KUNZMAN ASSOCIATES, INC.

GEORGE AVENUE/IODINE SPRINGS ROAD RESIDENTIAL PROJECT

TRAFFIC IMPACT ANALYSIS

July 28, 2015

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

KUNZMAN ASSOCIATES, INC.

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TRAFFIC IMPACT ANALYSIS

July 28, 2015

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I. Introduction and Summary

A. Purpose of Report and Study Objectives

The purpose of this traffic impact analysis is to evaluate the development of the George Avenue/Iodine Springs Road Residential Project. This traffic report presents the traffic impact study methodology, analysis, findings, recommendations, and supporting data.

Study objectives include (1) documentation of existing traffic conditions in the vicinity of the site; (2) analysis of existing plus project[1] traffic conditions; (3) evaluation of existing plus ambient growth plus project traffic conditions; (4) evaluation of existing plus ambient growth plus project plus cumulative traffic conditions; and (5) determination of on-site and off-site improvements and system management actions needed to achieve City of Wildomar level of service requirements.

Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with those terms unique to transportation engineering, a glossary of terms is provided within Appendix A.

B. Traffic Impact Analysis Methodology

The traffic impact study methodology is consistent with the Riverside County Transportation Department Traffic Impact Analysis Preparation Guide. The City of Wildomar Transportation Department was contacted for input on the scope of the study and information on other developments.

1. Required Level of Service

The County of Riverside has established, as a Countywide target, a Level of Service C on all County maintained roads and conventional State Highways, except that a Level of Service D could be allowed in urban areas only at intersections of any combination of Major Streets, Arterials, Expressways, or conventional State Highways within one mile of a freeway interchange and also at freeway ramp intersections. Level of Service D would only be allowed, subject to Board of Supervisor approval, in those instances where mitigation of Level of Service C is deemed to be impractical. The City of Wildomar utilizes the County of Riverside standards.

2. Definition of Significant Impact

Consistent with County of Riverside guidelines, an impact is considered significant if the proposed project causes an intersection to drop below the target Levels of Service as described above.

---

[1] The existing plus project conditions has been analyzed to comply with the Sunnyvale West Neighborhood Association v. City of Sunnyvale CEQA court case. This scenario assumes the full development of the proposed project and full absorption of the proposed project trips on the circulation system at the present time. This scenario is provided for informational purposes only, and will not be used for impact determinations or mitigation.

Riverside County Congestion Management Program facilities include the I-15 Freeway. The Congestion Management Program requires transportation facilities to maintain a minimum Level of Service E. Therefore, the above definitions are more conservative and applied in this analysis.

C. Executive Summary

1. Site Location and Study Area

The project site is located adjacent to Depasquale Road between George Avenue and Iodine Springs Road in the City of Wildomar. Figure 1 illustrates the traffic analysis study area.

Pursuant to discussions with the City of Wildomar Transportation Department staff (see Appendix B), the study area includes the following study area intersections:

I-15 Freeway SB Ramps (NS) at:
- Baxter Road (EW) - #1

I-15 Freeway NB Ramps (NS) at:
- Baxter Road (EW) - #2

Monte Vista Drive (NS) at:
- Baxter Road (EW) - #3

George Avenue (NS) at:
- Depasquale Road/Project Access (EW) - #4
- Clinton Keith Road (EW) - #5

Iodine Springs Road (NS) at:
- Project Access (EW) - #6
- Clinton Keith Road (EW) - #7

2. Development Description

a. Project Name: George Avenue/Iodine Springs Road Residential Project

b. Proposed Land Use: 77 single-family detached residential dwelling units

3. Principal Findings

a. The proposed development is projected to generate approximately 733 daily vehicle trips, 57 of which occur during the morning peak hour and 77 of which occur during the evening peak hour.

b. A total of 36 other developments that are under construction or being processed concurrently in the study area have been accounted for in this traffic impact

analysis. It should be noted that many other developments are under construction or being processed concurrently in the vicinity of the project, but were not included in this analysis as the trips distributed onto the study area roadway network from these other developments are projected to be less than significant.

c. Level of Service With Proposed Development:

For Existing Plus Project traffic conditions, the following study area intersections are projected to operate at unacceptable Levels of Service during the peak hours, without improvements:

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1

Monte Vista Drive (NS) at:
Baxter Road (EW) - #3

For Existing Plus Ambient Growth Plus Project traffic conditions, the following study area intersections are projected to operate at unacceptable Levels of Service during the peak hours, without improvements:

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1

Monte Vista Drive (NS) at:
Baxter Road (EW) - #3

For Existing Plus Ambient Growth Plus Project Plus Cumulative traffic conditions, the following study area intersection is projected to operate at unacceptable Levels of Service during the peak hours, without improvements:

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1

I-15 Freeway NB Ramps (NS) at:
Baxter Road (EW) - #2

Monte Vista Drive (NS) at:
Baxter Road (EW) - #3

George Avenue (NS) at:
Depasquale Road/Project Access (EW) - #4

4. Recommendations

On-Site

Site-specific circulation and access recommendations are depicted on Figure 47.

Construct George Avenue from the north project boundary to the south project boundary as a Secondary (100 foot right-of-way) at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.

Construct Iodine Springs Road from the north project boundary to the south project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.

The site should provide sufficient parking spaces to meet City of Wildomar parking code requirements in order to service on-site parking demand.

On-site traffic signing/striping should be implemented in conjunction with detailed construction plans for the project site.

Sight distance at project accesses should be reviewed with respect to California Department of Transportation/City of Wildomar standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

Off-Site

The following intersection improvements are required for Existing Plus Ambient Growth Plus Project Plus Cumulative traffic conditions:

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1
- Construct EB Right Turn Lane
- Install Traffic Signal

I-15 Freeway NB Ramps (NS) at:
Baxter Road (EW) - #2
- Install Traffic Signal

Monte Vista Drive (NS) at:
Baxter Road (EW) - #5
- Construct SB Left Turn Lane
- Construct EB Left Turn Lane
- Install Traffic Signal

George Avenue (NS) at:

Depasquale Road (EW) - #6

- Construct Additional SB Through Lane

Participate in the phased construction of off-site traffic signals through payment of traffic signal mitigation fees. The traffic signals within the study area at buildout should specifically include an interconnect of the traffic signals to function in a coordinated system.

As is the case for any roadway design, the City of Wildomar should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

II. Proposed Development

A. Location

The project site is located adjacent to Depasquale Road between George Avenue and Iodine Springs Road in the City of Wildomar. Figure 1 shows the project location map.

B. Land Use and Intensity

The project site is proposed to be developed with 77 single-family detached residential dwelling units. The proposed project will have access to George Avenue and Iodine Springs Road.

C. Site Plan

Figure 2 illustrates the project site plan.

D. Zoning and Land Use Category

Existing Zoning: Residential

Proposed Zoning: Residential

E. Phasing and Timing

The proposed project is anticipated for opening in Year 2017 and is proposed to be built in one phase.

Figure 1
Project Location Map

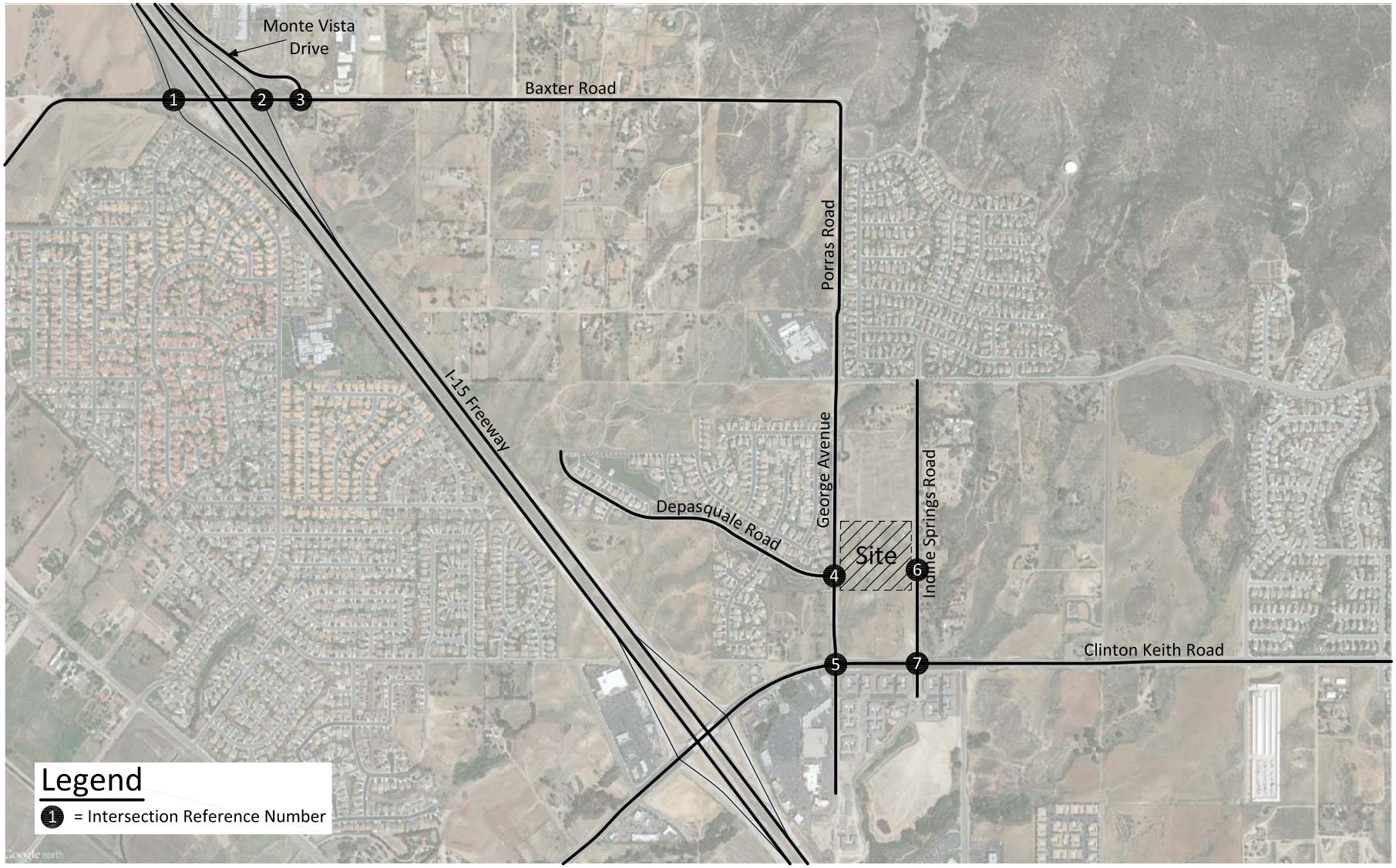

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Figure 2
Site Plan

III. Area Conditions

A. Study Area

1. Area of Significant Traffic Impact

Pursuant to discussions with the City of Wildomar Transportation Department staff, the study area includes the following study area intersections:

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1

I-15 Freeway NB Ramps (NS) at:
Baxter Road (EW) - #2

Monte Vista Drive (NS) at:
Baxter Road (EW) - #3

George Avenue (NS) at:
Depasquale Road/Project Access (EW) - #4

Iodine Springs Road (NS) at:
Project Access (EW) - #5
Clinton Keith Road (EW) - #6

B. Study Area Land Use

1. Existing Land Uses

The project site is currently undeveloped and no significant trip generation is currently being generated from the project. Adjacent land uses include the following:

North – Vacant
South – Vacant
East – Vacant
West – Residential

2. Approved Future Development

Other development and areawide growth calculations were added to existing volumes in the vicinity of the site for Existing Plus Ambient Growth Plus Project Plus Cumulative traffic conditions (see Section V).

C. Site Accessibility

1. Area Roadway System

Figure 3 identifies the existing roadway conditions for study area roadways. The number of through lanes for existing roadways and the existing intersection controls are identified.

