

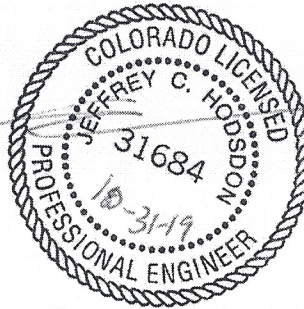


LSC TRANSPORTATION CONSULTANTS, INC.
545 East Pikes Peak Avenue, Suite 210
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Website: <http://www.lsctrans.com>

Eldorado Springs
Traffic Impact Study
(LSC #194820)
October 30, 2019

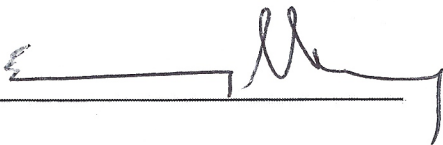
Traffic Engineer's Statement

This traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.



Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.



October 31 / 19
Date



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October 30, 2019

Emery Chukly
c/o John Olson
Altitude Land Consultants
2727 N Cascade, Ste 160
Colorado Springs, CO 80907

RE: Eldorado Springs
Traffic Impact Study
El Paso County, Colorado
LSC #194820

Dear Mr. Chukly:

In response to your request, LSC Transportation Consultants, Inc. has prepared this traffic impact study (TIS) for the Eldorado Springs development. As shown in Figure 1, the site is located southwest of Venetucci Boulevard between Bob Johnson Drive and Westmark Avenue in El Paso County, Colorado. One full-movement site access point is proposed to Venetucci Boulevard at the current intersection with Bob Johnson Drive and one emergency-only access is proposed to Westmark Avenue.

This is an updated study to a traffic study completed September 6, 2011 for the property. The previous study had 240 apartments, while the updated study has 236 apartments.

REPORT CONTENTS

The preparation of this report included the following:

- An inventory of existing roadway and traffic conditions on the adjacent and nearby roadway system, including surface conditions, functional classification, widths, pavement markings, traffic control signs, posted speed limits, intersection and access spacing, roadway and intersection alignments, roadway grades, and auxiliary turn lanes;
- Weekday morning and evening peak-hour turning movement traffic counts at the intersections:
 - Venetucci Boulevard/Bob Johnson Drive
 - Venetucci Boulevard/Westmark Avenue
- Estimated current average weekday traffic (AWT) volumes on the study area streets;
- Projections of 20-year background traffic volumes on the study area streets;

- The proposed site land use;
- Estimates of average weekday and weekday peak-hour trip generation for the proposed development;
- Assignment of the site-generated traffic to the roadway network;
- Projected resulting total peak-hour intersection traffic volumes at the study intersections;
- Projected total daily (AWT) volumes on the study area streets;
- Intersection level of service analysis at the study intersections for both background and total traffic scenarios;
- Findings and recommendations;

OTHER TRAFFIC IMPACT STUDIES USED IN THE PREPARATION OF THIS REPORT

LSC is not aware of other traffic studies completed in the study area in the previous five years. However, prior South Academy Highlands traffic reports (City of Fountain) were used in the estimate of the background traffic. These showed the Venetucci Boulevard connection north from the South Academy Highlands shopping center.

CORRIDOR PRESERVATION

The El Paso County *Major Transportation Corridor Plan* (MTCP) shows Venetucci Boulevard as a two-lane minor arterial adjacent to the property. No improvements are shown in the MTCP. However, it has been proposed that Venetucci Boulevard will extend south of B Street to the South Academy Highlands commercial center. The City of Colorado Springs *Major Thoroughfare Plan* (MTP) shows Venetucci Boulevard as a Principal Arterial.

LAND USE AND ACCESS

Figure 1 shows the site location relative to the adjacent and nearby streets and roadways. As shown, the development is located southwest of the intersection of Venetucci Boulevard/Bob Johnson Drive. The site is planned to have 236 apartments.

One full-movement site access point is proposed to Venetucci Boulevard at the intersection with Bob Johnson Drive. This site access would form the fourth leg of this existing full-movement, three-leg intersection. Access opportunities for the site are very limited due to the topography and a lower-density neighborhood to the west, a county road (Westmark Avenue) to the south, and a principal arterial-classified roadway (Venetucci Boulevard) with strict County access spacing criteria to the east. An emergency-only access to Westmark Avenue is proposed. The site plan is provided in Figure 2.

EXISTING ROAD AND TRAFFIC CONDITIONS

Figure 1 shows the streets adjacent to and in the vicinity of the site. Adjacent streets serving the site are identified below followed by a brief description of each:

Venetucci Boulevard is a north/south principal arterial extending south from Lake Avenue to the City of Fountain. The roadway is referred to as Old Highway 85-87 south of B Street where it is classified as a non-rural regional highway (NRA) by the Colorado Department of Transportation (CDOT). The roadway is maintained by the City of Colorado Springs. The posted speed limit on Venetucci Boulevard is 45 miles per hour (mph) south of the intersection with Bob Johnson Drive and 40 mph north of the intersection. Venetucci Boulevard is a four-lane urban roadway with auxiliary turn lanes north of Bob Johnson Drive and a two-lane rural roadway south of Bob Johnson Drive.

The intersections with Bob Johnson Drive and Westmark Avenue are unsignalized with stop control for the side streets. The intersections with Cheyenne Meadows Drive and B Street are signalized.

Existing Traffic Volumes

Figure 3 shows the results of peak-hour traffic volume counts conducted in October 2019 at the intersection of Venetucci Boulevard/Bob Johnson Drive along with existing lane geometries and traffic controls. As shown, Venetucci Boulevard carries approximately 13,300 vehicles per day (vpd) adjacent to the site. The traffic count sheets are attached.

Existing Levels of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection and is indicated on a scale from “A” to “F.” LOS A is indicative of little congestion or delay. LOS F indicates a high level of congestion or delay. Table 1 shows the level of service delay ranges for signalized and unsignalized intersections.

Table 1: Intersection Levels of Service Delay Ranges

Level of Service	Signalized Intersections	Unsignalized Intersections
	Average Control Delay (seconds per vehicle)	Average Control Delay (seconds per vehicle) ¹
A	≤ 10.0	≤ 10.0
B	10.1 – 20.0	10.1 – 15.0
C	20.1 – 35.0	15.1 – 25.0
D	35.1 – 55.0	25.1 – 35.0
E	55.1 – 80.0	35.1 – 50.0
F	≥ 80.1	≥ 50.1

¹ For unsignalized intersections, if V/C is > 1.00, then LOS is LOS F regardless of the projected average control delay per vehicle

The Venetucci Boulevard/Bob Johnson Drive intersection was analyzed to determine the existing levels of service. As shown in Figure 3, all yielding turn movements currently operate at

acceptable levels of service except the westbound left turn, which operates at LOS E during the PM peak. This is due to the high volume of traffic on the main street. Detailed Synchro reports are attached.

TRIP GENERATION

Estimates of the vehicle-trips projected to be generated by the 236 apartments were developed using the nationally published trip generation rates from *Trip Generation, 10th Edition, 2017* by the Institute of Transportation Engineers (ITE). Table 2 provides the trip generation estimate results. A detailed trip generation estimate for the development, including calculated trip generation rates, is presented in Table 3 (attached).

Table 2: Estimated Site Vehicle-Trip Generation

Analysis Period	Weekday		
	In	Out	Total
Morning Peak Hour	25	83	108
Afternoon Peak Hour	80	47	127

As shown in Table 2, the development is projected to generate approximately 108 vehicle-trips during the morning peak hour and 127 vehicle-trips during the evening peak hour.

TRIP DISTRIBUTION AND ASSIGNMENT

Estimating the directional distribution of site-generated vehicle-trips to the study area roads and intersections is a necessary component in determining the site's traffic impacts. The specific distribution estimates for the site-generated traffic volumes are shown in Figure 4. The estimates were based on the following factors: the location of the site with respect to the area employment, commercial, and activity centers including Fort Carson, Fountain, and Colorado Springs; the land use proposed for the site; the proposed access plan for the site; and the roadway network serving the site.

When the distribution percentages are applied to the trip generation estimates (from Table 2), the site-generated traffic volumes on the adjacent roadway system can be determined. Site-generated traffic volumes are shown in Figure 4.

SHORT TERM TOTAL TRAFFIC

Figure 5 shows the sum of the existing traffic volumes (from Figure 3) and site-generated peak-hour traffic volumes (shown in Figure 4). These volumes represent the projected short-term total traffic following the development's construction. Laneage and traffic control at the study area intersections are also shown in this figure.

2040 BACKGROUND CONDITIONS

The background traffic volumes for the year 2040 are shown in Figure 6. Background traffic is the traffic that is anticipated to occur without the addition of the proposed development. The background traffic volumes include increases in through traffic on Venetucci Boulevard and minor increases in traffic turning to/from Bob Johnson Drive.

2040 TOTAL TRAFFIC VOLUMES

Figure 7 shows the sum of the 2040 background traffic volumes (from Figure 6) and the site-generated traffic volumes (shown in Figure 4). These volumes represent the projected long-term total traffic following the construction of the development. Laneage and traffic control at the study area intersections are also shown in this figure.

SIGNAL WARRANT ANALYSIS

Based on the conventional method of evaluating traffic signal warrants using side street approach volumes as the “minor street,” the intersection of Venetucci Boulevard/Bob Johnson Drive is not forecasted to meet four- or eight-hour traffic volume signal warrants even with the addition of the fourth leg and site-generated traffic. This is due to the low side street volumes at the intersection. However, when applying the four-hour warrant criteria using the southbound left turn movement as the “minor street” volume and the combined northbound through/right-turn volume as the major street volume (not including the southbound volumes), the intersection is forecasted to meet the 70 percent four-hour warrant in the long term. It is close to meeting the four-hour warrant based on existing traffic volumes. Additionally, Warrant No. 7 (crash experience) or another MUTCD warrant(s), could potentially be met in the future.

Note: This analysis using the collected peak-hour data and forecasted future morning and afternoon peak-hour volumes, is intended to provide, for planning purposes, an indication that a warrant may be met or is close to being met based on evaluation of these volumes. In order for a Four-Hour Traffic Signal Warrant to be satisfied, the volume threshold would need to be met for a total of four hours of the day. For example, the four-hour warrant would be satisfied with the volume thresholds met for the two hours in the morning peak and two hours during the afternoon peak period. The decision to install a traffic signal at this location rests with the City of Colorado Springs.

LEVEL OF SERVICE ANALYSIS

The Venetucci Boulevard/Bob Johnson Drive intersection has been analyzed to determine the projected intersection levels of service for the long-term background as well as short-term and long-term total traffic scenarios for the morning and afternoon peak-hour periods. The short-term total, long-term background, and long-term total levels of service are shown in Figure 5, Figure 6, and Figure 7, respectively.

In the long-term background scenario, it is assumed the intersection will continue to be unsignalized. Although the intersection is not expected to meet signal warrants, the intersection was analyzed both as an unsignalized and signalized intersection for the short-term and long-term total traffic scenarios. Table 4 summarizes and compares traffic operations for the unsignalized and signalized scenarios for the short-term and long-term total traffic.

Long-Term Background

As shown in Figure 6, the westbound left turning movement is forecasted to operate at LOS F during the PM peak period. This is due to the high volume of traffic on Venetucci Boulevard. The turning movement volume is still expected to operate significantly under capacity and the 95th percentile queue length is less than 25 feet.

Short-Term Total

In the short-term total scenario, the eastbound left turning movement is forecasted to operate at LOS F during both peak hours and the westbound left turning movement is forecasted to operate at LOS F during the PM peak hour. As shown in Table 4, the movements are below capacity and the 95th percentile queue is 100 feet, which would not impact access to the development.

