based on the V/C ratio for South Belt Line and Seagoville Roads, no capacity improvements are required. Based on the traffic volume and the anticipated operations no left turn lanes or right turn lanes improvements are recommended at the proposed driveways.

It is Dunaway's recommendation to permit the proposed roadway connections and improvements along South Belt Line Road and Seagoville Road as described within this TIS.

APPENDIX

DUNAWAY

Table of Contents

TRAFFIC DATA

DUNAWAY

GRAM Traffic NTX Inc.

1120 W. Lovers Lane

Arlington, Texas, United States 76013
817.265.8968

Count Name: BELT LINE RD @ LAWSON RD - THUR
Site Code:
Start Date: 01/30/2020

Turning Movement Data

Start Time	BELT LINE RD Southbound					LAWSON RD Westbound					BELT LINE RD Northbound					Eastbound St. Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	8	29	0	0	37	36	0	42	0	78	0	56	18	0	74	0	0	0	0	0	189
7:15 AM	19	33	0	0	52	52	1	63	0	116	0	60	23	0	83	0	0	0	0	0	251
7:30 AM	15	49	0	0	64	45	0	53	0	98	0	85	31	0	116	0	0	0	0	0	278
7:45 AM	33	46	0	0	79	45	0	57	0	102	0	66	44	1	111	0	0	0	0	0	292
Hourly Total	75	157	0	0	232	178	1	215	0	394	0	267	116	1	384	0	0	0	0	0	1010
8:00 AM	33	60	0	1	94	46	0	46	0	92	0	68	27	1	96	0	0	0	0	0	282
8:15 AM	20	40	0	0	60	37	0	25	0	62	0	40	17	1	58	0	0	0	0	0	180
8:30 AM	18	28	0	0	46	41	0	22	0	63	0	36	28	0	64	0	0	0	0	0	173
8:45 AM	17	25	0	0	42	40	0	16	0	56	0	28	11	0	39	0	0	0	0	0	137
Hourly Total	88	153	0	1	242	164	0	109	0	273	0	172	83	2	257	0	0	0	0	0	772
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	59	75	0	0	134	42	0	18	0	60	0	46	63	0	109	0	0	0	1	1	304
4:15 PM	49	85	0	0	134	42	0	17	0	59	0	27	60	0	87	0	0	0	0	0	280
4:30 PM	61	64	0	0	125	39	0	21	0	60	0	52	69	0	121	0	0	0	0	0	306
4:45 PM	34	78	0	0	112	38	0	23	0	61	0	42	60	0	102	0	0	0	0	0	275
Hourly Total	203	302	0	0	505	161	0	79	0	240	0	167	252	0	419	0	0	0	1	1	1165
5:00 PM	35	78	0	0	113	44	0	18	0	62	0	55	65	0	120	0	0	0	0	0	295
5:15 PM	40	78	0	0	118	37	0	23	0	60	0	43	56	1	100	0	0	0	0	0	278
5:30 PM	44	84	0	0	128	31	0	30	0	61	0	44	67	0	111	0	0	0	0	0	300
5:45 PM	39	86	0	0	125	40	0	33	0	73	0	33	62	0	95	0	0	0	0	0	293
Hourly Total	158	326	0	0	484	152	0	104	0	256	0	175	250	1	426	0	0	0	0	0	1166
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	524	938	0	1	1463	655	1	507	0	1163	0	781	701	4	1486	0	0	0	1	1	4113
Approach %	35.8	64.1	0.0	0.1	-	56.3	0.1	43.6	0.0	-	0.0	52.6	47.2	0.3	-	0.0	0.0	0.0	100.0	-	-
Total %	12.7	22.8	0.0	0.0	35.6	15.9	0.0	12.3	0.0	28.3	0.0	19.0	17.0	0.1	36.1	0.0	0.0	0.0	0.0	0.0	-
Lights	504	912	0	1	1417	645	1	482	0	1128	0	774	689	4	1467	0	0	0	1	1	4013
% Lights	96.2	97.2	-	100.0	96.9	98.5	100.0	95.1	-	97.0	-	99.1	98.3	100.0	98.7	-	-	-	100.0	100.0	97.6
Mediums	18	13	0	0	31	9	0	25	0	34	0	5	10	0	15	0	0	0	0	0	80
% Mediums	3.4	1.4	-	0.0	2.1	1.4	0.0	4.9	-	2.9	-	0.6	1.4	0.0	1.0	-	-	-	0.0	0.0	1.9
Articulated Trucks	2	13	0	0	15	1	0	0	0	1	0	2	2	0	4	0	0	0	0	0	20
% Articulated Trucks	0.4	1.4	-	0.0	1.0	0.2	0.0	0.0	-	0.1	-	0.3	0.3	0.0	0.3	-	-	-	0.0	0.0	0.5

GRAM Traffic NTX Inc.

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Turning Movement Data

Start Time	BELT LINE RD Southbound					LAWSON RD Westbound					BELT LINE RD Northbound					Eastbound St. Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	8	36	0	0	44	47	0	40	0	87	0	59	24	0	83	0	0	0	0	0	214
7:15 AM	19	38	0	0	57	50	0	66	0	116	0	71	23	0	94	0	0	0	0	0	267
7:30 AM	18	47	0	0	65	52	0	52	0	104	0	70	29	0	99	0	0	0	0	0	268
7:45 AM	33	55	0	0	88	46	0	32	0	78	0	50	42	2	94	0	0	0	0	0	260
Hourly Total	78	176	0	0	254	195	0	190	0	385	0	250	118	2	370	0	0	0	0	0	1009
8:00 AM	15	50	1	0	66	49	1	38	0	88	0	53	33	0	86	0	0	0	0	0	240
8:15 AM	14	35	0	0	49	35	0	29	0	64	0	41	22	0	63	0	0	0	0	0	176
8:30 AM	19	28	0	0	47	18	0	29	0	47	0	34	26	0	60	0	0	0	0	0	154
8:45 AM	16	25	0	0	41	33	0	20	1	54	0	28	25	0	53	0	0	0	0	0	148
Hourly Total	64	138	1	0	203	135	1	116	1	253	0	156	106	0	262	0	0	0	0	0	718
9:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	49	55	0	0	104	37	0	27	0	64	0	36	49	0	85	0	0	0	0	0	253
4:15 PM	62	52	0	0	114	44	0	24	0	68	0	45	42	0	87	0	0	0	0	0	269
4:30 PM	50	60	0	0	110	46	0	20	0	66	0	56	83	0	139	0	0	0	0	0	315
4:45 PM	57	42	0	0	99	48	0	19	0	67	0	45	60	0	105	0	0	0	0	0	271
Hourly Total	218	209	0	0	427	175	0	90	0	265	0	182	234	0	416	0	0	0	0	0	1108
5:00 PM	35	68	0	0	103	32	0	21	0	53	0	48	72	0	120	0	0	0	0	0	276
5:15 PM	56	75	0	0	131	40	0	23	0	63	0	43	63	0	106	0	0	0	0	0	300
5:30 PM	41	80	0	0	121	42	0	24	0	66	0	37	69	0	106	0	0	0	0	0	293
5:45 PM	39	74	0	0	113	55	0	27	0	82	0	38	58	0	96	0	0	0	0	0	291
Hourly Total	171	297	0	0	468	169	0	95	0	264	0	166	262	0	428	0	0	0	0	0	1160
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	531	821	1	0	1353	674	1	491	1	1167	0	754	720	2	1476	0	0	0	0	0	3996
Approach %	39.2	60.7	0.1	0.0	-	57.8	0.1	42.1	0.1	-	0.0	51.1	48.8	0.1	-	0.0	0.0	0.0	0.0	-	-
Total %	13.3	20.5	0.0	0.0	33.9	16.9	0.0	12.3	0.0	29.2	0.0	18.9	18.0	0.1	36.9	0.0	0.0	0.0	0.0	0.0	-
Lights	511	807	1	0	1319	662	1	466	1	1130	0	743	708	2	1453	0	0	0	0	0	3902
% Lights	96.2	98.3	100.0	-	97.5	98.2	100.0	94.9	100.0	96.8	-	98.5	98.3	100.0	98.4	-	-	-	-	-	97.6
Mediums	20	11	0	0	31	12	0	24	0	36	0	9	10	0	19	0	0	0	0	0	86
% Mediums	3.8	1.3	0.0	-	2.3	1.8	0.0	4.9	0.0	3.1	-	1.2	1.4	0.0	1.3	-	-	-	-	-	2.2
Articulated Trucks	0	3	0	0	3	0	0	1	0	1	0	2	2	0	4	0	0	0	0	0	8
% Articulated Trucks	0.0	0.4	0.0	-	0.2	0.0	0.0	0.2	0.0	0.1	-	0.3	0.3	0.0	0.3	-	-	-	-	-	0.2

