

January 13, 2020

Mr. Michael Page
RECON Environmental
1927 Fifth Avenue
San Diego, CA 92101

LLG Reference: 3-19-3192

Subject: Tri-City Medical Center Expansion – Traffic Assessment Letter
Oceanside, CA

Dear Michael:

Linscott, Law & Greenspan, Engineers (LLG) has completed the following traffic assessment letter to evaluate the potential traffic-related impacts associated with the proposed Tri-City Medical Center Expansion project (Project) in the City of Oceanside.

Included in this letter report are the following:

- Project Description
- Existing Conditions
- Trip Generation, Distribution & Assignment
- Operational Analysis
- Proposed Waring Road Driveway
 - Operations
 - Sight Distance
- Summary & Conclusions

PROJECT DESCRIPTION

The Project site is located on the east side of Waring Road between College Boulevard and Camarillo Avenue on a vacant lot within the existing Tri-City Medical Center in the City of Oceanside. The existing medical center is primarily accessible via Vista Way and Thunder Drive and provides 380 hospital beds, 59,940 SF of medical office uses and 21,535 SF of general office uses.

The Project proposes the construction of a 13,400 SF, 16-bed psychiatric facility. The Project is consistent with the proposed General Plan and Zoning. A new access point

serving the Project and the Tri-City Medical Center at large is proposed on Waring Road

Figure 1, Project Area Map, shows the location of the Project in the City of Oceanside.

Figure 2, Conceptual Site Plan, shows the Project site plan.

EXISTING CONDITIONS

The following is a description of the study area roadways:

College Boulevard is classified as a four-lane Major Arterial on the City of Oceanside Circulation Element. Currently, it is constructed as a four-lane divided roadway. Sidewalks are provided in both directions. Parking is prohibited on both sides of the road and no bus stops are provided. Bike lanes are provided in both directions. The posted speed limit is 35 mph.

Waring Road is classified as a two-lane Collector (residential streets in the Circulation Element or industrial fronting) on the City of Oceanside Circulation Element. Currently, it is constructed as a two-lane undivided roadway. Sidewalks are provided in both directions. Bike lanes are not provided. Parking is prohibited south of the proposed Tri-City Medical Center driveway. To the north, parking is provided on both sides of the roadway except on the second and fourth Thursday of each month between 10 AM and 2 PM for street sweeping. Bus stops serving the North County Transit District's Breeze Route 302 are located on both sides of Waring Road. The posted speed limit is 25 mph.

Figure 3, Existing Conditions Diagram, details the existing conditions diagram, including intersection control type and lane configurations within the study area.

Existing average daily traffic (ADT) volumes and AM (7-9 AM) and PM (4-6 PM) peak hour intersection counts were collected on Wednesday December 11, 2019 at key study area locations. **Attachment A** contains the peak hour intersection and daily segment count sheets

Figure 4, Existing Traffic Volumes, shows the Existing traffic volumes.

TRIP GENERATION, DISTRIBUTION, & ASSIGNMENT

Proposed Land Use

The Project proposes the construction of a 13,400 SF, 16-bed psychiatric facility. The trip generation for the proposed Project was calculated using the SANDAG (*Not so*) *Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002.

Table 1 shows the Project traffic generation. As shown, the Project is calculated to generate 320 ADT with 26 AM peak hour trips (18 inbound / 8 outbound) and 32 PM peak hour trips (13 inbound / 19 outbound). For the purposes of this analysis, 100% of the Project's trips were conservatively assumed to access this Tri-City Medical Center via the proposed new access point on Waring Road.

Existing Land Uses

In addition to the Project trips at the proposed new access point on Waring Road, it is expected that a portion of the medical center's existing trips may opt to use the new access point as opposed to existing driveways on Vista Way and Thunder Drive.

As previously noted, the medical center currently provides 380 hospital beds, 59,940 SF of medical office uses and 21,535 SF of general office uses. The trip generation for the existing uses was also calculated using the SANDAG rates. The existing uses are calculated to generate 11,028 ADT with 848 AM peak hour trips and 1,146 PM peak hour trips. The detailed existing uses traffic generation calculations are included in *Attachment B*.

For the purposed of this study, it was assumed that 20% of the medical center's existing trips will use the new access point on Waring Road. As shown on *Table 1*, this equates to approximately 2,210 ADT with 170 AM peak hour trips (120 inbound / 50 outbound) and 230 PM peak hour trips (80 inbound / 150 outbound). It should be noted that these are not new trips to the street system, but rather redirected trips that are already on the surrounding roadways.

The total number of trips expected at the proposed Waring Road Driveway, including the proposed Project trips and the redirected existing trips, are 2,530 ADT with 196 AM peak hour trips (138 inbound / 58 outbound) and 262 PM peak hour trips (93 inbound / 169 outbound).

The distribution of the trips expected at the proposed Waring Road Driveway was determined based primarily on traffic patterns observed from the existing traffic counts, and the proximity of the site to surrounding freeways, and residential and commercial areas.

Figure 5, Trip Distribution, shows the trip distribution in the study area.

Figure 6, Project Traffic Volumes, shows the Project traffic volumes.

Figure 7, Existing + Project Traffic Volumes, shows the Existing + Project traffic volumes.

TABLE 1
TRIP GENERATION

Land Use	Quantity	Daily Trip Ends (ADT)		AM Peak Hour					PM Peak Hour					
				% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume			
		Rate	Volume			In	Out	Total			In	Out	Total	
Proposed Project														
Hospital ^b	16 Beds	20 Bed	320	8%	70 : 30	18	8	26	10%	40 : 60	13	19	32	
Redirected Trips														
Existing Redirected Trips ^c	-	-	2,210			120	50	170			80	150	230	
Total Estimated Trips at the Proposed Warning Road Driveway			2,530			138	58	196			93	169	262	

Footnotes:

a. Rate is based on SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002.

b. 100% of the trips associated with the proposed facility are assumed to use the proposed Waring Road Driveway.

c. An estimated 20% of the existing Medical Center's trips are assumed to opt to use the proposed Waring Road Driveway. The existing Medical Center's trip generation calculations are provided in *Attachment B*.

CAPACITY ANALYSIS

Given the Project would result in an increase in trips, as well as redirect a portion of the Tri-City Medical Center's existing trips, focused Existing + Project daily street segment and peak hour intersection analyses were conducted on Waring Road, and at the College Boulevard / Waring Road signalized intersection and the future Waring Road / Project Driveway intersection.

Street segment analysis is based upon the comparison of average daily traffic volumes (ADTs) to the City of Oceanside Roadway Capacity Standards table. Average vehicle delay was determined utilizing the methodology found in Chapters 18-20 of the *Highway Capacity Manual (HCM) 6*, with the assistance of the *Synchro* (version 10) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection Level of Service (LOS).

Table 2 shows the results of the peak hour LOS analysis. As shown in *Table 2*, the College Boulevard / Waring Road intersection is calculated to operate acceptably at LOS C under existing conditions and with the addition of the proposed Waring Road Driveway trips. The proposed Waring Road Driveway is calculated to operate acceptably at LOS B during the AM peak hour and LOS C during the PM peak hour.

Table 3 shows the results of the daily street segment analysis. As shown in *Table 3*, the street segments along Waring Road operate acceptably at LOS C or better under existing conditions and with the addition of the proposed Waring Road Driveway trips.

Attachment C provides the Synchro intersection analysis worksheets.

**TABLE 2
 INTERSECTION OPERATIONS**

Intersection	Control Type	Peak Hour	Existing (Without Project)		Existing + Project		Δ ^c	Sig?
			Delay ^a	LOS ^b	Delay	LOS		
1. College Boulevard / Waring Road	Signal	AM	30.6	C	32.9	C	2.3	No
		PM	28.1	C	33.8	C	5.7	
2. Waring Road / Project Driveway ^d	MSSC ^e	AM	-	-	13.8	B	13.8	No
		PM	-	-	18.2	C	18.2	

Footnotes:

- Average delay expressed in seconds per vehicle.
- Level of Service.
- Δ denotes an increase in delay due to the addition of Project traffic.
- Intersection does not exist under existing conditions
- Minor Street Stop Controlled intersection. Worst-case delay reported.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

General Notes:

- Sig? = Significant Impact? (yes/no)

**TABLE 3
 STREET SEGMENT OPERATIONS**

Street Segment	Functional Classification	Capacity (LOS E) ^a	Existing			Existing + Project				Sig?
			ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C	Δ ^e	
Waring Road										
1. College Boulevard to Camarillo Avenue	Collector	10,000	4,450	B	0.445	6,470	C	0.647	0.202	No
2. Camarillo Avenue to Waring Court	Collector	10,000	3,290	A	0.329	3,800	A	0.380	0.051	No

Footnotes:

- Capacities based on City of Oceanside Roadway Classification Table.
- ADT = Average Daily Traffic Volumes.
- LOS = Level of Service.
- V/C = Volume-to-Capacity Ratio.
- “Δ” denotes the Project-induced increase in V/C.