Long-Term Total

In the long-term scenario, the eastbound and westbound left-turn movements are projected to operate at LOS F. However, the left turns are no longer below capacity in the eastbound direction. The analysis of the eastbound left turn movement indicates high delay during peak periods due to the projected high through volumes on Venetucci Boulevard and a relatively high southbound left-turn movement. The nearby signal at Venetucci Boulevard/Cheyenne Meadows Boulevard and, to some extent, the signal at B Street/Venetucci will generate some traffic gaps. However, the delay will likely still be in the LOS F range. There is no reasonable way for motorists exiting the site to turn left and travel northbound on Venetucci Boulevard and avoid this long delay. There is no alternative route out of the development and there is no convenient location to the south that would allow for a U-turn if a vehicle chose to turn right out of the development. Traffic signal control would satisfactorily mitigate the high projected delay and LOS F for the eastbound left-turn movement exiting the site. If signalized, this intersection is projected to operate at LOS B during the morning peak and LOS A during the evening peak.

It should be noted that the traffic entering and exiting the site was unchanged between the short-term and long-term scenarios. Rather, traffic volumes on Venetucci Boulevard increased to a level in the long term that they created the excessive delay for side street traffic. It is recommended that this intersection be monitored along with the traffic volumes on Venetucci Boulevard. The City previously committed to allowing this intersection to be signalized given the limited options for site access and intersection traffic control (a roundabout was previously

proposed, but rejected through the public process). Also, please refer to the “Signal Warrant Analysis” section above.

INTERSECTION SIGHT DISTANCE

The El Paso County Engineering Criteria Manual (ECM) requires a sight distance of a minimum of 450 feet for an access on a road with a posted speed limit of 45-mph (per table 2-35). The sight distance standard is met at the proposed access location.

MULTIMODAL MOBILITY

There is currently a detached sidewalk on the east side of Venetucci Boulevard south of Bob Johnson Drive as well as detached sidewalks on both sides of Venetucci Boulevard north of Bob Johnson Drive. As part of this development, sidewalks will be constructed along the west side of Venetucci Boulevard south of Bob Johnson Drive.

Metro Transit Route 11 travels on Venetucci Boulevard while traveling between the transit center and Pikes Peak Community College. There are stops in both directions of travel on Venetucci Boulevard north of Cheyenne Meadows Road.

AUXILIARY TURN LANE ANALYSIS

It is recommended that the access drive provide two exiting lanes (one left, one shared through/right) and one entering lane. Per the City Traffic Criteria Manual, a northbound left-turn lane and a southbound right-turn lane will be required. The northbound left-turning deceleration lane on Venetucci Boulevard is required to be 260 feet in length with a 200-foot bay taper. This will also require a 45:1 lane redirect approaching the intersection. The southbound right turning deceleration lane is required to be 200 feet in length with a 180-foot approach taper.

DEVIATION REQUESTS

No deviation requests are being submitted.

CONCLUSIONS AND RECOMMENDATIONS

- The site is projected to generate approximately 108 new morning peak-hour trips, with 25 inbound and 83 outbound.
- The site is projected to generate approximately 127 new afternoon peak-hour trips, with 80 inbound and 47 outbound.
- Traffic signal control would satisfactorily mitigate the high projected peak hour delay and LOS F for the eastbound left-turn movement exiting the site (and the westbound left-turn movement from the east side of the intersection). If signalized, this intersection is projected to operate at LOS B during the morning peak and LOS A during the evening peak.

- The intersection should be monitored due to the high projected delay for eastbound left-turning traffic exiting the site and as the intersection is close to meeting a traffic signal warrant as described in the “Traffic Signal Warrants” section above. As described above, the intersection is projected to meet a four-hour volume traffic signal warrant, based on the methodology used and the projected future background traffic volumes. The City previously committed to allowing this intersection to be signalized given the limited options for site access and intersection traffic control (a roundabout was previously proposed, but rejected through the public process).
- It is recommended that the access drive provide two exiting lanes (one left, one shared through/right) and one entering lane.
- A northbound left turning deceleration lane is required with 260-foot lane and 200-foot bay taper. This will also require a 45:1 lane redirect approaching the intersection.
- A southbound right turning deceleration lane is required with 200-foot lane and 180-foot approach taper.

COUNTY ROAD IMPROVEMENT FEE PROGRAM

Eldorado will be required to participate in the Countywide Road Impact Fee program. The specific PID option (or opt-out option), as well as the specific calculated fee amount, will be provided prior to recording of the plat. The fee per residential dwelling unit will be payable at the time of the building permit.

* * * * *

Please contact me if you have any questions regarding this report.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.

By _____
Jeffrey C. Hodsdon, P.E.
Principal

CRG:jas

Enclosures: Tables 3-4
Figures 1-7
Traffic Count Reports
Level of Service Reports

Table 3: Detailed Trip Generation Estimate

Land Use Code	Land Use Description	Trip Generation Units	Trip Generation Rates ⁽¹⁾					Total Trips Generated				
			Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour		Average Weekday Traffic	Morning Peak Hour		Afternoon Peak Hour	
				In	Out	In	Out		In	Out		
220	Multi-Family Residential	236 DU ⁽²⁾	7.39	0.11	0.35	0.34	0.20	1,743	25	83	80	47
Notes:												
(1) Source: "Trip Generation, 10th Edition, 2017" by the Institute of Transportation Engineers (ITE)												
(2) DU = dwelling unit												
Source: LSC Transportation Consultants, Inc.												

Table 4: Operations Summary

Intersection	Unsignalized								Signalized							
	AM				PM				AM				PM			
	Level of Service	Control Delay (sec)	V/C	95th Percentile Queue Length (ft)	Level of Service	Control Delay (sec)	V/C	95th Percentile Queue Length (ft)	Level of Service	Control Delay (sec)	V/C	95th Percentile Queue Length (ft)	Level of Service	Control Delay (sec)	V/C	95th Percentile Queue Length (ft)
Short Term Total																
EB Left	F	154.6	0.74	100	F	87.7	0.38	50	E	63.5	0.42	75	E	61.0	0.30	50
EB Through/Right	C	15.7	0.12	25	C	18.0	0.08	25	C	21.4	0.27	50	C	24.3	0.20	50
WB Left	A	0.0	0.00	0	F	58.8	0.02	25	A	0.0	0.00	0	D	51.0	0.01	25
WB Through/Right	B	14.9	0.03	25	B	11.9	0.09	25	A	0.1	0.02	25	A	0.3	0.09	25
NB Left	A	8.1	0.01	0	A	9.8	0.05	25	A	5.4	0.02	25	A	4.4	0.07	25
NB Through/Right	---	---	---	---	---	---	---	---	A	9.8	0.59	400	A	5.2	0.34	175
SB Left	A	11.1	0.26	25	A	8.8	0.01	25	A	4.3	0.42	50	A	1.8	0.14	25
SB Through	---	---	---	---	---	---	---	---	A	2.1	0.22	75	A	3.2	0.49	200
SB Right	---	---	---	---	---	---	---	---	A	0.9	0.01	25	A	0.5	0.03	25
Entire Intersection LOS	A	6.8			A	3.0			A	9.0			A	4.9		
Long Term Total																
EB Left	F	927.9	2.17	150 ⁽¹⁾	F	802.2	1.63	100 ⁽¹⁾	E	74.3	0.52	75	E	61.3	0.30	50
EB Through/Right	D	29.8	0.24	25	D	34.7	0.17	25	C	24.3	0.31	50	C	24.3	0.20	50
WB Left	A	0.0	0.00	0	F	230.8	0.06	25	A	0.0	0.00	0	D	51.0	0.01	25
WB Through/Right	D	31.3	0.08	25	C	19.3	0.21	25	C	28.8	0.11	25	C	20.1	0.40	50
NB Left	A	8.8	0.01	0	B	11.6	0.06	25	A	6.2	0.02	25	A	5.3	0.11	25
NB Through/Right	---	---	---	---	---	---	---	---	B	18.5	0.80	700	A	7.8	0.55	375
SB Left	B	14.0	0.37	50	B	10.4	0.19	25	B	18.0	0.66	125	A	2.8	0.29	50
SB Through	---	---	---	---	---	---	---	---	A	2.3	0.36	100	A	5.9	0.70	425
SB Right	---	---	---	---	---	---	---	---	A	0.6	0.01	25	A	0.5	0.03	25
Entire Intersection LOS	C	22.1			A	7.4			B	14.9			A	7.5		
<p>Notes: (1) 95th percentile volume exceeds capacity, queue may be longer (2) TWSC = two-way stop-sign control</p>																

Tables and Figures



Table 3: Detailed Trip Generation Estimate

Land Use Code	Land Use Description	Trip Generation Units	Trip Generation Rates ⁽¹⁾					Total Trips Generated				
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Short Term Total																
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EB Through/Right	C	15.7	0.12	25	C	18.0	0.08	25	C	21.4	0.27	50	C	24.3	0.20	50
WB Left	A	0.0	0.00	0	F	58.8	0.02	25	A	0.0	0.00	0	D	51.0	0.01	25
WB Through/Right	B	14.9	0.03	25	B	11.9	0.09	25	A	0.1	0.02	25	A	0.3	0.09	25
NB Left	A	8.1	0.01	0	A	9.8	0.05	25	A	5.4	0.02	25	A	4.4	0.07	25
NB Through/Right	---	---	---	---	---	---	---	---	A	9.8	0.59	400	A	5.2	0.34	175
SB Left	A	11.1	0.26	25	A	8.8	0.01	25	A	4.3	0.42	50	A	1.8	0.14	25
SB Through	---	---	---	---	---	---	---	---	A	2.1	0.22	75	A	3.2	0.49	200
SB Right	---	---	---	---	---	---	---	---	A	0.9	0.01	25	A	0.5	0.03	25
Entire Intersection LOS	A	6.8			A	3.0			A	9.0			A	4.9		
Long Term Total																
EB Left	F	927.9	2.17	150 ⁽¹⁾	F	802.2	1.63	100 ⁽¹⁾	E	74.3	0.52	75	E	61.3	0.30	50
EB Through/Right	D	29.8	0.24	25	D	34.7	0.17	25	C	24.3	0.31	50	C	24.3	0.20	50
WB Left	A	0.0	0.00	0	F	230.8	0.06	25	A	0.0	0.00	0	D	51.0	0.01	25
WB Through/Right	D	31.3	0.08	25	C	19.3	0.21	25	C	28.8	0.11	25	C	20.1	0.40	50
NB Left	A	8.8	0.01	0	B	11.6	0.06	25	A	6.2	0.02	25	A	5.3	0.11	25
NB Through/Right	---	---	---	---	---	---	---	---	B	18.5	0.80	700	A	7.8	0.55	375
SB Left	B	14.0	0.37	50	B	10.4	0.19	25	B	18.0	0.66	125	A	2.8	0.29	50
SB Through	---	---	---	---	---	---	---	---	A	2.3	0.36	100	A	5.9	0.70	425
SB Right	---	---	---	---	---	---	---	---	A	0.6	0.01	25	A	0.5	0.03	25
Entire Intersection LOS	C	22.1			A	7.4			B	14.9			A	7.5		
<p>Notes: (1) 95th percentile volume exceeds capacity, queue may be longer (2) TWSC = two-way stop-sign control</p>																



