Dynamic Traffic, LLC
www.dynamictraffic.com
1904 Main Street
Lake Como, NJ
T. 732.681.0760

October 8, 2020
Via Hand Delivery

Township of Lawrence Zoning Board of Adjustment
2207 Lawrence Road, P.O. Box 6006
Township of Lawrence, NJ 08648

Attn: Brenda Kraemer, Secretary to the Zoning Board

Re: Supplemental Traffic Analysis
Proposed Residential Development
Block 2001 – Lots 3, 60-66 & 68
2495 Brunswick Pike (Route 1 Alt)
Township of Lawrence, Mercer County, NJ
DT # 1279-99-010T

Dear Zoning Board Members:

Per the request of the Board, Dynamic Traffic has prepared the following assessment to supplement the analysis provided in the *Traffic Impact and Parking Assessment* dated April 15, 2020. The following analysis was prepared in order to determine the traffic impacts of the site generated traffic at the adjacent intersections along Texas Avenue, including its intersection with the Lawrence Shopping Center Driveway as well as Route 1. Additionally, as requested, it is proposed to eliminate on-street parking along Texas Avenue and provide newly striped parking spaces adjacent to the site along the back of the Lawrence Shopping Center. These parking spaces will be accessed via the existing Lawrence Shopping Center driveway along Texas Avenue. The document herein summarizes the methodology and results of the capacity analyses as well as the newly proposed parking configuration for the site.

Adjacent Intersection Analysis

Existing Traffic Volumes

Manual turning movement (MTM) counts were conducted on Thursday, October 1, 2020 from 7:00 to 9:00 AM and from 4:30 to 6:30 PM at the intersection of Route 1 and Texas Avenue. Review of the collected traffic data reveals that the weekday morning peak street hour (PSH) occurs between 8:00 – 9:00 AM and the weekday evening PSH occurs between 4:30 – 5:30 PM.

It should be noted that stay-at-home protocols associated with the COVID-19 pandemic were in effect as of the time of the traffic counts. As a result, current traffic volumes on the surrounding roadways are atypically low at this time and would not be representative of "existing" traffic conditions. Therefore, historical traffic volume data obtained from the NJDOT Traffic Count Database has been reviewed and compared with current traffic conditions.

Specifically, Automatic Traffic Recorder (ATR) volumes along Texas Avenue between Route 1 and Princeton Pike conducted on Tuesday, September 12, 2017 were obtained. In order to better represent 2020 traffic volumes, the 2017 ATR volumes were grown utilizing an annual growth rate contained within the NJDOT Annual Background Growth Rate Table, which indicates a growth rate of 1.00% per year for Urban Major Collector roadways within Mercer County, for a period of three years. The peak hour (or closest hour) of the 2017 ATR volumes grown to represent "existing" conditions were then compared to the MTM peak hour volumes along Texas Avenue.

The NJDOT ATR volumes representative of "existing" conditions were utilized along Texas Avenue. Adjustment factors of 1.18 and 1.78 were then applied to the weekday morning and weekday evening peak hour volumes, respectively, to develop traffic volumes that best represent typical "existing" conditions. Appended, Figure 2 shows the existing peak hour traffic volumes and Figure 3 shows the adjusted existing traffic volumes at the study intersections. All traffic counts are appended to this letter.

Future Traffic Volumes

Traffic volumes and operational analyses were developed for both the 2022 No Build and Build conditions. The No Build conditions provide a baseline for assessing the impact of the site development traffic on the roadway system. The process of developing the No Build and Build traffic volumes and the subsequent analyses is outlined below.

Regardless of whether the subject site is developed or not, traffic volumes on the surrounding roadways are expected to increase as a result of developments throughout the region. A growth rate for roadways within the study area was obtained from the NJDOT Annual Background Growth Rate Table, which indicates a growth rate of 1.0% per year. Future 2022 Base traffic volumes were developed by applying the background growth rate of 1.0% for two (2) years to the study area roadways existing traffic volumes. Figure 3, in Appendix A, shows the 2022 Base traffic volumes.

It should be noted that the adjacent Lawrence Shopping Center is currently not operating at full capacity as portions of the shopping center sit vacant and the impact of COVID-19 has temporarily reduced in-person shopping trips. Additionally, a 34,000 SF LA Fitness has been approved to replace the existing vacant commercial building on Lot 2, but has yet to be constructed. In order to conservatively account for full occupancy of the shopping center as well as the future construction of the fitness center, turning movements at the site driveway along Texas Avenue were prepared utilizing trip generation research data as published under Land Use Code (LUC) 820 – Shopping Center and LUC 934 – Health/Fitness Club in the Institute of Transportation Engineers' (ITE) publication, *Trip Generation, 10th Edition.* This publication sets forth trip generation rates based on traffic counts conducted at research sites throughout the country.

According to studies conducted by ITE, traffic associated with LUC 820 is not 100% newly generated. Rather, a portion of the traffic is diverted from the existing traffic stream on the adjacent roadway network. This is because a shopping center is not exclusively a destination land use, instead patrons stop on their way to/from other locations such as home or work. ITE identifies a 34% passby traffic percentage, which is also accepted by NJDOT, and was used during the evening peak hour.

Table I details the traffic volumes associated with the fully operational existing Lawrence Shopping Center taking passby credits into account.

Table I
Fully Operational Shopping Center ITE Trip Generation

Land Use	Trip Type	AM PSH			PM PSH		
		In	Out	Total	In	Out	Total
341,205 SF Shopping Center	Total	200	122	322	647	701	1,348
	Passby	-	-	-	220	238	458
	Primary	200	122	322	427	463	890
34,000 SF Fitness Center	Total	23	22	45	67	50	117
	Passby	-	-	-	-	-	-
	Primary	23	22	45	67	50	117
Total	Total	223	144	367	714	751	1,465
	Passby	-	-	-	220	238	458
	Primary	223	144	367	494	513	1,007

Once the magnitude of traffic generated by the fully operational existing site is known, it is necessary to assign that traffic to the adjacent street system. The distribution of traffic to the surrounding roadways is based on the location of primary arterial roadways, major signalized intersections and existing traffic patterns. Appended, Figures 4-8 illustrate the Primary Shopping Center Traffic Trip Distribution, Primary Shopping Center Site Generated Volumes, Passby Shopping Center Traffic Trip Distribution, Passby Shopping Center Site Generated Volumes, and the Total Shopping Center Site Generated Volumes, respectively.

Future 2022 No Build traffic volumes were developed by applying the background growth rate of 1.00% per year for two years to the study area roadways existing traffic volumes and adding the traffic volumes associated with the fully operational Lawrence Shopping Center. Appended, Figure 9 shows the 2022 No Build traffic volumes.

Site Generated Traffic

Trip generation projections for The Project were made utilizing trip generation research data as published under Land Use Code (LUC) 220 – Multifamily Housing (Low-Rise) in the Institute of Transportation Engineers' (ITE) publication, *Trip Generation, Tenth Edition.* This publication sets forth trip generation rates based on traffic counts conducted at research sites throughout the country. The following table shows the anticipated trip generation for The Project.

Table II
Trip Generation

Use	AM PSH			PM PSH		
	In	Out	Total	In	Out	Total
70 Multifamily Units	8	26	34	27	16	43

Once the magnitude of traffic to be generated by the site is known, it is necessary to assign that traffic to the adjacent street system. The distribution of new traffic to the surrounding roadways is based on the location of primary arterial roadways, major signalized intersections and existing traffic patterns. Appended, Figure 10 illustrates the anticipated trip distribution for The Project, while Figure 11 illustrates the site generated volumes assigned to the study area network. The site generated volumes were added to the 2022 No Build traffic volumes to generate the 2022 Build traffic volumes which are shown in Figure 12.

Capacity Analysis

All capacity analyses were performed utilizing Synchro 11 software in accordance with Highway Capacity Manual (HCM) 6th Edition methodologies. Operational conditions at the study intersections were analyzed under the No Build and Build conditions and are summarized in Table III below.

Table III
Future Levels of Service

Intersection	Movement		AM PSH		PM PSH	
			No Build	Build	No Build	Build
Route 1 & Texas Avenue	EB	L	E (63)	E (64)	F (276)	F (284)
		R	A (5)	A (7)	A (7)	A (8)
	WB	L	E (62)	E (62)	D (55)	D (55)
		TR	D (54)	D (55)	D (47)	D (49)
	NB	T	B (19)	B (19)	B (17)	B (17)
	SB	T	B (19)	B (19)	C (22)	C (22)
	Overall		C (29)	C (29)	E (65)	E (66)
Texas Avenue & Lawrence Shopping Center Driveway	WB	L	a (8)	a (8)	a (8)	a (8)
	NB	LR	b (12)	b (13)	c (23)	d (26)
Texas Avenue & Egress Site Driveway	NB	LR	-	b (11)	-	b (12)
Texas Avenue & Ingress Site Driveway	WB	L	-	a (8)	-	a (8)

A (#) - Signalized Intersection Level of Service (seconds of delay per vehicle)
a (#) - Unsignalized Intersection Level of Service (seconds of delay per vehicle)

Route 1 and Texas Avenue

With the addition of site generated traffic, the intersection of Route 1 and Texas Avenue is anticipated to operate with overall No Build levels of service "E" or better. Additionally, all movements are anticipated to experience a maximum increase in delay of 1 second, with the exception of the eastbound left turn movement anticipated to experience an increase in delay of 8 seconds. It should be noted that the eastbound left turn movement is anticipated to experience an increase in 95th percentile queue length of 8 feet, from 541 feet to 549 feet, or less than one vehicle. The proposed site driveway is located over 900 feet from the intersection and as such will not be impacted by the queues from this intersection. See Table III for the individual movement levels of service and delays.

Texas Avenue and Lawrence Shopping Center Driveway

With the addition of site generated traffic, the intersection of Texas Avenue and the shopping center driveway is anticipated to operate with levels of service "D" or better during the studied peak hours. See Table III for the individual movement levels of service and delays.

Texas Avenue and Site Driveways

As designed, both the ingress and egress site driveways are anticipated to operate with acceptable levels of service "B" or better during the studied peak hours. See Table III for the individual movement levels of service and delays.

Site Access, Parking and Circulation

Access to the site will be provided via an enter only driveway and an exit only driveway along Texas Avenue, as well as the existing full movement driveway along Lawrence Road for the shopping center. The internal roadways and parking lot aisles are proposed as 24 feet wide for two-way traffic and 18 feet wide for one-way traffic. This meets the Residential Site Improvement Standards (RSIS) requirements, as well as that of the Ordinance, for 90-degree parking. The driveways have been designed to meet the spacing and location requirements of the Ordinance and will provide safe and efficient access to the site. The proposed parking stalls are 9'x18' which meets the Ordinance and RSIS requirements of 9'x18' for the use proposed. In addition, the layout of the on-site circulation aisles has been revised to eliminate any dead-end aisle and provides full circulation throughout the site.

It is proposed to provide 59 parking spaces (including 5 handicap spaces) on the site, as well as 43 new striped parking spaces adjacent to the site in within the existing shopping center pavement, for a total of 102 parking spaces. The RSIS sets forth a requirement of 1.8 parking spaces per 1-bedroom unit, 2.0 parking spaces per 2-bedroom unit, and 2.1 parking spaces per 3-bedroom unit. With 8 1-bedroom units, 37 2-bedroom units, and 25 3-bedroom units this equates to a parking requirement of 141 (140.9) parking spaces for The Project and as such, the RSIS requirement is not met.

It should be noted that the household characteristics of the proposed apartments differ from a typical residential development, as they will have income controls. Existing parking demand counts have been performed at similar family affordable apartment developments throughout suburban New Jersey. The following table details the parking demand associated with similar affordable apartment developments.

Table IV
Affordable Apartment Peak Parking Demand

Development	Location	Units	Peak Vehicles Parked	Peak Demand (spaces/unit)
Stafford Park	Manahawkin, NJ	112	143	1.28
Whispering Hills	Barnegat, NJ	52	93	1.79
Laurel Oaks	Barnegat, NJ	94	156	1.66
Crescent	Toms River, NJ	120	150	1.25
Windsor Crescent	Jackson, NJ	112	146	1.30
Woods at Manalapan	Manalapan, NJ	80	117	1.46
Heights at Medford	Medford, NJ	60	68	1.13
Creekside Manor	Medford, NJ	32	36	1.13
Saddlebrook Court	Hanover, NJ	78	105	1.35
Average Peak Parking Demand				**1.37**

As seen above, the peak parking demand associated with similar affordable apartment developments identifies a peak parking demand of 1.37 spaces/unit. As such, the 102 proposed parking spaces (1.46 spaces/unit) will be sufficient to support the anticipated demand.