General Notes:

- Sig? = Significant Impact? (yes/no)

PROPOSED WARING ROAD DRIVEWAY

Operations

As noted throughout this study, a new access point serving the Project and the Tri-City Medical Center at large is proposed on Waring Road. The driveway will be stop-controlled, with free movements along northbound and southbound Waring Road.

Given the number of trips expected to use the Waring Road Driveway and the existing traffic volumes on Waring Road, it is recommended that the driveway provide a dedicated left-turn lane and a dedicated right-turn lane out of the site, as well as a dedicated left-turn lane into the site at the southbound approach. Given this recommended lane configuration, the intersection is calculated to operate at LOS C or better during the peak hours as shown above on *Table 2*.

Sight Distance

A field level sight distance assessment was conducted at the proposed location of the Waring Road Driveway. Sight distance is the length of roadway visible to a driver. The driver of a vehicle approaching or departing from an intersection should have an unobstructed view of the intersection to anticipate and avoid potential collisions.

Two maneuvers can be completed at the proposed driveway: the left-turn maneuver and the right-turn maneuver.

The left-turn maneuver requires first clearing the traffic on the left, then entering the traffic stream on the right. The required sight distance for this maneuver is affected by the amount of time it takes the stopped vehicle to turn left clearing the traffic and reach average running speed without affecting the speed of the approaching vehicle. *Table 4* lists the recommended sight distances for this maneuver based on design speeds.

The right-turn maneuver must have sufficient distance to permit entrance onto the intersection roadway and then accelerate to the posted speed limit without being overtaken by approaching vehicles. *Table 4*, lists the recommended sight distances for this maneuver based on design speeds.

The posted speed limit on Waring Road is 25 mph, and therefore based on *Table 4*, 280' of stopping sight distance for the left-turn maneuver (looking northbound) and 240' of stopping sight distance for the right-turn maneuver (looking southbound) should be provided.

Based on observations made during the field level sight distance assessment at the site, there is approximately 245' of unobstructed sight distance looking northbound and approximately 350' of unobstructed sight distance looking southbound from the approximate location of the proposed Waring Road Driveway. The sight distance looking north appears to be less than required. It is recommended that an engineering level sight distance study be performed prior to the opening of the driveway on

Waring Road and that the driveway be placed such that sight distance requirements are met.

TABLE 4
MINIMUM RECOMMENDED SIGHT DISTANCE BASED ON VEHICLE MANEUVER

Vehicle Speed (MPH)	Stopping Sight Distance for Left-Turn Maneuver (feet)	Stopping Sight Distance for Crossover and Right-Turn Maneuvers (feet)
15	170	145
20	225	195
25	280	240
30	335	290
35	390	335
40	445	385
45	500	430
50	555	480
55	610	530

General Notes:

1. Distances are from the 2001 AASHTO Green Book and are for two-lane roadways.

SUMMARY & CONCLUSIONS

This letter report analyzed the traffic-related effects of the Project. Given the findings and recommendations above, it can be concluded that the Tri-City Medical Center Expansion project would have no significant transportation-related impacts on the study area street system. An engineering level sight distance study should be performed prior to opening the proposed driveway on Waring Road.

Please don't hesitate to call us at (858) 300-8800 with any questions or to discuss these findings further.

Sincerely,

Linscott, Law & Greenspan, Engineers



John Boarman, P.E.
Principal



Amelia Giacalone
Transportation Planner III

cc: File

Attachments: Figure 1: Project Area Map
 Figure 2: Conceptual Site Plan
 Figure 3: Existing Conditions Diagram
 Figure 4: Existing Traffic Volumes
 Figure 5: Trip Distribution
 Figure 6: Project Traffic Volumes
 Figure 7: Existing + Project Traffic Volumes

Attachment A: Existing Traffic Counts
Attachment B: Existing Uses Traffic Generation Calculations
Attachment C: Synchro Analysis Sheets