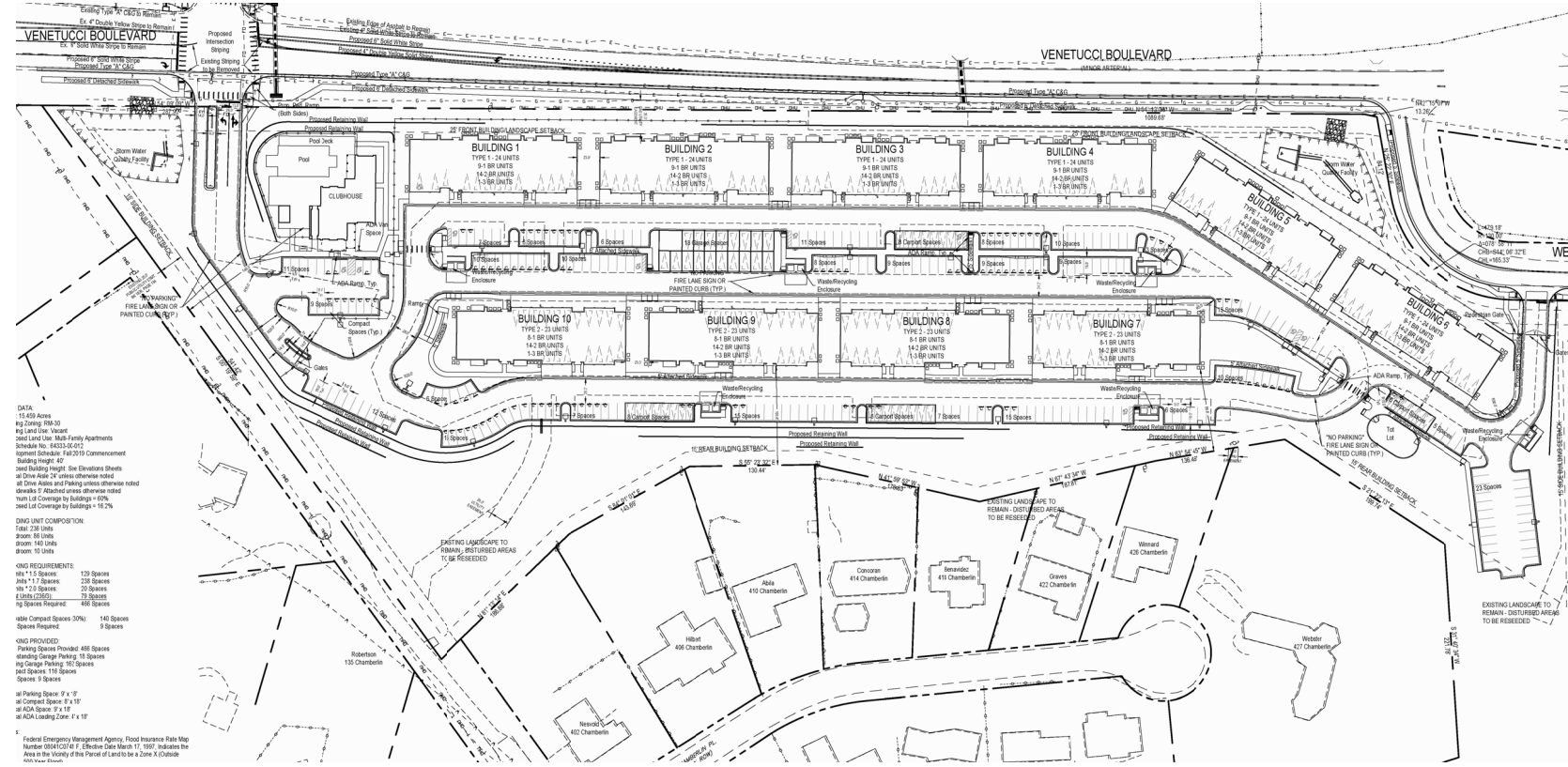
Figure 1

Vicinity Map

Eldorado Springs (LSC# 194820)



Not to scale



DATA:
 15.459 Acres
 1/2 Acre Vacant
 13.957 Acres
 1/2 Acre Vacant
 13.457 Acres
 1/2 Acre Vacant
 13.457 Acres
 1/2 Acre Vacant

UNIT COMPOSITION:
 1281 Units
 1000 Units
 150 Units
 10 Units

LAND REQUIREMENTS:
 1281 Units
 1000 Units
 150 Units
 10 Units

LAND PROVIDED:
 1281 Units
 1000 Units
 150 Units
 10 Units

EXISTING LANDSCAPE TO REMAIN - DISTURBED AREAS TO BE RESEEDDED

EXISTING LANDSCAPE TO REMAIN - DISTURBED AREAS TO BE RESEEDDED

EXISTING LANDSCAPE TO REMAIN - DISTURBED AREAS TO BE RESEEDDED

Figure 2
Site Plan

Eldorado Springs (LSC# 194820)



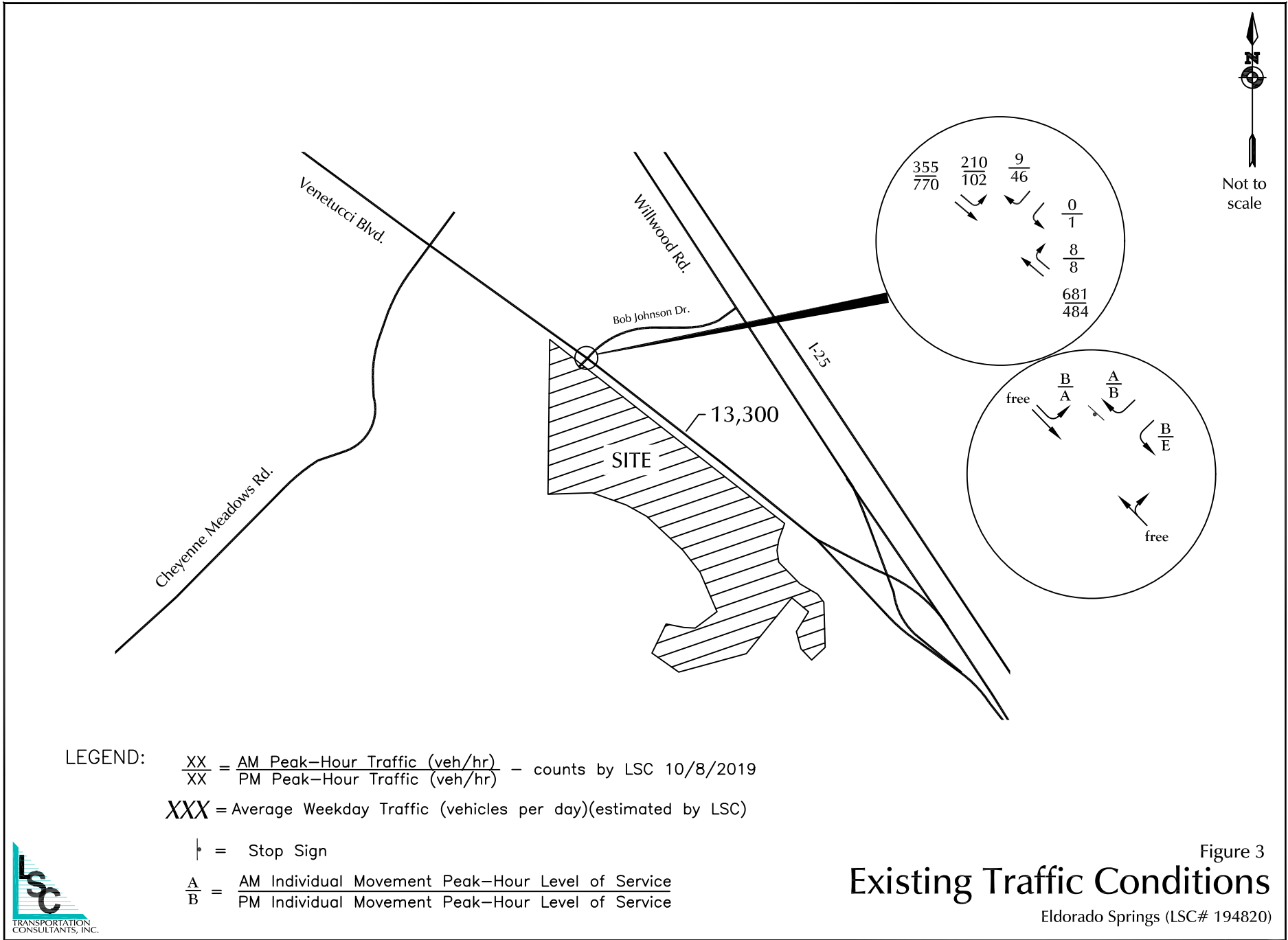


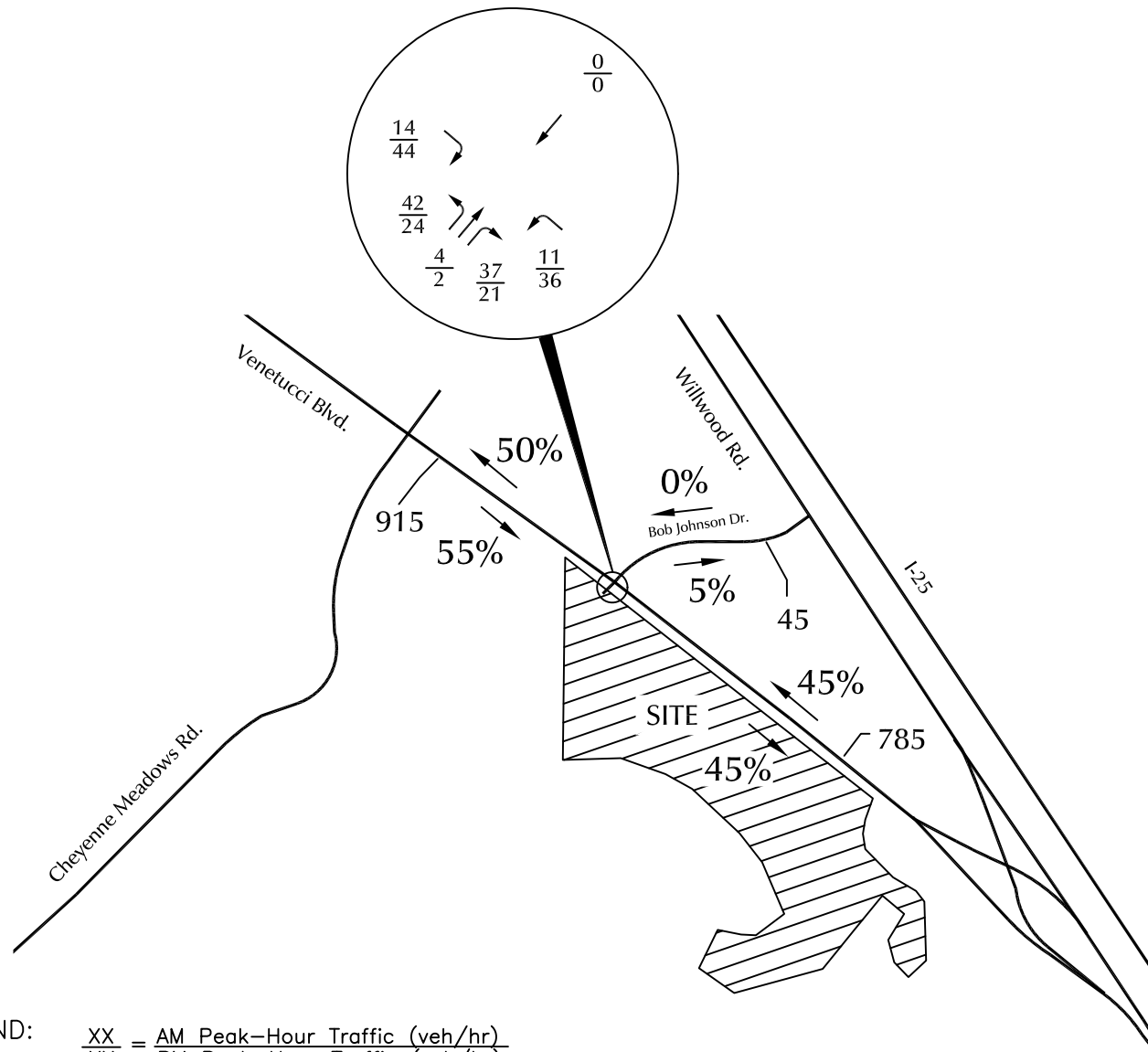
Figure 3
Existing Traffic Conditions

Eldorado Springs (LSC# 194820)