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	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	12	51	5	0	68	15	49	46	0	110	17	34	11	0	62	2	14	10	0	26	266
7:15 AM	22	66	12	2	102	24	50	37	0	111	18	34	34	1	87	9	34	13	0	56	356
7:30 AM	22	64	15	1	102	39	77	55	0	171	24	63	24	0	111	7	55	15	2	79	463
7:45 AM	31	58	9	0	98	48	82	46	0	176	17	53	32	0	102	13	76	30	1	120	496
Hourly Total	87	239	41	3	370	126	258	184	0	568	76	184	101	1	362	31	179	68	3	281	1581
8:00 AM	42	66	2	1	111	50	63	28	0	141	14	52	49	0	115	4	81	23	0	108	475
8:15 AM	21	52	3	0	76	53	70	20	2	145	11	37	31	0	79	6	41	13	0	60	360
8:30 AM	22	50	3	0	75	21	50	28	0	99	7	36	21	1	65	3	38	13	0	54	293
8:45 AM	20	46	6	1	73	29	46	19	4	98	19	26	22	1	68	2	39	18	2	61	300
Hourly Total	105	214	14	2	335	153	229	95	6	483	51	151	123	2	327	15	199	67	2	283	1428
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	29	89	6	2	126	24	34	24	1	83	19	67	39	1	126	10	91	62	0	163	498
4:15 PM	44	75	11	0	130	24	42	13	2	81	20	67	52	1	140	12	111	47	0	170	521
4:30 PM	27	73	9	3	112	50	73	43	0	166	11	74	41	1	127	12	103	56	1	172	577
4:45 PM	42	68	1	0	111	31	44	31	1	107	30	70	33	1	134	13	104	61	0	178	530
Hourly Total	142	305	27	5	479	129	193	111	4	437	80	278	165	4	527	47	409	226	1	683	2126
5:00 PM	45	78	8	0	131	26	43	43	3	115	25	70	34	1	130	13	83	51	0	147	523
5:15 PM	45	70	5	1	121	33	46	28	1	108	21	61	35	2	119	16	97	55	1	169	517
5:30 PM	45	69	8	1	123	25	37	30	0	92	20	63	42	1	126	18	114	37	2	171	512
5:45 PM	39	78	8	1	126	16	29	26	3	74	21	61	29	1	112	13	93	48	0	154	466
Hourly Total	174	295	29	3	501	100	155	127	7	389	87	255	140	5	487	60	387	191	3	641	2018
6:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	508	1053	112	13	1686	508	835	517	17	1877	294	868	529	12	1703	153	1174	552	9	1888	7154
Approach %	30.1	62.5	6.6	0.8	-	27.1	44.5	27.5	0.9	-	17.3	51.0	31.1	0.7	-	8.1	62.2	29.2	0.5	-	-
Total %	7.1	14.7	1.6	0.2	23.6	7.1	11.7	7.2	0.2	26.2	4.1	12.1	7.4	0.2	23.8	2.1	16.4	7.7	0.1	26.4	-
Lights	499	1019	111	13	1642	488	803	511	17	1819	282	854	523	12	1671	150	1153	537	9	1849	6981
% Lights	98.2	96.8	99.1	100.0	97.4	96.1	96.2	98.8	100.0	96.9	95.9	98.4	98.9	100.0	98.1	98.0	98.2	97.3	100.0	97.9	97.6
Mediums	7	19	1	0	27	20	31	6	0	57	7	9	6	0	22	3	20	8	0	31	137
% Mediums	1.4	1.8	0.9	0.0	1.6	3.9	3.7	1.2	0.0	3.0	2.4	1.0	1.1	0.0	1.3	2.0	1.7	1.4	0.0	1.6	1.9
Articulated Trucks	2	15	0	0	17	0	1	0	0	1	5	5	0	0	10	0	1	7	0	8	36
% Articulated Trucks	0.4	1.4	0.0	0.0	1.0	0.0	0.1	0.0	0.0	0.1	1.7	0.6	0.0	0.0	0.6	0.0	0.1	1.3	0.0	0.4	0.5

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Start Time	BELT LINE RD Southbound					SEAGOVILLE RD Westbound					BELT LINE RD Northbound					SEAGOVILLE RD Eastbound					Int. Total
	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	Left	Thru	Right	U-Turn	App. Total	
7:00 AM	23	59	6	1	89	21	38	46	0	105	18	47	8	2	75	0	21	11	0	32	301
7:15 AM	26	58	8	1	93	23	62	46	0	131	24	38	32	2	96	8	29	10	1	48	368
7:30 AM	28	67	10	0	105	39	66	45	1	151	16	50	28	0	94	12	51	9	1	73	423
7:45 AM	38	57	9	2	106	55	83	30	0	168	16	48	22	0	86	7	69	22	1	99	459
Hourly Total	115	241	33	4	393	138	249	167	1	555	74	183	90	4	351	27	170	52	3	252	1551
8:00 AM	39	56	5	0	100	56	63	30	0	149	15	51	45	0	111	6	65	20	1	92	452
8:15 AM	23	50	1	0	74	50	59	15	2	126	17	41	28	0	86	4	52	14	2	72	358
8:30 AM	21	33	3	0	57	28	57	31	2	118	16	30	25	0	71	8	38	11	1	58	304
8:45 AM	20	40	2	1	63	35	51	24	1	111	13	28	28	0	69	5	36	13	1	55	298
Hourly Total	103	179	11	1	294	169	230	100	5	504	61	150	126	0	337	23	191	58	5	277	1412
9:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hourly Total	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
4:00 PM	29	59	5	1	94	22	27	31	0	80	29	46	48	1	124	9	56	35	1	101	399
4:15 PM	38	58	7	0	103	29	37	27	2	95	19	57	55	2	133	12	64	38	0	114	445
4:30 PM	32	68	5	1	106	59	80	43	3	185	19	90	40	2	151	13	63	42	1	119	561
4:45 PM	34	58	9	1	102	34	46	37	2	119	19	63	33	1	116	7	50	25	1	83	420
Hourly Total	133	243	26	3	405	144	190	138	7	479	86	256	176	6	524	41	233	140	3	417	1825
5:00 PM	45	63	7	5	120	29	46	36	1	112	21	68	38	2	129	14	67	31	0	112	473
5:15 PM	38	72	8	0	118	20	39	28	3	90	23	70	32	3	128	13	62	31	0	106	442
5:30 PM	39	86	9	2	136	32	35	21	4	92	14	73	23	2	112	20	84	33	1	138	478
5:45 PM	37	83	10	3	133	18	36	27	2	83	30	66	31	2	129	20	76	39	1	136	481
Hourly Total	159	304	34	10	507	99	156	112	10	377	88	277	124	9	498	67	289	134	2	492	1874
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	510	968	104	18	1600	550	825	517	23	1915	309	867	516	19	1711	158	883	384	13	1438	6664
Approach %	31.9	60.5	6.5	1.1	-	28.7	43.1	27.0	1.2	-	18.1	50.7	30.2	1.1	-	11.0	61.4	26.7	0.9	-	-
Total %	7.7	14.5	1.6	0.3	24.0	8.3	12.4	7.8	0.3	28.7	4.6	13.0	7.7	0.3	25.7	2.4	13.3	5.8	0.2	21.6	-
Lights	502	949	104	18	1573	526	788	513	23	1850	299	853	512	19	1683	154	857	375	13	1399	6505
% Lights	98.4	98.0	100.0	100.0	98.3	95.6	95.5	99.2	100.0	96.6	96.8	98.4	99.2	100.0	98.4	97.5	97.1	97.7	100.0	97.3	97.6
Mediums	7	14	0	0	21	23	36	4	0	63	8	10	3	0	21	4	26	7	0	37	142
% Mediums	1.4	1.4	0.0	0.0	1.3	4.2	4.4	0.8	0.0	3.3	2.6	1.2	0.6	0.0	1.2	2.5	2.9	1.8	0.0	2.6	2.1
Articulated Trucks	1	5	0	0	6	1	1	0	0	2	2	4	1	0	7	0	0	2	0	2	17
% Articulated Trucks	0.2	0.5	0.0	0.0	0.4	0.2	0.1	0.0	0.0	0.1	0.6	0.5	0.2	0.0	0.4	0.0	0.0	0.5	0.0	0.1	0.3