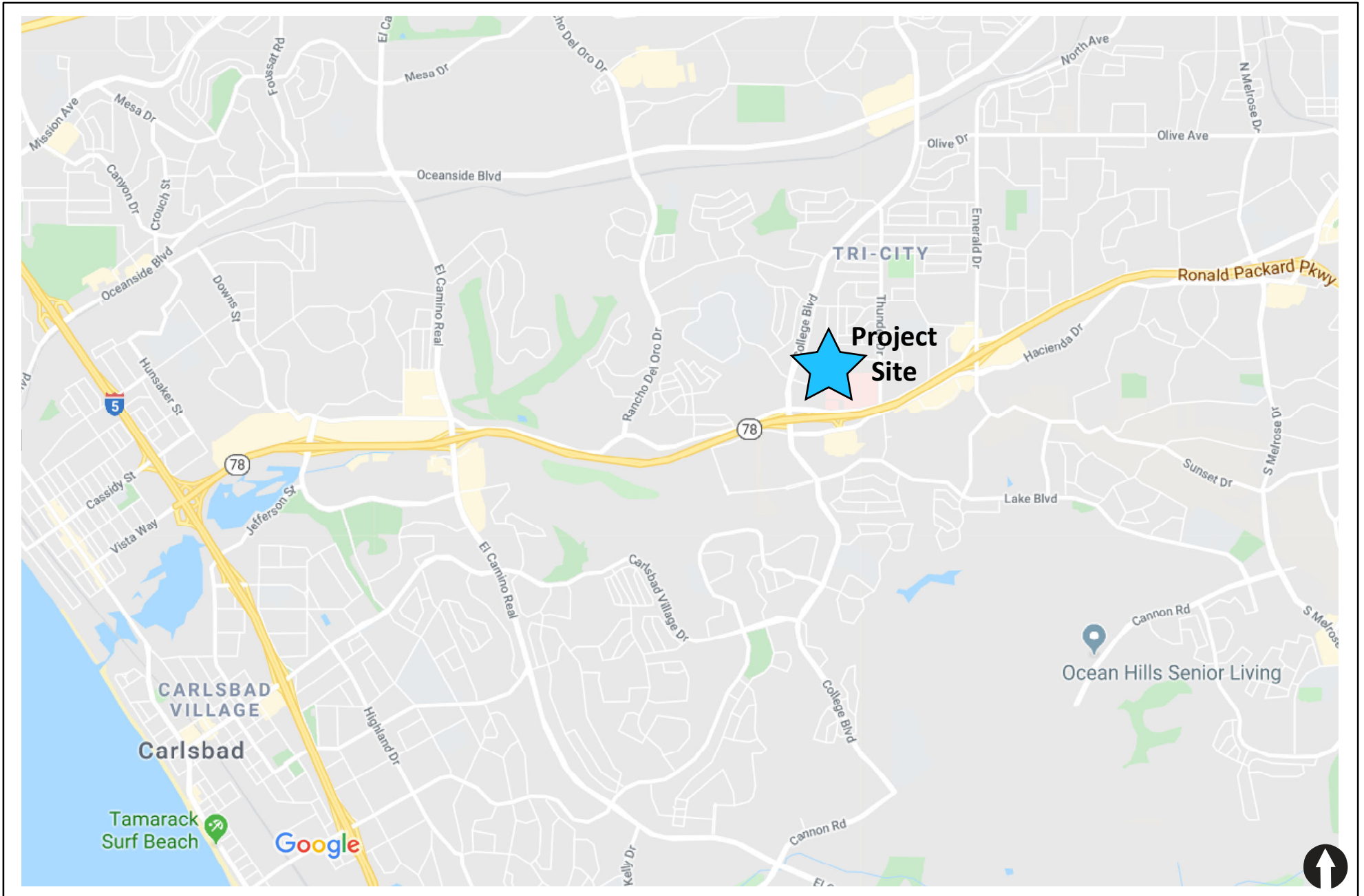


Figure 1

Project Area Map

TRI CITY MEDICAL CENTER

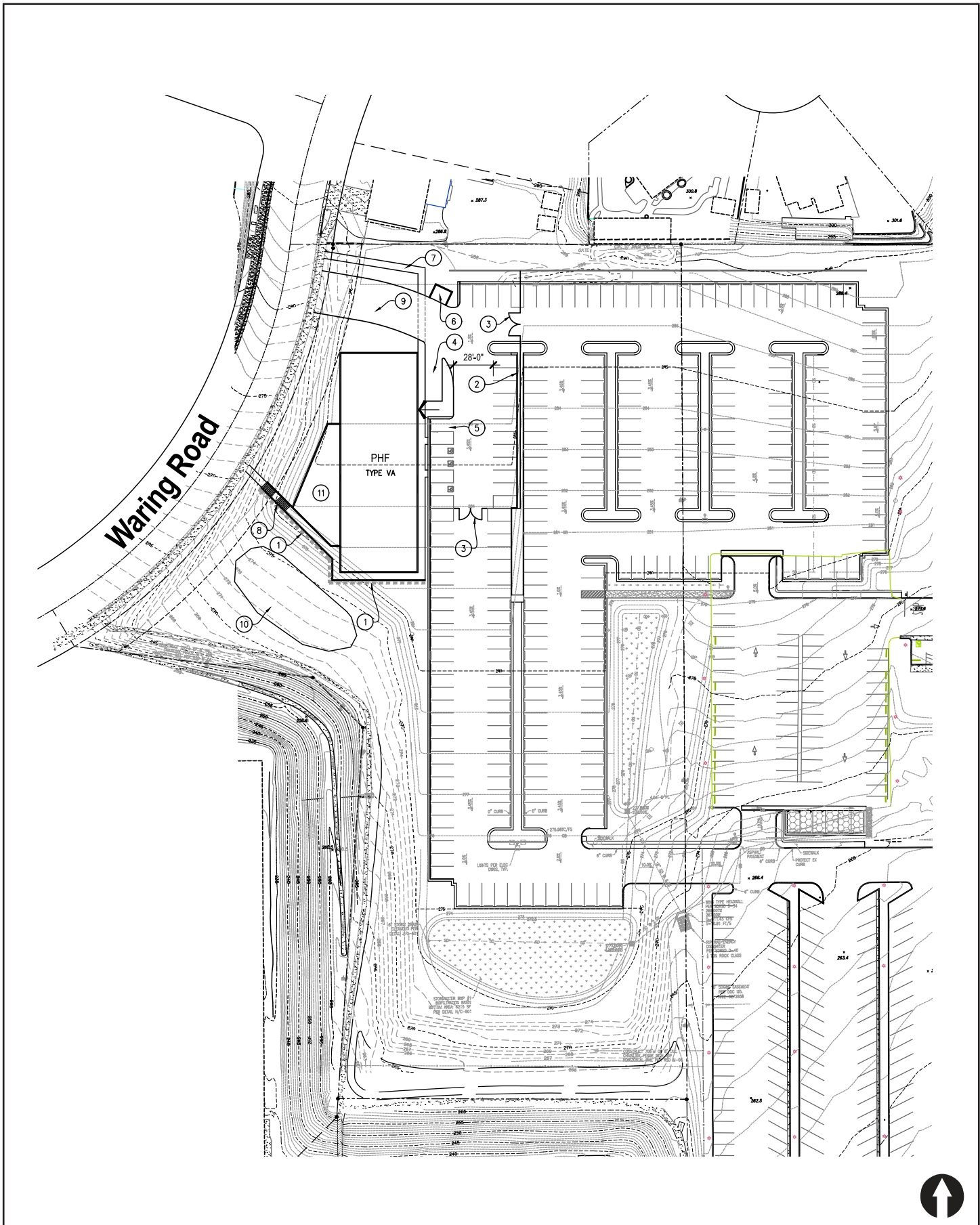


Figure 2

Conceptual Site Plan

TRI CITY MEDICAL CENTER

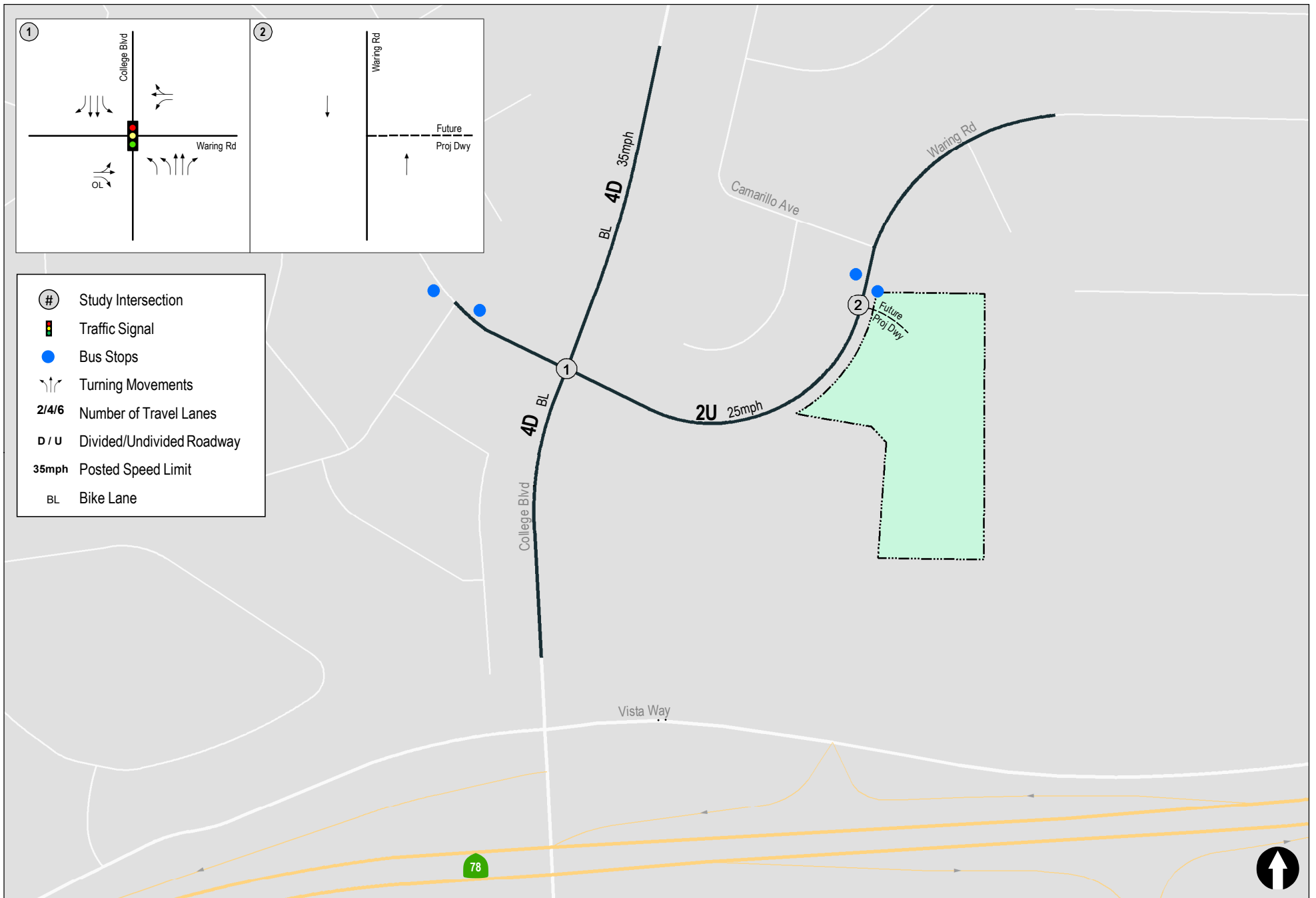


Figure 3

Existing Conditions Diagram

Tri City Medical Center

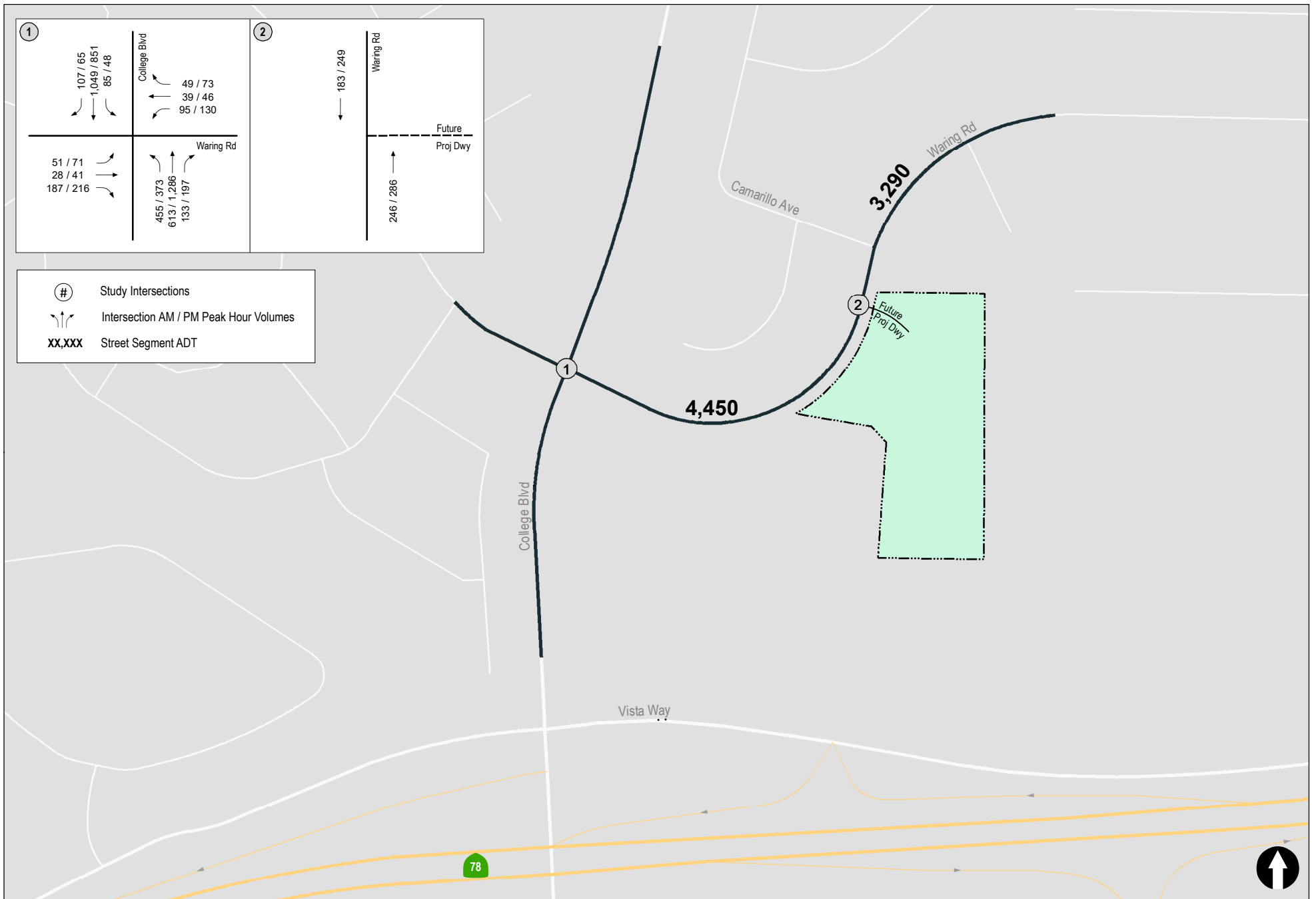


Figure 4
Existing Traffic Volumes

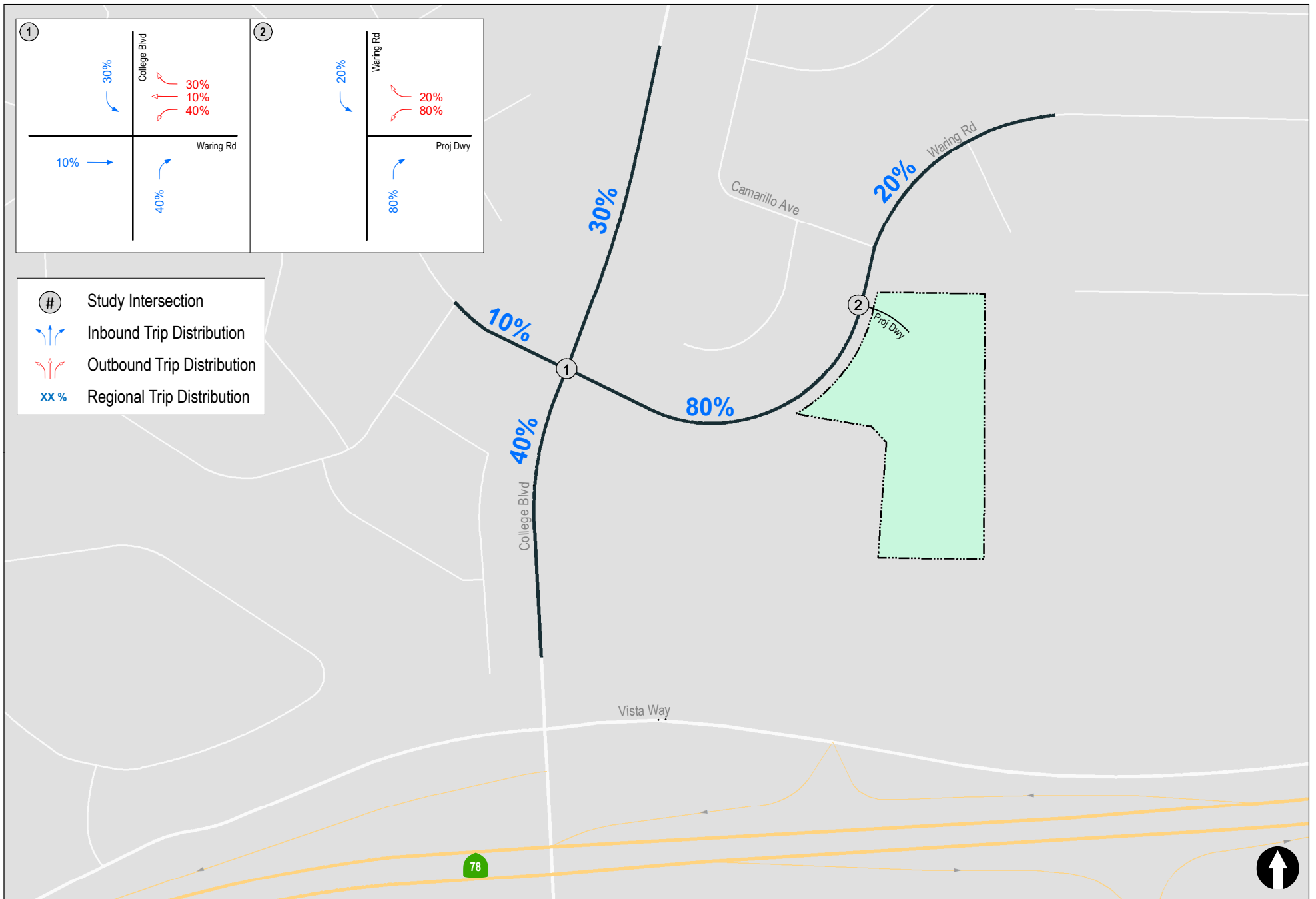


Figure 5
Trip Distirbution

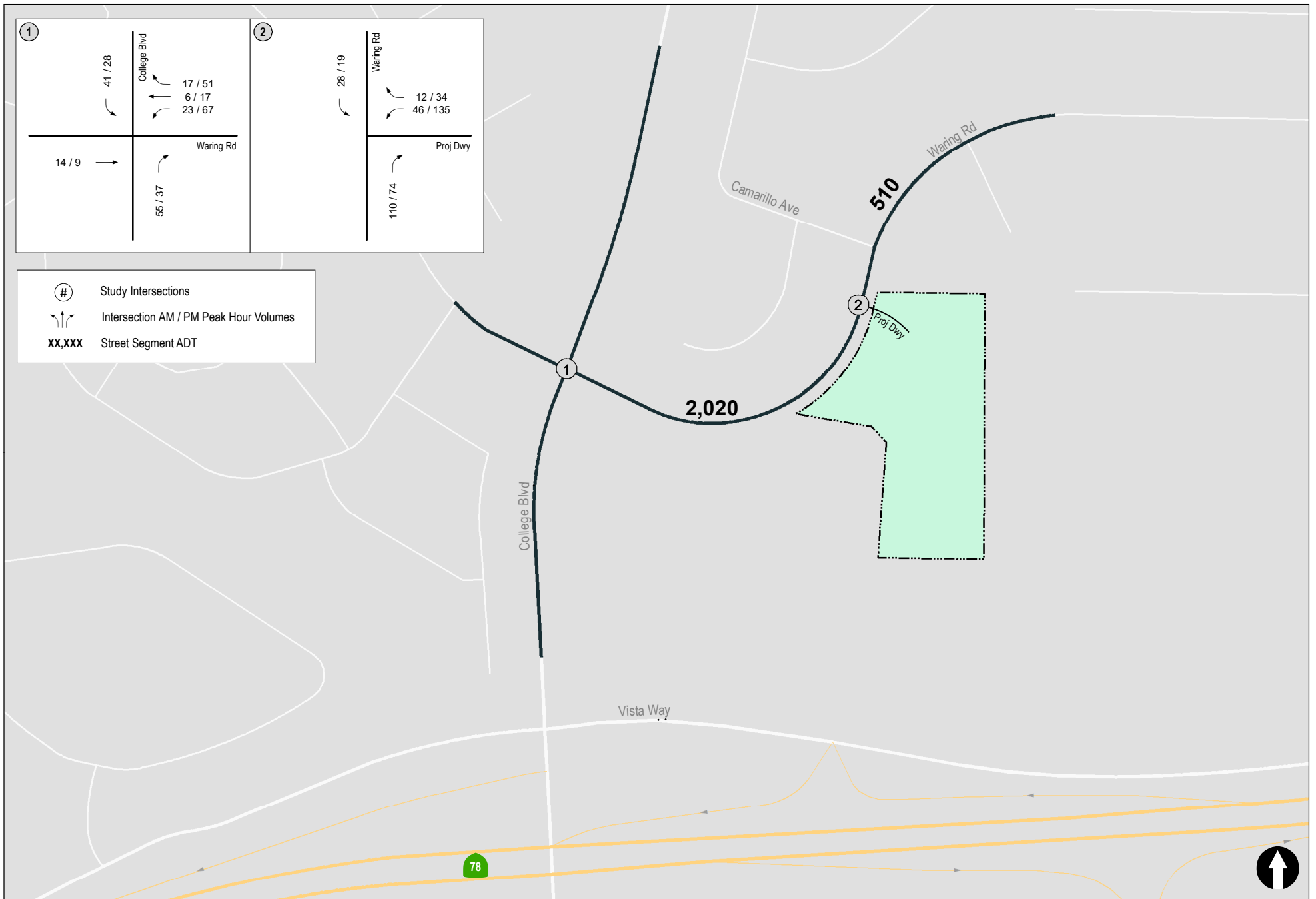


Figure 6

Project Traffic Volumes
(Including redistributed traffic from existing site)

Tri City Medical Center

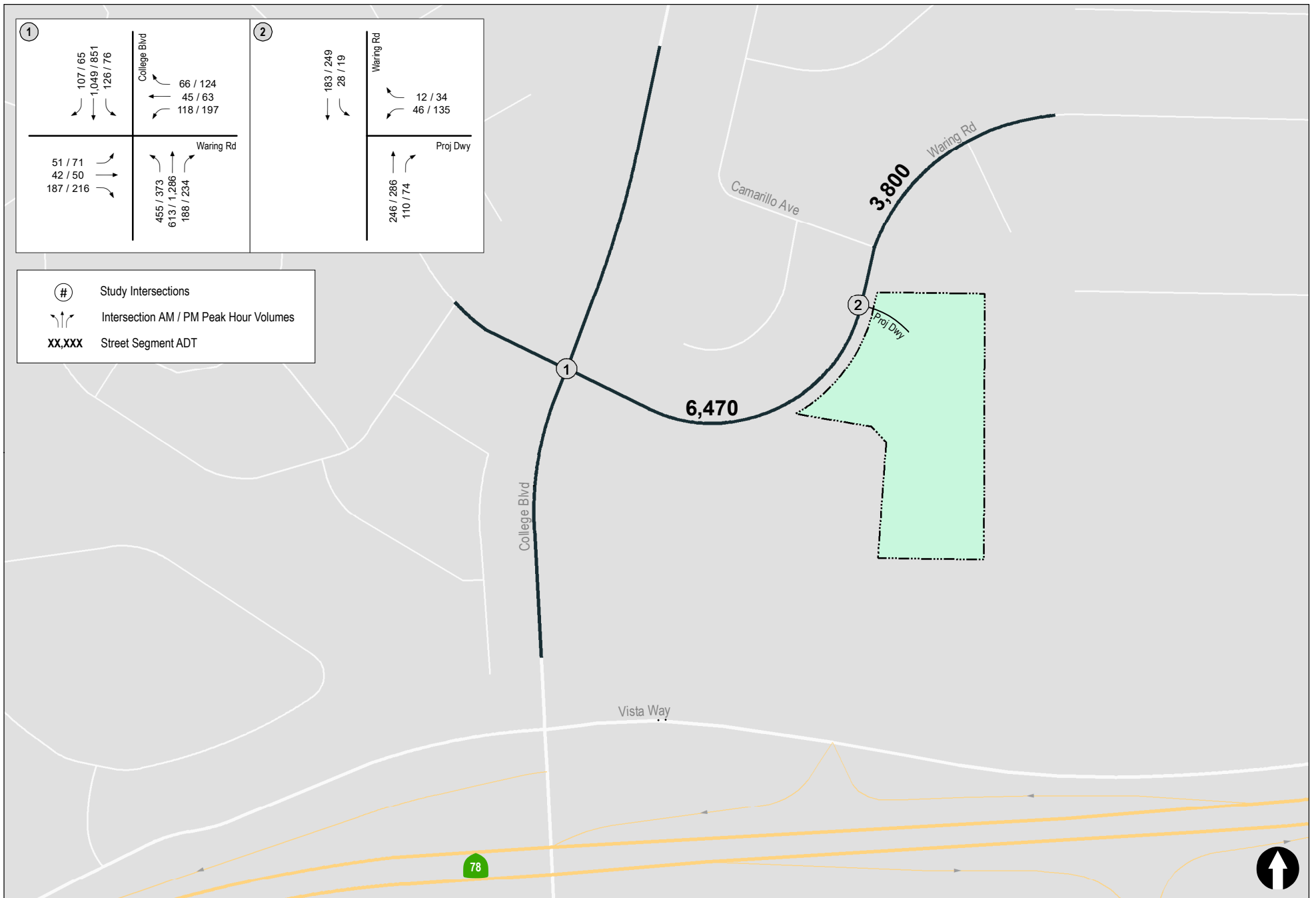


Figure 7
Existing + Project Traffic Volumes

Attachment A
Existing Traffic Counts