Not to scale

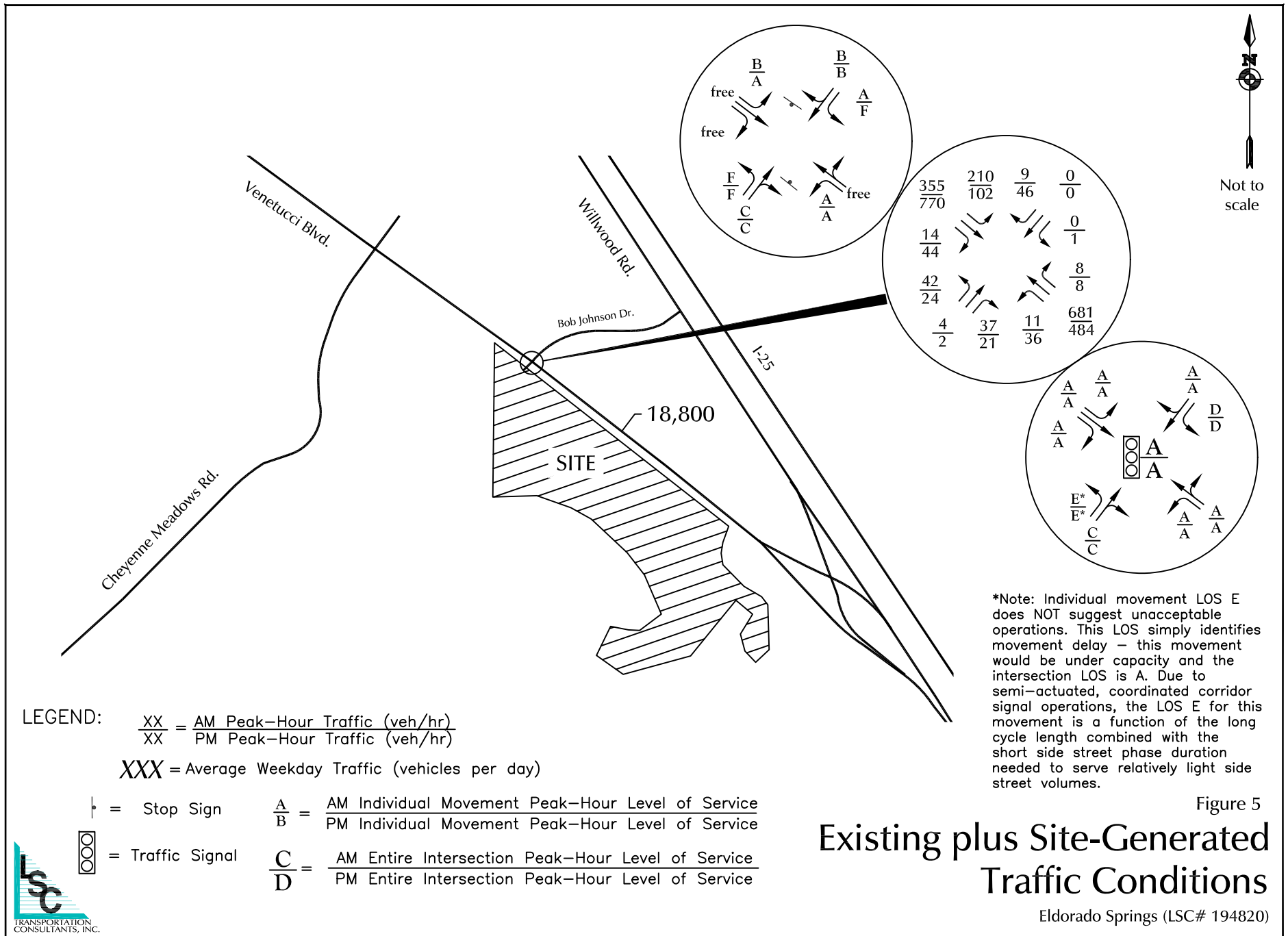


LEGEND: $\frac{XX}{XX}$ = AM Peak-Hour Traffic (veh/hr)
 $\frac{XX}{XX}$ = PM Peak-Hour Traffic (veh/hr)
 XXX = Average Weekday Traffic (vehicles per day)
 \longleftrightarrow = Percent Directional Distribution

Figure 4
Site-Generated Traffic

Eldorado Springs (LSC# 194820)





LEGEND: $\frac{XX}{XX} = \frac{\text{AM Peak-Hour Traffic (veh/hr)}}{\text{PM Peak-Hour Traffic (veh/hr)}}$

XXX = Average Weekday Traffic (vehicles per day)

= Stop Sign

= Traffic Signal

$\frac{A}{B} = \frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

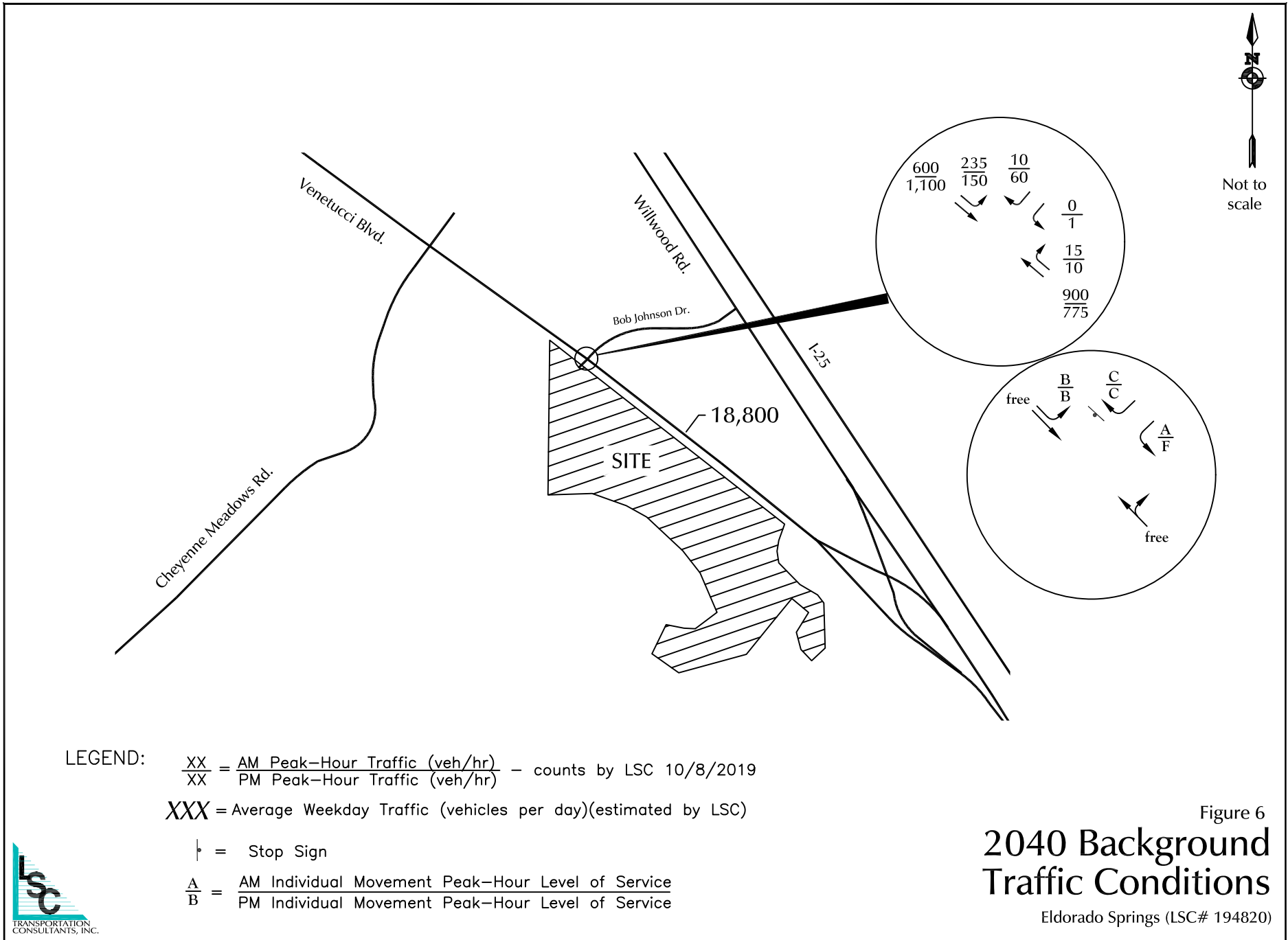
$\frac{C}{D} = \frac{\text{AM Entire Intersection Peak-Hour Level of Service}}{\text{PM Entire Intersection Peak-Hour Level of Service}}$

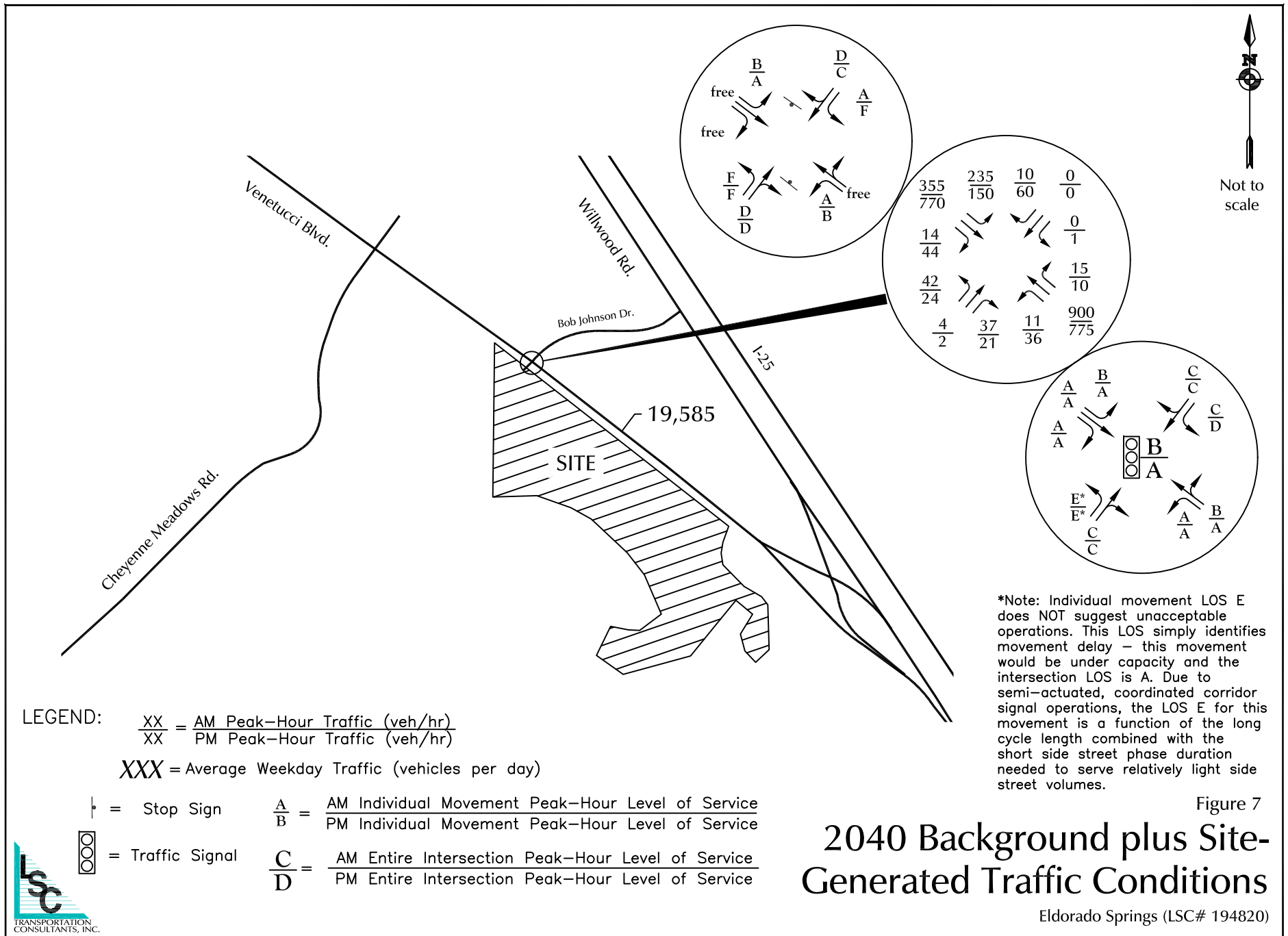


*Note: Individual movement LOS E does NOT suggest unacceptable operations. This LOS simply identifies movement delay – this movement would be under capacity and the intersection LOS is A. Due to semi-actuated, coordinated corridor signal operations, the LOS E for this movement is a function of the long cycle length combined with the short side street phase duration needed to serve relatively light side street volumes.