Figure 4 exhibits the current City of Wildomar General Plan Circulation Element. Existing and future roadways are included in the Circulation Element of the General Plan and are graphically depicted on Figure 4. This figure shows the nature and extent of arterial highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan and serves to coordinate future arterials between local jurisdictions. Figure 5 illustrates the City of Wildomar arterial street cross-sections.

2. Traffic Volumes and Conditions

Figure 6 depicts the existing average daily traffic volumes. Existing average daily traffic volumes were obtained from the 2014 Traffic Volumes on California State Highways by the California Department of Transportation and factored from peak hour counts obtained by Kunzman Associates, Inc. in September 2014 and January 2015 (see Appendix C), using the following formula for each intersection leg:

PM Peak Hour (Approach + Exit Volume) x 12 = Leg Volume.

This is a conservative estimate and may over estimate the average daily traffic volumes.

The technique used to assess the capacity needs of an intersection is known as the Intersection Delay Method (see Appendix D). To calculate delay, the volume of traffic using the intersection is compared with the capacity of the intersection.

The existing delay and Level of Service for intersections in the vicinity of the project are shown in Table 1. Existing delay is based upon manual morning and evening peak hour intersection turning movement counts obtained and modified by Kunzman Associates, Inc. in September 2014 and January 2015 (see Figures 7 and 8). Traffic count worksheets are provided in Appendix C.

The study area intersections currently operate within acceptable Levels of Service during the peak hours for existing traffic conditions, except for the following study area intersections that currently operate at unacceptable Levels of Service during the peak hours, without improvements:

I-15 Freeway SB Ramps (NS) at:
- Baxter Road (EW) - #1

Monte Vista Drive (NS) at:
Baxter Road (EW) - #3

Existing delay worksheets are provided in Appendix D.

3. Existing Traffic Signal Warrant Analysis

Traffic signals appear to currently be warranted at the following study area intersections for Existing traffic conditions (see Appendix E):

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1

I-15 Freeway NB Ramps (NS) at:
Baxter Road (EW) - #2

Monte Vista Drive (NS) at:
Baxter Road (EW) - #3

The unsignalized intersections have been evaluated for traffic signals using the California Department of Transportation Warrant 3 Peak Hour traffic signal warrant analysis, as specified in the California Manual of Uniform Traffic Control Devices (2014 Update).

4. Transit Service

The study area is currently served by the Riverside Transit Agency Route 7 along Clinton Keith Road.

Table 1

Existing Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
I-15 Freeway SB Ramps (NS) at:																
Baxter Road (EW) - #1	Caltrans	AWS	0	0	0	1	0	d	0	0.5	0.5	1	1	0	99.9-F[4]	23.6-C
I-15 Freeway NB Ramps (NS) at:																
Baxter Road (EW) - #2	Caltrans	AWS	1	0	d	0	0	0	1	1	0	0	0.5	0.5	27.2-D	16.2-C
Monte Vista Drive (NS) at:																
Baxter Road (EW) - #3	Wildomar	CSS	0	0	0	0.5	0	0.5	0.5	0.5	0	0	0.5	0.5	56.5-F	9.8-A
George Avenue (NS) at:																
Depasquale Road (EW) - #4	Wildomar	CSS	0.5	0.5	0	0	0.5	0.5	0.5	0	0.5	0	0	0	11.5-B	9.2-A
Clinton Keith Road (EW) - #5	Wildomar	TS	1	0.5	0.5	1	1	1	1	2.5	0.5	1	2	1	16.2-B	13.8-B
Iodine Springs Road (NS) at:																
Clinton Keith Road (EW) - #7	Wildomar	CSS	0	0	1	0	0	1	0	3.5	0.5	0	1.5	0.5	10.9-B	12.8-B

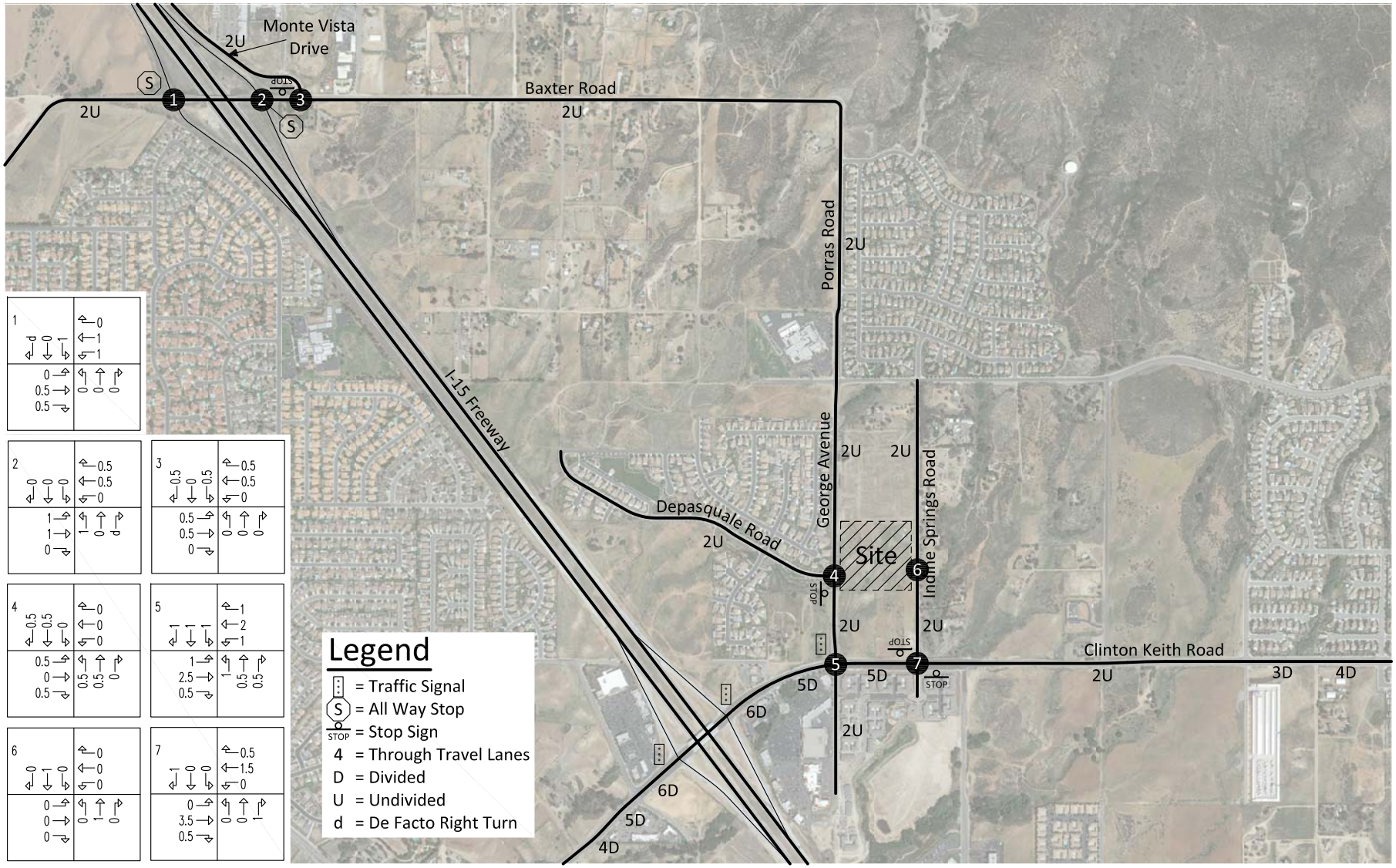
[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; d = De Facto Right Turn Lane

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] AWS = All Way Stop; CSS = Cross Street Stop; TS = Traffic Signal

[4] 99.9-F = Delay High, Intersection Unstable, Level of Service F.

Figure 3
Existing Through Travel Lanes and Intersection Controls



KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

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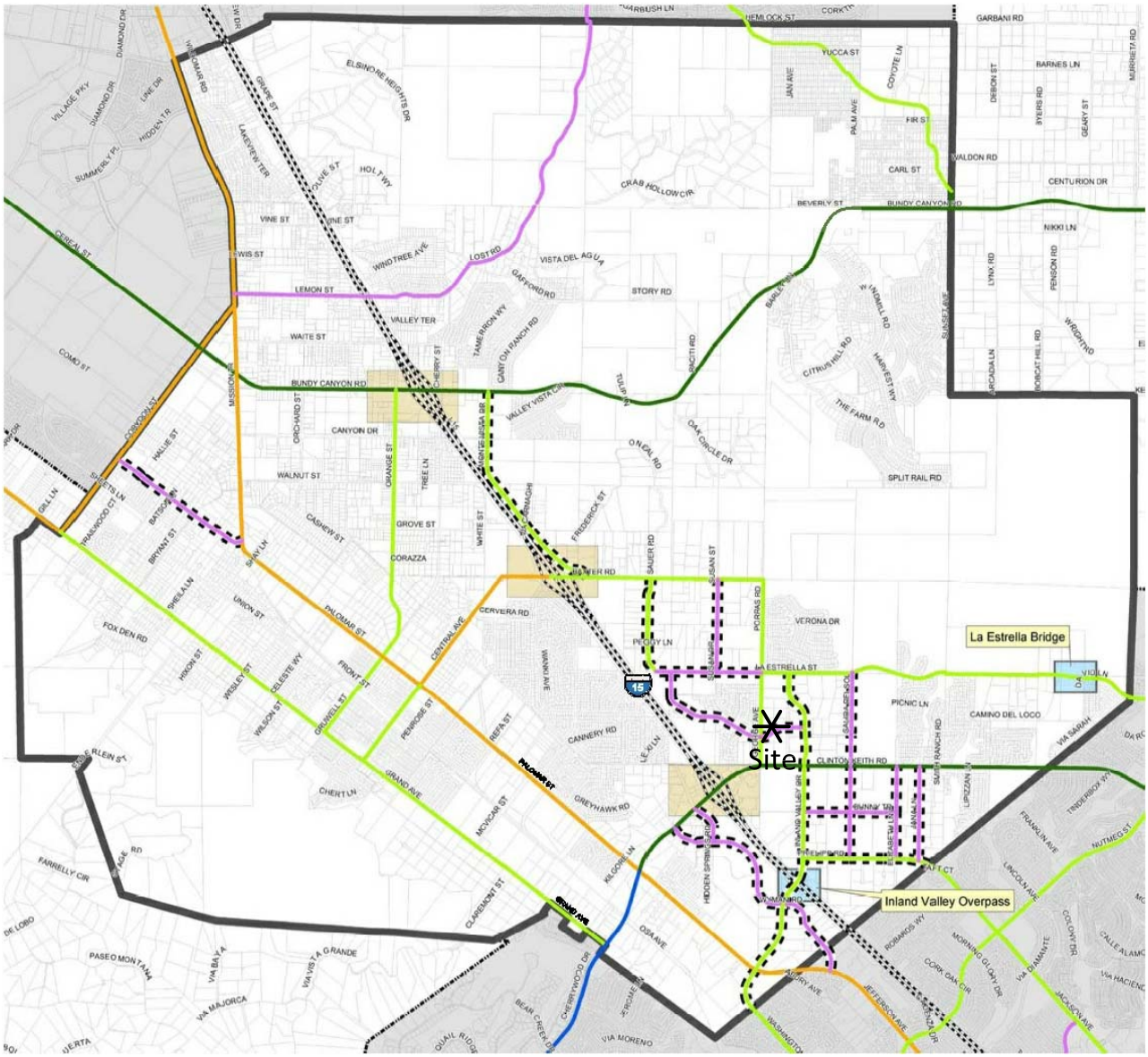
Figure 4
City of Wildomar General Plan Circulation Element



Legend

- Proposed Wildomar Circulation Changes
- URBAN ARTERIAL
- ARTERIAL
- MAJOR
- SECONDARY
- COLLECTOR
- Highways
- Parcels
- Proposed Wildomar Incorporation
- Cities
- Existing Interchanges