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: #A Waring Road, College Boulevard To Camarillo Avenue

Date: **Wednesday, December 11, 2019** Total Daily Volume: **4445** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
15	11	5	9	31	98	188	304	249	252	292	295	281	301	347	327	337	334	236	157	151	119	70	36
0	5	2	3	3	11	30	80	62	59	71	65	86	69	92	92	72	94	58	46	48	34	26	7
6	2	0	1	3	19	41	80	58	57	78	63	67	79	89	70	76	76	69	33	38	34	15	8
4	1	1	3	12	36	57	67	72	63	67	87	68	77	76	74	89	84	53	41	32	28	15	7
5	3	2	2	13	32	60	77	57	73	76	80	60	76	90	91	100	80	56	37	33	23	14	14

Date: **Wednesday, December 11, 2019** Total Daily Volume: **2536** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
11	7	3	4	10	34	70	142	142	142	153	157	154	184	207	186	199	206	152	100	112	90	47	24
0	4	2	2	1	9	12	34	31	33	33	37	39	39	54	56	40	57	39	28	36	26	21	5
5	1	0	0	0	7	11	39	30	27	40	31	32	49	54	35	53	48	44	23	22	27	8	6
4	1	0	1	3	5	24	31	43	34	34	38	43	48	45	45	50	52	33	27	26	20	9	5
2	1	1	1	6	13	23	38	38	48	46	51	40	48	54	50	56	49	36	22	28	17	9	8

Date: **Wednesday, December 11, 2019** Total Daily Volume: **1909** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
4	4	2	5	21	64	118	162	107	110	139	138	127	117	140	141	138	128	84	57	39	29	23	12
0	1	0	1	2	2	18	46	31	26	38	28	47	30	38	36	32	37	19	18	12	8	5	2
1	1	0	1	3	12	30	41	28	30	38	32	35	30	35	35	23	28	25	10	16	7	7	2
0	0	1	2	9	31	33	36	29	29	33	49	25	29	31	29	39	32	20	14	6	8	6	2
3	2	1	1	7	19	37	39	19	25	30	29	20	28	36	41	44	31	20	15	5	6	5	6