Figure 5
Existing plus Site-Generated
Traffic Conditions

Eldorado Springs (LSC# 194820)





LEGEND: $\frac{XX}{XX}$ = AM Peak-Hour Traffic (veh/hr)
 PM Peak-Hour Traffic (veh/hr)

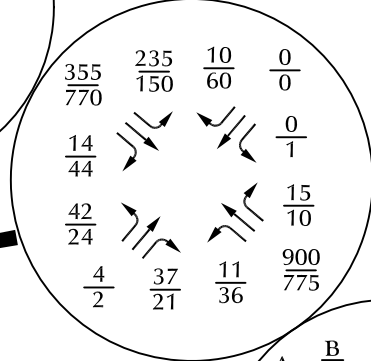
XXX = Average Weekday Traffic (vehicles per day)

⊥ = Stop Sign

⊞ = Traffic Signal

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

$\frac{C}{D}$ = $\frac{\text{AM Entire Intersection Peak-Hour Level of Service}}{\text{PM Entire Intersection Peak-Hour Level of Service}}$



*Note: Individual movement LOS E does NOT suggest unacceptable operations. This LOS simply identifies movement delay – this movement would be under capacity and the intersection LOS is A. Due to semi-actuated, coordinated corridor signal operations, the LOS E for this movement is a function of the long cycle length combined with the short side street phase duration needed to serve relatively light side street volumes.

Figure 7
2040 Background plus Site-Generated Traffic Conditions

Eldorado Springs (LSC# 194820)



Traffic Counts





LSC Transportation Consultants, Inc.

545 E Pikes Peak Ave, Suite 210

Colorado Springs, CO 80905

719-633-2868

File Name : Venetucci Blvd - Bob Johnson Dr AM

Site Code : 194820

Start Date : 10/8/2019

Page No : 1

Groups Printed- Unshifted

Start Time	Venatucci Blvd Southbound					Bob Johnson Dr Westbound					Venatucci Blvd Northbound					Eastbound					Int. Total
	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	
06:30 AM	16	48	0	0	64	0	0	0	0	0	0	89	1	0	90	0	0	0	0	0	154
06:45 AM	33	60	0	0	93	0	0	2	0	2	0	109	2	0	111	0	0	0	0	0	206
Total	49	108	0	0	157	0	0	2	0	2	0	198	3	0	201	0	0	0	0	0	360
07:00 AM	37	56	0	0	93	0	0	0	0	0	0	110	1	0	111	0	0	0	0	0	204
07:15 AM	61	79	0	0	140	0	0	1	0	1	0	205	3	0	208	0	0	0	0	0	349
07:30 AM	49	80	0	0	129	0	0	2	0	2	0	192	4	0	196	0	0	0	0	0	327
07:45 AM	48	92	0	0	140	0	0	3	0	3	0	168	0	0	168	0	0	0	0	0	311
Total	195	307	0	0	502	0	0	6	0	6	0	675	8	0	683	0	0	0	0	0	1191
08:00 AM	52	104	0	0	156	0	0	3	0	3	0	116	1	0	117	0	0	0	0	0	276
08:15 AM	32	91	0	0	123	0	0	0	0	0	0	114	3	0	117	0	0	0	0	0	240
Grand Total	328	610	0	0	938	0	0	11	0	11	0	1103	15	0	1118	0	0	0	0	0	2067
Apprch %	35	65	0	0		0	0	100	0		0	98.7	1.3	0		0	0	0	0		
Total %	15.9	29.5	0	0	45.4	0	0	0.5	0	0.5	0	53.4	0.7	0	54.1	0	0	0	0	0	

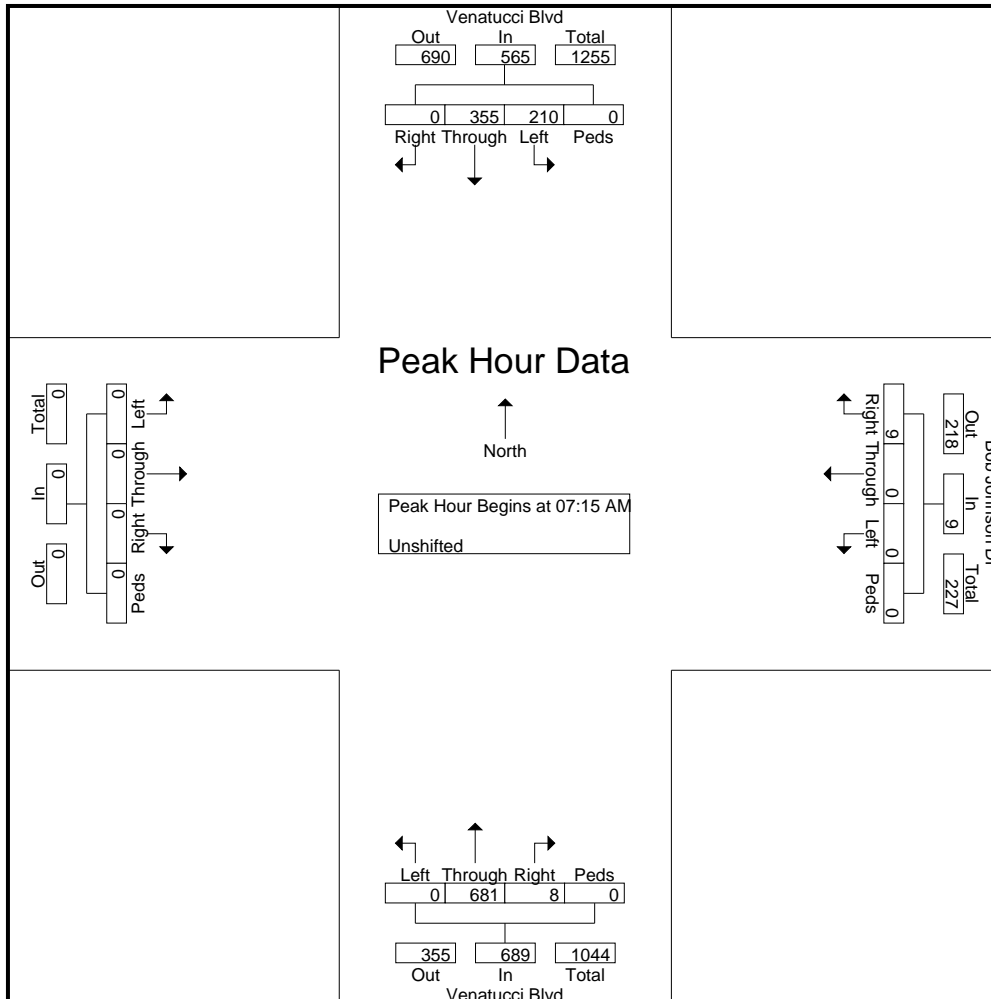


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 719-633-2868

File Name : Venetucci Blvd - Bob Johnson Dr AM
 Site Code : 194820
 Start Date : 10/8/2019
 Page No : 2

Start Time	Venetucci Blvd Southbound					Bob Johnson Dr Westbound					Venetucci Blvd Northbound					Eastbound					Int. Total
	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	61	79	0	0	140	0	0	1	0	1	0	205	3	0	208	0	0	0	0	0	349
07:30 AM	49	80	0	0	129	0	0	2	0	2	0	192	4	0	196	0	0	0	0	0	327
07:45 AM	48	92	0	0	140	0	0	3	0	3	0	168	0	0	168	0	0	0	0	0	311
08:00 AM	52	104	0	0	156	0	0	3	0	3	0	116	1	0	117	0	0	0	0	0	276
Total Volume	210	355	0	0	565	0	0	9	0	9	0	681	8	0	689	0	0	0	0	0	1263
% App. Total	37.2	62.8	0	0		0	0	100	0		0	98.8	1.2	0		0	0	0	0		
PHF	.861	.853	.000	.000	.905	.000	.000	.750	.000	.750	.000	.830	.500	.000	.828	.000	.000	.000	.000	.000	.905



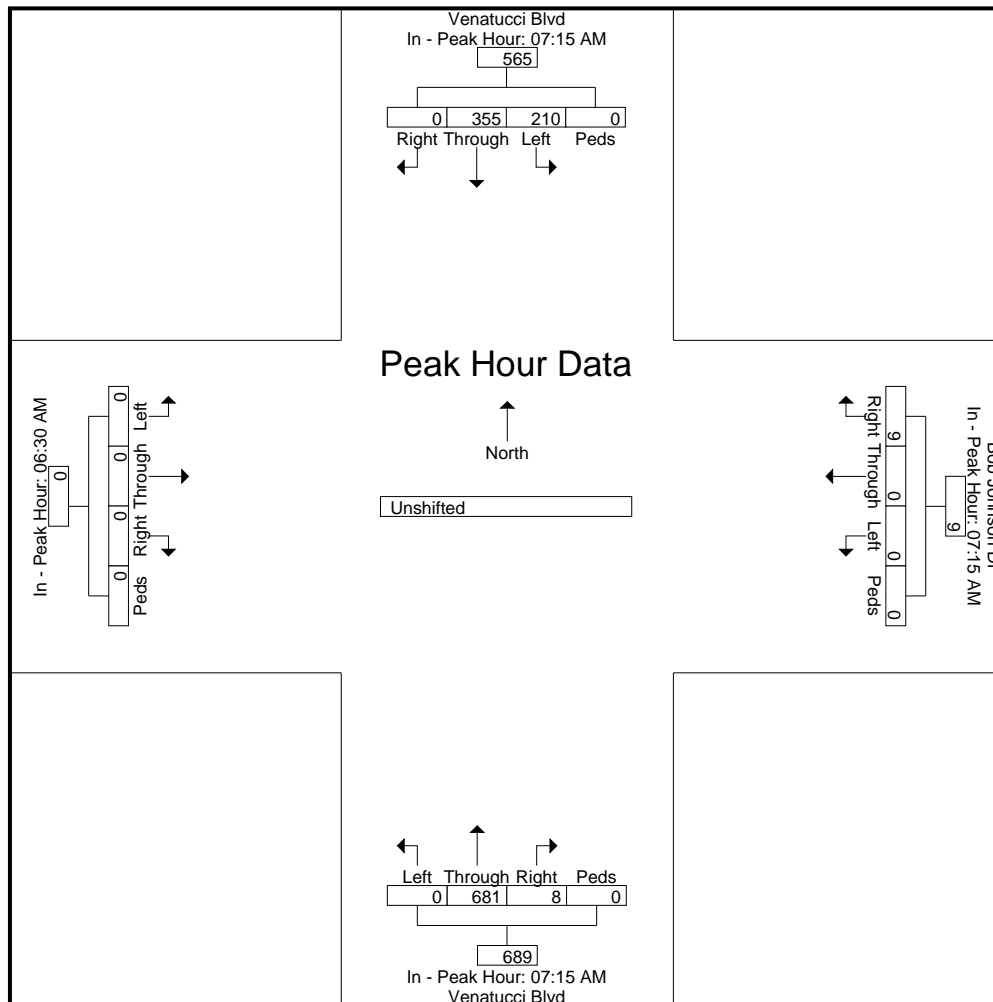


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 719-633-2868

File Name : Venetucci Blvd - Bob Johnson Dr AM
 Site Code : 194820
 Start Date : 10/8/2019
 Page No : 3