Additionally, the most trusted and well known industry standard publication regarding parking is published by the ITE and is titled *Parking Generation, 5th Edition*. This publication provides parking generation (parking demand) information for various land use types based on data gathered at similar land uses throughout the country. *Parking Generation* identifies an average peak parking demand of 0.99 spaces per unit for affordable apartment sites (LUC 223). The 1.46 spaces per unit provided for this development exceeds the parking demand identified by ITE.

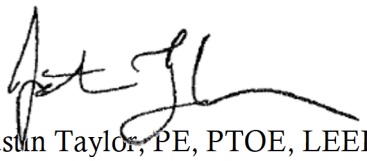
Conclusion

Based upon our Traffic Assessment as detailed in the body of this report, it is the professional opinion of Dynamic Traffic that the adjacent street system of the Township of Lawrence and NJDOT will not experience any significant degradation in operating conditions with the development of the site. The site driveways are located to provide safe and efficient access to the adjacent roadway system. The site plan as proposed provides for good circulation throughout the site and provides adequate parking to accommodate The Project's needs.

If you have any questions on the above, please do not hesitate to contact me.

Sincerely,

Dynamic Traffic, LLC



Justin Taylor, PE, PTOE, LEED AP
Principal
NJ PE License 45988

Nick Verderese, PE
Senior Principal
NJ PE License 38991

JPT

c: Kevin Kavanaugh (via email w/encl.)
Ryan Kennedy (via email w/encl.)
Tom Muller/Ryan McDermott/Luiza Guazzelli (via email w/encl.)

File: T:\TRAFFIC PROJECTS\1279 RPM Development\99-010T Lawrence\Design\2020-10-08 Supplemental Memo\2020-10-08 Supplemental Analysis Memo.docx

Dynamic Traffic, LLC

1904 Main Street, Lake Como, NJ 07719
245 Main Street - Suite 110, Chester, NJ 07930
732-681-0760

E/W: Texas Rd/Jughandle
N/S: Rt 1 Business
Town/County: Lawrence/Mercer
Job #: 1279-99-010T

File Name : Rt 1 Business & Texas Rd - AMPM
Site Code : 00000000
Start Date : 10/1/2020
Page No : 1

Groups Printed- Cars - Trucks (SU) - Trucks (TT)

	Texas Road Eastbound					Route 1 Business NB Jughandle Westbound					Route 1 Business Northbound					Route 1 Business Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	12	0	6	1	19	9	8	0	0	17	0	71	0	0	71	0	34	0	1	35	142
07:15 AM	26	0	5	0	31	10	18	2	0	30	0	88	0	0	88	0	46	0	0	46	195
07:30 AM	24	0	3	0	27	4	12	1	0	17	0	108	0	0	108	0	42	0	0	42	194
07:45 AM	22	0	8	0	30	2	3	0	0	5	0	123	0	0	123	0	56	0	0	56	214
Total	84	0	22	1	107	25	41	3	0	69	0	390	0	0	390	0	178	0	1	179	745
08:00 AM	29	0	11	0	40	4	10	0	0	14	0	79	0	0	79	0	65	0	0	65	198
08:15 AM	24	0	12	0	36	8	11	0	0	19	0	75	0	0	75	0	68	0	0	68	198
08:30 AM	19	0	9	0	28	10	6	0	0	16	0	72	0	0	72	0	74	0	0	74	190
08:45 AM	21	0	5	0	26	12	12	1	0	25	0	106	0	0	106	0	86	0	0	86	243
Total	93	0	37	0	130	34	39	1	0	74	0	332	0	0	332	0	293	0	0	293	829
*** BREAK ***																					
04:30 PM	27	0	8	0	35	3	24	0	0	27	0	73	0	0	73	0	143	0	1	144	279
04:45 PM	33	0	16	0	49	10	16	0	0	26	0	60	0	0	60	0	153	0	1	154	289
Total	60	0	24	0	84	13	40	0	0	53	0	133	0	0	133	0	296	0	2	298	568
05:00 PM	33	0	21	0	54	19	21	0	0	40	0	102	0	0	102	0	159	0	0	159	355
05:15 PM	30	0	13	0	43	11	11	0	0	22	0	99	0	0	99	0	161	0	0	161	325
05:30 PM	22	0	15	0	37	8	11	0	0	19	0	76	0	0	76	0	94	0	0	94	226
05:45 PM	27	0	8	0	35	14	15	0	0	29	0	79	0	0	79	0	123	0	0	123	266
Total	112	0	57	0	169	52	58	0	0	110	0	356	0	0	356	0	537	0	0	537	1172
06:00 PM	26	0	15	0	41	13	17	0	0	30	0	89	0	0	89	0	107	0	0	107	267
06:15 PM	26	0	15	0	41	4	10	1	0	15	0	63	0	0	63	0	118	0	0	118	237
Grand Total	401	0	170	1	572	141	205	5	0	351	0	1363	0	0	1363	0	1529	0	3	1532	3818
Apprch %	70.1	0	29.7	0.2		40.2	58.4	1.4	0		0	100	0	0		0	99.8	0	0.2		
Total %	10.5	0	4.5	0	15	3.7	5.4	0.1	0	9.2	0	35.7	0	0	35.7	0	40	0	0.1	40.1	
Cars	398	0	163	1	562	140	196	5	0	341	0	1325	0	0	1325	0	1496	0	3	1499	3727
% Cars	99.3	0	95.9	100	98.3	99.3	95.6	100	0	97.2	0	97.2	0	0	97.2	0	97.8	0	100	97.8	97.6
Trucks (SU)	3	0	7	0	10	1	0	0	0	1	0	28	0	0	28	0	24	0	0	24	63
% Trucks (SU)	0.7	0	4.1	0	1.7	0.7	0	0	0	0.3	0	2.1	0	0	2.1	0	1.6	0	0	1.6	1.7
Trucks (TT)	0	0	0	0	0	0	9	0	0	9	0	10	0	0	10	0	9	0	0	9	28
% Trucks (TT)	0	0	0	0	0	0	4.4	0	0	2.6	0	0.7	0	0	0.7	0	0.6	0	0	0.6	0.7

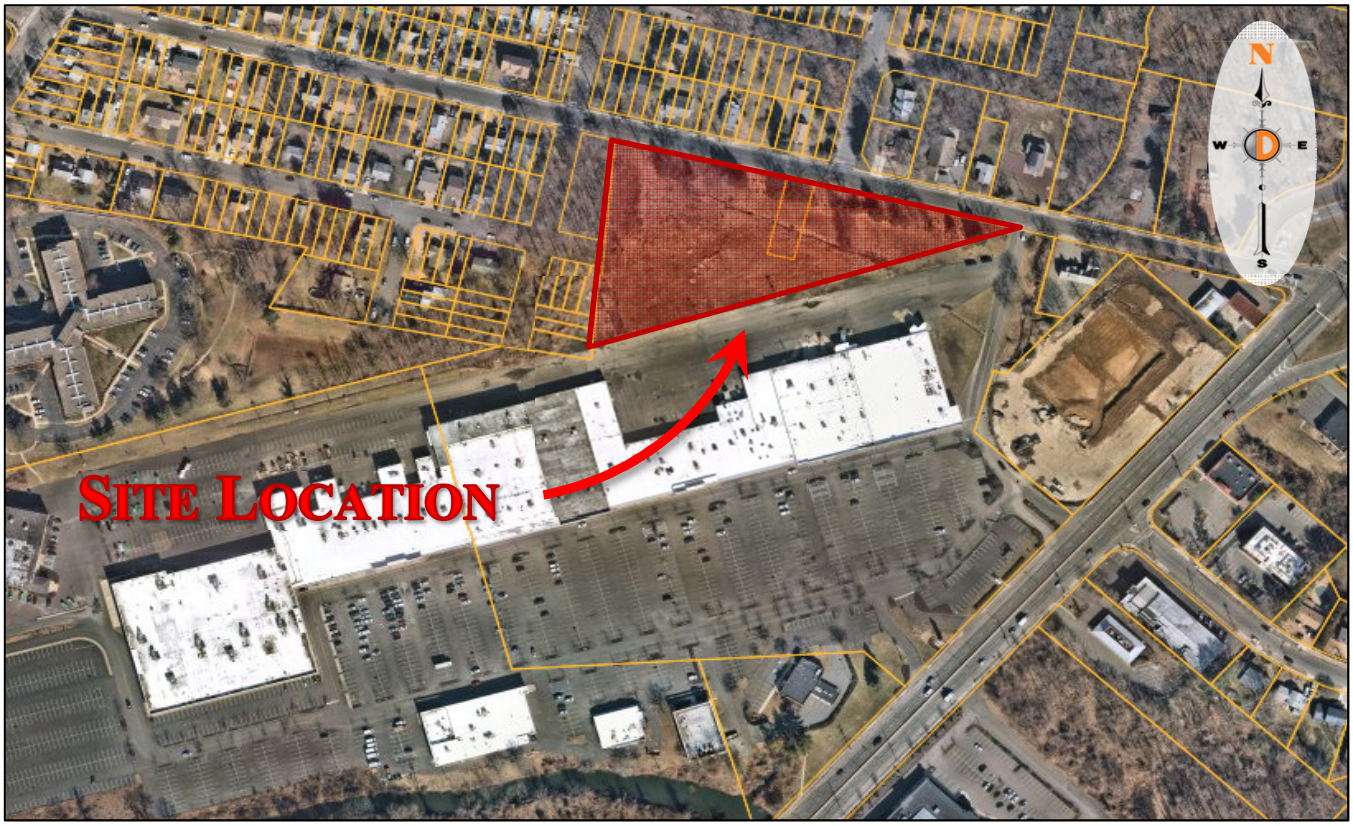
Dynamic Traffic, LLC

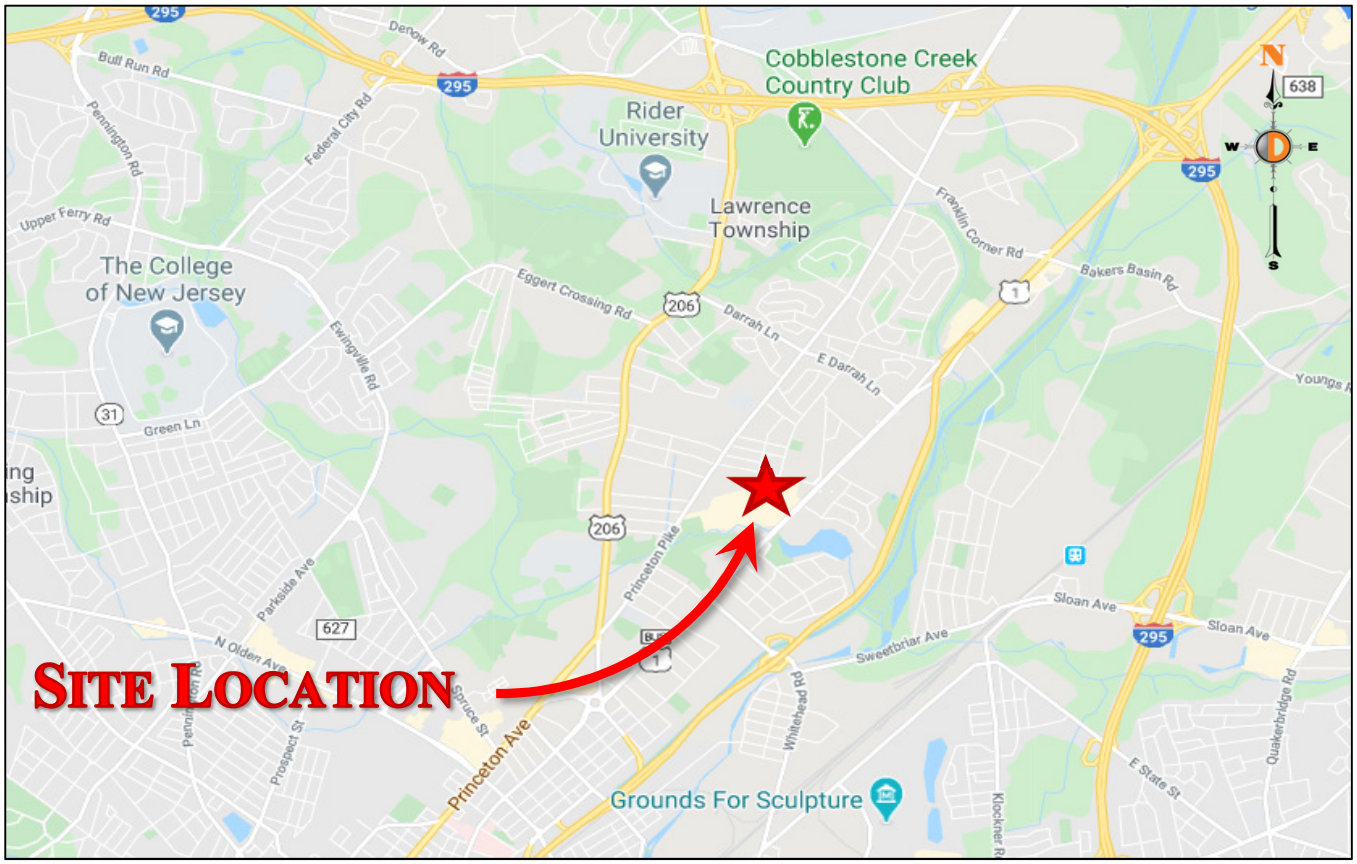
1904 Main Street, Lake Como, NJ 07719
245 Main Street - Suite 110, Chester, NJ 07930
732-681-0760