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Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: #B Waring Road, Camarillo Avenue To Waring Court

Date: **Wednesday, December 11, 2019** Total Daily Volume: **3289** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
19	7	4	6	15	65	132	207	225	210	242	244	230	259	274	250	248	217	144	86	81	64	40	20
3	2	1	3	2	9	13	50	53	50	66	51	72	66	75	69	55	60	32	26	25	14	20	5
7	2	0	1	2	18	35	42	45	44	62	62	53	62	74	56	59	59	39	21	18	26	6	2
5	1	1	1	5	20	41	49	66	55	56	69	54	63	62	53	68	51	32	18	21	15	5	6
4	2	2	1	6	18	43	66	61	61	58	62	51	68	63	72	66	47	41	21	17	9	9	7

Date: **Wednesday, December 11, 2019** Total Daily Volume: **1944** Description: **Eastbound Volume**

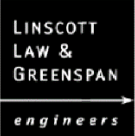
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
13	4	2	4	7	36	69	138	143	132	134	141	130	165	155	137	143	115	85	56	58	43	23	11
2	1	1	2	1	9	10	35	34	33	33	34	32	39	44	42	29	29	22	16	19	11	13	2
6	1	0	0	0	10	14	32	26	25	35	29	26	39	48	26	40	32	22	15	11	19	2	1
4	1	0	1	2	7	24	28	40	33	31	37	37	42	33	29	39	22	20	12	16	7	2	5
1	1	1	1	4	10	21	43	43	41	35	41	35	45	30	40	35	32	21	13	12	6	6	3

Date: **Wednesday, December 11, 2019** Total Daily Volume: **1345** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
6	3	2	2	8	29	63	69	82	78	108	103	100	94	119	113	105	102	59	30	23	21	17	9
1	1	0	1	1	0	3	15	19	17	33	17	40	27	31	27	26	31	10	10	6	3	7	3
1	1	0	1	2	8	21	10	19	19	27	33	27	23	26	30	19	27	17	6	7	7	4	1
1	0	1	0	3	13	17	21	26	22	25	32	17	21	29	24	29	29	12	6	5	8	3	1
3	1	1	0	2	8	22	23	18	20	23	21	16	23	33	32	31	15	20	8	5	3	3	4

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Intersection Turning Movement - Peak Hour Vehicle Count



Location: #01	File Name: ITM-19-148-01
Intersection: College Boulevard & Waring Road	Project: LLG Ref. 3-19-XXXX
Date of Count: Wednesday, December 11, 2019	Oceanside Tri City Medical

AM	College Boulevard Southbound			Waring Road Westbound			College Boulevard Northbound			Waring Road Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	23	291	11	48	2	9	58	132	23	5	2	54	658
7:15	12	279	11	35	6	11	63	159	41	7	10	67	701
7:30	10	257	8	28	7	17	63	211	35	14	7	64	721
7:45	13	255	19	41	8	15	88	174	30	6	11	51	711
8:00	18	282	16	25	4	9	69	163	35	10	6	36	673
8:15	18	245	17	25	8	10	96	163	26	8	5	41	662
8:30	26	266	31	22	13	14	142	143	41	19	11	58	786
8:45	23	256	43	23	14	16	148	144	31	14	6	52	770
Total	143	2131	156	247	62	101	727	1289	262	83	58	423	5682
Approach%	5.9	87.7	6.4	60.2	15.1	24.6	31.9	56.6	11.5	14.7	10.3	75.0	
Total%	2.5	37.5	2.7	4.3	1.1	1.8	12.8	22.7	4.6	1.5	1.0	7.4	

AM Intersection Peak Hour: 08:00 to 09:00

Volume	85	1,049	107	95	39	49	455	613	133	51	28	187	2,891
Approach%	6.8	84.5	8.6	51.9	21.3	26.8	37.9	51.0	11.1	19.2	10.5	70.3	
Total%	2.9	36.3	3.7	3.3	1.3	1.7	15.7	21.2	4.6	1.8	1.0	6.5	
PHF			0.96			0.86			0.92			0.76	0.92

PM	College Boulevard Southbound			Waring Road Westbound			College Boulevard Northbound			Waring Road Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	23	223	8	26	8	19	66	324	49	22	5	97	870
16:15	12	231	14	31	4	15	91	292	45	11	9	65	820
16:30	15	232	14	44	8	21	84	326	46	21	8	0	819
16:45	10	201	10	32	10	24	98	323	49	21	9	83	870
17:00	9	192	21	30	17	14	90	302	49	17	13	79	833
17:15	14	226	20	24	11	14	101	335	53	12	11	54	875
17:30	10	191	12	31	10	20	128	287	41	7	9	47	793
17:45	9	197	24	28	10	9	118	336	49	15	10	64	869
Total	102	1693	123	246	78	136	776	2525	381	126	74	489	6749
Approach%	5.3	88.3	6.4	53.5	17.0	29.6	21.1	68.6	10.3	18.3	10.7	71.0	
Total%	1.5	25.1	1.8	3.6	1.2	2.0	11.5	37.4	5.6	1.9	1.1	7.2	

PM Intersection Peak Hour: 16:30 to 17:30

Volume	48	851	65	130	46	73	373	1,286	197	71	41	216	3,397
Approach%	5.0	88.3	6.7	52.2	18.5	29.3	20.1	69.3	10.6	21.6	12.5	65.9	
Total%	1.4	25.1	1.9	3.8	1.4	2.1	11.0	37.9	5.8	2.1	1.2	6.4	
PHF			0.92			0.85			0.95			0.73	0.97

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #01	File Name: ITM-19-148-01
	Intersection: College Boulevard & Waring Road	Project: LLG Ref. 3-19-XXXX
	Date of Count: Wednesday, December 11, 2019	Oceanside Tri City Medical

AM	College Boulevard Southbound				Waring Road Westbound				College Boulevard Northbound				Waring Road Eastbound				Totals		
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle	
7:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0
7:15	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	1	2	2
7:30	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	3	0
7:45	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3	0
8:00	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	5	0
8:15	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	3	0
8:30	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	4	0
8:45	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	5	0
Ped Total	0				6				20				0				26		
Bike Total		0	0	1		0	0	0		0	0	0		0	0	1		2	