CONCEPTUAL SITE PLAN

DUNAWAY

EXIST. 3P OHE LINE LOCATION

S BELT LINE RD.

STOP 4-WAY

5' BLDG SETBACK/ LANDSCAPE BUFFER

950.99'

KEY PAD & GATED ENTRY

PROPOSED SEAGOVILLE RD MULTIFAMILY 240 UNITS 10.4 ACRES

5' LANDSCAPE BUFFER

209.12'

DETENTION POND AREA

F

E

A

A

A

A

A

A

CLUBHOUSE

GREEN SPACE / AMENITIES AREA

SWIMMING POOL AREA

211.30'

M&J TIRES AND AUTO REPAIR

130.11'

211.30'

SEAGOVILLE RD.

15' BLDG SETBACK

167.34'

F

E

GATED EXIT & EMERGENCY ENTRANCE

505.52'

5' LANDSCAPE BUFFER

15' BLDG SETBACK

5' LANDSCAPE BUFFER

950.99'

15' BLDG SETBACK

Building Type	Buildings	Units per Building	4 Bedroom Units		3 Bedroom Units		2 Bedroom Units		1 Bedroom Units		TOTAL
			per Building	Total Units	per Building	Total Units	per Building	Total Units	per Building	Total Units	
A	5	24	0	0	12	60	12	60	0	0	
E	2	36	0	0	0	0	24	48	12	24	
F	2	24	12	24	0	0	0	0	12	24	
-		0	0	0	0	0	0	0	0	0	
	9		Total Units:	24	Total Units:	60	Total Units:	108	Total Units:	48	240
			Total BRs:	96	Total BRs:	180	Total BRs:	216	Total BRs:	48	540

Site Acreage	10.4
Density	23
Required Parking	552
Provided Parking	450

DUNAWAY
550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121
(TX REG. F-1114)

CONCEPT SITE PLAN

SEAGOVILLE RD & S. BELT LINE RD.
DALLAS, TX

0 100 200
GRAPHIC SCALE IN FEET

TRIP GENERATION

DUNAWAY

Weekend Trip Generation

25-Feb-20

ITE Trip Generation Rates - 10th Edition

Pass-by rates from ITE Trip Generation Handbook - 3rd Edition

Instructions: Enter Expected Unit Volumes into Column 'M'

Description/ITE Code		Units	ITE Vehicle Trip Generation Rates									Expected Units	Total Generated Trips					SYNCHRO INPTUT 1 Unadjusted Volume		SYNCHRO INPTUT 1 Unadjusted Volume	
			(Peak Hour of Adjacent Street)					(Peak Hour of Generator)													
			Weekday	AM	PM	AM Pass By	PM Pass-By	AM In	AM Out	PM In	PM Out		Daily	AM Hour	PM Hour	AM Pass-By	PM Pass-By	AM In	AM Out	PM In	PM Out
Multifamily Low Rise	220	DU	7.32	0.46	0.56			23%	77%	63%	37%	240.0	1,757	110	134	0	0	25	85	85	50

TRIP DISTRIBUTION

DUNAWAY

DUNAWAY
550 Bailey Avenue • Suite 400 • Fort Worth, Texas 76107
Tel: 817.335.1121
TX REG. F-1114

TRIP DISTRIBUTION

MULTI-FAMILY DEVELOPMENT, DALLAS, TX

APPENDIX

GROWTH RATE

DUNAWAY

Seagoville Road (East of Belt Line Road)						
Year	**Eastbound ADT**	**Growth Rate**	**Westbound ADT**	**Growth Rate**	**Total ADT**	**Growth Rate**
1999	9485		9485		18970	
2004	10078	1.2%	10078	1.2%	20156	1.2%
2014	9364	-0.7%	9085	-1.0%	18449	-0.9%
2020	6106	-6.9%	4965	-9.6%	11071	-8.2%
	Average Growth Rate	**-2.1%**	**Average Growth Rate**	**-3.1%**	**Average Growth Rate**	**-2.6%**

Belt Line Road (East of Seagoville Road)						
Year	**Northeast ADT**	**Growth Rate**	**Southwest ADT**	**Growth Rate**	**Total ADT**	**Growth Rate**
1999	3494		3494		6988	
2004	3423	-0.4%	3423	-0.4%	6846	-0.4%
2009	3599	1.0%	3599	1.0%	7198	1.0%
2014	3852	1.4%	3913	1.7%	7765	1.5%
2020	4716	3.4%	5052	4.3%	9768	3.9%
	Average Growth Rate	**1.3%**	**Average Growth Rate**	**1.7%**	**Average Growth Rate**	**1.5%**

SYNCHRO Analysis Reports

List of Contents

DUNAWAY

SYNCHRO Analysis Report

2020 Existing AM Analysis

DUNAWAY

Intersection	
Int Delay, s/veh	22.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	173	181	259	119	101	195
Future Vol, veh/h	173	181	259	119	101	195
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	-	-	-	70	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	79	76	68	77	81
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	184	229	341	175	131	241

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	812	258	0	0	516	0
Stage 1	429	-	-	-	-	-
Stage 2	383	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	317	741	-	-	1046	-
Stage 1	624	-	-	-	-	-
Stage 2	659	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	277	741	-	-	1046	-
Mov Cap-2 Maneuver	277	-	-	-	-	-
Stage 1	624	-	-	-	-	-
Stage 2	577	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	69	0	3.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	424	1046	-
HCM Lane V/C Ratio	-	-	0.974	0.125	-
HCM Control Delay (s)	-	-	69	8.9	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	11.8	0.4	-

HCM 6th Edition all-way stop-controlled intersection methodology supports maximum of three lanes.