E/W: Texas Rd/Jughandle
N/S: Rt 1 Business
Town/County: Lawrence/Mercer
Job #: 1279-99-010T

File Name : Rt 1 Business & Texas Rd - AMPM
Site Code : 00000000
Start Date : 10/1/2020

	Texas Road Eastbound					Route 1 Business NB Jughandle Westbound					Route 1 Business Northbound					Route 1 Business Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	29	0	11	0	40	4	10	0	0	14	0	79	0	0	79	0	65	0	0	65	198
08:15 AM	24	0	12	0	36	8	11	0	0	19	0	75	0	0	75	0	68	0	0	68	198
08:30 AM	19	0	9	0	28	10	6	0	0	16	0	72	0	0	72	0	74	0	0	74	190
08:45 AM	21	0	5	0	26	12	12	1	0	25	0	106	0	0	106	0	86	0	0	86	243
Total Volume	93	0	37	0	130	34	39	1	0	74	0	332	0	0	332	0	293	0	0	293	829
% App. Total	71.5	0	28.5	0		45.9	52.7	1.4	0		0	100	0	0		0	100	0	0		
PHF	.802	.000	.771	.000	.813	.708	.813	.250	.000	.740	.000	.783	.000	.000	.783	.000	.852	.000	.000	.852	.853
Cars	92	0	35	0	127	33	37	1	0	71	0	319	0	0	319	0	280	0	0	280	797
% Cars	98.9	0	94.6	0	97.7	97.1	94.9	100	0	95.9	0	96.1	0	0	96.1	0	95.6	0	0	95.6	96.1
Trucks (SU)	1	0	2	0	3	1	0	0	0	1	0	11	0	0	11	0	11	0	0	11	26
% Trucks (SU)	1.1	0	5.4	0	2.3	2.9	0	0	0	1.4	0	3.3	0	0	3.3	0	3.8	0	0	3.8	3.1
Trucks (TT)	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	0	2	0	0	2	6
% Trucks (TT)	0	0	0	0	0	0	5.1	0	0	2.7	0	0.6	0	0	0.6	0	0.7	0	0	0.7	0.7
Peak Hour Analysis From 12:00 PM to 06:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	27	0	8	0	35	3	24	0	0	27	0	73	0	0	73	0	143	0	1	144	279
04:45 PM	33	0	16	0	49	10	16	0	0	26	0	60	0	0	60	0	153	0	1	154	289
05:00 PM	33	0	21	0	54	19	21	0	0	40	0	102	0	0	102	0	159	0	0	159	355
05:15 PM	30	0	13	0	43	11	11	0	0	22	0	99	0	0	99	0	161	0	0	161	325
Total Volume	123	0	58	0	181	43	72	0	0	115	0	334	0	0	334	0	616	0	2	618	1248
% App. Total	68	0	32	0		37.4	62.6	0	0		0	100	0	0		0	99.7	0	0.3		
PHF	.932	.000	.690	.000	.838	.566	.750	.000	.000	.719	.000	.819	.000	.000	.819	.000	.957	.000	.500	.960	.879
Cars	121	0	56	0	177	43	69	0	0	112	0	330	0	0	330	0	613	0	2	615	1234
% Cars	98.4	0	96.6	0	97.8	100	95.8	0	0	97.4	0	98.8	0	0	98.8	0	99.5	0	100	99.5	98.9
Trucks (SU)	2	0	2	0	4	0	0	0	0	0	0	4	0	0	4	0	3	0	0	3	11
% Trucks (SU)	1.6	0	3.4	0	2.2	0	0	0	0	0	0	1.2	0	0	1.2	0	0.5	0	0	0.5	0.9
Trucks (TT)	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3
% Trucks (TT)	0	0	0	0	0	0	4.2	0	0	2.6	0	0	0	0	0	0	0	0	0	0	0.2

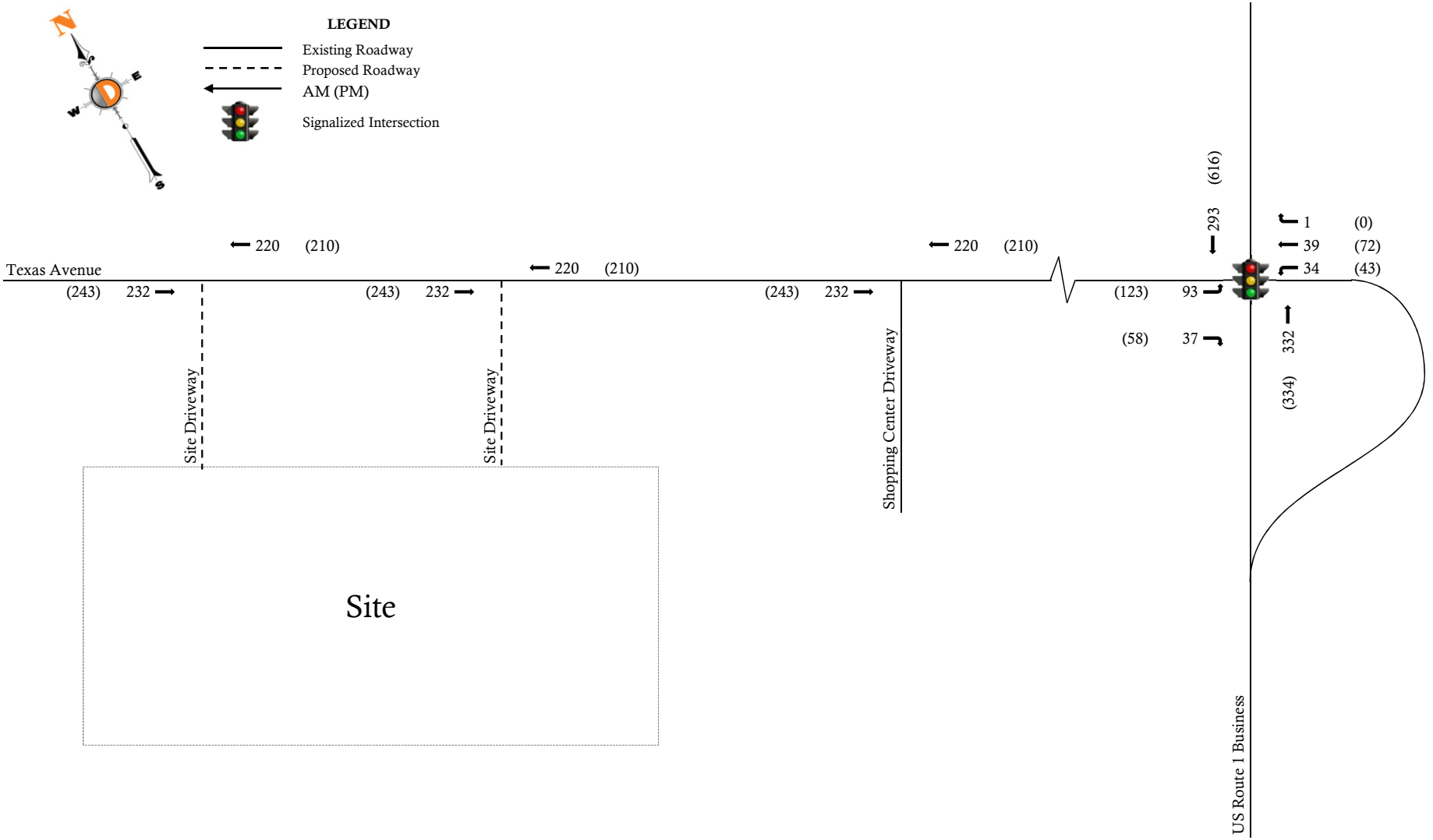




Proposed Residential Development
Supplemental Traffic Analysis
1279-99-010T
10/8/2020

Figure 1

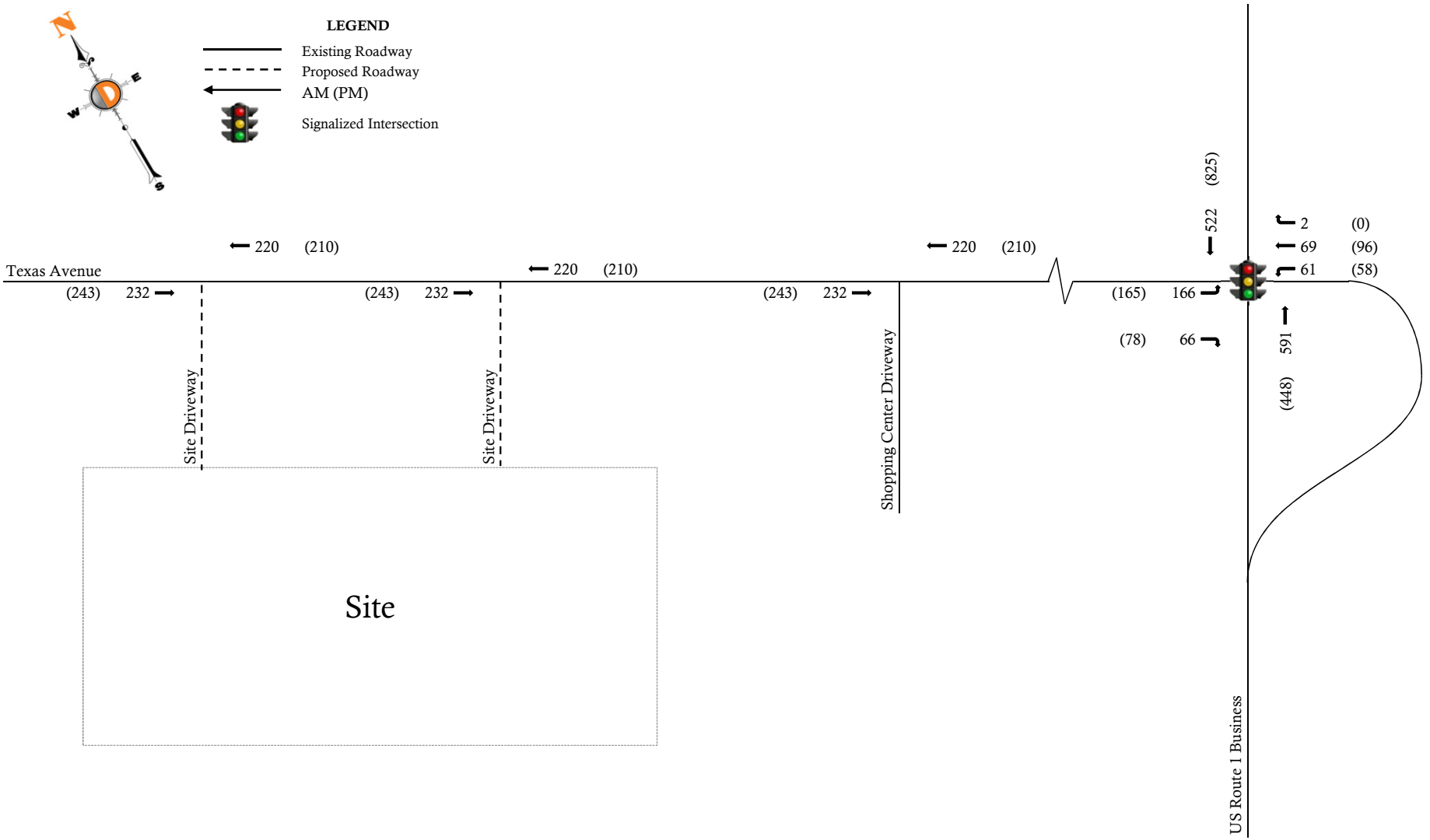
Site Location Map



Proposed Residential Development
Supplemental Traffic Analysis
1279-99-010T
10/8/2020