Source: City of Wildomar

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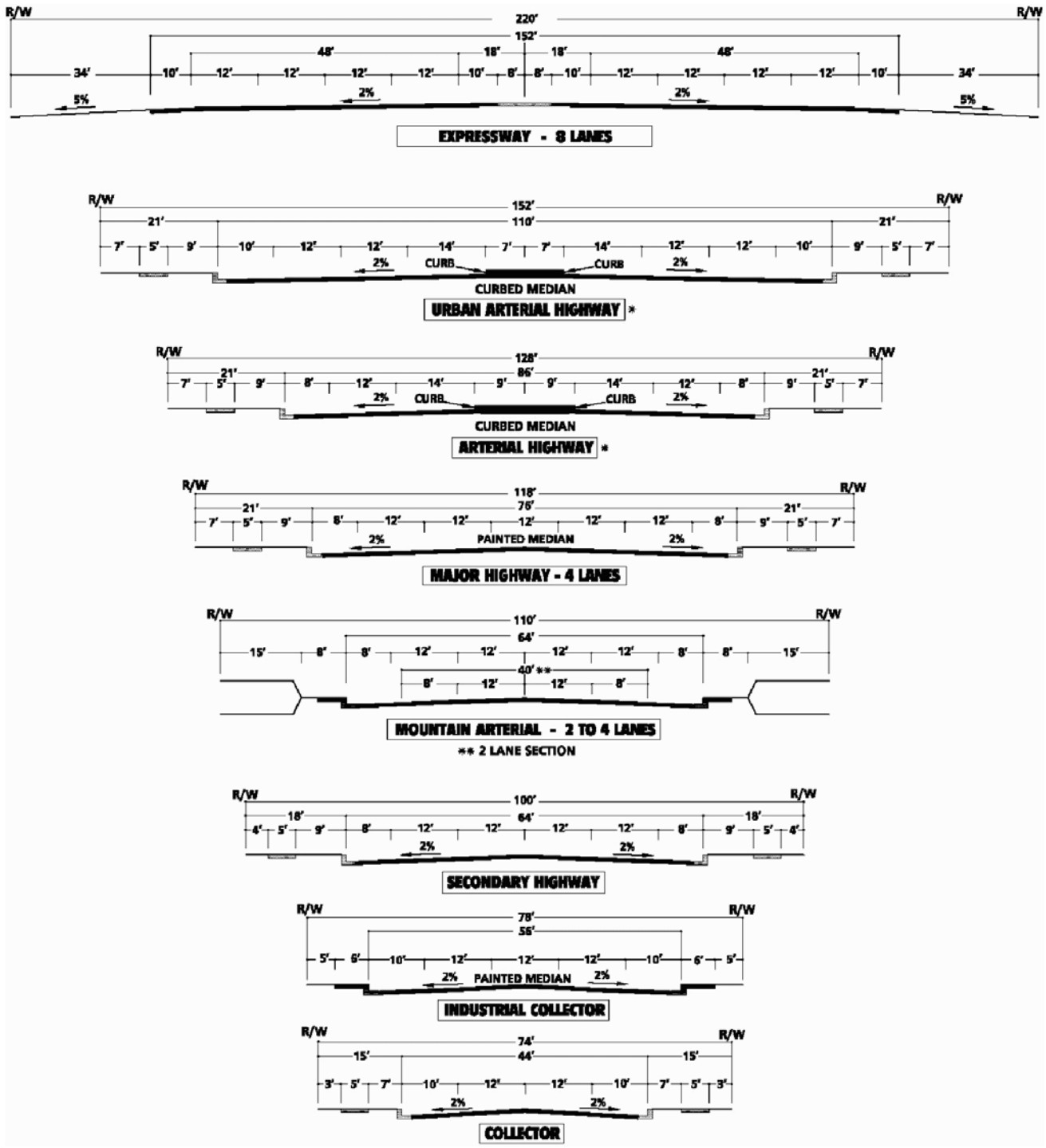
Figure 5
City of Wildomar General Plan Roadway Cross-Sections



Source: City of Wildomar

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Figure 6
Existing Average Daily Traffic Volumes

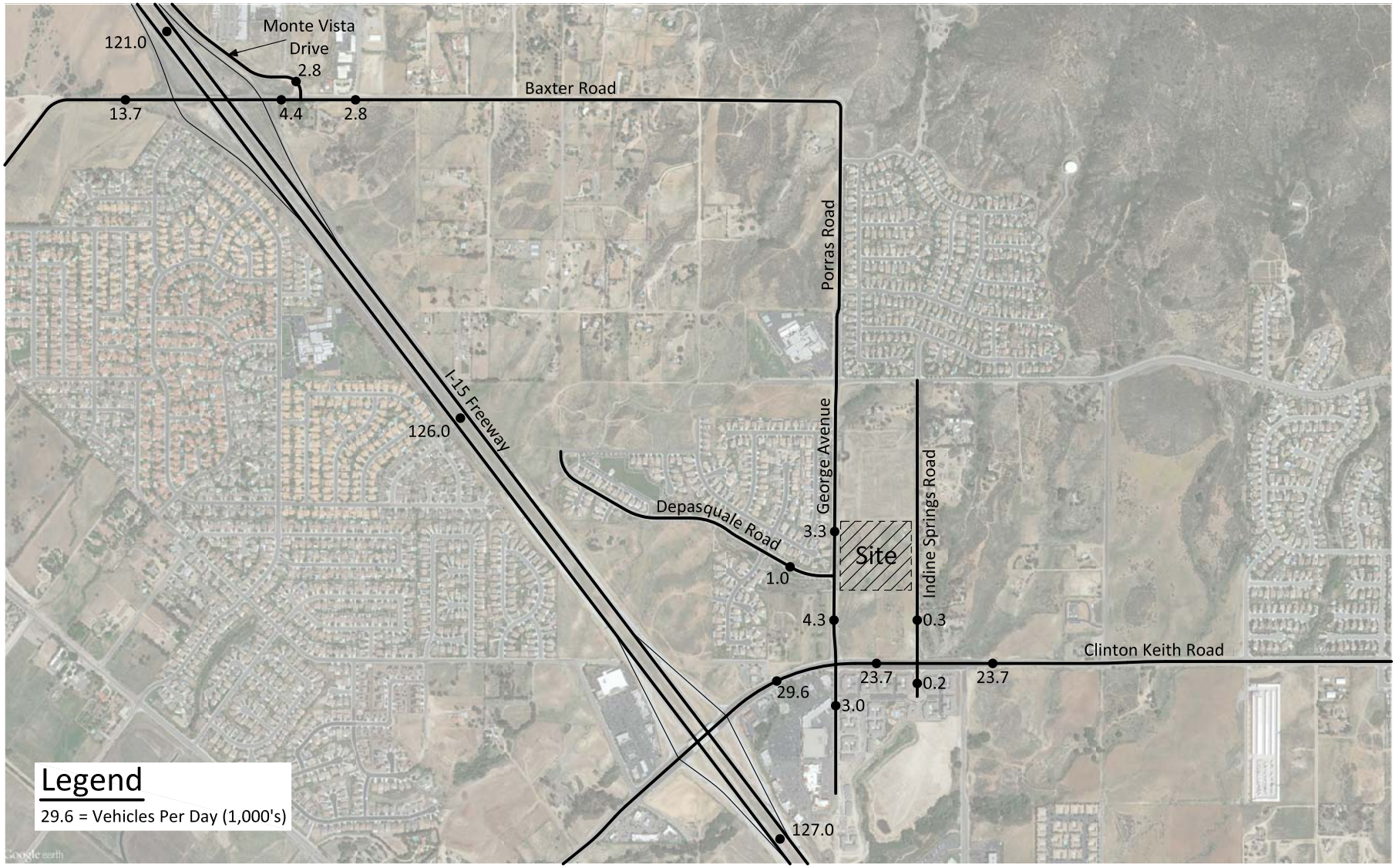

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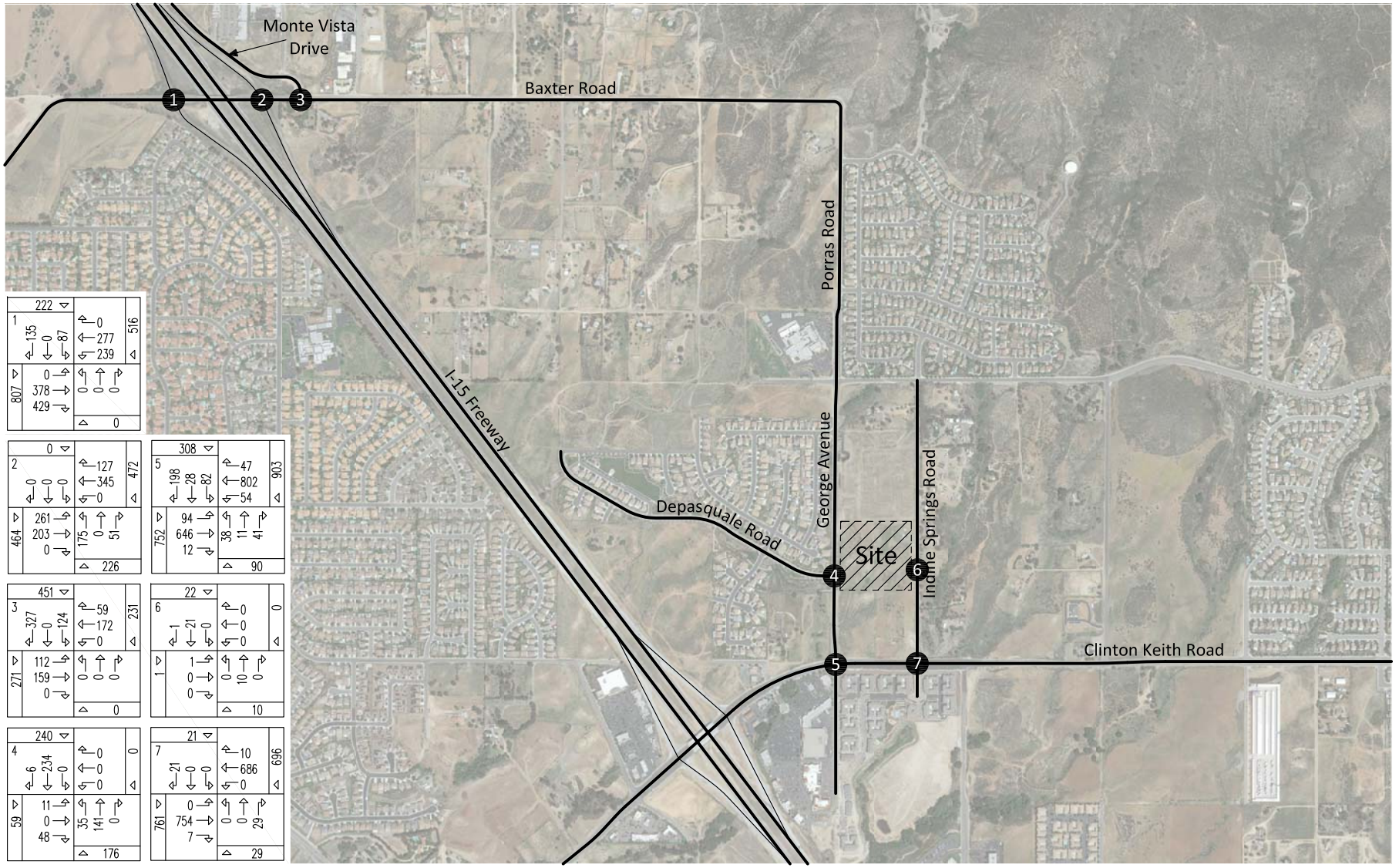
Figure 7
Existing Morning Peak Hour Intersection Turning Movement Volumes



KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

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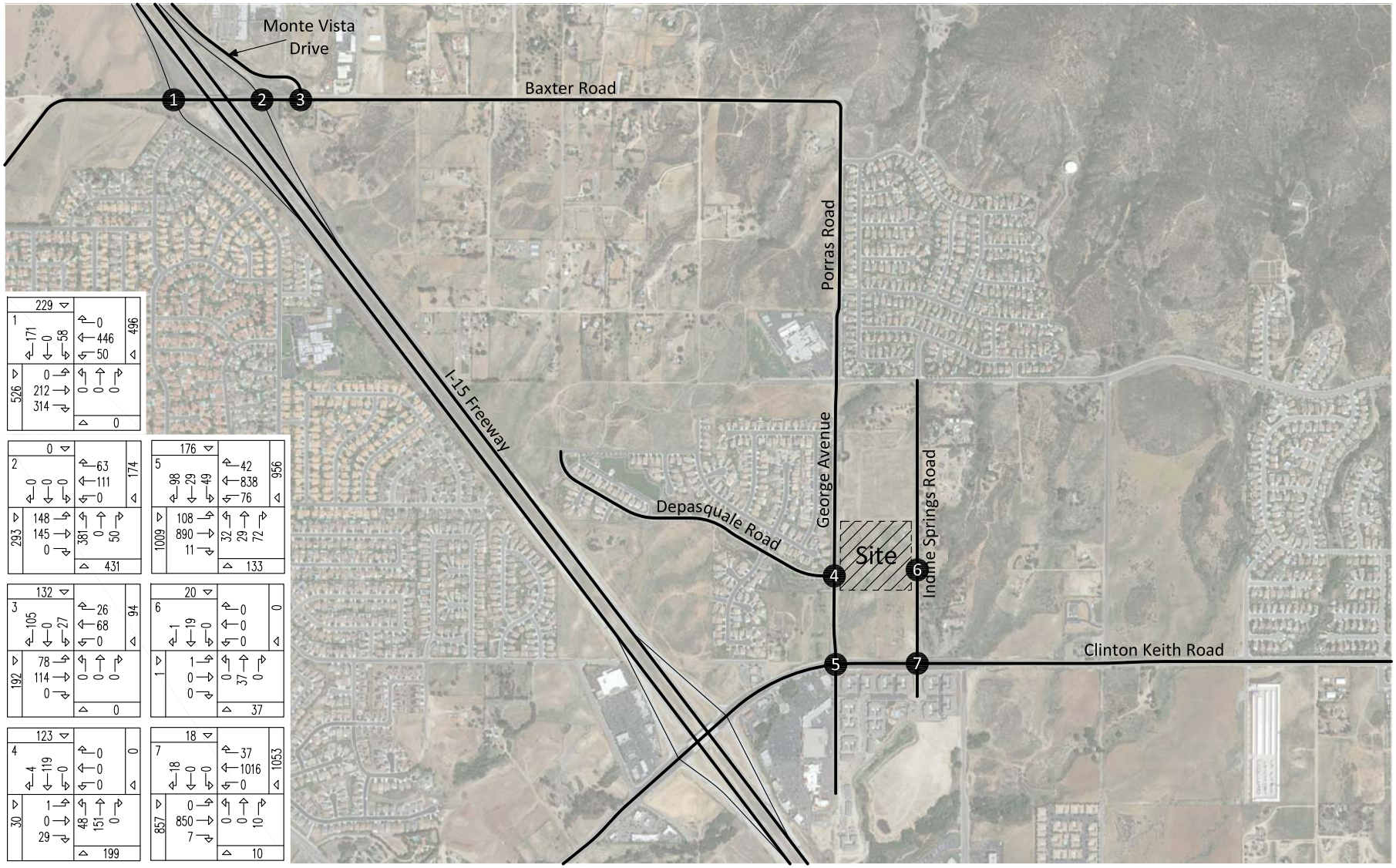
Figure 8
Existing Evening Peak Hour Intersection Turning Movement Volumes



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Intersection reference numbers are in upper left corner of turning movement boxes.

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IV. Project Traffic

The project site is proposed to be developed with 77 single-family detached residential dwelling units. The proposed project will have access to George Avenue and Iodine Springs Road.

A. Site Traffic

1. Trip Generation

The trips generated by the project are determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and life styles remain similar to what are known today. A major change in these variables may affect trip generation rates.

Trip generation rates were determined for daily traffic, morning peak hour inbound and outbound traffic, and evening peak hour inbound and outbound traffic for the proposed land use. By multiplying the trip generation rates by the land use quantity, the traffic volumes are determined. Table 2 exhibits the trip generation rates, project peak hour volumes, and project daily traffic volumes. The trip generation rates are from the Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012.

The proposed development is projected to generate approximately 733 daily vehicle trips, 57 of which occur during the morning peak hour and 77 of which occur during the evening peak hour.

2. Trip Distribution

Figures 9 and 10 contain the directional distributions of the project trips for the proposed land use.

To determine the trip distributions for the proposed project, peak hour traffic counts of the existing directional distribution of traffic for existing areas in the vicinity of the site, and other additional information on future development and traffic impacts in the area were reviewed.

3. Trip Assignment

Based on the identified trip generation and distributions, project average daily traffic volumes have been calculated and shown on Figure 11. Morning and evening peak hour intersection turning movement volumes expected from the project are shown on Figures 12 and 13, respectively.

4. Modal Split

The traffic reducing potential of public transit has not been considered in this report. Essentially the traffic projections are conservative in that public transit might be able to reduce the traffic volumes.

Table 2

Project Trip Generation[1]

Land Use	Quantity	Units[2]	Morning			Evening			Daily
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Single-Family Detached Residential	77	DU	0.19	0.56	0.75	0.63	0.37	1.00	9.52
Trips Generated									
Single-Family Detached Residential	77	DU	14	43	57	49	28	77	733

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Category 210.

[2] DU = Dwelling Units

Figure 9
Project Outbound Trip Distribution

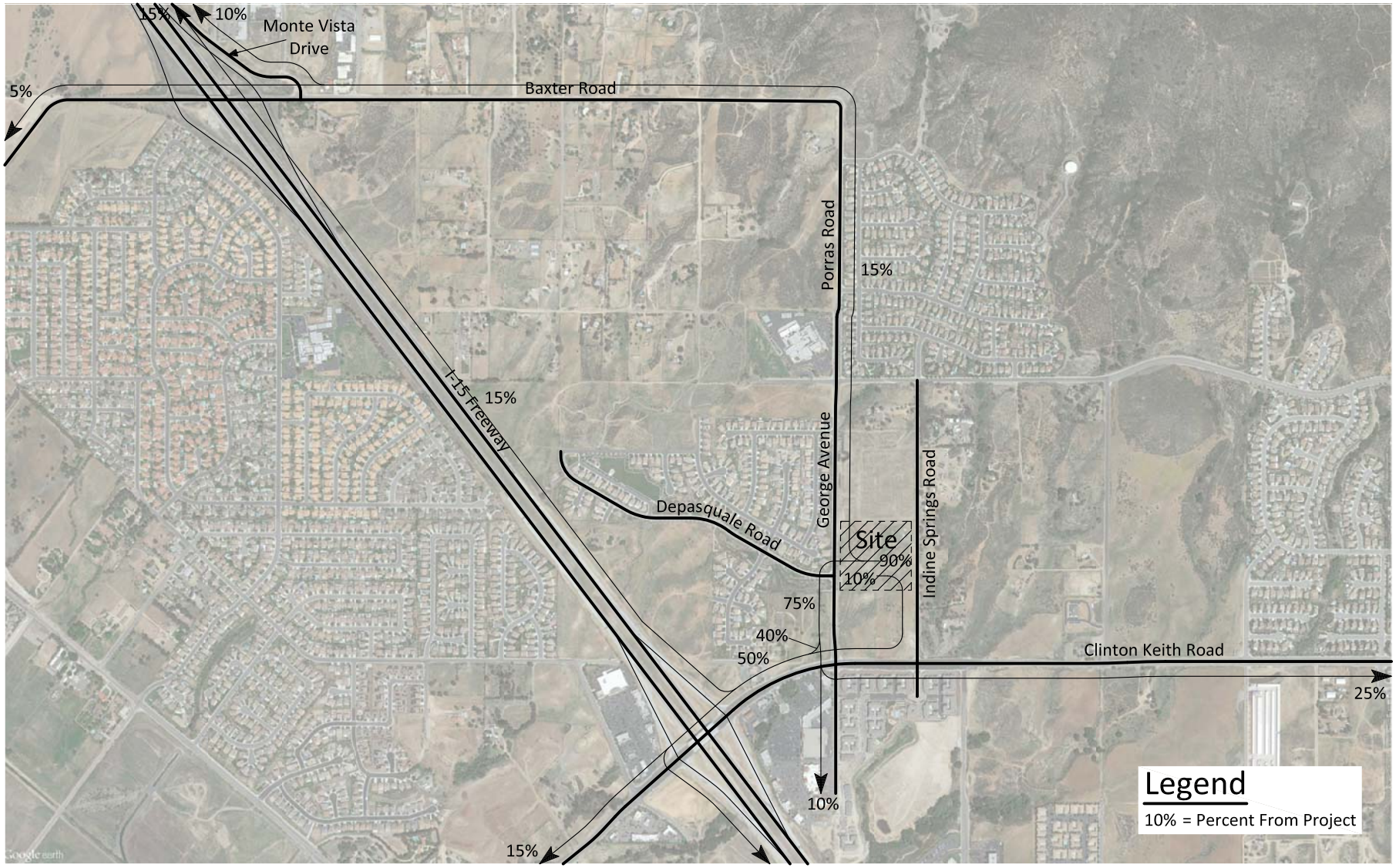

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Figure 10
Project Inbound Trip Distribution