Intersection	
Int Delay, s/veh	0

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	0	384	0	0	385
Future Vol, veh/h	0	0	384	0	0	385
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	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	417	0	0	418

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	626	209	0	0	417	0
Stage 1	417	-	-	-	-	-
Stage 2	209	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	416	797	-	-	1138	-
Stage 1	633	-	-	-	-	-
Stage 2	806	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	416	797	-	-	1138	-
Mov Cap-2 Maneuver	416	-	-	-	-	-
Stage 1	633	-	-	-	-	-
Stage 2	806	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	-	-	1138	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	0	505	631	0	0	0
Future Vol, veh/h	0	505	631	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	549	686	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	343
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	653
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	653
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	SE	NW	SW
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SETSWLn1	
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Intersection Delay, s/veh	31.4
Intersection LOS	D

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	30	253	81	190	292	149	66	137	136	116	160	29
Future Vol, veh/h	30	253	81	190	292	149	66	137	136	116	160	29
Peak Hour Factor	0.58	0.78	0.68	0.90	0.89	0.68	0.69	0.81	0.69	0.69	0.91	0.48
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	324	119	211	328	219	96	169	197	168	176	60
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	SE	NW	NE	SW
Opposing Approach	NW	SE	SW	NE
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SW	NE	SE	NW
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NE	SW	NW	SE
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	29.5	39.1	28.6	22.6
HCM LOS	D	E	D	C

Lane	NELn1	NELn2	NELn3	NWLn1	NWLn2	NWLn3	SELn1	SELn2	SELn3	SWLn1	SWLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	25%	0%	100%	40%	0%	100%	51%	0%	100%
Vol Right, %	0%	0%	75%	0%	0%	60%	0%	0%	49%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	91	182	190	195	246	30	169	165	116	107
LT Vol	66	0	0	190	0	0	30	0	0	116	0
Through Vol	0	91	46	0	195	97	0	169	84	0	107
RT Vol	0	0	136	0	0	149	0	0	81	0	0
Lane Flow Rate	96	113	253	211	219	328	52	216	227	168	117
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.302	0.34	0.727	0.62	0.612	0.881	0.161	0.645	0.656	0.537	0.358
Departure Headway (Hd)	11.356	10.856	10.332	10.573	10.073	9.65	11.238	10.738	10.395	11.501	11.001
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	317	332	350	342	359	374	319	337	348	314	327
Service Time	9.116	8.616	8.092	8.326	7.826	7.402	8.999	8.499	8.156	9.26	8.76
HCM Lane V/C Ratio	0.303	0.34	0.723	0.617	0.61	0.877	0.163	0.641	0.652	0.535	0.358
HCM Control Delay	19	19.1	36.4	29.2	27.6	53.2	16.2	31.2	31	26.9	19.8
HCM Lane LOS	C	C	E	D	D	F	C	D	D	D	C
HCM 95th-tile Q	1.2	1.5	5.5	3.9	3.9	8.7	0.6	4.2	4.4	3	1.6

SYNCHRO Analysis Report

2020 Existing PM Analysis

DUNAWAY

Intersection	
Int Delay, s/veh	27.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	163	79	176	254	179	305
Future Vol, veh/h	163	79	176	254	179	305
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	-	-	-	70	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	86	80	92	73	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	175	92	220	276	245	339

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1018	248	0	0	496	0
Stage 1	358	-	-	-	-	-
Stage 2	660	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	233	752	-	-	1064	-
Stage 1	678	-	-	-	-	-
Stage 2	476	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	179	752	-	-	1064	-
Mov Cap-2 Maneuver	179	-	-	-	-	-
Stage 1	678	-	-	-	-	-
Stage 2	367	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	130.6	0	3.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	243	1064	-
HCM Lane V/C Ratio	-	-	1.099	0.23	-
HCM Control Delay (s)	-	-	130.6	9.4	-
HCM Lane LOS	-	-	F	A	-
HCM 95th %tile Q(veh)	-	-	11.6	0.9	-

HCM 6th Edition all-way stop-controlled intersection methodology supports maximum of three lanes.

Intersection	
Int Delay, s/veh	0

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	0	461	0	0	481
Future Vol, veh/h	0	0	461	0	0	481
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	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	501	0	0	523

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	763	251	0	0	501	0
Stage 1	501	-	-	-	-	-
Stage 2	262	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	341	749	-	-	1059	-
Stage 1	574	-	-	-	-	-
Stage 2	758	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	341	749	-	-	1059	-
Mov Cap-2 Maneuver	341	-	-	-	-	-
Stage 1	574	-	-	-	-	-
Stage 2	758	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	-	-	1059	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	0	719	463	0	0	0
Future Vol, veh/h	0	719	463	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	782	503	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	252
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	748
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	748
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	SE	NW	SW
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SETSWLn1	
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Intersection Delay, s/veh	57.1
Intersection LOS	F

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	50	401	215	131	202	130	86	187	160	158	196	29
Future Vol, veh/h	50	401	215	131	202	130	86	187	160	158	196	29
Peak Hour Factor	0.96	0.90	0.88	0.66	0.69	0.76	0.72	0.95	0.77	0.88	0.94	0.66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	446	244	198	293	171	119	197	208	180	209	44
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	SE	NW	NE	SW
Opposing Approach	NW	SE	SW	NE
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SW	NE	SE	NW
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NE	SW	NW	SE
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	103	39	39.5	27.6
HCM LOS	F	E	E	D

Lane	NELn1	NELn2	NELn3	NWLn1	NWLn2	NWLn3	SELn1	SELn2	SELn3	SWLn1	SWLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	28%	0%	100%	34%	0%	100%	38%	0%	100%
Vol Right, %	0%	0%	72%	0%	0%	66%	0%	0%	62%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	86	125	222	131	135	197	50	267	349	158	131
LT Vol	86	0	0	131	0	0	50	0	0	158	0
Through Vol	0	125	62	0	135	67	0	267	134	0	131
RT Vol	0	0	160	0	0	130	0	0	215	0	0
Lane Flow Rate	119	131	273	198	195	269	52	297	393	180	139
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.403	0.426	0.85	0.653	0.615	0.814	0.17	0.929	1.181	0.617	0.459
Departure Headway (Hd)	12.407	11.907	11.403	12.009	11.509	11.048	11.756	11.256	10.825	12.609	12.109
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	291	304	320	304	316	330	306	324	338	289	299
Service Time	10.107	9.607	9.103	9.709	9.209	8.748	9.502	9.002	8.57	10.309	9.809
HCM Lane V/C Ratio	0.409	0.431	0.853	0.651	0.617	0.815	0.17	0.917	1.163	0.623	0.465
HCM Control Delay	23.2	23.2	54.5	34.7	31	48	16.9	68.6	140.5	33.7	24.7
HCM Lane LOS	C	C	F	D	D	E	C	F	F	D	C
HCM 95th-tile Q	1.9	2	7.5	4.3	3.8	6.9	0.6	9.2	16.4	3.8	2.3

SYNCHRO Analysis Report

2022 Forecasted AM Analysis

DUNAWAY

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	191	200	286	131	111	215
Future Volume (veh/h)	191	200	286	131	111	215
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	253	376	193	144	265
Peak Hour Factor	0.94	0.79	0.76	0.68	0.77	0.81
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	416	370	625	316	505	1811
Arrive On Green	0.23	0.23	0.27	0.27	0.11	0.51
Sat Flow, veh/h	1781	1585	2378	1155	1781	3647
Grp Volume(v), veh/h	203	253	291	278	144	265
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1662	1781	1777
Q Serve(g_s), s	3.5	5.1	5.0	5.1	1.7	1.4
Cycle Q Clear(g_c), s	3.5	5.1	5.0	5.1	1.7	1.4
Prop In Lane	1.00	1.00		0.69	1.00	
Lane Grp Cap(c), veh/h	416	370	486	455	505	1811
V/C Ratio(X)	0.49	0.68	0.60	0.61	0.29	0.15
Avail Cap(c_a), veh/h	916	815	913	855	593	2842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.6	12.2	11.1	11.1	6.9	4.5
Incr Delay (d2), s/veh	0.9	2.2	1.2	1.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.6	1.5	1.4	0.4	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.5	14.5	12.2	12.4	7.2	4.6
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	456		569			409
Approach Delay, s/veh	13.6		12.3			5.5
Approach LOS	B		B			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.3	14.1			22.3	12.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.5	18.0			28.0	18.0
Max Q Clear Time (g_c+I1), s	3.7	7.1			3.4	7.1
Green Ext Time (p_c), s	0.1	2.5			1.5	1.2