Figure 2

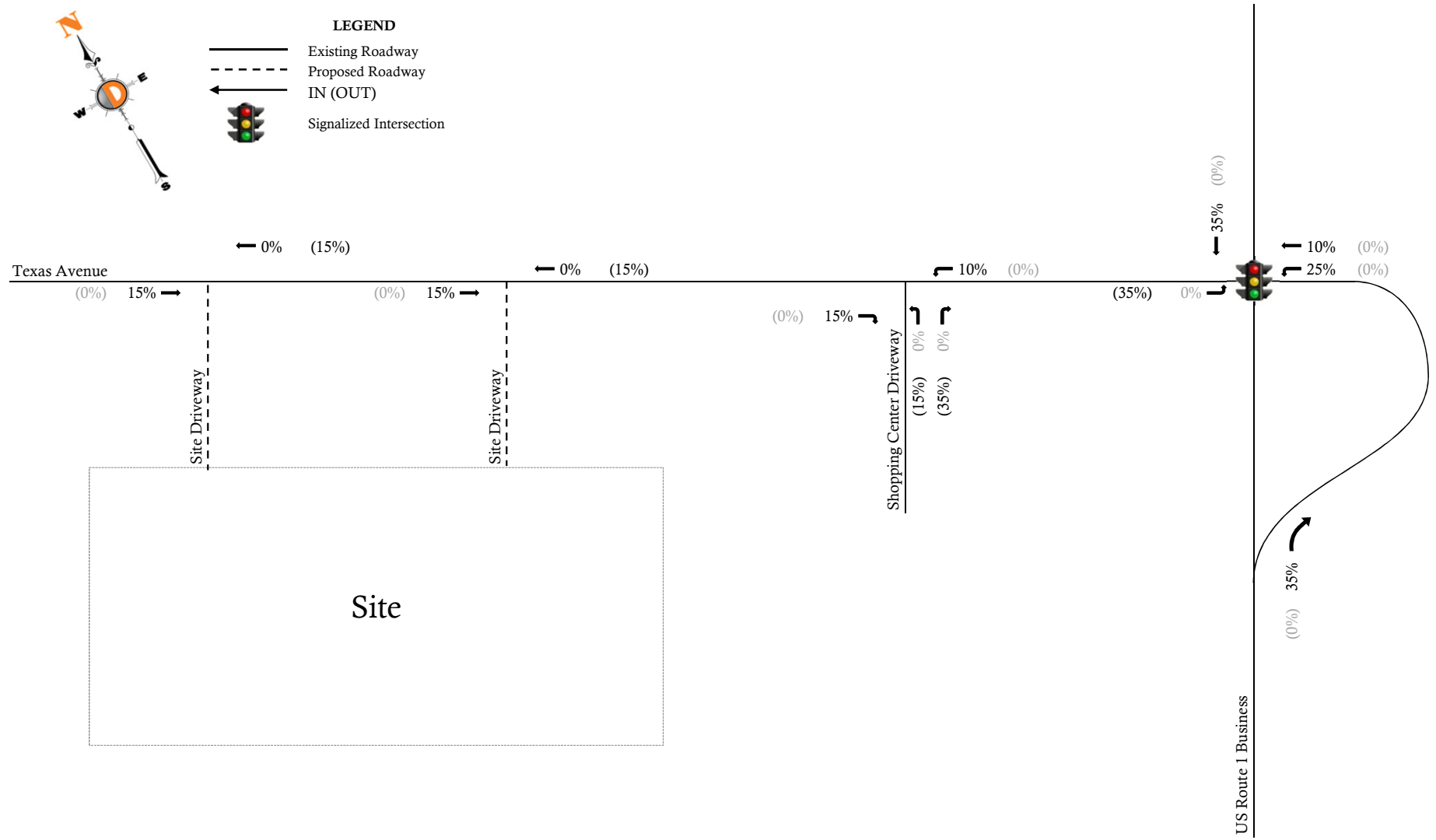
Existing Traffic Volumes



Proposed Residential Development
Supplemental Traffic Analysis
1279-99-010T
10/8/2020

Figure 3

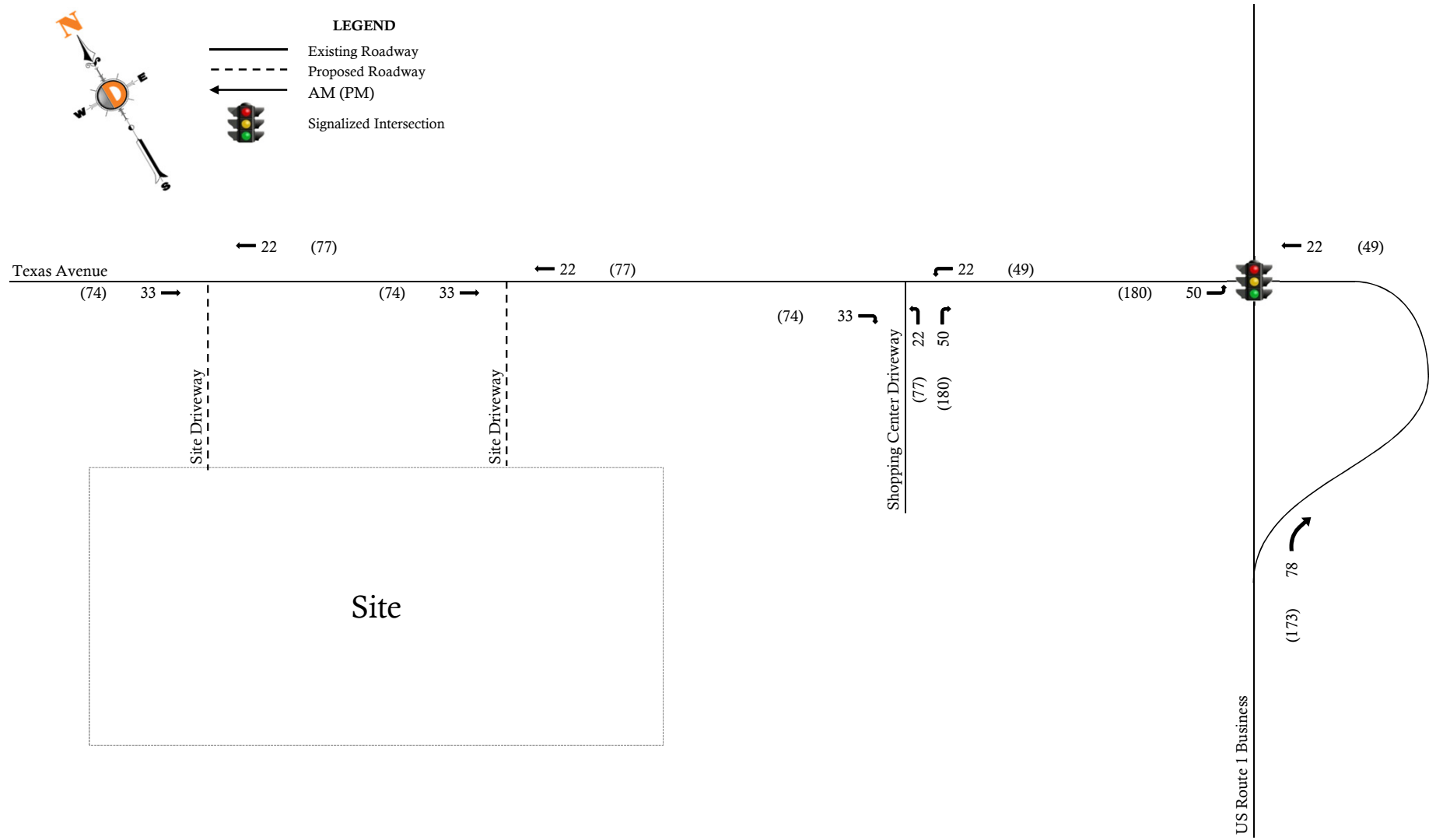
Adjusted Existing Traffic Volumes



Proposed Residential Development
Supplemental Traffic Analysis
1279-99-010T
10/8/2020

Figure 4

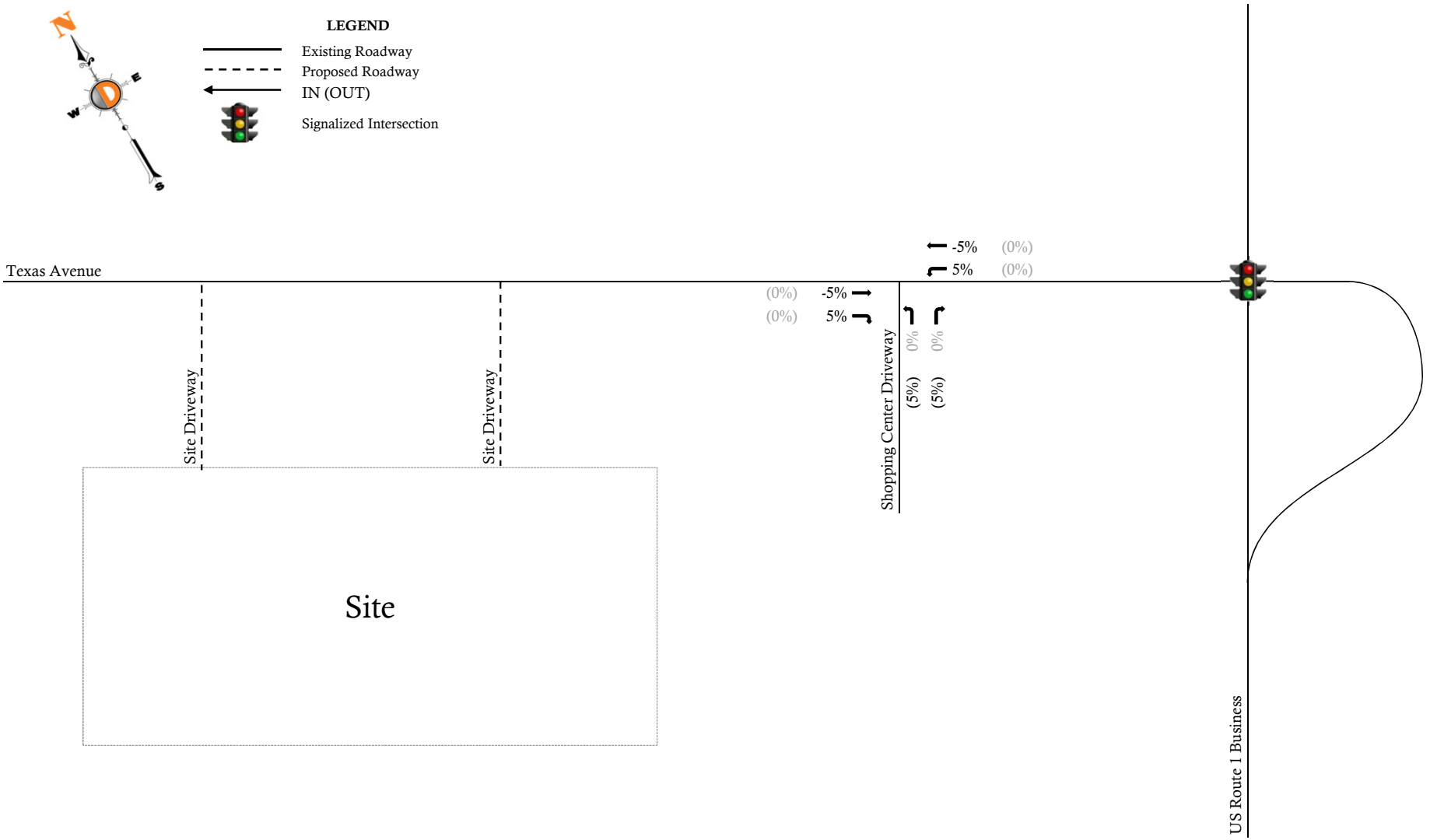
Shopping Center Percent Distribution (Primary Trips)