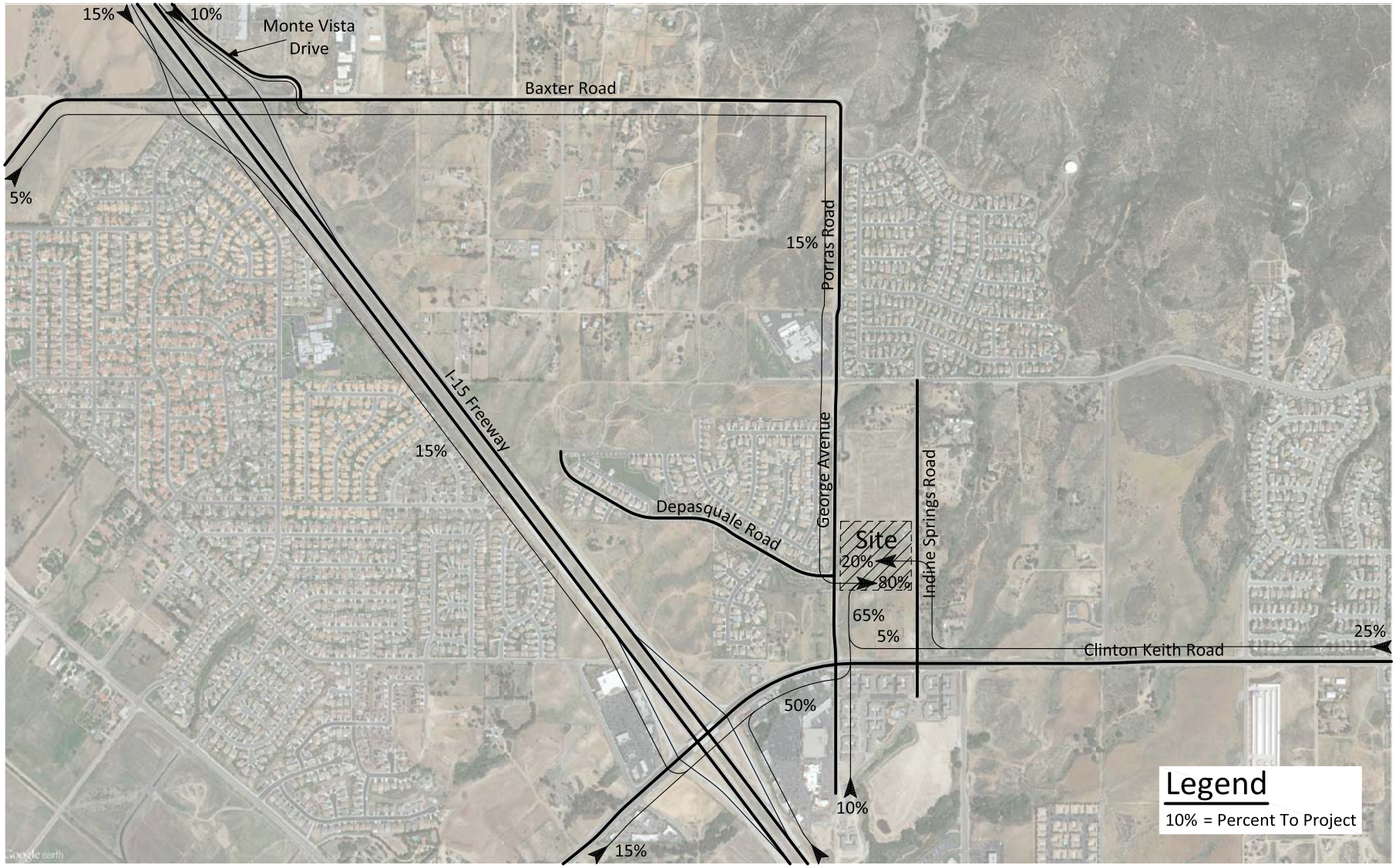

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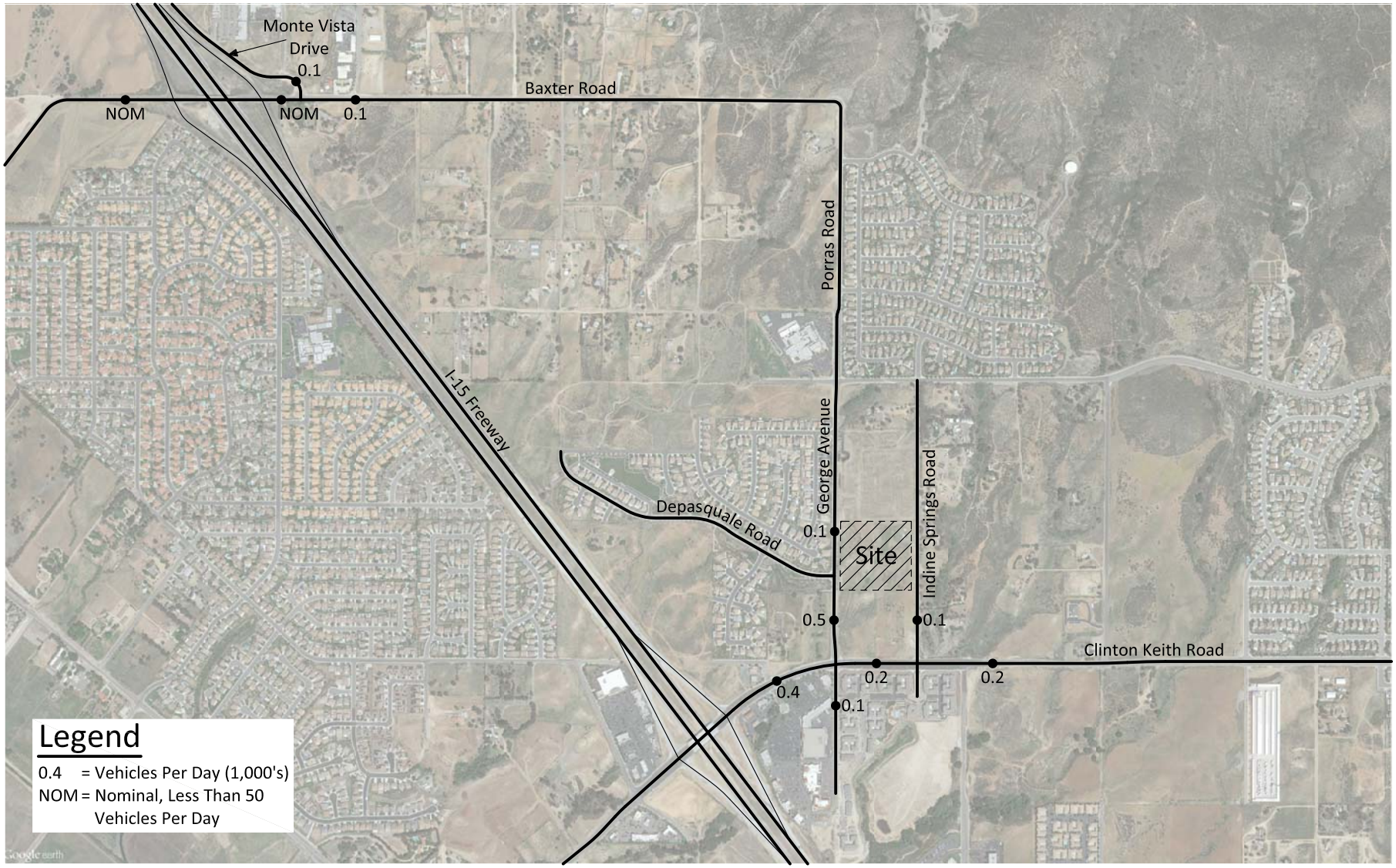
Figure 11
Project Average Daily Traffic Volumes



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OVER 35 YEARS OF EXCELLENT SERVICE

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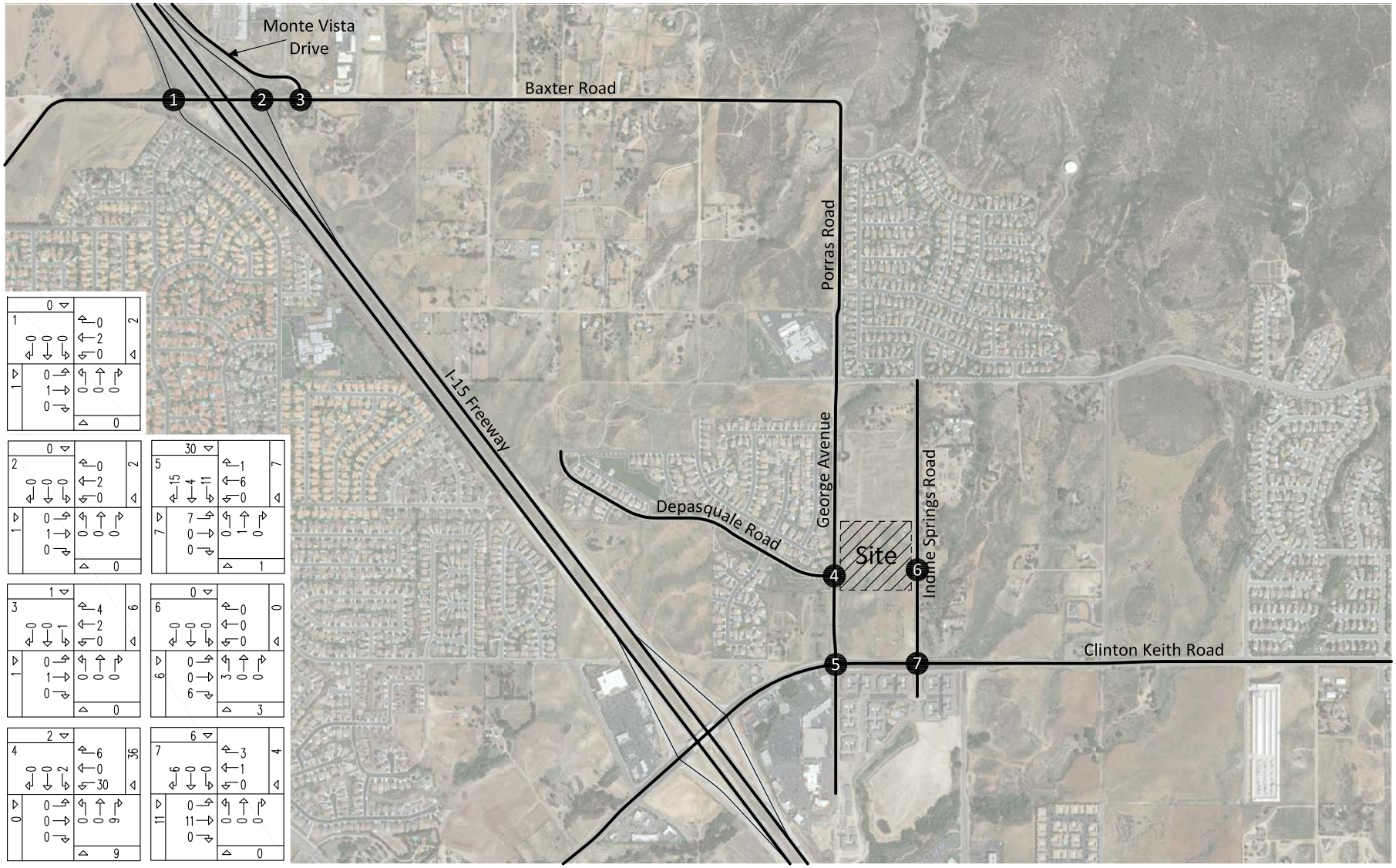
Figure 12
Project Morning Peak Hour Intersection Turning Movement Volumes



KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

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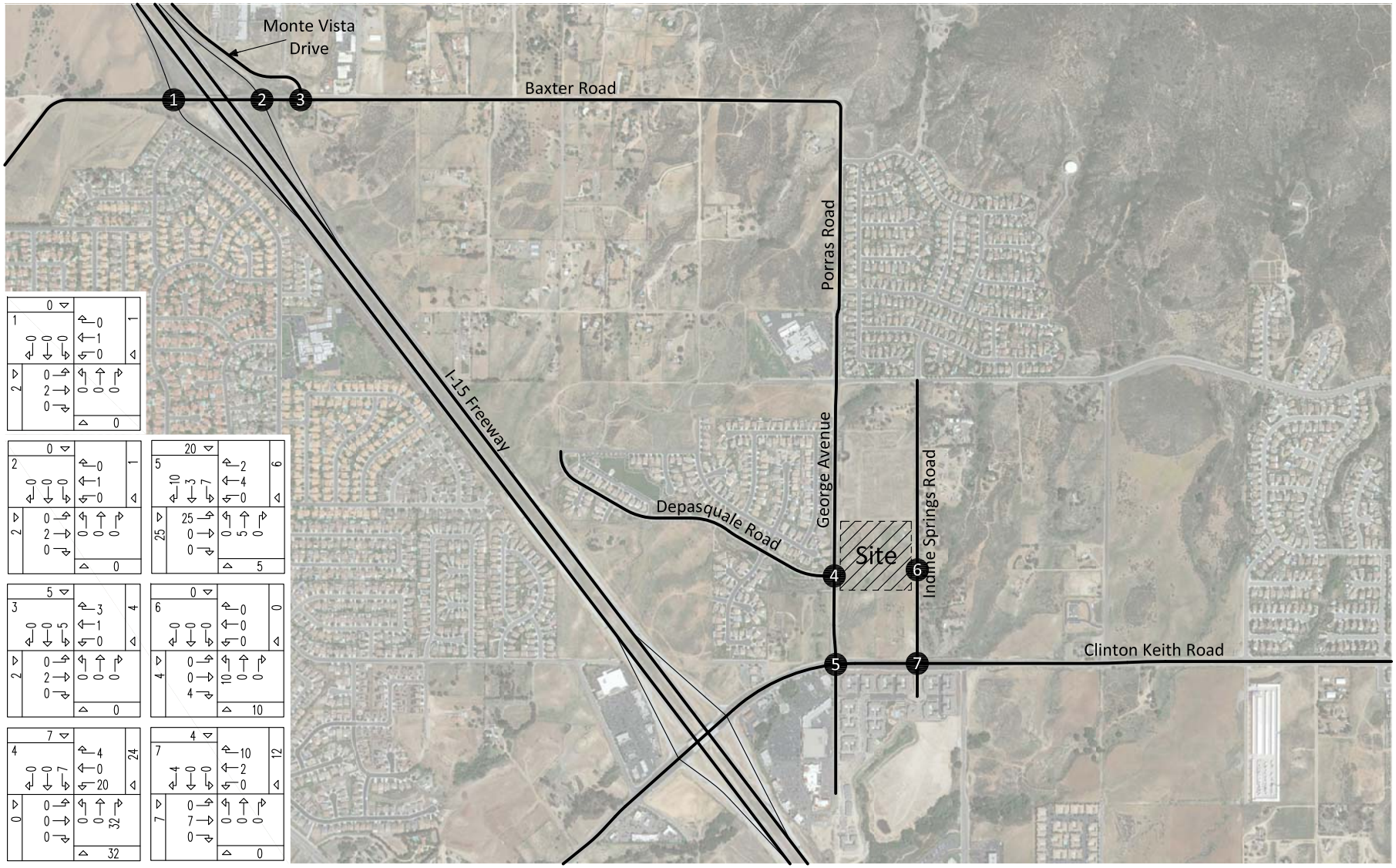
Figure 13
Project Evening Peak Hour Intersection Turning Movement Volumes



KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

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OVER 35 YEARS OF EXCELLENT SERVICE

V. Traffic Analysis

A. Future Traffic

1. Method of Projection

To assess future traffic conditions, project traffic is combined with existing traffic, ambient growth, and other development. The opening year for analysis purposes in this report is 2017.