Intersection Summary	
HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	33	279	89	209	322	164	73	226	150	128	265	32
Future Volume (veh/h)	33	279	89	209	322	164	73	226	150	128	265	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	57	358	131	232	362	241	106	279	217	186	291	67
Peak Hour Factor	0.58	0.78	0.68	0.90	0.89	0.68	0.69	0.81	0.69	0.69	0.91	0.48
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	333	541	195	419	552	361	462	711	331	403	975	215
Arrive On Green	0.06	0.21	0.21	0.11	0.27	0.27	0.08	0.21	0.21	0.10	0.23	0.23
Sat Flow, veh/h	1781	2559	922	1781	2057	1347	1781	3404	1585	1781	4184	924
Grp Volume(v), veh/h	57	247	242	232	312	291	106	279	217	186	234	124
Grp Sat Flow(s),veh/h/ln	1781	1777	1704	1781	1777	1628	1781	1702	1585	1781	1702	1704
Q Serve(g_s), s	1.2	6.3	6.4	4.9	7.7	7.8	2.2	3.5	6.2	4.0	2.8	2.9
Cycle Q Clear(g_c), s	1.2	6.3	6.4	4.9	7.7	7.8	2.2	3.5	6.2	4.0	2.8	2.9
Prop In Lane	1.00		0.54	1.00		0.83	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	333	376	360	419	477	437	462	711	331	403	793	397
V/C Ratio(X)	0.17	0.66	0.67	0.55	0.65	0.67	0.23	0.39	0.66	0.46	0.30	0.31
Avail Cap(c_a), veh/h	427	669	641	419	676	619	505	1246	580	403	1246	624
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	17.8	17.8	13.3	16.0	16.0	13.3	16.8	17.8	13.5	15.5	15.6
Incr Delay (d2), s/veh	0.2	2.0	2.2	1.6	1.5	1.8	0.3	0.4	2.2	0.8	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.3	2.3	1.7	2.7	2.6	0.8	1.2	2.1	1.3	0.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	19.7	20.0	14.9	17.5	17.8	13.6	17.1	20.0	14.4	15.7	16.0
LnGrp LOS	B	B	C	B	B	B	B	B	C	B	B	B
Approach Vol, veh/h		546			835			602			544	
Approach Delay, s/veh		19.3			16.9			17.5			15.3	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	17.7	9.5	14.8	10.0	14.9	8.3	16.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.3	18.7	5.0	18.0	5.5	18.5	5.0	18.0
Max Q Clear Time (g_c+I1), s	3.2	9.8	6.0	8.2	6.9	8.4	4.2	4.9
Green Ext Time (p_c), s	0.0	2.4	0.0	2.1	0.0	2.0	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	17.2
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	0	423	0	0	424
Future Vol, veh/h	0	0	423	0	0	424
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	0	-	-	-	-
Veh in Median Storage, #	1	-	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	460	0	0	461

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	691	230	0	0	460	0
Stage 1	460	-	-	-	-	-
Stage 2	231	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	378	772	-	-	1097	-
Stage 1	602	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	378	772	-	-	1097	-
Mov Cap-2 Maneuver	477	-	-	-	-	-
Stage 1	602	-	-	-	-	-
Stage 2	785	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	-	-	1097	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	0	557	696	0	0	0
Future Vol, veh/h	0	557	696	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	605	757	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	379
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	619
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	619
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	SE	NW	SW
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SETSWLn1	
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

SYNCHRO Analysis Report

2022 Forecasted PM Analysis

DUNAWAY

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	180	87	194	280	197	336
Future Volume (veh/h)	180	87	194	280	197	336
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	194	101	242	304	270	373
Peak Hour Factor	0.93	0.86	0.80	0.92	0.73	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	302	269	526	469	577	2028
Arrive On Green	0.17	0.17	0.30	0.30	0.14	0.57
Sat Flow, veh/h	1781	1585	1870	1585	1781	3647
Grp Volume(v), veh/h	194	101	242	304	270	373
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	3.5	2.0	3.8	5.8	3.1	1.7
Cycle Q Clear(g_c), s	3.5	2.0	3.8	5.8	3.1	1.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	302	269	526	469	577	2028
V/C Ratio(X)	0.64	0.38	0.46	0.65	0.47	0.18
Avail Cap(c_a), veh/h	926	824	975	870	808	3387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.4	12.8	9.9	10.6	6.4	3.6
Incr Delay (d2), s/veh	2.3	0.9	0.6	1.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.6	1.0	1.5	0.6	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.7	13.6	10.6	12.1	7.0	3.6
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	295		546			643
Approach Delay, s/veh	15.0		11.4			5.0
Approach LOS	B		B			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.5	14.7			24.3	10.4
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	9.5	19.0			33.0	18.0
Max Q Clear Time (g_c+I1), s	5.1	7.8			3.7	5.5
Green Ext Time (p_c), s	0.3	2.5			2.4	0.7

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	55	442	237	144	223	143	95	310	176	174	324	32
Future Volume (veh/h)	55	442	237	144	223	143	95	310	176	174	324	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	57	491	269	218	323	188	132	326	229	198	345	48
Peak Hour Factor	0.96	0.90	0.88	0.66	0.69	0.76	0.72	0.95	0.77	0.88	0.94	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	408	612	334	365	717	408	422	709	330	351	986	134
Arrive On Green	0.05	0.28	0.28	0.11	0.33	0.33	0.08	0.21	0.21	0.09	0.22	0.22
Sat Flow, veh/h	1781	2219	1210	1781	2182	1242	1781	3404	1585	1781	4546	617
Grp Volume(v), veh/h	57	393	367	218	262	249	132	326	229	198	256	137
Grp Sat Flow(s),veh/h/ln	1781	1777	1653	1781	1777	1647	1781	1702	1585	1781	1702	1759
Q Serve(g_s), s	1.2	11.5	11.6	4.8	6.5	6.7	3.2	4.7	7.5	4.9	3.6	3.7
Cycle Q Clear(g_c), s	1.2	11.5	11.6	4.8	6.5	6.7	3.2	4.7	7.5	4.9	3.6	3.7
Prop In Lane	1.00		0.73	1.00		0.75	1.00		1.00	1.00		0.35
Lane Grp Cap(c), veh/h	408	490	456	365	584	541	422	709	330	351	738	382
V/C Ratio(X)	0.14	0.80	0.81	0.60	0.45	0.46	0.31	0.46	0.69	0.56	0.35	0.36
Avail Cap(c_a), veh/h	499	574	534	365	584	541	437	1094	509	351	1094	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	18.9	18.9	13.7	14.8	14.9	15.4	19.4	20.5	16.2	18.6	18.6
Incr Delay (d2), s/veh	0.2	6.9	7.7	2.7	0.5	0.6	0.4	0.5	2.6	2.1	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.9	4.7	1.8	2.3	2.2	1.1	1.7	2.6	1.9	1.2	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	25.8	26.6	16.4	15.3	15.5	15.8	19.9	23.1	18.3	18.9	19.2
LnGrp LOS	B	C	C	B	B	B	B	B	C	B	B	B
Approach Vol, veh/h		817			729			687			591	
Approach Delay, s/veh		25.3			15.7			20.2			18.7	
Approach LOS		C			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	22.9	9.5	16.2	10.4	19.9	9.0	16.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.8	18.2	5.0	18.0	5.9	18.1	5.0	18.0
Max Q Clear Time (g_c+I1), s	3.2	8.7	6.9	9.5	6.8	13.6	5.2	5.7
Green Ext Time (p_c), s	0.0	2.0	0.0	2.2	0.0	1.9	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	0	508	0	0	530
Future Vol, veh/h	0	0	508	0	0	530
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	0	-	-	-	-
Veh in Median Storage, #	1	-	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	552	0	0	576