Proposed Residential Development
Supplemental Traffic Analysis
1279-99-010T
10/8/2020

Figure 5

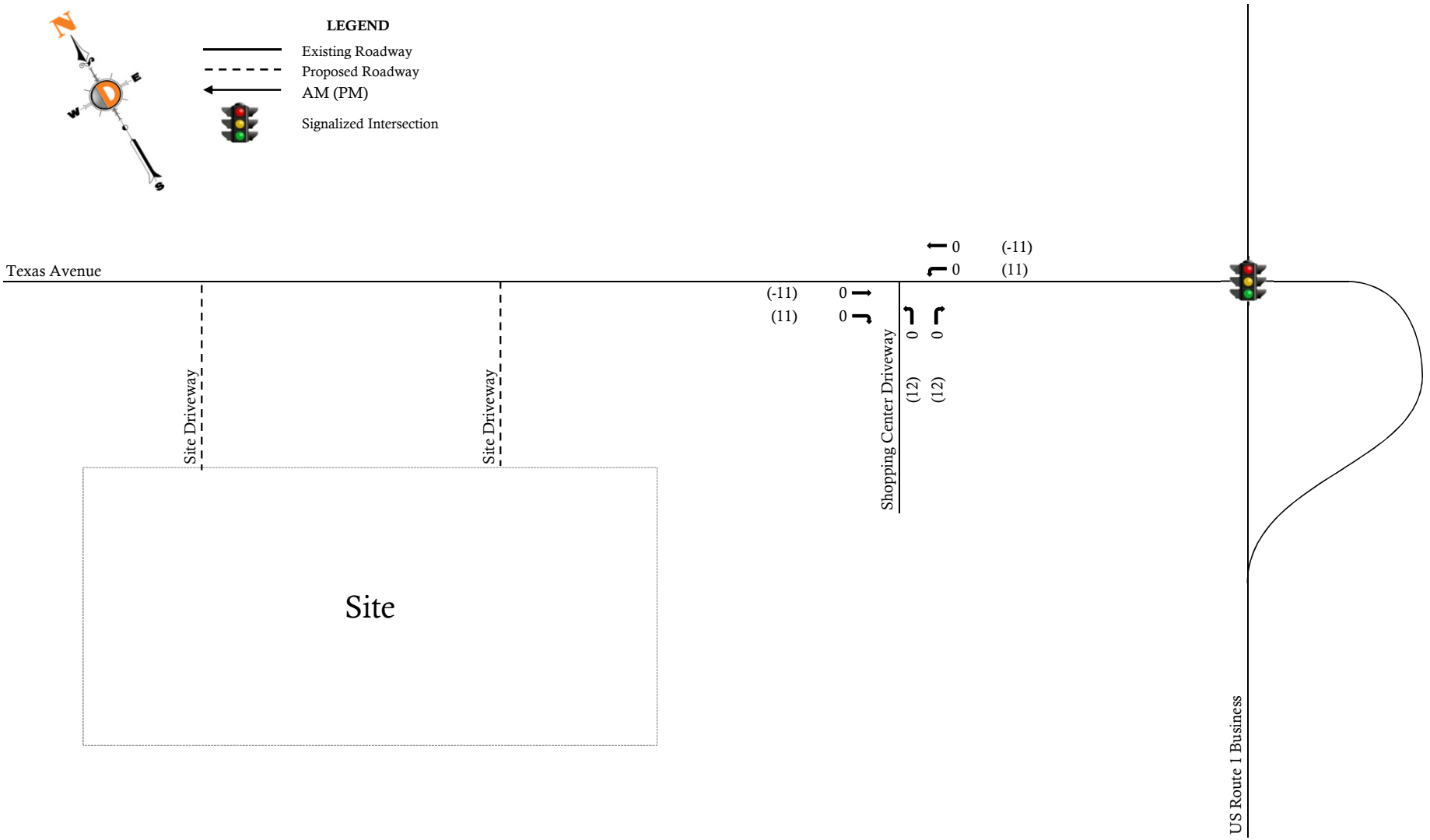
Shopping Center Primary Site Generated Trips



Proposed Residential Development
Supplemental Traffic Analysis
1279-99-010T
10/8/2020

Figure 6

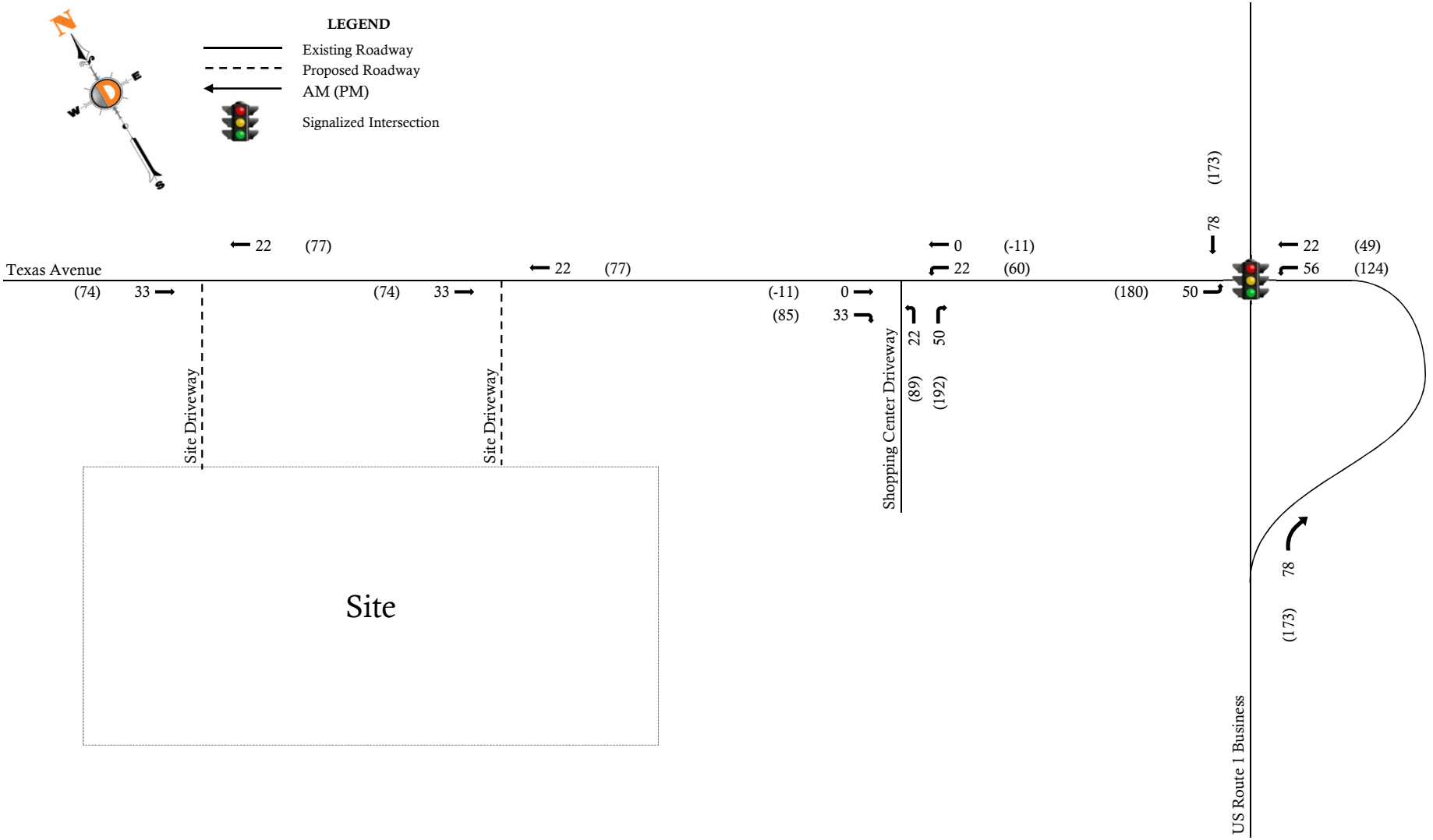
Shopping Center Percent Distribution (Passby Trips)



Proposed Residential Development
Supplemental Traffic Analysis
1279-99-010T
10/8/2020

Figure 7

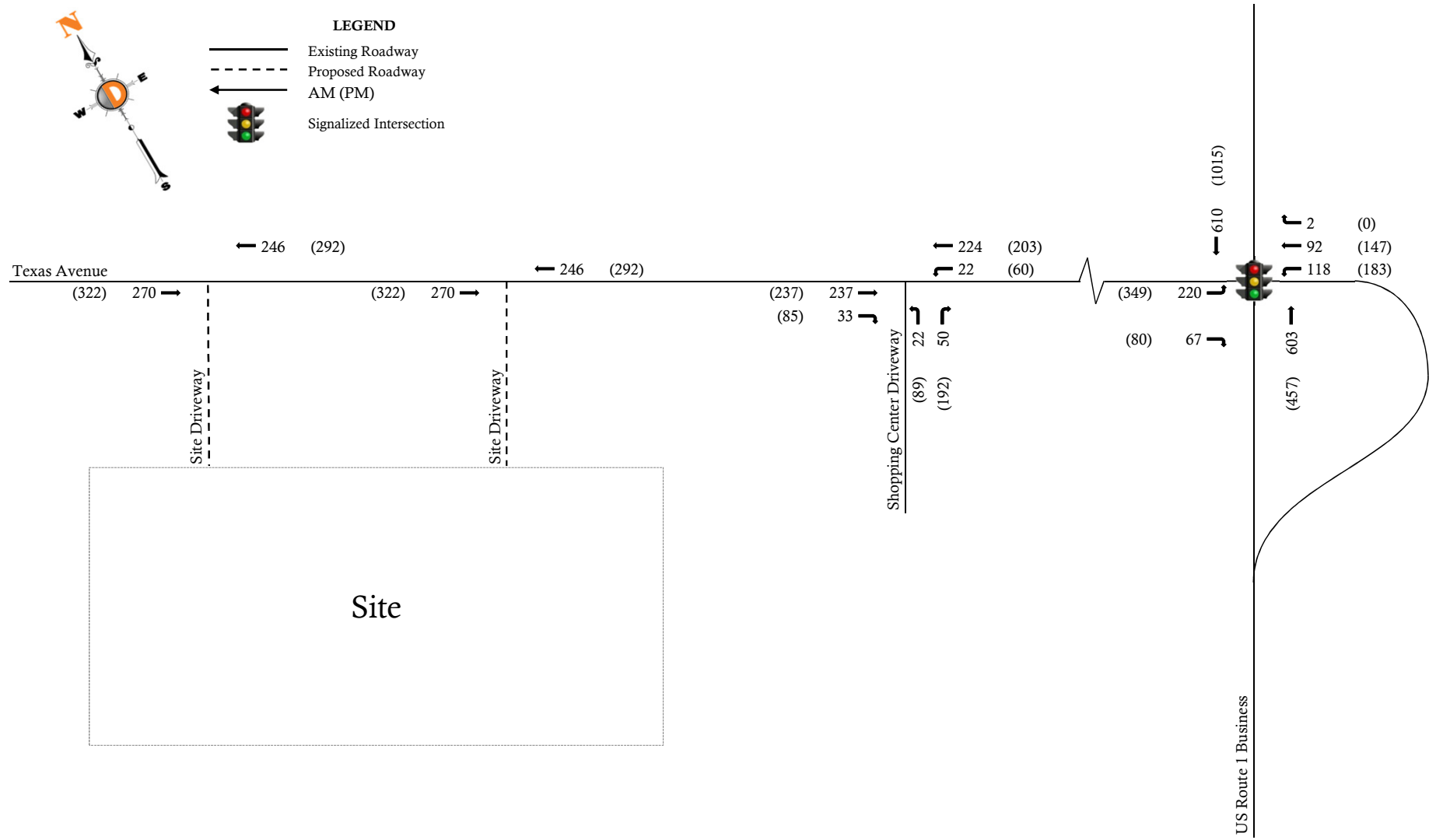
Shopping Center Passby Site Generated Trips