2. Other Development

Table 3 lists the proposed land uses for the nearby development for opening year traffic conditions provided by the City of Wildomar Department of Transportation staff and City of Murrieta Department of Transportation staff. Figure 16 shows the other development traffic analysis zone map.

Table 3 shows the daily and peak hour vehicle trips generated by the surrounding approved development in the study area. Figures 17 to 34 contain the opening year directional distributions and assignment of the other development trips. Based on the identified opening year trip distributions for the other development on arterial highways throughout the study area, other development average daily traffic volumes are shown on Figure 35. Other development morning and evening peak hour intersection turning movement volumes are shown on Figures 36 and 37, respectively.

3. Ambient Growth

To account for ambient growth on roadways, Opening Year (2017) traffic volumes have been calculated based on a 2.0 percent annual growth rate of existing traffic volumes over a two year period.

B. Average Daily Traffic

1. Existing Plus Project

For Existing Plus Project traffic conditions, existing traffic is combined with project traffic. Figure 38 shows the average daily traffic volumes that can be expected for Existing Plus Project traffic conditions.

2. Existing Plus Ambient Growth Plus Project

For Existing Plus Ambient Growth Plus Project traffic conditions, existing traffic is combined with ambient growth and project traffic. Figure 39 shows the average daily traffic volumes that can be expected for Existing Plus Ambient Growth Plus Project traffic conditions.

3. Existing Plus Ambient Growth Plus Project Plus Cumulative

For Existing Plus Ambient Growth Plus Project Plus Cumulative traffic conditions, existing traffic is combined with ambient growth and project traffic. Figure 40 shows the average daily traffic volumes that can be expected for Existing Plus Ambient Growth Plus Project Plus Cumulative traffic conditions.

C. Delay and Level of Service Analysis

A complete explanation and calculation of intersection delay and Level of Service worksheets for all future traffic scenarios is included in Appendix D.

1. Existing Plus Project

The Existing Plus Project delay and Levels of Service for the study area roadway network are shown in Table 4. Table 4 shows delay values based on geometrics at the study area intersections without with improvements. Existing Plus Project morning and evening peak hour intersection turning movement volumes are shown on Figures 41 and 42, respectively.

For Existing Plus Project traffic conditions, the following study area intersections are projected to operate at unacceptable Levels of Service during the peak hours, without improvements:

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1

Monte Vista Drive (NS) at:
Baxter Road (EW) - #3

For Existing Plus Project traffic conditions and with improvements, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours. Existing Plus Project delay worksheets are provided in Appendix D.

2. Existing Plus Ambient Growth Plus Project

The Existing Plus Ambient Growth Plus Project delay and Levels of Service for the study area roadway network are shown in Table 5. Table 5 shows delay values based on geometrics at the study area intersections without and with improvements. Existing Plus Ambient Growth Plus Project morning and evening peak hour intersection turning movement volumes are shown on Figures 43 and 44, respectively.

For Existing Plus Ambient Growth Plus Project traffic conditions, the following study area intersection is projected to operate at unacceptable Levels of Service during the peak hours, without improvements:

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1

Monte Vista Drive (NS) at:
Baxter Road (EW) - #3

For Existing Plus Ambient Growth Plus Project traffic conditions and with improvements, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours. Existing Plus Ambient Growth Plus Project delay worksheets are provided in Appendix D.

3. Existing Plus Ambient Growth Plus Project Plus Cumulative

The Existing Plus Ambient Growth Plus Project Plus Cumulative delay and Levels of Service for the study area roadway network are shown in Table 6. Table 6 shows delay values based on geometrics at the study area intersections without and with improvements. Existing Plus Ambient Growth Plus Project Plus Cumulative morning and evening peak hour intersection turning movement volumes are shown on Figures 45 and 46, respectively.

For Existing Plus Ambient Growth Plus Project Plus Cumulative traffic conditions, the following study area intersection is projected to operate at unacceptable Levels of Service during the peak hours, without improvements:

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1

I-15 Freeway NB Ramps (NS) at:
Baxter Road (EW) - #2

Monte Vista Drive (NS) at:
Baxter Road (EW) - #3

George Avenue (NS) at:
Depasquale Road/Project Access (EW) - #4

For Existing Plus Ambient Growth Plus Project Plus Cumulative traffic conditions and with improvements, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours. Existing Plus Ambient Growth Plus Project Plus Cumulative delay worksheets are provided in Appendix D.

Table 3

Other Development Trip Generation[1]

Traffic Analysis Zone	Project	Land Use	Quantity	Units[2]	Peak Hour Morning Inbound	Peak Hour Morning Outbound	Peak Hour Morning Total	Peak Hour Evening Inbound	Peak Hour Evening Outbound	Peak Hour Evening Total	Daily
1	DPO-012-3186	Duplex	8	DU	1	3	4	3	2	5	53
2	Bear Creek	Single-Family Detached Residential	52	DU	10	29	39	33	19	52	495
3	McVicar Residential	Single-Family Detached Residential	49	DU	9	28	37	31	18	49	466
	C.V. Communities	Single-Family Detached Residential	186	DU	35	105	140	117	69	186	1,771
	Lennar Homes Andalusia I	Single-Family Detached Residential	86	DU	16	48	64	54	32	86	819
	Lennar Homes Andalusia II	Single-Family Detached Residential	44	DU	8	25	33	28	16	44	419
	Lennar Homes Andalusia III	Single-Family Detached Residential	55	DU	10	31	41	35	20	55	524
	Autozone	Automobile Parts Sales	29.767	TSF	33	33	66	87	91	178	1,843
	Stable Lanes	Commercial	20.894	TSF	12	8	20	37	40	77	892
		Daycare Facility	9.305	TSF	60	53	113	54	61	115	689
	Meritage Homes	Single-Family Detached Residential	74	DU	14	42	56	47	27	74	704
		Total			197	373	570	490	374	864	8,127
4	Wildomar Square	Commercial	46.600	TSF	28	17	45	83	90	173	1,990
5	Walmart	Free-Standing Discount Superstore	207.800	TSF	232	187	419	420	432	852	10,162
6	Lesle Tract Map	Single-Family Detached Residential	10	DU	2	6	8	6	4	10	95
	Strata/Baxter Village	Single-Family Detached Residential	67	DU	13	38	51	42	25	67	638
		Apartments	204	DU	21	83	104	82	44	126	1,357
		Commercial	75.000	TSF	81	50	131	237	259	496	5,633
		Total			117	177	294	367	332	699	7,723
7	Cornerstone Church	Preschool/Day Care/Church	42.777	TSF	85	73	158	75	84	159	1,020
8	Westpark Promenade	Condominiums/Townhomes	191	DU	13	71	84	67	32	99	1,110
		Commercial	118.354	TSF	300	204	504	577	535	1,112	12,464
		Total			313	275	588	644	567	1,211	13,574
9	Rancon 51	Single-Family Detached Residential	51	DU	10	29	39	32	19	51	486
10	George Ave/Clinton Keith Rd	Fast Food Restaurant with Drive-Through Window	5.940	TSF	138	132	270	101	93	194	2,947
		- Pass-by (49% AM, 50% PM)			-68	-65	-133	-51	-47	-98	-231
		Variety Store	12.840	TSF	29	20	49	44	44	88	822
		Convenience Market with Gas Pumps	12	FP	99	99	198	114	114	228	6,511
		- Pass-by (63% AM, 66% PM)			-62	-62	-124	-75	-75	-150	-274
		Commercial Retail	18.250	TSF	11	7	18	32	35	67	779
		- Pass-by (34% PM)			--	--	--	-14	-15	-29	-29
		Total			147	131	278	151	149	300	10,525
11	Inland Valley Medical	Medical Office	39.000	TSF	74	20	94	39	100	139	1,409
12	Strata/Clinton Keith	Apartments	192	DU	20	78	98	77	42	119	1,277
		Commercial	40.000	TSF	24	15	39	71	77	148	1,708
		Total			44	93	137	148	119	267	2,985
13	Rancon Medical/Retail Center	Single-Family Detached Residential	11	DU	2	6	8	7	4	11	105
		Medical Office	36.700	TSF	69	18	87	37	94	131	1,326
		Commercial	19.250	TSF	11	7	18	34	37	71	822
		Fast-Food Restaurant W/ Drive-Thru	3.000	TSF	69	67	136	51	47	98	1,488
		Total			151	98	249	129	182	311	3,741
14	Strata/Prielipp PAR	Condominiums/Townhomes	150	DU	11	55	66	52	26	78	872
		Assisted Living	25.000	TSF	10	4	14	10	9	19	190
	Sienna Apartments	Apartments	180	DU	18	73	91	73	39	112	1,197
	Lennar Residential	Single-Family Detached Residential	67	DU	13	38	51	42	25	67	638
		Total			52	170	222	177	99	276	2,897
15	Nutmeg Professional Center	Daycare Facility	15.350	TSF	99	88	187	89	100	189	1,137
		Office	17.400	TSF	24	3	27	4	22	26	192
		Total			123	91	214	93	122	215	1,329
16	TTM 35853	Single-Family Detached Residential	532	DU	100	299	399	335	197	532	5,065
	TTM 31121	Single-Family Detached Residential	24	DU	5	14	19	15	9	24	228
	DP-2014-301	Condominiums/Townhomes	251	DU	19	92	111	87	43	130	1,458
	DP-2014-364	Condominiums/Townhomes	82	DU	6	30	36	29	14	43	476
	DP-2008-2668/SC-2013-3300	Apartments	325	DU	33	133	166	131	71	202	2,161
	TTM 33231	Single-Family Detached Residential	35	DU	7	20	27	22	13	35	333
	TTM 28532	Single-Family Detached Residential	501	DU	94	282	376	316	185	501	4,770
	TTM 34445	Single-Family Detached Residential	13	DU	2	7	9	8	5	13	124
	TTM 32718	Single-Family Detached Residential	10	DU	2	6	8	6	4	10	95
	TTM 33904	Single-Family Detached Residential	22	DU	4	12	16	14	8	22	209
	TTM 32266	Single-Family Detached Residential	99	DU	19	56	75	62	37	99	942
		Total			291	951	1,242	1,025	586	1,611	15,861
Total					1,875	2,717	4,592	3,909	3,276	7,185	82,377

[1] Source: Space Creations Office and Daycare Facility Case No DP0-004-220 Focused Traffic Analysis prepared by RK Engineering Group, Inc., February 22, 2005.