Start Time	Venetucci Blvd Southbound					Bob Johnson Dr Westbound					Venetucci Blvd Northbound					Eastbound					Int. Total
	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	
Peak Hour Analysis From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	07:15 AM					07:15 AM					07:15 AM					06:30 AM					
+0 mins.	61	79	0	0	140	0	0	1	0	1	0	205	3	0	208	0	0	0	0	0	
+15 mins.	49	80	0	0	129	0	0	2	0	2	0	192	4	0	196	0	0	0	0	0	
+30 mins.	48	92	0	0	140	0	0	3	0	3	0	168	0	0	168	0	0	0	0	0	
+45 mins.	52	104	0	0	156	0	0	3	0	3	0	116	1	0	117	0	0	0	0	0	
Total Volume	210	355	0	0	565	0	0	9	0	9	0	681	8	0	689	0	0	0	0	0	
% App. Total	37.2	62.8	0	0		0	0	100	0		0	98.8	1.2	0		0	0	0	0		
PHF	.861	.853	.000	.000	.905	.000	.000	.750	.000	.750	.000	.830	.500	.000	.828	.000	.000	.000	.000	.000	





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545 E Pikes Peak Ave, Suite 210

Colorado Springs, CO 80905

719-633-2868

File Name : Venetucci Blvd - Bob Johnson Dr PM

Site Code : 194820

Start Date : 10/8/2019

Page No : 1

Groups Printed- Unshifted

Start Time	Venatucci Blvd Southbound					Bob Johnson Dr Westbound					Venatucci Blvd Northbound					Eastbound					Int. Total
	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	
04:00 PM	33	194	0	0	227	0	0	15	0	15	0	125	2	0	127	0	0	0	0	0	369
04:15 PM	21	188	0	0	209	0	0	12	0	12	0	116	1	0	117	0	0	0	0	0	338
04:30 PM	24	203	0	0	227	0	0	9	0	9	0	107	0	0	107	0	0	0	0	0	343
04:45 PM	35	176	0	0	211	0	0	9	0	9	0	130	4	0	134	0	0	0	0	0	354
Total	113	761	0	0	874	0	0	45	0	45	0	478	7	0	485	0	0	0	0	0	1404
05:00 PM	24	202	0	0	226	1	0	19	0	20	0	123	3	0	126	0	0	0	0	0	372
05:15 PM	19	189	0	0	208	0	0	9	0	9	0	124	1	0	125	0	0	0	0	0	342
05:30 PM	25	184	0	0	209	0	0	6	0	6	0	110	2	0	112	0	0	0	0	0	327
05:45 PM	33	126	0	0	159	0	0	7	0	7	0	104	3	0	107	0	0	0	0	0	273
Total	101	701	0	0	802	1	0	41	0	42	0	461	9	0	470	0	0	0	0	0	1314
Grand Total	214	1462	0	0	1676	1	0	86	0	87	0	939	16	0	955	0	0	0	0	0	2718
Apprch %	12.8	87.2	0	0		1.1	0	98.9	0		0	98.3	1.7	0		0	0	0	0	0	
Total %	7.9	53.8	0	0	61.7	0	0	3.2	0	3.2	0	34.5	0.6	0	35.1	0	0	0	0	0	

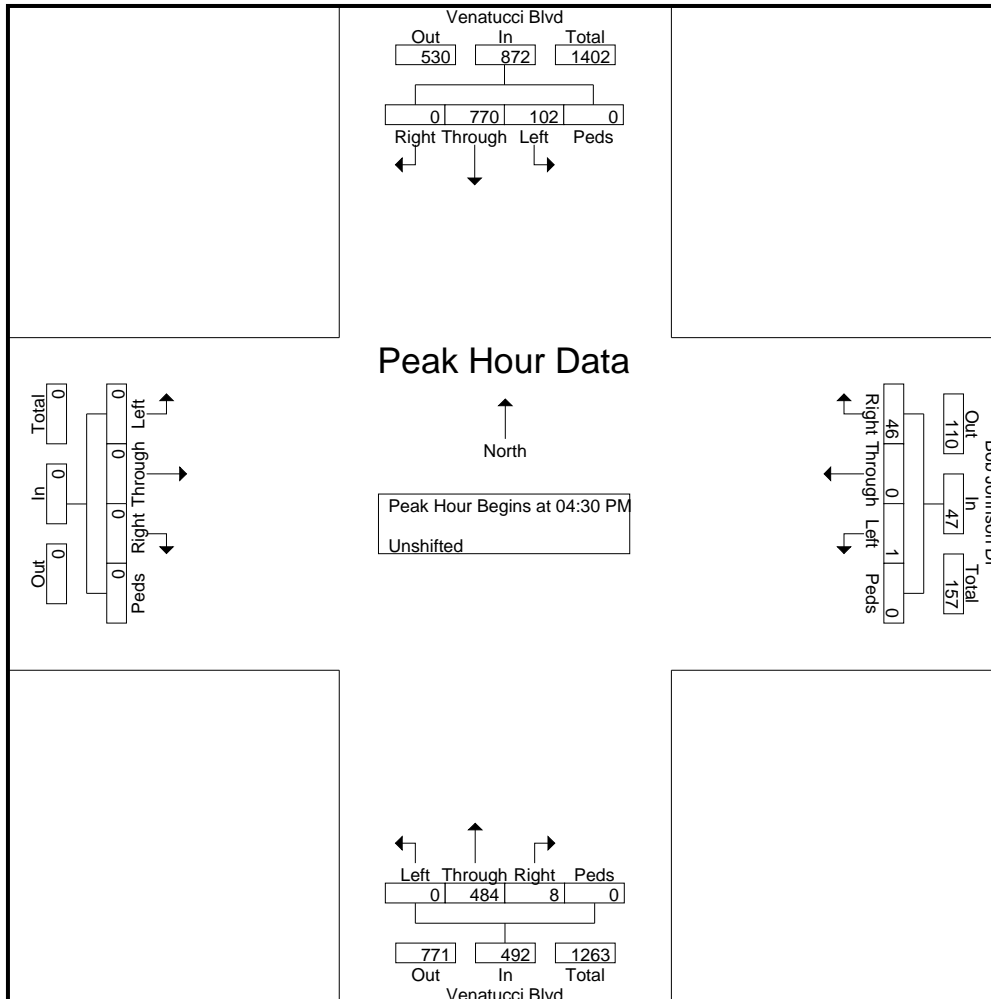


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File Name : Venetucci Blvd - Bob Johnson Dr PM
 Site Code : 194820
 Start Date : 10/8/2019
 Page No : 2

Start Time	Venetucci Blvd Southbound					Bob Johnson Dr Westbound					Venetucci Blvd Northbound					Eastbound					Int. Total
	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	24	203	0	0	227	0	0	9	0	9	0	107	0	0	107	0	0	0	0	0	343
04:45 PM	35	176	0	0	211	0	0	9	0	9	0	130	4	0	134	0	0	0	0	0	354
05:00 PM	24	202	0	0	226	1	0	19	0	20	0	123	3	0	126	0	0	0	0	0	372
05:15 PM	19	189	0	0	208	0	0	9	0	9	0	124	1	0	125	0	0	0	0	0	342
Total Volume	102	770	0	0	872	1	0	46	0	47	0	484	8	0	492	0	0	0	0	0	1411
% App. Total	11.7	88.3	0	0		2.1	0	97.9	0		0	98.4	1.6	0		0	0	0	0		
PHF	.729	.948	.000	.000	.960	.250	.000	.605	.000	.588	.000	.931	.500	.000	.918	.000	.000	.000	.000	.000	.948



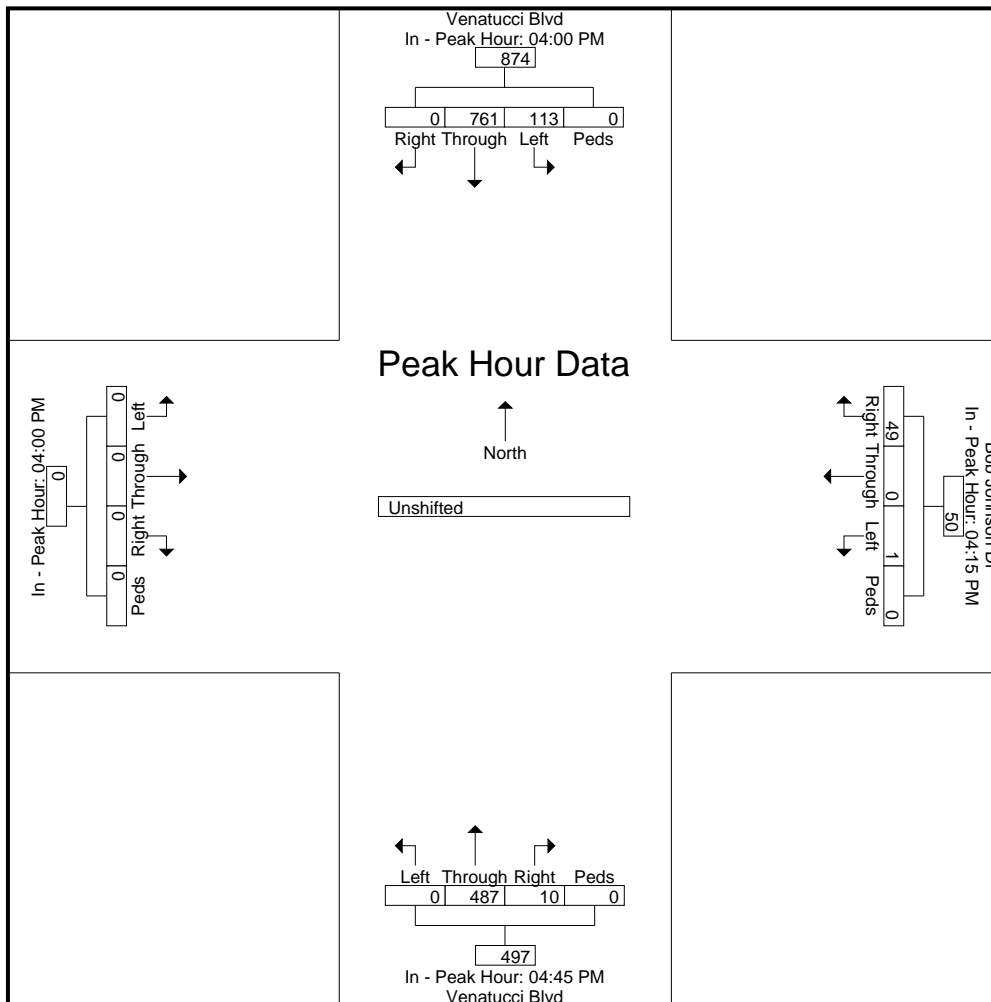


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 Site Code : 194820
 Start Date : 10/8/2019
 Page No : 3

Start Time	Venetucci Blvd Southbound					Bob Johnson Dr Westbound					Venetucci Blvd Northbound					Eastbound					Int. Total
	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	Left	Through	Right	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Each Approach Begins at:																					
	04:00 PM					04:15 PM					04:45 PM					04:00 PM					
+0 mins.	33	194	0	0	227	0	0	12	0	12	0	130	4	0	134	0	0	0	0	0	
+15 mins.	21	188	0	0	209	0	0	9	0	9	0	123	3	0	126	0	0	0	0	0	
+30 mins.	24	203	0	0	227	0	0	9	0	9	0	124	1	0	125	0	0	0	0	0	
+45 mins.	35	176	0	0	211	1	0	19	0	20	0	110	2	0	112	0	0	0	0	0	
Total Volume	113	761	0	0	874	1	0	49	0	50	0	487	10	0	497	0	0	0	0	0	
% App. Total	12.9	87.1	0	0		2	0	98	0		0	98	2	0		0	0	0	0		
PHF	.807	.937	.000	.000	.963	.250	.000	.645	.000	.625	.000	.937	.625	.000	.927	.000	.000	.000	.000	.000	