Proposed Residential Development
Supplemental Traffic Analysis
1279-99-010T
10/8/2020

Figure 8

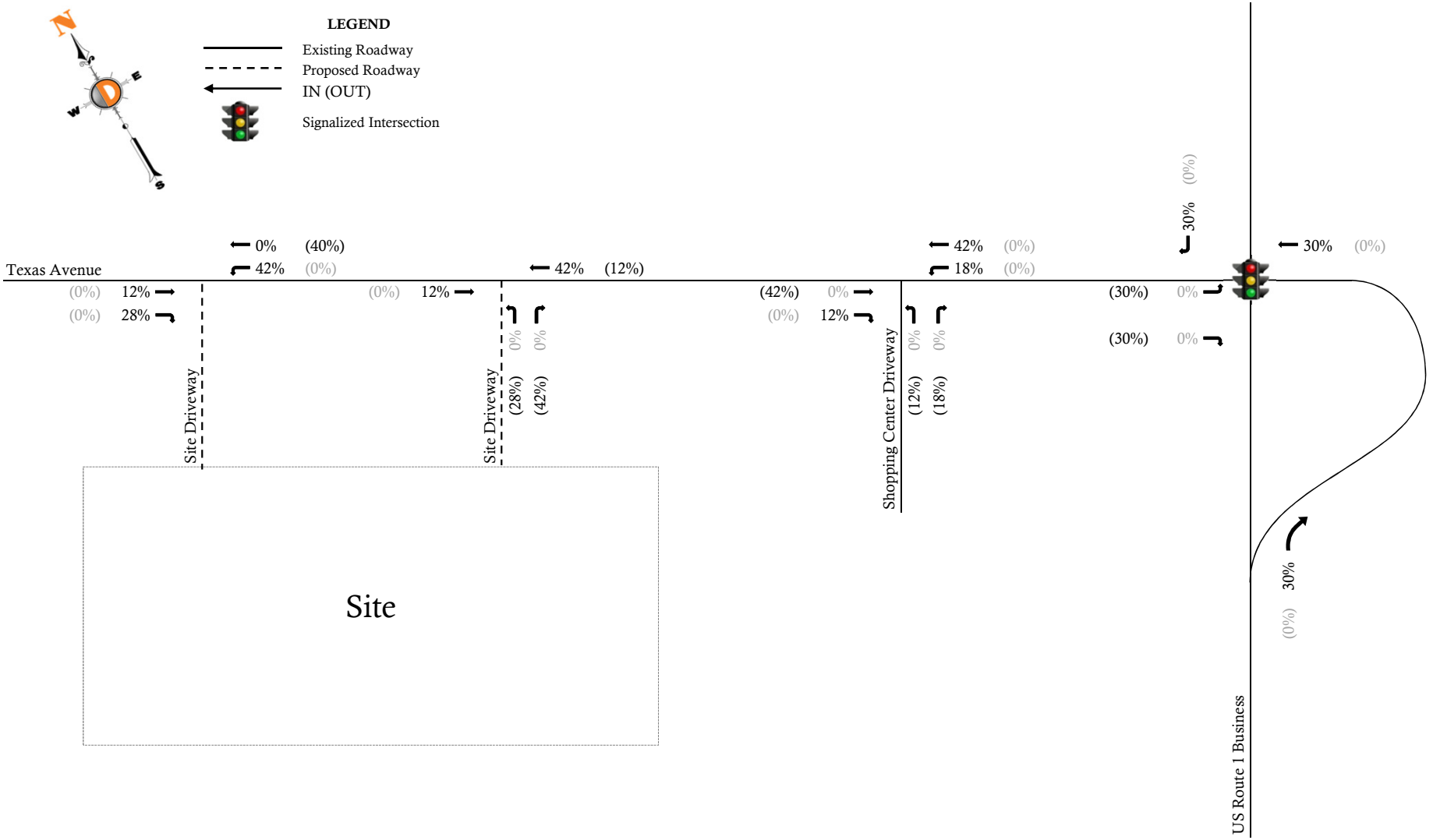
Total Shopping Center Site Generated Trips



Proposed Residential Development
Supplemental Traffic Analysis
1279-99-010T
10/8/2020

Figure 9

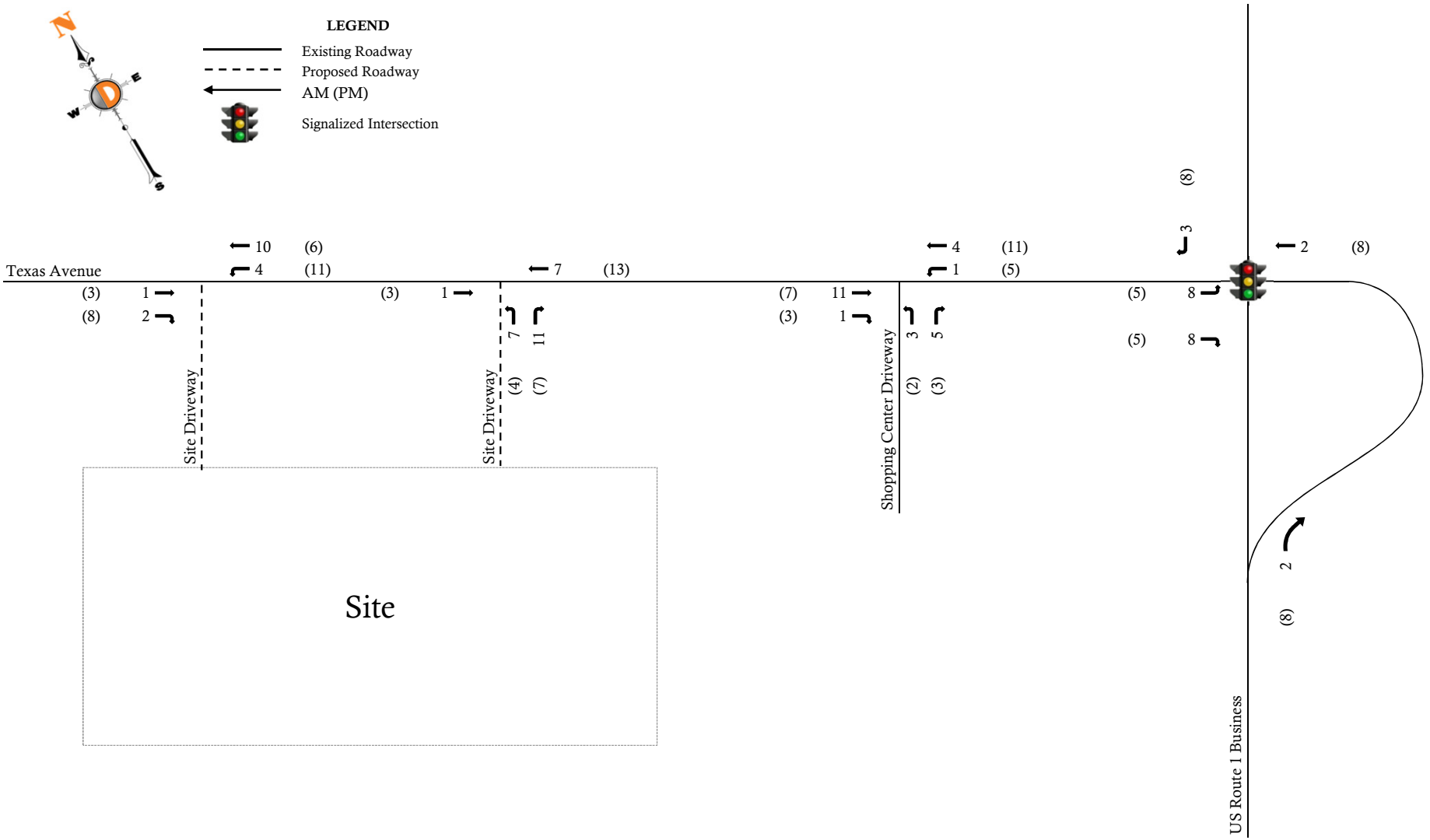
No Build Traffic Volumes



Proposed Residential Development
Supplemental Traffic Analysis
1279-99-010T
10/8/2020

Figure 10

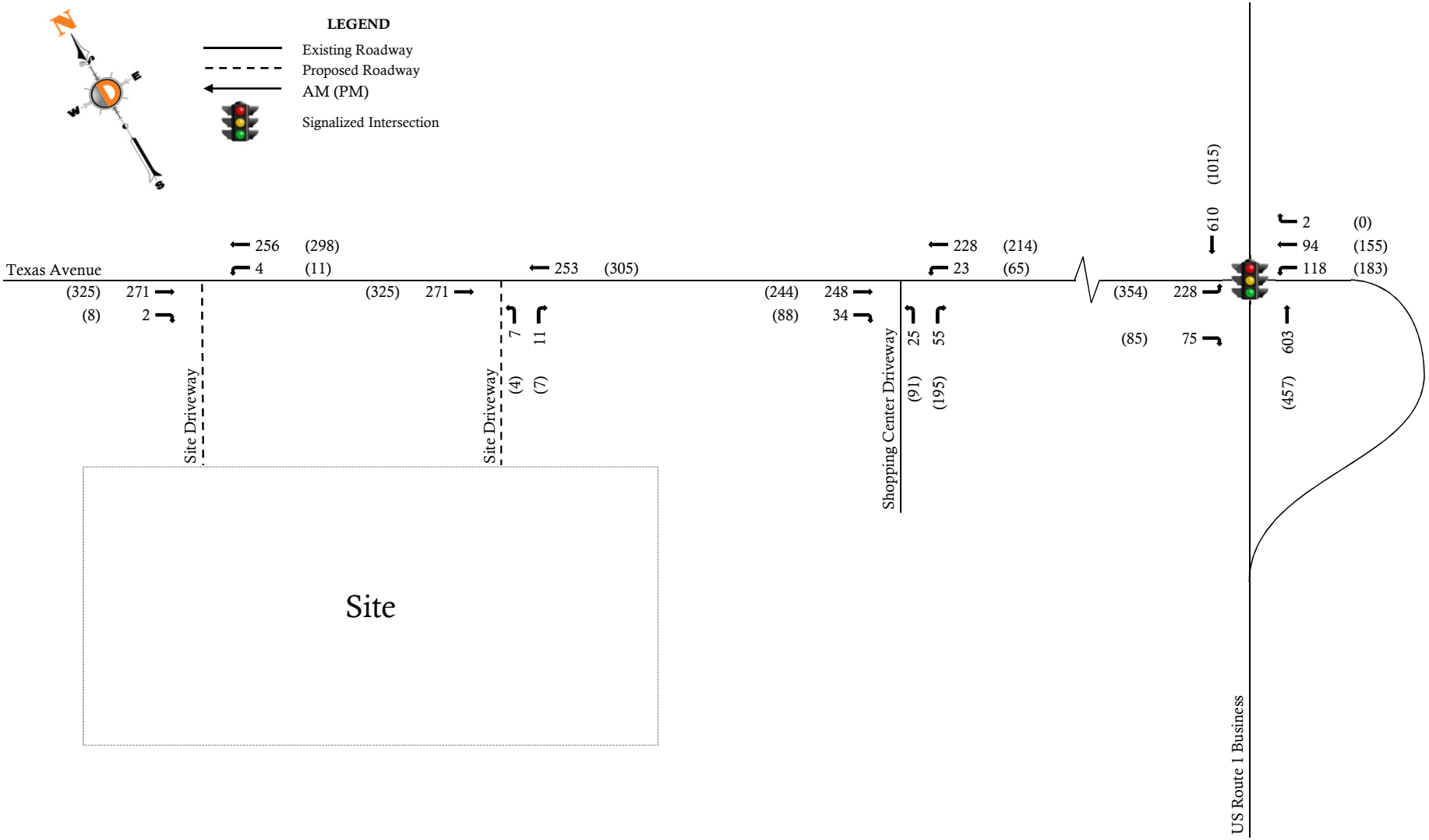
Site Generated Percent Distribution



Proposed Residential Development
Supplemental Traffic Analysis
1279-99-010T
10/8/2020