Bear Creek (TTM 36328) Development Traffic Impact Study prepared by RK Engineering Group, Inc., August 21, 2013.

Westpark Promenade Traffic Impact Analysis prepared by Trames Solutions Inc., March 9,2015.

Cornerstone Pre-School Expansion Traffic Impact Analysis (Revised) prepared by Urban Crossroads., September 6, 2013.

Wildomar Walmart Traffic Impact Analysis prepared by Urban Crossroads., June 10, 2014.

Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Categories 210, 220, 230, 520, 565, 620, 710, 720, 814, 820, 841, 852, and 934.

[2] DU = Dwelling Units; TSF = Thousand Square Feet

Table 4

Existing Plus Project Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
I-15 Freeway SB Ramps (NS) at:																
Baxter Road (EW) - #1																
- Without Improvements	Caltrans	AWS	0	0	0	1	0	d	0	0.5	0.5	1	1	0	99.9-F[4]	23.9-C
- With Improvements		**TS**	0	0	0	1	0	d	0	0.5	0.5	1	1	0	33.6-C	12.7-B
I-15 Freeway NB Ramps (NS) at:																
Baxter Road (EW) - #2	Caltrans															
- Without Improvements		AWS	1	0	d	0	0	0	1	1	0	0	0.5	0.5	27.5-D	16.2-C
- With Improvements		**TS**	1	0	d	0	0	0	1	1	0	0	0.5	0.5	22.8-C	17.6-B
Monte Vista Drive (NS) at:																
Baxter Road (EW) - #3	Wildomar															
- Without Improvements		CSS	0	0	0	0.5	0	0.5	0.5	0.5	0	0	0.5	0.5	58.5-F	10.0-A
- With Improvements		**TS**	0	0	0	0.5	0	0.5	0.5	0.5	0	0	0.5	0.5	16.9-B	10.0-A
George Avenue (NS) at:																
Depasquale Road/Project Access (EW) - #4	Wildomar	CSS	0	1	0	0	1	0	0	1	0	0	**1**	0	16.5-C	12.6-B
Clinton Keith Road (EW) - #5	Wildomar	TS	1	0.5	0.5	1	1	1	1	2.5	0.5	1	2	1	16.6-B	14.5-B
Iodine Springs Road (NS) at:																
Project Access (EW) - #6	Wildomar	**CSS**	0.5	0.5	0	0	0.5	0.5	**0.5**	0	**0.5**	0	0	0	8.5-A	8.5-A
Clinton Keith Road (EW) - #7	Wildomar	CSS	0	0	1	0	0	1	0	3.5	0.5	0	1.5	0.5	10.9-B	12.9-B

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; d = De Facto Right Turn Lane; **1** = Improvement

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] AWS = All Way Stop; TS = Traffic Signal; CSS = Cross Street Stop

[4] 99.9-F = Delay High, Intersection Unstable, Level of Service F.

Table 5

Existing Plus Ambient Growth Plus Project Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
I-15 Freeway SB Ramps (NS) at:																
Baxter Road (EW) - #1	Caltrans															
- Without Improvements		AWS	0	0	0	1	0	d	0	0.5	0.5	1	1	0	99.9-F[4]	27.6-D
- With Improvements		**TS**	0	0	0	1	0	d	0	1	**1**	1	1	0	17.7-B	32.5-C
I-15 Freeway NB Ramps (NS) at:																
Baxter Road (EW) - #2	Caltrans															
- Without Improvements		AWS	1	0	d	0	0	0	1	1	0	0	0.5	0.5	32.4-D	17.4-C
- With Improvements		**TS**	1	0	d	0	0	0	1	1	0	0	0.5	0.5	24.5-C	18.1-D
Monte Vista Drive (NS) at:																
Baxter Road (EW) - #3	Wildomar															
- Without Improvements		CSS	0	0	0	0.5	0	0.5	0.5	0.5	0	0	0.5	0.5	77.5-F	10.1-B
- With Improvements		**TS**	0	0	0	0.5	0	0.5	0.5	0.5	0	0	0.5	0.5	18.2-B	10.0-B
George Avenue (NS) at:																
Depasquale Road/Project Access (EW) - #4	Wildomar	CSS	0	1	0	0	1	0	0	1	0	0	**1**	0	17.1-C	12.9-B
Clinton Keith Road (EW) - #5	Wildomar	TS	1	0.5	0.5	1	1	1	1	2.5	0.5	1	2	1	16.7-B	14.5-B
Iodine Springs Road (NS) at:																
Project Access (EW) - #6	Wildomar	**CSS**	0.5	0.5	0	0	0.5	0.5	**0.5**	0	**0.5**	0	0	0	8.5-A	8.5-A
Clinton Keith Road (EW) - #7	Wildomar	CSS	0	0	1	0	0	1	0	3.5	0.5	0	1.5	0.5	11.1-B	13.2-B

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; d = De Facto Right Turn Lane; **1** = Improvement

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] AWS = All Way Stop; TS = Traffic Signal; CSS = Cross Street Stop

[4] 99.9-F = Delay High, Intersection Unstable, Level of Service F.

Table 6

Existing Plus Ambient Growth Plus Project Plus Cumulative Intersection Delay and Level of Service

Intersection	Jurisdiction	Traffic Control[3]	Intersection Approach Lanes[1]												Peak Hour Delay-LOS[2]	
			Northbound			Southbound			Eastbound			Westbound				
			L	T	R	L	T	R	L	T	R	L	T	R	Morning	Evening
I-15 Freeway SB Ramps (NS) at:																
Baxter Road (EW) - #1	Caltrans															
- Without Improvements		AWS	0	0	0	1	0	d	0	0.5	0.5	1	1	0	99.9-F[4]	99.9-F
- With Improvements		**TS**	0	0	0	1	0	d	0	1	**1**	1	1	0	19.4-B	37.3-D
I-15 Freeway NB Ramps (NS) at:																
Baxter Road (EW) - #2	Caltrans															
- Without Improvements		AWS	1	0	d	0	0	0	1	1	0	0	0.5	0.5	99.9-F	99.9-F
- With Improvements		**TS**	1	0	d	0	0	0	1	1	0	0	0.5	0.5	33.7-C	30.7-C
Monte Vista Drive (NS) at:																
Baxter Road (EW) - #3	Wildomar															
- Without Improvements		CSS	0	0	0	0.5	0	0.5	0.5	0.5	0	0	0.5	0.5	99.9-F	58.2-F
- With Improvements		**TS**	0	0	0	**1**	0	1	**1**	1	0	0	0.5	0.5	16.7-B	11.8-B
George Avenue (NS) at:																
Depasquale Road/Project Access (EW) - #4	Wildomar															
- Without Improvements		CSS	0	1	0	0	1	0	0	1	0	0	1	0	26.3-D	20.1-C
- With Improvements		CSS	0	1	0	0.5	**1**	0.5	0	1	0	0	**1**	0	19.5-C	19.4-C
Clinton Keith Road (EW) - #5	Wildomar	TS	1	0.5	0.5	1	1	1	1	2.5	0.5	1	2	1	22.8-C	30.7-C
Iodine Springs Road (NS) at:																
Project Access (EW) - #6	Wildomar	**CSS**	0.5	0.5	0	0	0.5	0.5	**0.5**	0	**0.5**	0	0	0	8.5-A	8.5-A
Clinton Keith Road (EW) - #7	Wildomar	CSS	0	0	1	0	0	1	0	3.5	0.5	0	1.5	0.5	13.5-B	18.7-C

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.
L = Left; T = Through; R = Right; d = De Facto Right Turn Lane; **1** = Improvement

[2] Delay and level of service has been calculated using the following analysis software: Traffix, Version 7.9.0215 (2008). Per the Highway Capacity Manual, overall average intersection delay and level of service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] AWS = All Way Stop; TS = Traffic Signal; CSS = Cross Street Stop

[4] 99.9-F = Delay High, Intersection Unstable, Level of Service F.

Figure 14
Other Development Traffic Analysis Zone Map

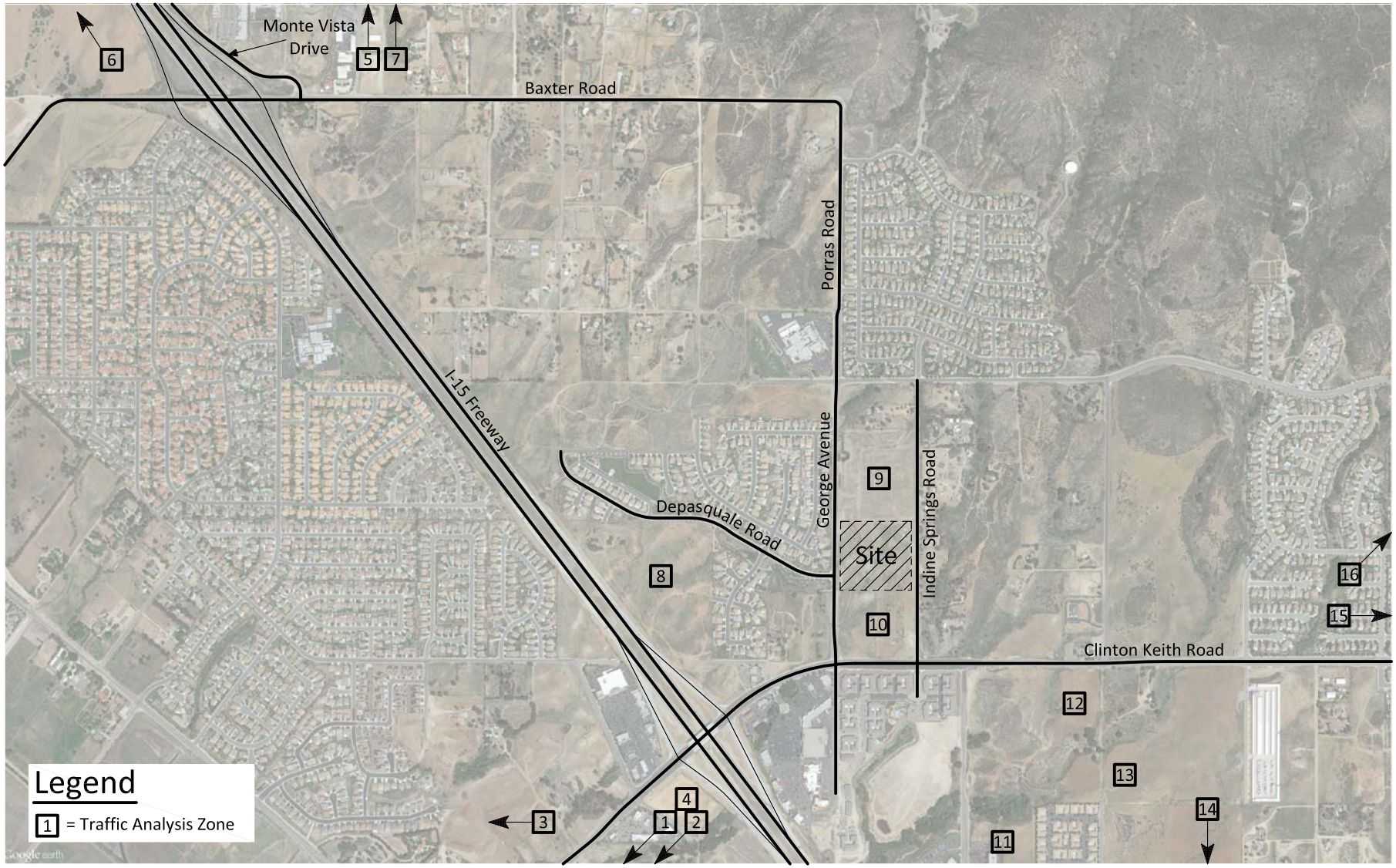

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Figure 15
Other Development Traffic Analysis Zone 1 Trip Distribution