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	840	276	0	0	552	0
Stage 1	552	-	-	-	-	-
Stage 2	288	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	304	721	-	-	1014	-
Stage 1	541	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	304	721	-	-	1014	-
Mov Cap-2 Maneuver	417	-	-	-	-	-
Stage 1	541	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	-	-	1014	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	0	793	510	0	0	0
Future Vol, veh/h	0	793	510	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	862	554	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	277
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	720
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	720
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	SE	NW	SW
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NWT	NWR	SETSWLn1	
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	-	-	-	0
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	-

SYNCHRO Analysis Report

2022 Forecasted + SITE AM Analysis

DUNAWAY

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	191	200	286	131	111	215
Future Volume (veh/h)	191	200	290	131	111	216
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	203	253	382	193	144	267
Peak Hour Factor	0.94	0.79	0.76	0.68	0.77	0.81
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	415	369	632	315	504	1815
Arrive On Green	0.23	0.23	0.28	0.28	0.11	0.51
Sat Flow, veh/h	1781	1585	2391	1144	1781	3647
Grp Volume(v), veh/h	203	253	294	281	144	267
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1664	1781	1777
Q Serve(g_s), s	3.5	5.1	5.1	5.2	1.7	1.4
Cycle Q Clear(g_c), s	3.5	5.1	5.1	5.2	1.7	1.4
Prop In Lane	1.00	1.00		0.69	1.00	
Lane Grp Cap(c), veh/h	415	369	489	458	504	1815
V/C Ratio(X)	0.49	0.68	0.60	0.61	0.29	0.15
Avail Cap(c_a), veh/h	913	812	911	853	591	2833
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.7	12.3	11.1	11.1	6.9	4.5
Incr Delay (d2), s/veh	0.9	2.3	1.2	1.3	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	1.6	1.5	1.4	0.4	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.5	14.5	12.3	12.4	7.2	4.6
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	456		575			411
Approach Delay, s/veh	13.7		12.3			5.5
Approach LOS	B		B			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.3	14.2			22.4	12.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	5.5	18.0			28.0	18.0
Max Q Clear Time (g_c+I1), s	3.7	7.2			3.4	7.1
Green Ext Time (p_c), s	0.1	2.5			1.6	1.2

Intersection Summary	
HCM 6th Ctrl Delay	10.8
HCM 6th LOS	B

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	33	279	89	209	322	164	73	226	150	128	265	32
Future Volume (veh/h)	44	279	89	226	341	167	73	236	150	137	282	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	358	131	251	383	246	106	291	217	199	310	106
Peak Hour Factor	0.58	0.78	0.68	0.90	0.89	0.68	0.69	0.81	0.69	0.69	0.91	0.48
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	334	543	196	419	539	341	441	714	332	402	891	288
Arrive On Green	0.07	0.21	0.21	0.11	0.26	0.26	0.08	0.21	0.21	0.10	0.23	0.23
Sat Flow, veh/h	1781	2559	922	1781	2087	1322	1781	3404	1585	1781	3818	1235
Grp Volume(v), veh/h	76	247	242	251	325	304	106	291	217	199	275	141
Grp Sat Flow(s),veh/h/ln	1781	1777	1704	1781	1777	1632	1781	1702	1585	1781	1702	1648
Q Serve(g_s), s	1.6	6.3	6.4	5.5	8.2	8.4	2.2	3.6	6.2	4.3	3.3	3.6
Cycle Q Clear(g_c), s	1.6	6.3	6.4	5.5	8.2	8.4	2.2	3.6	6.2	4.3	3.3	3.6
Prop In Lane	1.00		0.54	1.00		0.81	1.00		1.00	1.00		0.75
Lane Grp Cap(c), veh/h	334	377	362	419	459	422	441	714	332	402	795	385
V/C Ratio(X)	0.23	0.65	0.67	0.60	0.71	0.72	0.24	0.41	0.65	0.50	0.35	0.37
Avail Cap(c_a), veh/h	408	667	639	419	674	619	483	1243	579	402	1243	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.8	17.8	17.8	13.7	16.6	16.7	13.4	16.8	17.8	13.7	15.8	15.8
Incr Delay (d2), s/veh	0.3	1.9	2.1	2.4	2.0	2.3	0.3	0.4	2.2	0.9	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.3	2.3	2.0	3.0	2.8	0.8	1.2	2.1	1.5	1.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	19.7	20.0	16.1	18.6	19.0	13.7	17.2	20.0	14.6	16.0	16.4
LnGrp LOS	B	B	B	B	B	B	B	B	C	B	B	B
Approach Vol, veh/h		565			880			614			615	
Approach Delay, s/veh		19.1			18.0			17.6			15.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	17.2	9.5	14.8	10.0	15.0	8.3	16.0
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.3	18.7	5.0	18.0	5.5	18.5	5.0	18.0
Max Q Clear Time (g_c+I1), s	3.6	10.4	6.3	8.2	7.5	8.4	4.2	5.6
Green Ext Time (p_c), s	0.0	2.4	0.0	2.2	0.0	2.0	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0.7

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	0	423	0	0	424
Future Vol, veh/h	45	4	423	24	1	424
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	0	-	-	-	-
Veh in Median Storage, #	1	-	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	49	4	460	26	1	461

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	706	243	0	0	486	0
Stage 1	473	-	-	-	-	-
Stage 2	233	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	370	758	-	-	1073	-
Stage 1	593	-	-	-	-	-
Stage 2	784	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	370	758	-	-	1073	-
Mov Cap-2 Maneuver	470	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	783	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	13.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	470	758	1073	-
HCM Lane V/C Ratio	-	-	0.104	0.006	0.001	-
HCM Control Delay (s)	-	-	13.5	9.8	8.4	0
HCM Lane LOS	-	-	B	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	0	557	696	0	0	0
Future Vol, veh/h	0	566	699	0	0	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	615	760	0	0	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	380
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	618
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	618
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	SE	NW	SW
HCM Control Delay, s	0	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SETSWLn1
Capacity (veh/h)	-	-	- 618
HCM Lane V/C Ratio	-	-	- 0.063
HCM Control Delay (s)	-	-	- 11.2
HCM Lane LOS	-	-	- B
HCM 95th %tile Q(veh)	-	-	- 0.2

SYNCHRO Analysis Report

2022 Forecasted + SITE PM Analysis

DUNAWAY

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	180	87	194	280	197	336
Future Volume (veh/h)	180	87	197	280	197	340
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	194	101	246	304	270	378
Peak Hour Factor	0.93	0.86	0.80	0.92	0.73	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	302	268	526	470	576	2029
Arrive On Green	0.17	0.17	0.30	0.30	0.14	0.57
Sat Flow, veh/h	1781	1585	1870	1585	1781	3647
Grp Volume(v), veh/h	194	101	246	304	270	378
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	3.5	2.0	3.9	5.8	3.1	1.8
Cycle Q Clear(g_c), s	3.5	2.0	3.9	5.8	3.1	1.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	302	268	526	470	576	2029
V/C Ratio(X)	0.64	0.38	0.47	0.65	0.47	0.19
Avail Cap(c_a), veh/h	925	823	974	869	807	3384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.4	12.8	10.0	10.6	6.4	3.6
Incr Delay (d2), s/veh	2.3	0.9	0.6	1.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.6	1.1	1.5	0.6	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.7	13.6	10.6	12.1	7.0	3.6
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	295		550			648
Approach Delay, s/veh	15.0		11.4			5.0
Approach LOS	B		B			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.5	14.8			24.3	10.4
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	9.5	19.0			33.0	18.0
Max Q Clear Time (g_c+I1), s	5.1	7.8			3.8	5.5
Green Ext Time (p_c), s	0.3	2.5			2.4	0.7