Levels of Service



Intersection						
Int Delay, s/veh	1.7					
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	210	355	681	8	0	9
Future Vol, veh/h	210	355	681	8	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	225	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	83	83	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	210	355	820	10	0	9

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	830	0	-	0	1600 825
Stage 1	-	-	-	-	825 -
Stage 2	-	-	-	-	775 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	802	-	-	-	117 372
Stage 1	-	-	-	-	430 -
Stage 2	-	-	-	-	454 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	802	-	-	-	86 372
Mov Cap-2 Maneuver	-	-	-	-	86 -
Stage 1	-	-	-	-	317 -
Stage 2	-	-	-	-	454 -

Approach	SE	NW	SW
HCM Control Delay, s	4.1	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	SWLn2
Capacity (veh/h)	-	-	802	-	-	372
HCM Lane V/C Ratio	-	-	0.262	-	-	0.024
HCM Control Delay (s)	-	-	11.1	-	0	14.9
HCM Lane LOS	-	-	B	-	A	B
HCM 95th %tile Q(veh)	-	-	1	-	-	0.1

Intersection

Int Delay, s/veh 1.3

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	102	770	484	8	1	46
Future Vol, veh/h	102	770	484	8	1	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	225	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	98	98	59	59
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	106	802	494	8	2	78

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	502	0	0
Stage 1	-	-	498
Stage 2	-	-	1014
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1062	-	132
Stage 1	-	-	611
Stage 2	-	-	350
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1062	-	119
Mov Cap-2 Maneuver	-	-	119
Stage 1	-	-	550
Stage 2	-	-	350

Approach	SE	NW	SW
HCM Control Delay, s	1	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1	SWLn2
Capacity (veh/h)	-	-	1062	-	119	572
HCM Lane V/C Ratio	-	-	0.1	-	0.014	0.136
HCM Control Delay (s)	-	-	8.8	-	35.7	12.3
HCM Lane LOS	-	-	A	-	E	B
HCM 95th %tile Q(veh)	-	-	0.3	-	0	0.5

Intersection

Int Delay, s/veh 1.8

Movement SEL SET NWT NWR SWL SWR

Lane Configurations						
Traffic Vol, veh/h	235	600	900	15	0	10
Future Vol, veh/h	235	600	900	15	0	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	225	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	83	83	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	235	600	1084	18	0	10

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	1102	0	-	0	2163	1093
Stage 1	-	-	-	-	1093	-
Stage 2	-	-	-	-	1070	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	633	-	-	-	52	261
Stage 1	-	-	-	-	321	-
Stage 2	-	-	-	-	329	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	633	-	-	-	33	261
Mov Cap-2 Maneuver	-	-	-	-	33	-
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	329	-

Approach SE NW SW

HCM Control Delay, s	3.9	0	19.3
HCM LOS			C

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1SWLn2

Capacity (veh/h)	-	-	633	-	-	261
HCM Lane V/C Ratio	-	-	0.371	-	-	0.038
HCM Control Delay (s)	-	-	14	-	0	19.3
HCM Lane LOS	-	-	B	-	A	C
HCM 95th %tile Q(veh)	-	-	1.7	-	-	0.1

Intersection

Int Delay, s/veh 1.6

Movement SEL SET NWT NWR SWL SWR

Lane Configurations						
Traffic Vol, veh/h	150	1100	775	10	1	60
Future Vol, veh/h	150	1100	775	10	1	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	225	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	98	98	59	59
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	156	1146	791	10	2	102

Major/Minor Major1 Major2 Minor2

Conflicting Flow All	801	0	-	0	2254	796
Stage 1	-	-	-	-	796	-
Stage 2	-	-	-	-	1458	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	822	-	-	-	46	387
Stage 1	-	-	-	-	444	-
Stage 2	-	-	-	-	214	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	822	-	-	-	37	387
Mov Cap-2 Maneuver	-	-	-	-	37	-
Stage 1	-	-	-	-	360	-
Stage 2	-	-	-	-	214	-

Approach SE NW SW

HCM Control Delay, s	1.2	0	19.1
HCM LOS			C

Minor Lane/Major Mvmt NWT NWR SEL SETSWLn1SWLn2

Capacity (veh/h)	-	-	822	-	37	387
HCM Lane V/C Ratio	-	-	0.19	-	0.046	0.263
HCM Control Delay (s)	-	-	10.4	-	106.9	17.6
HCM Lane LOS	-	-	B	-	F	C
HCM 95th %tile Q(veh)	-	-	0.7	-	0.1	1

Timings
3: Venetucci Blvd & Bob Johnson Dr

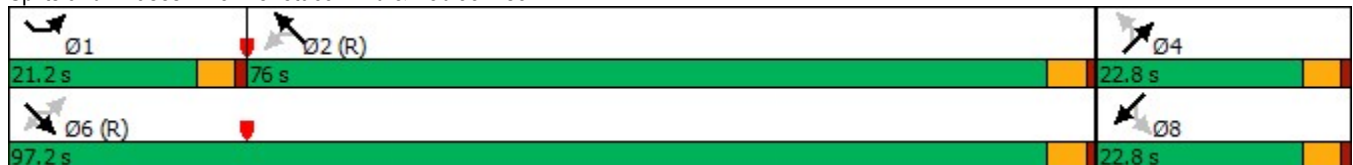
Short Term Total
AM Peak Hour

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWT
Lane Configurations								
Traffic Volume (vph)	210	355	14	11	681	42	4	0
Future Volume (vph)	210	355	14	11	681	42	4	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	NA
Protected Phases	1	6			2		4	8
Permitted Phases	6		6	2		4		
Detector Phase	1	6	6	2	2	4	4	8
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	21.2	97.2	97.2	76.0	76.0	22.8	22.8	22.8
Total Split (%)	17.7%	81.0%	81.0%	63.3%	63.3%	19.0%	19.0%	19.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag			
Lead-Lag Optimize?	Yes			Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	103.7	104.6	104.6	91.0	91.0	9.3	9.3	9.3
Actuated g/C Ratio	0.86	0.87	0.87	0.76	0.76	0.08	0.08	0.08
v/c Ratio	0.42	0.22	0.01	0.02	0.59	0.42	0.27	0.02
Control Delay	4.3	2.1	0.9	5.4	9.8	63.5	21.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.3	2.1	0.9	5.4	9.8	63.5	21.4	0.1
LOS	A	A	A	A	A	E	C	A
Approach Delay		2.9			9.7		42.9	0.1
Approach LOS		A			A		D	A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 9.0
 Intersection Capacity Utilization 68.2%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 3: Venetucci Blvd & Bob Johnson Dr



Timings
3: Venetucci Blvd & Bob Johnson Dr

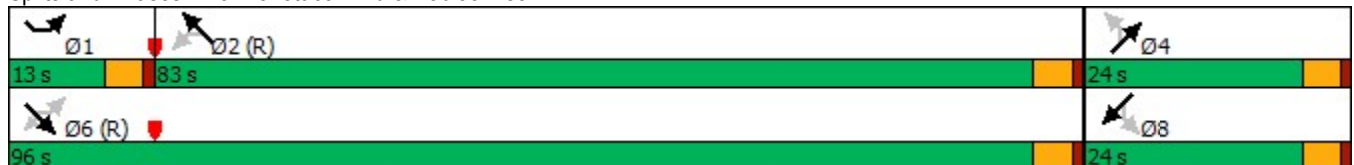
Short Term Total
PM Peak Hour

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWL	SWT
Lane Configurations									
Traffic Volume (vph)	102	770	44	36	484	24	2	1	0
Future Volume (vph)	102	770	44	36	484	24	2	1	0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6			2		4		8
Permitted Phases	6		6	2		4		8	
Detector Phase	1	6	6	2	2	4	4	8	8
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	13.0	96.0	96.0	83.0	83.0	24.0	24.0	24.0	24.0
Total Split (%)	10.8%	80.0%	80.0%	69.2%	69.2%	20.0%	20.0%	20.0%	20.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag				
Lead-Lag Optimize?	Yes			Yes	Yes				
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	105.1	106.0	106.0	94.1	94.1	7.9	7.9	7.9	7.9
Actuated g/C Ratio	0.88	0.88	0.88	0.78	0.78	0.07	0.07	0.07	0.07
v/c Ratio	0.14	0.49	0.03	0.07	0.34	0.30	0.20	0.01	0.09
Control Delay	1.8	3.2	0.5	4.4	5.2	61.0	24.3	51.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.8	3.2	0.5	4.4	5.2	61.0	24.3	51.0	0.3
LOS	A	A	A	A	A	E	C	D	A
Approach Delay		2.9			5.2		43.0		1.3
Approach LOS		A			A		D		A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.49
 Intersection Signal Delay: 4.9
 Intersection Capacity Utilization 63.9%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 3: Venetucci Blvd & Bob Johnson Dr



Timings
3: Venetucci Blvd & Bob Johnson Dr

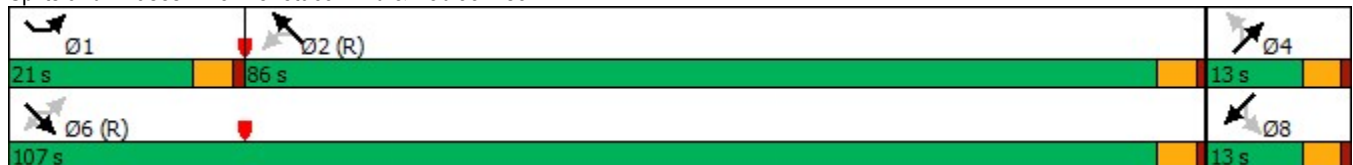
Long Term Total
AM Peak Hour

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWT
Lane Configurations								
Traffic Volume (vph)	235	600	14	11	900	42	4	1
Future Volume (vph)	235	600	14	11	900	42	4	1
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	NA
Protected Phases	1	6			2		4	8
Permitted Phases	6		6	2		4		
Detector Phase	1	6	6	2	2	4	4	8
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	21.0	107.0	107.0	86.0	86.0	13.0	13.0	13.0
Total Split (%)	17.5%	89.2%	89.2%	71.7%	71.7%	10.8%	10.8%	10.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag			
Lead-Lag Optimize?	Yes			Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	105.3	106.2	106.2	88.4	88.4	7.7	7.7	7.7
Actuated g/C Ratio	0.88	0.88	0.88	0.74	0.74	0.06	0.06	0.06
v/c Ratio	0.66	0.36	0.01	0.02	0.80	0.52	0.31	0.11
Control Delay	18.0	2.3	0.6	6.2	18.5	74.3	24.3	28.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	2.3	0.6	6.2	18.5	74.3	24.3	28.8
LOS	B	A	A	A	B	E	C	C
Approach Delay		6.6			18.3		49.9	28.8
Approach LOS		A			B		D	C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 14.9
 Intersection Capacity Utilization 81.5%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 3: Venetucci Blvd & Bob Johnson Dr