Figure 11

Site Generated Trips



Proposed Residential Development
Supplemental Traffic Analysis
1279-99-010T
10/8/2020

Figure 12

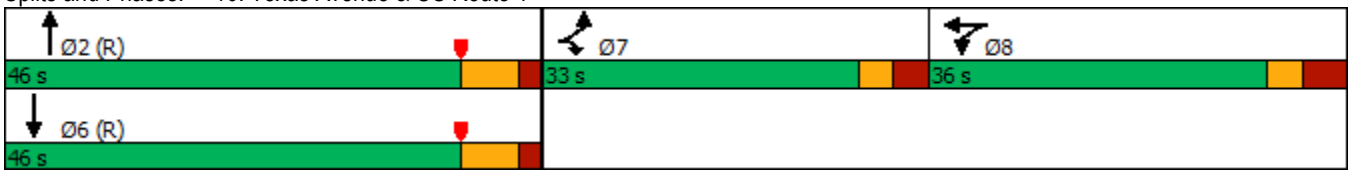
Build Traffic Volumes

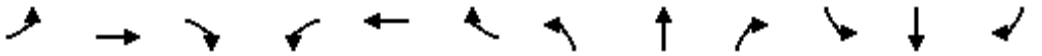
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	0	67	118	92	2	0	603	0	0	610	0
Future Volume (vph)	220	0	67	118	92	2	0	603	0	0	610	0
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Grade (%)		8%			0%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.997							
Flt Protected	0.950			0.950								
Satd. Flow (prot)	1761	0	1515	1799	1853	0	0	3562	0	0	3562	0
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	1761	0	1515	1799	1853	0	0	3562	0	0	3562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104		1							
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		185			240			1149			1782	
Travel Time (s)		5.0			6.5			17.4			27.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	0%	5%	3%	5%	0%	0%	4%	0%	0%	4%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	259	0	79	139	110	0	0	709	0	0	718	0
Turn Type	Prot		Prot	Split	NA			NA			NA	
Protected Phases	7		7	8	8			2			6	
Permitted Phases												
Detector Phase	7		7	8	8			2			6	
Switch Phase												
Minimum Initial (s)	7.0		7.0	7.0	7.0			39.0			39.0	
Minimum Split (s)	13.0		13.0	14.0	14.0			46.0			46.0	
Total Split (s)	33.0		33.0	36.0	36.0			46.0			46.0	
Total Split (%)	28.7%		28.7%	31.3%	31.3%			40.0%			40.0%	
Yellow Time (s)	3.0		3.0	3.0	3.0			5.0			5.0	
All-Red Time (s)	3.0		3.0	4.0	4.0			2.0			2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0		6.0	7.0	7.0			7.0			7.0	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Recall Mode	None		None	None	None			C-Max			C-Max	
Act Effct Green (s)	21.1		21.1	13.6	13.6			60.3			60.3	
Actuated g/C Ratio	0.18		0.18	0.12	0.12			0.52			0.52	
v/c Ratio	0.80		0.22	0.66	0.50			0.38			0.38	
Control Delay	63.0		4.9	62.4	54.1			18.5			18.5	
Queue Delay	0.0		0.0	0.0	0.0			0.0			0.0	
Total Delay	63.0		4.9	62.4	54.1			18.5			18.5	
LOS	E		A	E	D			B			B	
Approach Delay		49.4			58.7			18.5			18.5	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	185		0	100	77			158			161	
Queue Length 95th (ft)	245		19	149	121			230			233	
Internal Link Dist (ft)		105			160			1069			1702	
Turn Bay Length (ft)												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	413		435	453	468			1867			1867	
Starvation Cap Reductn	0		0	0	0			0			0	
Spillback Cap Reductn	0		0	0	0			0			0	
Storage Cap Reductn	0		0	0	0			0			0	
Reduced v/c Ratio	0.63		0.18	0.31	0.24			0.38			0.38	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 115			
Offset: 5 (4%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 28.7		Intersection LOS: C	
Intersection Capacity Utilization 61.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 10: Texas Avenue & US Route 1



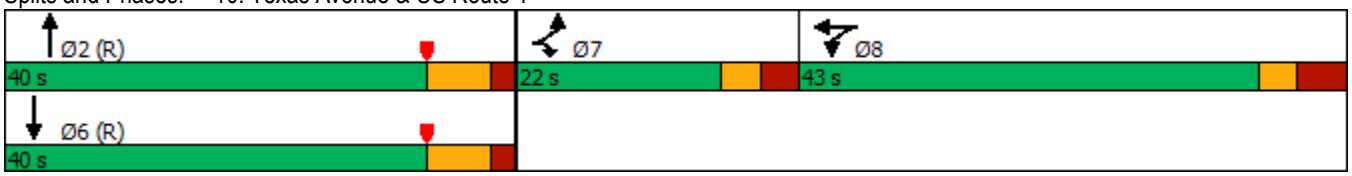


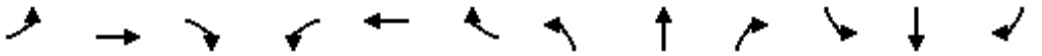
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	349	0	80	183	147	0	0	457	0	0	1015	0
Future Volume (vph)	349	0	80	183	147	0	0	457	0	0	1015	0
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Grade (%)		8%			0%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850									
Flt Protected	0.950			0.950								
Satd. Flow (prot)	1744	0	1545	1852	1875	0	0	3668	0	0	3668	0
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	1744	0	1545	1852	1875	0	0	3668	0	0	3668	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114									
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		185			240			1149			1782	
Travel Time (s)		5.0			6.5			17.4			27.0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	0%	3%	0%	4%	0%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	397	0	91	208	167	0	0	519	0	0	1153	0
Turn Type	Prot		Prot	Split	NA			NA			NA	
Protected Phases	7		7	8	8			2			6	
Permitted Phases												
Detector Phase	7		7	8	8			2			6	
Switch Phase												
Minimum Initial (s)	7.0		7.0	7.0	7.0			33.0			33.0	
Minimum Split (s)	13.0		13.0	14.0	14.0			40.0			40.0	
Total Split (s)	22.0		22.0	43.0	43.0			40.0			40.0	
Total Split (%)	21.0%		21.0%	41.0%	41.0%			38.1%			38.1%	
Yellow Time (s)	3.0		3.0	3.0	3.0			5.0			5.0	
All-Red Time (s)	3.0		3.0	4.0	4.0			2.0			2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0		6.0	7.0	7.0			7.0			7.0	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Recall Mode	None		None	None	None			C-Max			C-Max	
Act Effct Green (s)	16.0		16.0	16.6	16.6			52.4			52.4	
Actuated g/C Ratio	0.15		0.15	0.16	0.16			0.50			0.50	
v/c Ratio	1.50		0.27	0.71	0.56			0.28			0.63	
Control Delay	276.2		6.7	54.7	47.4			16.7			22.0	
Queue Delay	0.0		0.0	0.0	0.0			0.0			0.0	
Total Delay	276.2		6.7	54.7	47.4			16.7			22.0	
LOS	F		A	D	D			B			C	
Approach Delay		225.9			51.5			16.7			22.0	
Approach LOS		F			D			B			C	
Queue Length 50th (ft)	~371		0	134	105			103			286	
Queue Length 95th (ft)	#541		28	193	157			152			390	
Internal Link Dist (ft)		105			160			1069			1702	
Turn Bay Length (ft)												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	265		332	634	642			1829			1829	
Starvation Cap Reductn	0		0	0	0			0			0	
Spillback Cap Reductn	0		0	0	0			0			0	
Storage Cap Reductn	0		0	0	0			0			0	
Reduced v/c Ratio	1.50		0.27	0.33	0.26			0.28			0.63	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 18 (17%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.50			
Intersection Signal Delay: 64.5		Intersection LOS: E	
Intersection Capacity Utilization 70.5%		ICU Level of Service C	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 10: Texas Avenue & US Route 1



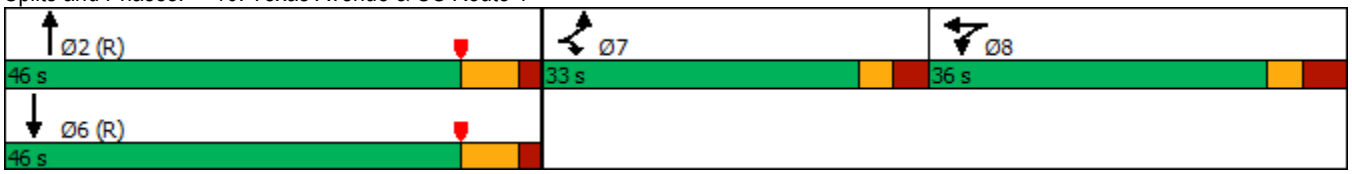


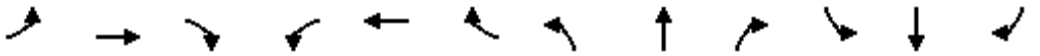
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	228	0	75	118	94	2	0	603	0	0	610	0
Future Volume (vph)	228	0	75	118	94	2	0	603	0	0	610	0
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Grade (%)		8%			0%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850		0.997							
Flt Protected	0.950			0.950								
Satd. Flow (prot)	1761	0	1515	1799	1853	0	0	3562	0	0	3562	0
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	1761	0	1515	1799	1853	0	0	3562	0	0	3562	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			104		1							
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		185			240			1149			1782	
Travel Time (s)		5.0			6.5			17.4			27.0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	0%	5%	3%	5%	0%	0%	4%	0%	0%	4%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	268	0	88	139	113	0	0	709	0	0	718	0
Turn Type	Prot		Prot	Split	NA			NA			NA	
Protected Phases	7		7	8	8			2			6	
Permitted Phases												
Detector Phase	7		7	8	8			2			6	
Switch Phase												
Minimum Initial (s)	7.0		7.0	7.0	7.0			39.0			39.0	
Minimum Split (s)	13.0		13.0	14.0	14.0			46.0			46.0	
Total Split (s)	33.0		33.0	36.0	36.0			46.0			46.0	
Total Split (%)	28.7%		28.7%	31.3%	31.3%			40.0%			40.0%	
Yellow Time (s)	3.0		3.0	3.0	3.0			5.0			5.0	
All-Red Time (s)	3.0		3.0	4.0	4.0			2.0			2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0		6.0	7.0	7.0			7.0			7.0	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Recall Mode	None		None	None	None			C-Max			C-Max	
Act Effct Green (s)	21.5		21.5	13.6	13.6			59.9			59.9	
Actuated g/C Ratio	0.19		0.19	0.12	0.12			0.52			0.52	
v/c Ratio	0.81		0.24	0.66	0.52			0.38			0.39	
Control Delay	63.6		6.5	62.4	54.6			18.7			18.8	
Queue Delay	0.0		0.0	0.0	0.0			0.0			0.0	
Total Delay	63.6		6.5	62.4	54.6			18.7			18.8	
LOS	E		A	E	D			B			B	
Approach Delay		49.5			58.9			18.7			18.8	
Approach LOS		D			E			B			B	
Queue Length 50th (ft)	191		0	100	79			161			163	
Queue Length 95th (ft)	254		26	149	123			230			233	
Internal Link Dist (ft)		105			160			1069			1702	
Turn Bay Length (ft)												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	413		435	453	468			1854			1854	
Starvation Cap Reductn	0		0	0	0			0			0	
Spillback Cap Reductn	0		0	0	0			0			0	
Storage Cap Reductn	0		0	0	0			0			0	
Reduced v/c Ratio	0.65		0.20	0.31	0.24			0.38			0.39	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 115			
Offset: 5 (4%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 29.1		Intersection LOS: C	
Intersection Capacity Utilization 61.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 10: Texas Avenue & US Route 1