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	55	442	237	144	223	143	95	310	176	174	324	32
Future Volume (veh/h)	93	442	237	154	234	152	95	344	176	179	334	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	97	491	269	233	339	200	132	362	229	203	355	65
Peak Hour Factor	0.96	0.90	0.88	0.66	0.69	0.76	0.72	0.95	0.77	0.88	0.94	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	408	611	333	363	674	390	414	716	334	350	954	170
Arrive On Green	0.07	0.28	0.28	0.10	0.31	0.31	0.08	0.21	0.21	0.09	0.22	0.22
Sat Flow, veh/h	1781	2219	1210	1781	2168	1254	1781	3404	1585	1781	4360	775
Grp Volume(v), veh/h	97	393	367	233	277	262	132	362	229	203	275	145
Grp Sat Flow(s),veh/h/ln	1781	1777	1653	1781	1777	1645	1781	1702	1585	1781	1702	1731
Q Serve(g_s), s	2.1	11.6	11.6	5.2	7.1	7.4	3.2	5.3	7.5	5.0	3.9	4.0
Cycle Q Clear(g_c), s	2.1	11.6	11.6	5.2	7.1	7.4	3.2	5.3	7.5	5.0	3.9	4.0
Prop In Lane	1.00		0.73	1.00		0.76	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	408	489	455	363	553	511	414	716	334	350	745	379
V/C Ratio(X)	0.24	0.80	0.81	0.64	0.50	0.51	0.32	0.51	0.69	0.58	0.37	0.38
Avail Cap(c_a), veh/h	468	572	532	363	575	533	429	1090	508	350	1090	554
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.0	18.9	19.0	14.1	15.8	15.9	15.4	19.6	20.5	16.3	18.7	18.7
Incr Delay (d2), s/veh	0.3	7.0	7.8	3.8	0.7	0.8	0.4	0.6	2.5	2.4	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	5.0	4.8	2.1	2.5	2.4	1.1	1.9	2.6	2.0	1.4	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.3	26.0	26.8	17.9	16.5	16.7	15.8	20.2	23.0	18.7	19.0	19.4
LnGrp LOS	B	C	C	B	B	B	B	C	C	B	B	B
Approach Vol, veh/h		857			772			723			623	
Approach Delay, s/veh		24.9			17.0			20.3			19.0	
Approach LOS		C			B			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	22.0	9.5	16.3	10.4	20.0	9.0	16.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.8	18.2	5.0	18.0	5.9	18.1	5.0	18.0
Max Q Clear Time (g_c+I1), s	4.1	9.4	7.0	9.5	7.2	13.6	5.2	6.0
Green Ext Time (p_c), s	0.0	2.1	0.0	2.3	0.0	1.8	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	20.5
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.4

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	0	508	0	0	530
Future Vol, veh/h	26	3	508	81	4	530
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	0	-	-	-	-
Veh in Median Storage, #	1	-	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	28	3	552	88	4	576

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	892	320	0	0	640	0
Stage 1	596	-	-	-	-	-
Stage 2	296	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	281	676	-	-	940	-
Stage 1	513	-	-	-	-	-
Stage 2	729	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	279	676	-	-	940	-
Mov Cap-2 Maneuver	395	-	-	-	-	-
Stage 1	513	-	-	-	-	-
Stage 2	725	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	14.3	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	395	676	940	-
HCM Lane V/C Ratio	-	-	0.072	0.005	0.005	-
HCM Control Delay (s)	-	-	14.8	10.4	8.8	0
HCM Lane LOS	-	-	B	B	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	0	793	510	0	0	0
Future Vol, veh/h	0	798	519	0	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	867	564	0	0	23

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	282
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	715
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	715
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	SE	NW	SW
HCM Control Delay, s	0	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SETSWLn1
Capacity (veh/h)	-	-	- 715
HCM Lane V/C Ratio	-	-	- 0.032
HCM Control Delay (s)	-	-	- 10.2
HCM Lane LOS	-	-	- B
HCM 95th %tile Q(veh)	-	-	- 0.1

SYNCHRO Analysis Report

2027 Horizon AM Analysis

DUNAWAY

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	244	255	365	167	142	274
Future Volume (veh/h)	244	255	369	167	142	275
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	260	323	486	246	184	340
Peak Hour Factor	0.94	0.79	0.76	0.68	0.77	0.81
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	483	430	749	377	445	1879
Arrive On Green	0.27	0.27	0.33	0.33	0.10	0.53
Sat Flow, veh/h	1781	1585	2381	1152	1781	3647
Grp Volume(v), veh/h	260	323	377	355	184	340
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1663	1781	1777
Q Serve(g_s), s	5.6	8.4	8.2	8.2	2.7	2.2
Cycle Q Clear(g_c), s	5.6	8.4	8.2	8.2	2.7	2.2
Prop In Lane	1.00	1.00		0.69	1.00	
Lane Grp Cap(c), veh/h	483	430	582	545	445	1879
V/C Ratio(X)	0.54	0.75	0.65	0.65	0.41	0.18
Avail Cap(c_a), veh/h	1088	968	1322	1237	878	4223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.0	15.0	12.9	12.9	8.5	5.5
Incr Delay (d2), s/veh	0.9	2.7	1.2	1.3	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.8	2.6	2.5	0.7	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.9	17.7	14.1	14.3	9.1	5.6
LnGrp LOS	B	B	B	B	A	A
Approach Vol, veh/h	583		732			524
Approach Delay, s/veh	16.5		14.2			6.8
Approach LOS	B		B			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.1	19.2			28.3	16.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	15.5	33.5			53.5	27.5
Max Q Clear Time (g_c+I1), s	4.7	10.2			4.2	10.4
Green Ext Time (p_c), s	0.3	4.5			2.3	1.8

Intersection Summary						
HCM 6th Ctrl Delay			12.8			
HCM 6th LOS			B			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	42	356	114	267	411	209	93	288	191	163	338	41
Future Volume (veh/h)	53	356	114	284	430	212	93	298	191	172	355	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	91	456	168	316	483	312	135	368	277	249	390	125
Peak Hour Factor	0.58	0.78	0.68	0.90	0.89	0.68	0.69	0.81	0.69	0.69	0.91	0.48
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	296	584	213	432	671	432	411	751	350	376	1033	317
Arrive On Green	0.06	0.23	0.23	0.16	0.32	0.32	0.08	0.22	0.22	0.13	0.27	0.27
Sat Flow, veh/h	1781	2548	931	1781	2073	1334	1781	3404	1585	1781	3872	1189
Grp Volume(v), veh/h	91	317	307	316	414	381	135	368	277	249	341	174
Grp Sat Flow(s),veh/h/ln	1781	1777	1703	1781	1777	1630	1781	1702	1585	1781	1702	1656
Q Serve(g_s), s	2.6	11.2	11.4	8.5	13.8	13.9	3.8	6.3	11.1	7.0	5.5	5.8
Cycle Q Clear(g_c), s	2.6	11.2	11.4	8.5	13.8	13.9	3.8	6.3	11.1	7.0	5.5	5.8
Prop In Lane	1.00		0.55	1.00		0.82	1.00		1.00	1.00		0.72
Lane Grp Cap(c), veh/h	296	407	390	432	576	528	411	751	350	376	908	442
V/C Ratio(X)	0.31	0.78	0.79	0.73	0.72	0.72	0.33	0.49	0.79	0.66	0.38	0.39
Avail Cap(c_a), veh/h	323	529	507	433	672	617	450	912	425	376	994	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.3	24.3	24.3	15.9	20.0	20.0	17.8	22.9	24.7	17.6	20.1	20.2
Incr Delay (d2), s/veh	0.6	5.5	6.1	6.2	3.1	3.5	0.5	0.5	8.2	4.3	0.3	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.9	4.8	3.6	5.5	5.1	1.5	2.4	4.6	2.9	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.9	29.7	30.5	22.2	23.1	23.5	18.3	23.4	32.9	21.9	20.3	20.7
LnGrp LOS	B	C	C	C	C	C	B	C	C	C	C	C
Approach Vol, veh/h		715			1111			780			764	
Approach Delay, s/veh		28.7			23.0			25.9			20.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	26.2	13.0	19.3	15.0	19.9	9.9	22.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	25.4	8.5	18.0	10.5	20.0	6.9	19.6
Max Q Clear Time (g_c+I1), s	4.6	15.9	9.0	13.1	10.5	13.4	5.8	7.8
Green Ext Time (p_c), s	0.0	3.3	0.0	1.7	0.0	2.0	0.0	2.4