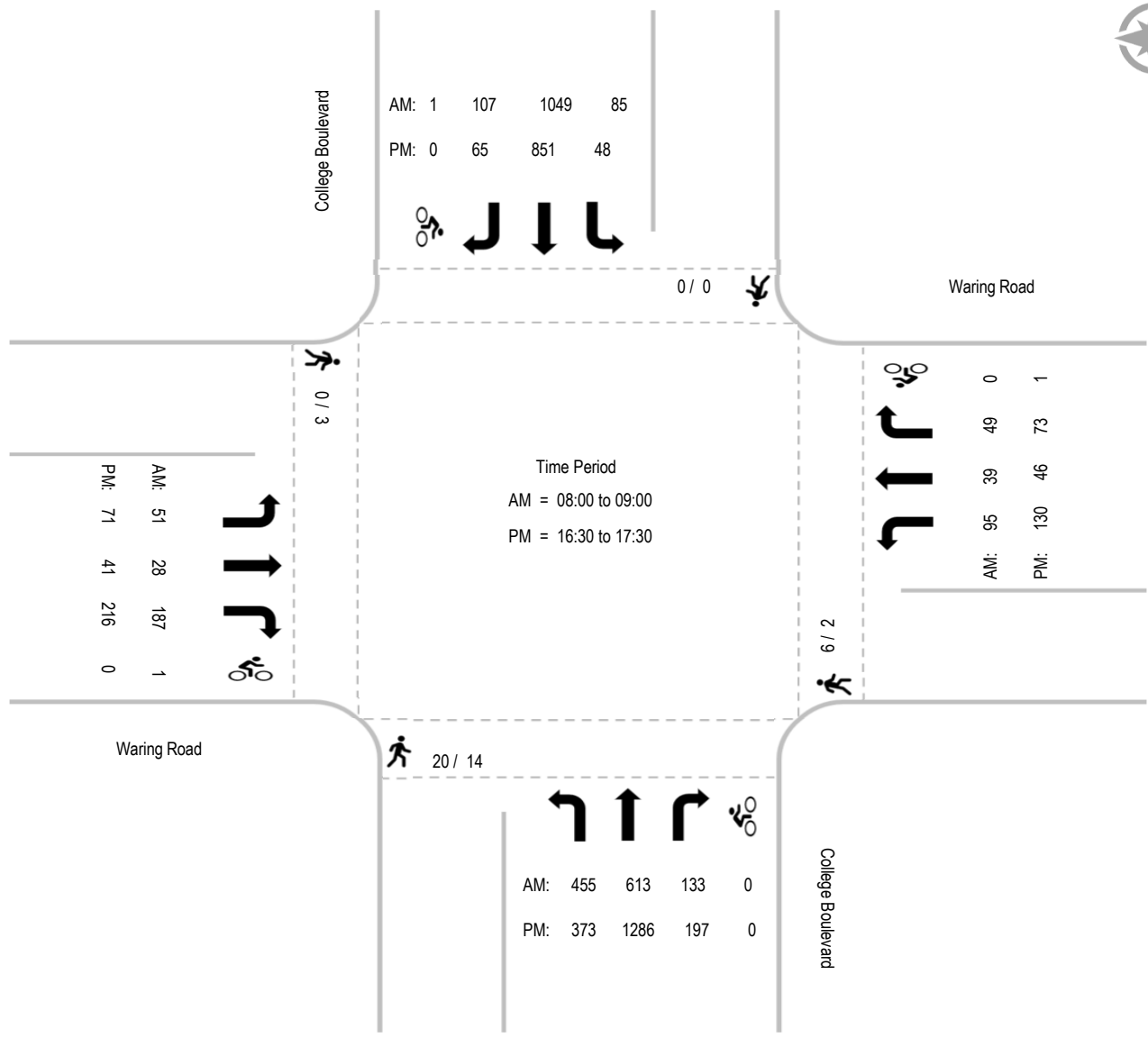
PM	College Boulevard Southbound				Waring Road Westbound				College Boulevard Northbound				Waring Road Eastbound				Totals		
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle	
16:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0
16:15	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	4	0
16:30	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0
17:15	0	0	0	0	2	0	0	0	3	0	0	0	0	3	0	0	0	8	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1	1
Ped Total	0				2				14				3				19		
Bike Total		0	0	0		0	1	0		0	0	0		0	0	0		1	

Intersection Turning Movement - Peak Hour Summary



Location: #01
 Intersection: College Boulevard & Waring Road
 Date of Count: Wednesday, December 11, 2019

File Name: ITM-19-148-01
 Project: LLG Ref. 3-19-XXXX
 Oceanside Tri City Medical



Attachment B
Existing Uses Traffic Generation Calculations

Tri-City Medical Campus

Existing Uses Trip Generation

Land Use	Quantity	Daily Trip Ends (ADT)		AM Peak Hour					PM Peak Hour				
				% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
		Rate	Volume			In	Out	Total			In	Out	Total
Hospital	380 Beds	20 /Bed	7,600	8%	70 : 30	426	182	608	10%	40 : 60	304	456	760
Medical Office	59.94 KSF	50 /KSF	2,997	6%	80 : 20	144	36	180	11%	30 : 70	99	231	330
Office	21.54 KSF	20 /KSF	431	14%	90 : 10	54	6	60	13%	20 : 80	11	45	56
Total			11,028			624	224	848			414	732	1,146

Footnotes:

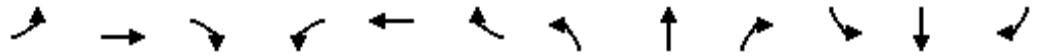
a. Rates based on SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002.

Attachment C
Synchro Analysis Sheets

HCM 6th Signalized Intersection Summary

1: College Boulevard /College Blvd & Waring Road /Waring Road

01/13/2020

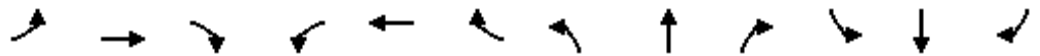


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗	↖	↗		↖	↗	↗	↖	↖	↗
Traffic Volume (veh/h)	51	28	187	95	39	49	455	613	133	85	1049	107
Future Volume (veh/h)	51	28	187	95	39	49	455	613	133	85	1049	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.93	1.00		0.96	1.00		0.98
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	55	30	203	103	42	53	495	666	145	92	1140	116
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	171	93	480	169	69	87	568	1807	776	118	1458	635
Arrive On Green	0.15	0.15	0.15	0.10	0.10	0.10	0.16	0.51	0.51	0.07	0.41	0.41
Sat Flow, veh/h	1172	639	1511	1781	721	910	3456	3554	1527	1781	3554	1546
Grp Volume(v), veh/h	85	0	203	103	0	95	495	666	145	92	1140	116
Grp Sat Flow(s),veh/h/ln	1812	0	1511	1781	0	1632	1728	1777	1527	1781	1777	1546
Q Serve(g_s), s	4.1	0.0	10.4	5.4	0.0	5.5	13.6	11.0	5.0	5.0	27.1	4.7
Cycle Q Clear(g_c), s	4.1	0.0	10.4	5.4	0.0	5.5	13.6	11.0	5.0	5.0	27.1	4.7
Prop In Lane	0.65		1.00	1.00		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	264	0	480	169	0	155	568	1807	776	118	1458	635
V/C Ratio(X)	0.32	0.00	0.42	0.61	0.00	0.61	0.87	0.37	0.19	0.78	0.78	0.18
Avail Cap(c_a), veh/h	678	0	826	329	0	301	620	1807	776	243	1458	635
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.3	0.0	26.8	42.4	0.0	42.4	39.7	14.5	13.0	44.8	24.9	18.3
Incr Delay (d2), s/veh	0.7	0.0	0.6	3.5	0.0	3.9	12.1	0.6	0.5	10.5	4.2	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	1.9	0.0	3.8	2.5	0.0	2.3	6.7	4.4	1.8	2.5	11.8	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.0	0.0	27.4	45.9	0.0	46.3	51.8	15.1	13.5	55.3	29.2	18.9
LnGrp LOS	D	A	C	D	A	D	D	B	B	E	C	B
Approach Vol, veh/h		288			198			1306			1348	
Approach Delay, s/veh		30.5			46.0			28.8			30.1	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	54.1		18.7	20.5	44.5		13.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	13.3	44.2		36.5	17.5	40.0		18.0				
Max Q Clear Time (g_c+I1), s	7.0	13.0		12.4	15.6	29.1		7.5				
Green Ext Time (p_c), s	0.1	5.7		1.2	0.4	6.1		0.6				
Intersection Summary												
HCM 6th Ctrl Delay				30.6								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

1: College Boulevard /College Blvd & Waring Road /Waring Road

01/13/2020

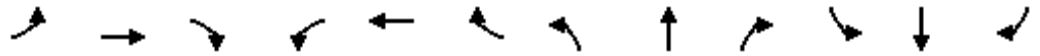


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔	↔	↔		↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	71	41	216	130	46	73	373	1286	197	48	851	65
Future Volume (veh/h)	71	41	216	130	46	73	373	1286	197	48	851	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.94	1.00		0.96	1.00		0.98
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	73	42	223	134	47	75	385	1326	203	49	877	67
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	106	457	198	69	110	468	1802	774	67	1455	633
Arrive On Green	0.16	0.16	0.16	0.11	0.11	0.11	0.14	0.51	0.51	0.04	0.41	0.41
Sat Flow, veh/h	1151	662	1516	1781	624	995	3456	3554	1527	1781	3554	1546
Grp Volume(v), veh/h	115	0	223	134	0	122	385	1326	203	49	877	67
Grp Sat Flow(s),veh/h/ln	1813	0	1516	1781	0	1619	1728	1777	1527	1781	1777	1546
Q Serve(g_s), s	5.6	0.0	11.9	7.1	0.0	7.1	10.6	28.7	7.4	2.7	18.9	2.6
Cycle Q Clear(g_c), s	5.6	0.0	11.9	7.1	0.0	7.1	10.6	28.7	7.4	2.7	18.9	2.6
Prop In Lane	0.63		1.00	1.00		0.61	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	290	0	457	198	0	180	468	1802	774	67	1455	633
V/C Ratio(X)	0.40	0.00	0.49	0.68	0.00	0.68	0.82	0.74	0.26	0.73	0.60	0.11
Avail Cap(c_a), veh/h	677	0	781	328	0	298	619	1802	774	242	1455	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	28.4	41.8	0.0	41.8	41.1	18.9	13.7	46.5	22.6	17.8
Incr Delay (d2), s/veh	0.9	0.0	0.8	4.0	0.0	4.5	6.7	2.7	0.8	14.1	1.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	4.3	3.3	0.0	3.0	4.9	11.8	2.6	1.4	8.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.7	0.0	29.2	45.8	0.0	46.2	47.8	21.6	14.5	60.6	24.5	18.2
LnGrp LOS	D	A	C	D	A	D	D	C	B	E	C	B
Approach Vol, veh/h		338			256			1914			993	
Approach Delay, s/veh		32.1			46.0			26.1			25.8	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	54.1		20.1	17.7	44.5		15.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	13.3	44.2		36.5	17.5	40.0		18.0				
Max Q Clear Time (g_c+I1), s	4.7	30.7		13.9	12.6	20.9		9.1				
Green Ext Time (p_c), s	0.0	8.5		1.4	0.6	6.4		0.7				
Intersection Summary												
HCM 6th Ctrl Delay			28.1									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