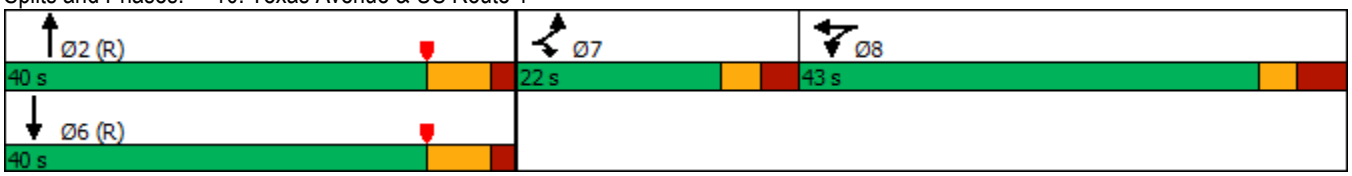


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	354	0	85	183	155	0	0	457	0	0	1015	0
Future Volume (vph)	354	0	85	183	155	0	0	457	0	0	1015	0
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Grade (%)		8%			0%			0%			0%	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850									
Flt Protected	0.950			0.950								
Satd. Flow (prot)	1744	0	1545	1852	1875	0	0	3668	0	0	3668	0
Flt Permitted	0.950			0.950								
Satd. Flow (perm)	1744	0	1545	1852	1875	0	0	3668	0	0	3668	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114									
Link Speed (mph)		25			25			45			45	
Link Distance (ft)		185			240			1149			1782	
Travel Time (s)		5.0			6.5			17.4			27.0	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	2%	0%	3%	0%	4%	0%	0%	1%	0%	0%	1%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	402	0	97	208	176	0	0	519	0	0	1153	0
Turn Type	Prot		Prot	Split	NA			NA			NA	
Protected Phases	7		7	8	8			2			6	
Permitted Phases												
Detector Phase	7		7	8	8			2			6	
Switch Phase												
Minimum Initial (s)	7.0		7.0	7.0	7.0			33.0			33.0	
Minimum Split (s)	13.0		13.0	14.0	14.0			40.0			40.0	
Total Split (s)	22.0		22.0	43.0	43.0			40.0			40.0	
Total Split (%)	21.0%		21.0%	41.0%	41.0%			38.1%			38.1%	
Yellow Time (s)	3.0		3.0	3.0	3.0			5.0			5.0	
All-Red Time (s)	3.0		3.0	4.0	4.0			2.0			2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0		6.0	7.0	7.0			7.0			7.0	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Recall Mode	None		None	None	None			C-Max			C-Max	
Act Effct Green (s)	16.0		16.0	16.6	16.6			52.4			52.4	
Actuated g/C Ratio	0.15		0.15	0.16	0.16			0.50			0.50	
v/c Ratio	1.52		0.29	0.71	0.59			0.28			0.63	
Control Delay	283.9		7.9	54.7	48.6			16.7			22.0	
Queue Delay	0.0		0.0	0.0	0.0			0.0			0.0	
Total Delay	283.9		7.9	54.7	48.6			16.7			22.0	
LOS	F		A	D	D			B			C	
Approach Delay		230.3			51.9			16.7			22.0	
Approach LOS		F			D			B			C	
Queue Length 50th (ft)	~378		0	134	111			103			286	
Queue Length 95th (ft)	#549		33	193	165			152			390	
Internal Link Dist (ft)		105			160			1069			1702	
Turn Bay Length (ft)												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	265		332	634	642			1829			1829	
Starvation Cap Reductn	0		0	0	0			0			0	
Spillback Cap Reductn	0		0	0	0			0			0	
Storage Cap Reductn	0		0	0	0			0			0	
Reduced v/c Ratio	1.52		0.29	0.33	0.27			0.28			0.63	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Offset: 18 (17%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.52			
Intersection Signal Delay: 66.1		Intersection LOS: E	
Intersection Capacity Utilization 71.2%		ICU Level of Service C	
Analysis Period (min) 15			
~ Volume exceeds capacity, queue is theoretically infinite.			
Queue shown is maximum after two cycles.			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 10: Texas Avenue & US Route 1



Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	237	33	22	224	22	50
Future Vol, veh/h	237	33	22	224	22	50
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	2	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	5	2	2
Mvmt Flow	279	39	26	264	26	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	318	0	615	299
Stage 1	-	-	-	-	299	-
Stage 2	-	-	-	-	316	-
Critical Hdwy	-	-	4.12	-	6.82	6.42
Critical Hdwy Stg 1	-	-	-	-	5.82	-
Critical Hdwy Stg 2	-	-	-	-	5.82	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1242	-	425	728
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	714	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1242	-	414	728
Mov Cap-2 Maneuver	-	-	-	-	414	-
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	696	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	591	-	-	1242	-
HCM Lane V/C Ratio	0.143	-	-	0.021	-
HCM Control Delay (s)	12.1	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Int Delay, s/veh	8.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	237	85	60	203	89	192
Future Vol, veh/h	237	85	60	203	89	192
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	2	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	282	101	71	242	106	229

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	383	0	717	333
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	384	-
Critical Hdwy	-	-	4.12	-	6.82	6.42
Critical Hdwy Stg 1	-	-	-	-	5.82	-
Critical Hdwy Stg 2	-	-	-	-	5.82	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1175	-	366	696
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	660	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1175	-	340	696
Mov Cap-2 Maneuver	-	-	-	-	340	-
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	614	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	23.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	523	-	-	1175	-
HCM Lane V/C Ratio	0.64	-	-	0.061	-
HCM Control Delay (s)	23.3	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	4.5	-	-	0.2	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	248	34	23	228	25	55
Future Vol, veh/h	248	34	23	228	25	55
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	2	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	5	2	2
Mvmt Flow	292	40	27	268	29	65

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	332	0	634	312
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	322	-
Critical Hdwy	-	-	4.12	-	6.82	6.42
Critical Hdwy Stg 1	-	-	-	-	5.82	-
Critical Hdwy Stg 2	-	-	-	-	5.82	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1227	-	413	716
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	709	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1227	-	402	716
Mov Cap-2 Maneuver	-	-	-	-	402	-
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	691	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	12.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	576	-	-	1227	-
HCM Lane V/C Ratio	0.163	-	-	0.022	-
HCM Control Delay (s)	12.5	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	8.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	244	88	65	214	91	195
Future Vol, veh/h	244	88	65	214	91	195
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	2	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	290	105	77	255	108	232

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	395	0	752	343
Stage 1	-	-	-	-	343	-
Stage 2	-	-	-	-	409	-
Critical Hdwy	-	-	4.12	-	6.82	6.42
Critical Hdwy Stg 1	-	-	-	-	5.82	-
Critical Hdwy Stg 2	-	-	-	-	5.82	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1164	-	348	686
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	641	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1164	-	321	686
Mov Cap-2 Maneuver	-	-	-	-	321	-
Stage 1	-	-	-	-	692	-
Stage 2	-	-	-	-	592	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	25.7
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	504	-	-	1164	-
HCM Lane V/C Ratio	0.676	-	-	0.066	-
HCM Control Delay (s)	25.7	-	-	8.3	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	5	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	271	0	0	253	7	11
Future Vol, veh/h	271	0	0	253	7	11
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	-	-	4	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	5	2	2
Mvmt Flow	319	0	0	298	8	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	617	319
Stage 1	-	-	-	-	319	-
Stage 2	-	-	-	-	298	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	453	722
Stage 1	-	0	0	-	737	-
Stage 2	-	0	0	-	753	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	453	722
Mov Cap-2 Maneuver	-	-	-	-	453	-
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	753	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	587	-	-
HCM Lane V/C Ratio	0.036	-	-
HCM Control Delay (s)	11.4	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	325	0	0	305	4	7
Future Vol, veh/h	325	0	0	305	4	7
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	-	-	4	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	387	0	0	363	5	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	750	387
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	363	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	-	0	0	-	379	661
Stage 1	-	0	0	-	686	-
Stage 2	-	0	0	-	704	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	379	661
Mov Cap-2 Maneuver	-	-	-	-	379	-
Stage 1	-	-	-	-	686	-
Stage 2	-	-	-	-	704	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	520	-	-
HCM Lane V/C Ratio	0.025	-	-
HCM Control Delay (s)	12.1	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	271	2	4	256	0	0
Future Vol, veh/h	271	2	4	256	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	-	-	2	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	5	2	2
Mvmt Flow	319	2	5	301	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	321	0	-	320
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-	3.318
Pot Cap-1 Maneuver	-	-	1239	-	0	721
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1239	-	-	721
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1239	-
HCM Lane V/C Ratio	-	-	-	0.004	-
HCM Control Delay (s)	0	-	-	7.9	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	325	8	11	298	0	0
Future Vol, veh/h	325	8	11	298	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	-	-	2	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	4	2	2
Mvmt Flow	387	10	13	355	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	397	0	-	392
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-	3.318
Pot Cap-1 Maneuver	-	-	1162	-	0	657
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1162	-	-	657
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1162	-
HCM Lane V/C Ratio	-	-	-	0.011	-
HCM Control Delay (s)	0	-	-	8.1	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Parking Demand Recording Summary

Family Affordable Apartments

Facility	Units	Address	Town	Day	Date	Time	Demand
Stafford Park	**112**	Stafford Park Boulevard	Stafford	Wed	4/25/2018	9:30 PM	143
				Sat	9/6/2014	12:00 AM	139
	Demand	**Rate (Stalls/Unit)**		Wed	9/3/2014	9:00 PM	136
Avg	**137**	**1.22**		Wed	8/27/2014	12:15 AM	130
Peak	**143**	**1.28**					
Whispering Hills	**52**	Hawthorne Avenue	Barnegat	Wed	4/25/2018	9:40 PM	93
				Sat	9/6/2014	9:00 PM	66
				Wed	9/3/2014	9:00 PM	67
				Wed	8/27/2014	12:30 AM	63
	Demand	**Rate (Stalls/Unit)**		Wed	4/30/2014	9:00 PM	76
Avg	**75**	**1.44**		Thu	5/1/2014	9:00 PM	71
Peak	**93**	**1.79**		Sat	5/3/2014	9:00 PM	89
Laurel Oaks	**94**	Route 9	Barnegat	Wed	4/25/2018	9:50 PM	121
				Sat	9/6/2014	9:00 PM	129
				Wed	9/3/2014	9:00 PM	125
				Wed	8/27/2014	12:30 AM	135
	Demand	**Rate (Stalls/Unit)**		Wed	4/30/2014	9:00 PM	138
Avg	**135**	**1.44**		Thu	5/1/2014	9:00 PM	143
Peak	**156**	**1.66**		Sat	5/3/2014	9:00 PM	156
Crescent	**120**	100 Crescent Court	Toms River	Wed	4/25/2018	10:45 PM	129
				Wed	8/27/2014	1:00 AM	150
	Demand	**Rate (Stalls/Unit)**					
Avg	**140**	**1.17**					
Peak	**150**	**1.25**					
Windsor Crescent	**112**	Solar Avenue	Jackson	Tue	4/24/2018	7:30 PM	143
				Wed	8/27/2014	1:30 AM	146
	Demand	**Rate (Stalls/Unit)**					
Avg	**145**	**1.29**					
Peak	**146**	**1.3**					

Parking Demand Recording Summary

Family Affordable Apartments

Facility	Units	Address	Town	Day	Date	Time	Demand
Woods at Manalapan	**80**	48 Wood Avenue	Manalapan	Tue	4/24/2018	11:30 PM	117
				-	Unknown	-	80
	Demand	**Rate (Stalls/Unit)**					
Avg	**99**	**1.24**					
Peak	**117**	**1.46**					
Heights at Medford	**60**	311 Stephen's Rise	Medford	-	Unknown	-	68
	Demand	**Rate (Stalls/Unit)**					
Avg	**68**	**1.13**					
Peak	**68**	**1.13**					
Creekside Manor	**32**	237 Route 70	Medford	-	Unknown	-	36
	Demand	**Rate (Stalls/Unit)**					
Avg	**36**	**1.13**					
Peak	**36**	**1.13**					
Saddlebrook Court	**78**	Justin Court	Hanover	-	Unknown	-	105
	Demand	**Rate (Stalls/Unit)**					
Avg	**105**	**1.35**					
Peak	**105**	**1.35**					