Intersection Summary	
HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.6

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	0	540	0	0	541
Future Vol, veh/h	45	4	540	24	1	541
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	0	-	-	-	-
Veh in Median Storage, #	1	-	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	49	4	587	26	1	588

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	896	307	0	0	613	0
Stage 1	600	-	-	-	-	-
Stage 2	296	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	280	689	-	-	962	-
Stage 1	511	-	-	-	-	-
Stage 2	729	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	279	689	-	-	962	-
Mov Cap-2 Maneuver	394	-	-	-	-	-
Stage 1	511	-	-	-	-	-
Stage 2	728	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	15	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	394	689	962	-
HCM Lane V/C Ratio	-	-	0.124	0.006	0.001	-
HCM Control Delay (s)	-	-	15.4	10.3	8.7	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	0	711	888	0	0	0
Future Vol, veh/h	0	720	891	0	0	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	783	968	0	0	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	484
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	529
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	529
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

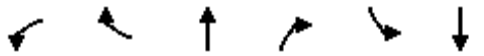
Approach	SE	NW	SW
HCM Control Delay, s	0	0	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SETSWLn1
Capacity (veh/h)	-	-	- 529
HCM Lane V/C Ratio	-	-	- 0.074
HCM Control Delay (s)	-	-	- 12.3
HCM Lane LOS	-	-	- B
HCM 95th %tile Q(veh)	-	-	- 0.2

SYNCHRO Analysis Report

2027 Horizon PM Analysis

DUNAWAY



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	230	111	248	357	251	429
Future Volume (veh/h)	230	111	251	357	251	433
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	247	129	314	388	344	481
Peak Hour Factor	0.93	0.86	0.80	0.92	0.73	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	346	308	610	544	554	2166
Arrive On Green	0.19	0.19	0.34	0.34	0.17	0.61
Sat Flow, veh/h	1781	1585	1870	1585	1781	3647
Grp Volume(v), veh/h	247	129	314	388	344	481
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1585	1781	1777
Q Serve(g_s), s	5.9	3.3	6.5	9.8	4.9	2.8
Cycle Q Clear(g_c), s	5.9	3.3	6.5	9.8	4.9	2.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	346	308	610	544	554	2166
V/C Ratio(X)	0.71	0.42	0.52	0.71	0.62	0.22
Avail Cap(c_a), veh/h	913	812	1104	985	1205	4455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	16.2	12.0	13.1	8.2	4.0
Incr Delay (d2), s/veh	2.7	0.9	0.7	1.8	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.1	2.0	2.8	1.2	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.0	17.1	12.7	14.9	9.4	4.1
LnGrp LOS	C	B	B	B	A	A
Approach Vol, veh/h	376		702			825
Approach Delay, s/veh	19.0		13.9			6.3
Approach LOS	B		B			A

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.2	20.2			32.5	13.4
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	24.5	28.5			57.5	23.5
Max Q Clear Time (g_c+I1), s	6.9	11.8			4.8	7.9
Green Ext Time (p_c), s	0.9	4.0			3.3	1.0

Intersection Summary	
HCM 6th Ctrl Delay	11.6
HCM 6th LOS	B

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	70	564	302	184	285	183	121	396	225	222	414	41
Future Volume (veh/h)	108	564	302	194	296	192	121	430	225	227	424	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	627	343	294	429	253	168	453	292	258	451	79
Peak Hour Factor	0.96	0.90	0.88	0.66	0.69	0.76	0.72	0.95	0.77	0.88	0.94	0.66
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	365	667	365	343	802	468	394	732	341	335	1058	181
Arrive On Green	0.06	0.30	0.30	0.13	0.37	0.37	0.10	0.22	0.22	0.12	0.24	0.24
Sat Flow, veh/h	1781	2216	1213	1781	2159	1262	1781	3404	1585	1781	4388	751
Grp Volume(v), veh/h	112	503	467	294	352	330	168	453	292	258	348	182
Grp Sat Flow(s),veh/h/ln	1781	1777	1652	1781	1777	1643	1781	1702	1585	1781	1702	1735
Q Serve(g_s), s	3.3	21.6	21.6	8.4	12.2	12.4	5.6	9.4	13.9	8.8	6.8	7.0
Cycle Q Clear(g_c), s	3.3	21.6	21.6	8.4	12.2	12.4	5.6	9.4	13.9	8.8	6.8	7.0
Prop In Lane	1.00		0.73	1.00		0.77	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	365	535	497	343	660	610	394	732	341	335	821	418
V/C Ratio(X)	0.31	0.94	0.94	0.86	0.53	0.54	0.43	0.62	0.86	0.77	0.42	0.44
Avail Cap(c_a), veh/h	406	535	497	354	660	610	418	782	364	335	825	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	26.7	26.7	17.8	19.3	19.4	20.8	27.8	29.6	21.8	25.1	25.2
Incr Delay (d2), s/veh	0.5	24.7	26.0	18.0	0.8	1.0	0.7	1.3	17.1	10.5	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	12.0	11.3	4.7	4.7	4.4	2.2	3.7	6.6	4.3	2.6	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.7	51.4	52.7	35.8	20.2	20.3	21.5	29.2	46.7	32.3	25.5	25.9
LnGrp LOS	B	D	D	D	C	C	C	C	D	C	C	C
Approach Vol, veh/h		1082			976			913			788	
Approach Delay, s/veh		48.5			24.9			33.4			27.8	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	33.6	14.0	21.4	14.9	28.1	12.0	23.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	6.7	27.8	9.5	18.0	10.9	23.6	8.5	19.0
Max Q Clear Time (g_c+I1), s	5.3	14.4	10.8	15.9	10.4	23.6	7.6	9.0
Green Ext Time (p_c), s	0.0	3.4	0.0	1.0	0.1	0.0	0.0	2.2

Intersection Summary	
HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.4

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Vol, veh/h	0	0	648	0	0	676
Future Vol, veh/h	26	3	648	81	4	676
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	0	-	-	-	-
Veh in Median Storage, #	1	-	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	28	3	704	88	4	735

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1124	396	0	0	792	0
Stage 1	748	-	-	-	-	-
Stage 2	376	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	199	603	-	-	824	-
Stage 1	429	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	197	603	-	-	824	-
Mov Cap-2 Maneuver	321	-	-	-	-	-
Stage 1	429	-	-	-	-	-
Stage 2	659	-	-	-	-	-

Approach	NW	NE	SW
HCM Control Delay, s	16.6	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NET	NER	NWLn1	NWLn2	SWL	SWT
Capacity (veh/h)	-	-	321	603	824	-
HCM Lane V/C Ratio	-	-	0.088	0.005	0.005	-
HCM Control Delay (s)	-	-	17.3	11	9.4	0
HCM Lane LOS	-	-	C	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	0	1012	651	0	0	0
Future Vol, veh/h	0	1017	660	0	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1105	717	0	0	23

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	359
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	0	-	-	-	0	638
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	638
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	SE	NW	SW
HCM Control Delay, s	0	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SETSWLn1
Capacity (veh/h)	-	-	- 638
HCM Lane V/C Ratio	-	-	- 0.036
HCM Control Delay (s)	-	-	- 10.9
HCM Lane LOS	-	-	- B
HCM 95th %tile Q(veh)	-	-	- 0.1