1: College Boulevard /College Blvd & Waring Road /Waring Road

01/13/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗	↖	↗		↖	↗	↗	↖	↗	↗
Traffic Volume (veh/h)	51	42	187	118	45	66	455	613	188	126	1049	107
Future Volume (veh/h)	51	42	187	118	45	66	455	613	188	126	1049	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.95	1.00		0.94	1.00		0.96	1.00		0.98
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	55	46	203	128	49	72	495	666	204	137	1140	116
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	144	121	479	195	72	106	565	1671	717	168	1426	620
Arrive On Green	0.15	0.15	0.15	0.11	0.11	0.11	0.16	0.47	0.47	0.09	0.40	0.40
Sat Flow, veh/h	992	829	1511	1781	658	967	3456	3554	1524	1781	3554	1546
Grp Volume(v), veh/h	101	0	203	128	0	121	495	666	204	137	1140	116
Grp Sat Flow(s),veh/h/ln	1821	0	1511	1781	0	1626	1728	1777	1524	1781	1777	1546
Q Serve(g_s), s	5.0	0.0	10.7	6.9	0.0	7.1	13.9	12.2	8.2	7.5	28.2	4.8
Cycle Q Clear(g_c), s	5.0	0.0	10.7	6.9	0.0	7.1	13.9	12.2	8.2	7.5	28.2	4.8
Prop In Lane	0.54		1.00	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	265	0	479	195	0	178	565	1671	717	168	1426	620
V/C Ratio(X)	0.38	0.00	0.42	0.66	0.00	0.68	0.88	0.40	0.28	0.81	0.80	0.19
Avail Cap(c_a), veh/h	667	0	812	322	0	294	607	1671	717	238	1426	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.5	0.0	27.5	42.6	0.0	42.7	40.7	17.2	16.1	44.3	26.3	19.3
Incr Delay (d2), s/veh	0.9	0.0	0.6	3.8	0.0	4.5	13.1	0.7	1.0	13.6	4.8	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	2.3	0.0	3.9	3.2	0.0	3.1	6.9	5.0	3.0	3.9	12.4	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	0.0	28.1	46.4	0.0	47.3	53.8	17.9	17.1	57.8	31.1	20.0
LnGrp LOS	D	A	C	D	A	D	D	B	B	E	C	B
Approach Vol, veh/h		304			249			1365			1393	
Approach Delay, s/veh		31.9			46.8			30.8			32.8	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.9	51.4		19.0	20.8	44.5		15.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	13.3	44.2		36.5	17.5	40.0		18.0				
Max Q Clear Time (g_c+I1), s	9.5	14.2		12.7	15.9	30.2		9.1				
Green Ext Time (p_c), s	0.1	6.0		1.3	0.3	5.7		0.7				

Intersection Summary

HCM 6th Ctrl Delay	32.9
HCM 6th LOS	C

HCM 6th TWSC
2: Waring Road Dwy & Waring Road

01/13/2020

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	12	246	110	28	183
Future Vol, veh/h	46	12	246	110	28	183
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	-	-	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	50	13	267	120	30	199

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	586	327	0	0	387
Stage 1	327	-	-	-	-
Stage 2	259	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	473	714	-	-	1171
Stage 1	731	-	-	-	-
Stage 2	784	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	461	714	-	-	1171
Mov Cap-2 Maneuver	461	-	-	-	-
Stage 1	712	-	-	-	-
Stage 2	784	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	1.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	461	714	1171
HCM Lane V/C Ratio	-	-	0.108	0.018	0.026
HCM Control Delay (s)	-	-	13.8	10.1	8.2
HCM Lane LOS	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	0.1

HCM 6th Signalized Intersection Summary

1: College Boulevard /College Blvd & Waring Road /Waring Road

01/13/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔	↔	↔		↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	71	50	216	197	63	124	373	1286	234	76	851	65
Future Volume (veh/h)	71	50	216	197	63	124	373	1286	234	76	851	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.95	1.00		0.96	1.00		0.97
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	73	52	223	203	65	128	385	1326	241	78	877	67
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	168	120	452	261	80	157	462	1651	708	101	1377	598
Arrive On Green	0.16	0.16	0.16	0.15	0.15	0.15	0.13	0.46	0.46	0.06	0.39	0.39
Sat Flow, veh/h	1061	756	1515	1781	544	1071	3456	3554	1524	1781	3554	1545
Grp Volume(v), veh/h	125	0	223	203	0	193	385	1326	241	78	877	67
Grp Sat Flow(s),veh/h/ln	1817	0	1515	1781	0	1615	1728	1777	1524	1781	1777	1545
Q Serve(g_s), s	6.4	0.0	12.6	11.3	0.0	12.0	11.2	32.9	10.4	4.5	20.7	2.9
Cycle Q Clear(g_c), s	6.4	0.0	12.6	11.3	0.0	12.0	11.2	32.9	10.4	4.5	20.7	2.9
Prop In Lane	0.58		1.00	1.00		0.66	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	288	0	452	261	0	236	462	1651	708	101	1377	598
V/C Ratio(X)	0.43	0.00	0.49	0.78	0.00	0.82	0.83	0.80	0.34	0.77	0.64	0.11
Avail Cap(c_a), veh/h	642	0	747	311	0	282	586	1651	708	229	1377	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.3	0.0	30.4	42.5	0.0	42.7	43.6	23.6	17.6	48.1	25.7	20.3
Incr Delay (d2), s/veh	1.0	0.0	0.8	10.1	0.0	14.6	8.2	4.3	1.3	11.9	2.3	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	2.9	0.0	4.7	5.7	0.0	5.7	5.3	14.2	3.8	2.3	9.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.3	0.0	31.2	52.5	0.0	57.3	51.8	27.9	18.9	59.9	28.0	20.6
LnGrp LOS	D	A	C	D	A	E	D	C	B	E	C	C
Approach Vol, veh/h		348			396			1952			1022	
Approach Delay, s/veh		34.5			54.9			31.5			29.9	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.3	52.5		20.8	18.3	44.5		19.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	13.3	44.2		36.5	17.5	40.0		18.0				
Max Q Clear Time (g_c+I1), s	6.5	34.9		14.6	13.2	22.7		14.0				
Green Ext Time (p_c), s	0.1	6.4		1.5	0.6	6.1		0.7				
Intersection Summary												
HCM 6th Ctrl Delay			33.8									
HCM 6th LOS			C									

HCM 6th TWSC
2: Waring Road Dwy & Waring Road

01/13/2020

Intersection						
Int Delay, s/veh	3.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↗	↖		↙	↗
Traffic Vol, veh/h	135	34	286	74	19	249
Future Vol, veh/h	135	34	286	74	19	249
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	-	-	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	147	37	311	80	21	271

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	664	351	0	0	391
Stage 1	351	-	-	-	-
Stage 2	313	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	426	692	-	-	1168
Stage 1	713	-	-	-	-
Stage 2	741	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	418	692	-	-	1168
Mov Cap-2 Maneuver	418	-	-	-	-
Stage 1	700	-	-	-	-
Stage 2	741	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.7	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	418	692	1168
HCM Lane V/C Ratio	-	-	0.351	0.053	0.018
HCM Control Delay (s)	-	-	18.2	10.5	8.1
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	1.6	0.2	0.1