Timings
3: Venetucci Blvd & Bob Johnson Dr

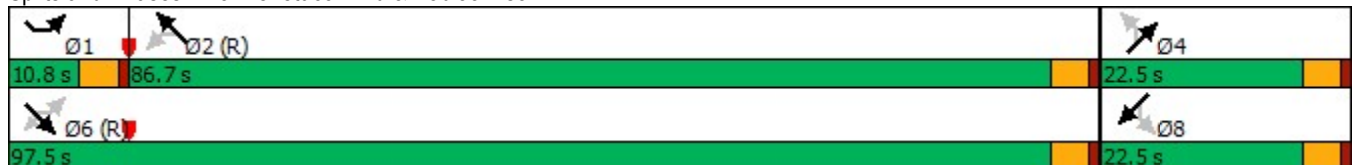
Long Term Total
PM Peak Hour

Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWL	SWT
Lane Configurations									
Traffic Volume (vph)	150	1100	44	36	775	24	2	1	1
Future Volume (vph)	150	1100	44	36	775	24	2	1	1
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases	1	6			2		4		8
Permitted Phases	6		6	2		4		8	
Detector Phase	1	6	6	2	2	4	4	8	8
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
Total Split (s)	10.8	97.5	97.5	86.7	86.7	22.5	22.5	22.5	22.5
Total Split (%)	9.0%	81.3%	81.3%	72.3%	72.3%	18.8%	18.8%	18.8%	18.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag				
Lead-Lag Optimize?	Yes			Yes	Yes				
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	None	None	None	None
Act Effct Green (s)	105.1	106.0	106.0	93.5	93.5	7.9	7.9	7.9	7.9
Actuated g/C Ratio	0.88	0.88	0.88	0.78	0.78	0.07	0.07	0.07	0.07
v/c Ratio	0.29	0.70	0.03	0.11	0.55	0.30	0.20	0.01	0.40
Control Delay	2.8	5.9	0.5	5.3	7.8	61.3	24.3	51.0	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.8	5.9	0.5	5.3	7.8	61.3	24.3	51.0	20.1
LOS	A	A	A	A	A	E	C	D	C
Approach Delay		5.4			7.7		43.1		20.6
Approach LOS		A			A		D		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:NWTL and 6:SETL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 7.5
 Intersection Capacity Utilization 81.3%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service D

Splits and Phases: 3: Venetucci Blvd & Bob Johnson Dr



Intersection												
Int Delay, s/veh	6.8											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↙	↑	↗	↙	↗		↙	↗		↙	↗	
Traffic Vol, veh/h	210	355	14	11	681	8	42	4	37	0	0	9
Future Vol, veh/h	210	355	14	11	681	8	42	4	37	0	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	225	-	0	0	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	83	83	83	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	210	355	14	13	820	10	46	4	40	0	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	830	0	0	369	0	0	1631	1631	355	1655	1640	825
Stage 1	-	-	-	-	-	-	775	775	-	851	851	-
Stage 2	-	-	-	-	-	-	856	856	-	804	789	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	802	-	-	1190	-	-	81	101	689	78	100	372
Stage 1	-	-	-	-	-	-	391	408	-	355	376	-
Stage 2	-	-	-	-	-	-	352	374	-	377	402	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	802	-	-	1190	-	-	62	74	689	56	73	372
Mov Cap-2 Maneuver	-	-	-	-	-	-	62	74	-	56	73	-
Stage 1	-	-	-	-	-	-	289	301	-	262	372	-
Stage 2	-	-	-	-	-	-	339	370	-	258	297	-

Approach	SE			NW			NE			SW		
HCM Control Delay, s	4			0.1			86			14.9		
HCM LOS							F			B		

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SERSWLn1	SWLn2
Capacity (veh/h)	62	380	1190	-	-	802	-	-	372
HCM Lane V/C Ratio	0.736	0.117	0.011	-	-	0.262	-	-	0.026
HCM Control Delay (s)	154.6	15.7	8.1	-	-	11.1	-	-	14.9
HCM Lane LOS	F	C	A	-	-	B	-	-	B
HCM 95th %tile Q(veh)	3.2	0.4	0	-	-	1	-	-	0.1

Intersection												
Int Delay, s/veh	3											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↑	↗	↖	↗		↖	↗		↖	↗	
Traffic Vol, veh/h	102	770	44	36	484	8	24	2	21	1	0	46
Future Vol, veh/h	102	770	44	36	484	8	24	2	21	1	0	46
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	225	-	0	0	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	98	98	98	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	106	802	46	37	494	8	26	2	23	1	0	50

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	502	0	0	848	0	0	1611	1590	802	1622	1632	498
Stage 1	-	-	-	-	-	-	1014	1014	-	572	572	-
Stage 2	-	-	-	-	-	-	597	576	-	1050	1060	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1062	-	-	790	-	-	84	108	384	82	101	572
Stage 1	-	-	-	-	-	-	288	316	-	505	504	-
Stage 2	-	-	-	-	-	-	490	502	-	275	301	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1062	-	-	790	-	-	68	93	384	68	87	572
Mov Cap-2 Maneuver	-	-	-	-	-	-	68	93	-	68	87	-
Stage 1	-	-	-	-	-	-	259	284	-	455	480	-
Stage 2	-	-	-	-	-	-	426	478	-	231	271	-

Approach	SE			NW			NE			SW		
HCM Control Delay, s	1			0.7			53.6			12.9		
HCM LOS							F			B		

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SER	SWLn1	SWLn2
Capacity (veh/h)	68	302	790	-	-	1062	-	-	68	572
HCM Lane V/C Ratio	0.384	0.083	0.046	-	-	0.1	-	-	0.016	0.087
HCM Control Delay (s)	87.7	18	9.8	-	-	8.8	-	-	58.8	11.9
HCM Lane LOS	F	C	A	-	-	A	-	-	F	B
HCM 95th %tile Q(veh)	1.5	0.3	0.1	-	-	0.3	-	-	0	0.3

Intersection												
Int Delay, s/veh	23											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↑	↗	↖	↗		↖	↗		↖	↗	
Traffic Vol, veh/h	235	600	14	11	900	15	42	4	37	0	1	10
Future Vol, veh/h	235	600	14	11	900	15	42	4	37	0	1	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	225	-	0	0	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	83	83	83	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	235	600	14	13	1084	18	46	4	40	0	1	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1102	0	0	614	0	0	2195	2198	600	2218	2203	1093
Stage 1	-	-	-	-	-	-	1070	1070	-	1119	1119	-
Stage 2	-	-	-	-	-	-	1125	1128	-	1099	1084	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	633	-	-	965	-	-	~ 32	45	501	31	45	261
Stage 1	-	-	-	-	-	-	268	298	-	251	282	-
Stage 2	-	-	-	-	-	-	249	279	-	258	293	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	633	-	-	965	-	-	~ 21	28	501	18	28	261
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 21	28	-	18	28	-
Stage 1	-	-	-	-	-	-	169	187	-	158	278	-
Stage 2	-	-	-	-	-	-	234	275	-	146	184	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	3.9	0.1	\$ 484.3	31.3
HCM LOS			F	D

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SERSWLn1	SWLn2
Capacity (veh/h)	21	189	965	-	-	633	-	-	149
HCM Lane V/C Ratio	2.174	0.236	0.014	-	-	0.371	-	-	0.08
HCM Control Delay (s)	\$ 927.9	29.8	8.8	-	-	14	-	-	31.3
HCM Lane LOS	F	D	A	-	-	B	-	-	D
HCM 95th %tile Q(veh)	6	0.9	0	-	-	1.7	-	-	0.3

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

Intersection												
Int Delay, s/veh	11											
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations	↖	↑	↗	↖	↗		↖	↗		↖	↗	
Traffic Vol, veh/h	150	1100	44	36	775	10	24	2	21	1	1	60
Future Vol, veh/h	150	1100	44	36	775	10	24	2	21	1	1	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	225	-	0	0	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	98	98	98	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	156	1146	46	37	791	10	26	2	23	1	1	65

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	801	0	0	1192	0	0	2361	2333	1146	2364	2374	796
Stage 1	-	-	-	-	-	-	1458	1458	-	870	870	-
Stage 2	-	-	-	-	-	-	903	875	-	1494	1504	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	822	-	-	586	-	-	~ 25	37	243	24	35	387
Stage 1	-	-	-	-	-	-	161	194	-	346	369	-
Stage 2	-	-	-	-	-	-	332	367	-	153	184	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	822	-	-	586	-	-	~ 16	28	243	17	27	387
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 16	28	-	17	27	-
Stage 1	-	-	-	-	-	-	130	157	-	280	346	-
Stage 2	-	-	-	-	-	-	258	344	-	111	149	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	1.2	0.5	\$ 426.6	22.7
HCM LOS			F	C

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SERSWLn1	SWLn2
Capacity (veh/h)	16	146	586	-	-	822	-	-	17 318
HCM Lane V/C Ratio	1.63	0.171	0.063	-	-	0.19	-	-	0.064 0.209
HCM Control Delay (s)	\$ 802.2	34.7	11.6	-	-	10.4	-	-	230.8 19.3
HCM Lane LOS	F	D	B	-	-	B	-	-	F C
HCM 95th %tile Q(veh)	3.8	0.6	0.2	-	-	0.7	-	-	0.2 0.8

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

Queues
3: Venetucci Blvd & Bob Johnson Dr

Short Term Total
AM Peak Hour



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWT
Lane Group Flow (vph)	210	355	14	13	830	46	44	10
v/c Ratio	0.42	0.22	0.01	0.02	0.59	0.42	0.27	0.02
Control Delay	4.3	2.1	0.9	5.4	9.8	63.5	21.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.3	2.1	0.9	5.4	9.8	63.5	21.4	0.1
Queue Length 50th (ft)	20	38	0	2	257	35	3	0
Queue Length 95th (ft)	42	72	3	9	391	72	39	0
Internal Link Dist (ft)		1423			1170		447	492
Turn Bay Length (ft)	225							
Base Capacity (vph)	595	1623	1381	775	1410	213	279	539
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.22	0.01	0.02	0.59	0.22	0.16	0.02

Intersection Summary

Queues
3: Venetucci Blvd & Bob Johnson Dr

Short Term Total
PM Peak Hour

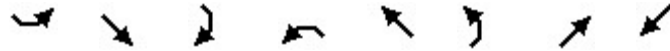


Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWL	SWT
Lane Group Flow (vph)	106	802	46	37	502	26	25	1	50
v/c Ratio	0.14	0.49	0.03	0.07	0.34	0.30	0.20	0.01	0.09
Control Delay	1.8	3.2	0.5	4.4	5.2	61.0	24.3	51.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.8	3.2	0.5	4.4	5.2	61.0	24.3	51.0	0.3
Queue Length 50th (ft)	8	105	0	6	104	20	2	1	0
Queue Length 95th (ft)	19	188	5	17	174	49	29	7	0
Internal Link Dist (ft)		1423			1170		447		492
Turn Bay Length (ft)	225								
Base Capacity (vph)	767	1645	1403	529	1457	219	280	224	657
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.49	0.03	0.07	0.34	0.12	0.09	0.00	0.08

Intersection Summary

Queues
3: Venetucci Blvd & Bob Johnson Dr

Long Term Total
AM Peak Hour



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWT
Lane Group Flow (vph)	235	600	14	13	1102	46	44	12
v/c Ratio	0.66	0.36	0.01	0.02	0.80	0.52	0.31	0.11
Control Delay	18.0	2.3	0.6	6.2	18.5	74.3	24.3	28.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.0	2.3	0.6	6.2	18.5	74.3	24.3	28.8
Queue Length 50th (ft)	29	71	0	3	550	35	3	1
Queue Length 95th (ft)	115	98	2	9	701	76	41	21
Internal Link Dist (ft)		1423			1170		447	492
Turn Bay Length (ft)	225							
Base Capacity (vph)	409	1648	1402	600	1369	98	151	123
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.36	0.01	0.02	0.80	0.47	0.29	0.10

Intersection Summary

Queues
3: Venetucci Blvd & Bob Johnson Dr

Long Term Total
PM Peak Hour



Lane Group	SEL	SET	SER	NWL	NWT	NEL	NET	SWL	SWT
Lane Group Flow (vph)	156	1146	46	37	801	26	25	1	66
v/c Ratio	0.29	0.70	0.03	0.11	0.55	0.30	0.20	0.01	0.40
Control Delay	2.8	5.9	0.5	5.3	7.8	61.3	24.3	51.0	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.8	5.9	0.5	5.3	7.8	61.3	24.3	51.0	20.1
Queue Length 50th (ft)	13	222	0	6	218	20	2	1	1
Queue Length 95th (ft)	27	424	5	19	364	49	29	7	45
Internal Link Dist (ft)		1423			1170		447		492
Turn Bay Length (ft)	225								
Base Capacity (vph)	533	1645	1403	333	1447	199	260	207	293
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.70	0.03	0.11	0.55	0.13	0.10	0.00	0.23

Intersection Summary