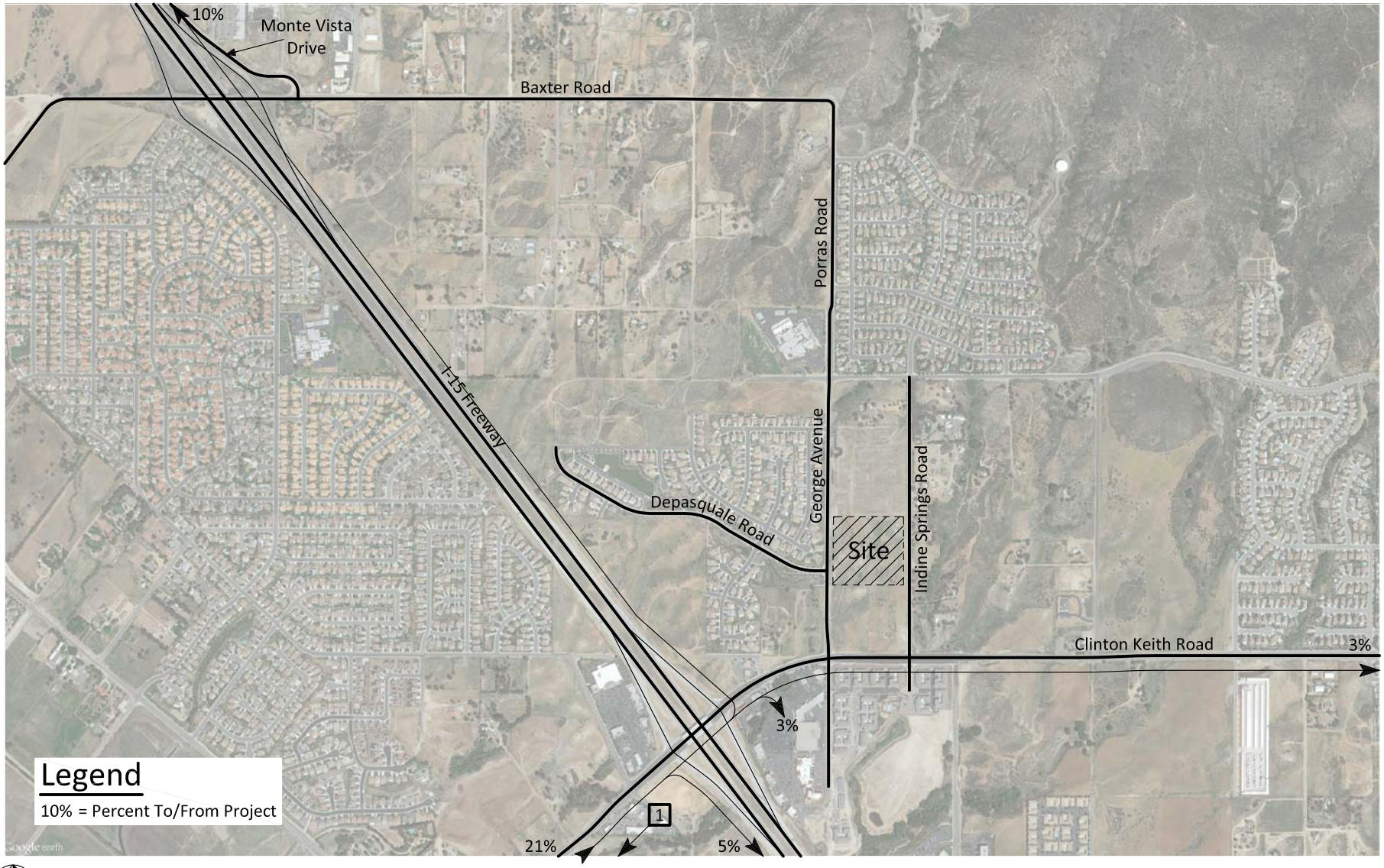

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Figure 16
Other Development Traffic Analysis Zone 2 Trip Distribution

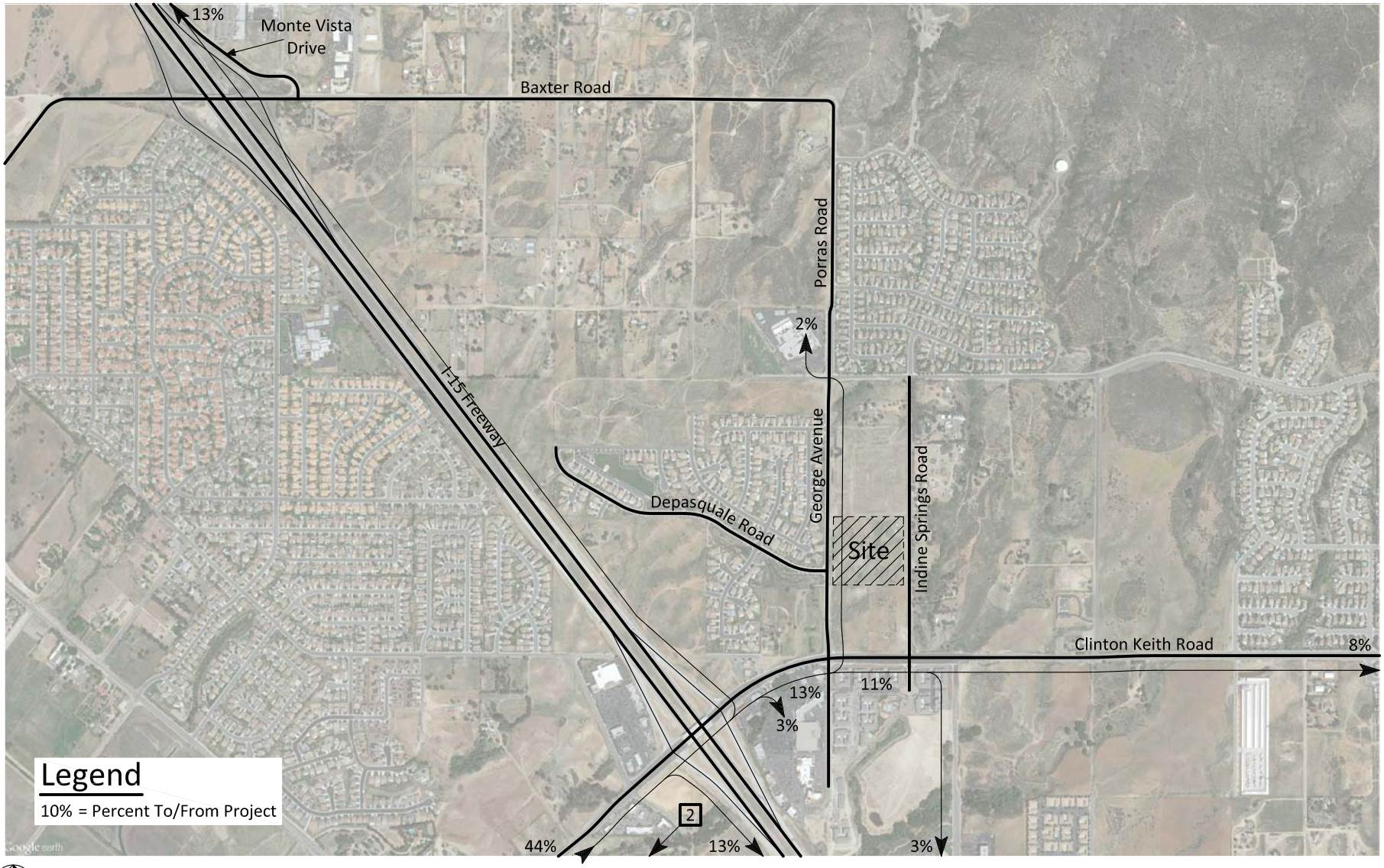

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Figure 17
Other Development Traffic Analysis Zone 3 Trip Distribution

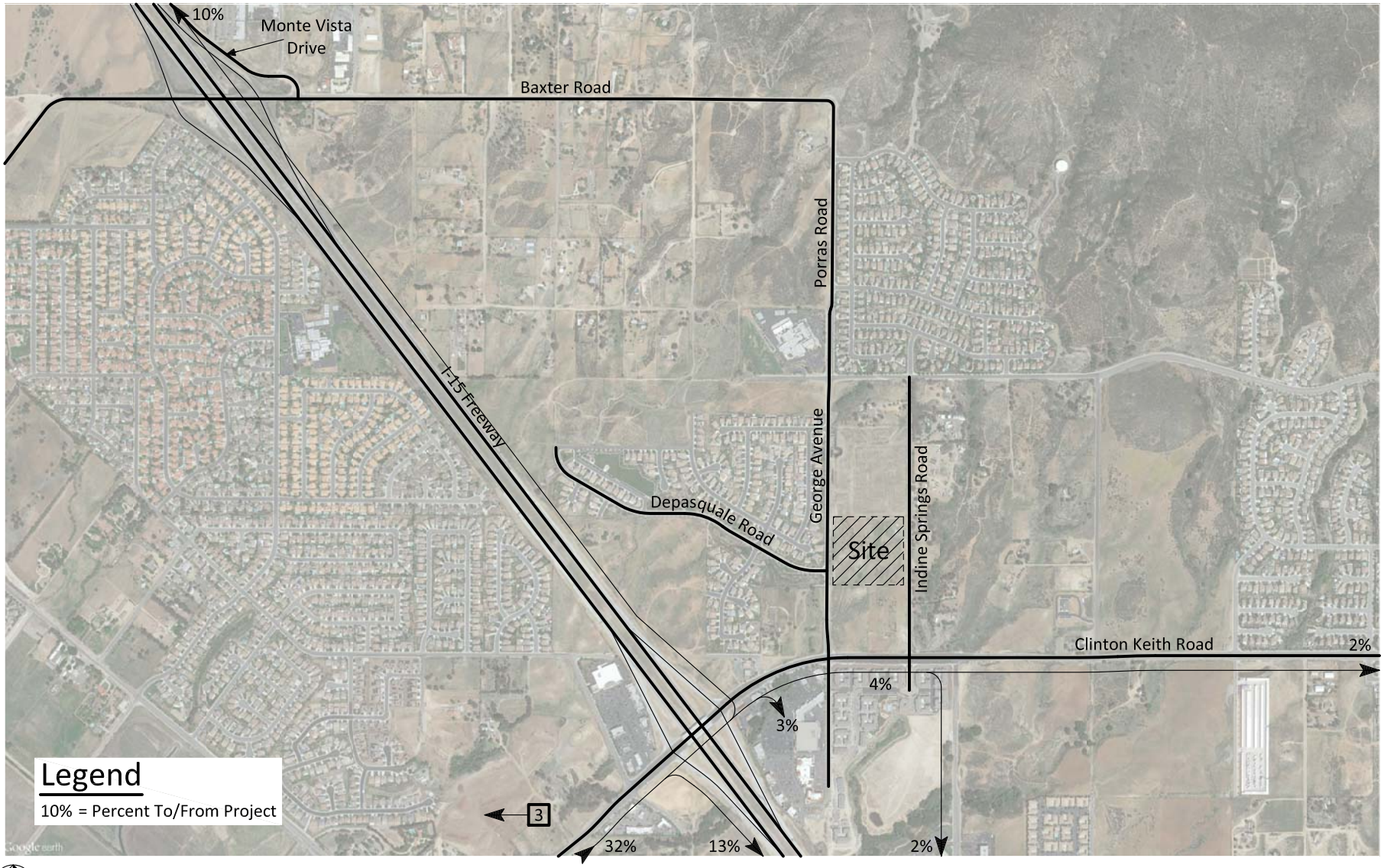

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Figure 18
Other Development Traffic Analysis Zone 4 Trip Distribution

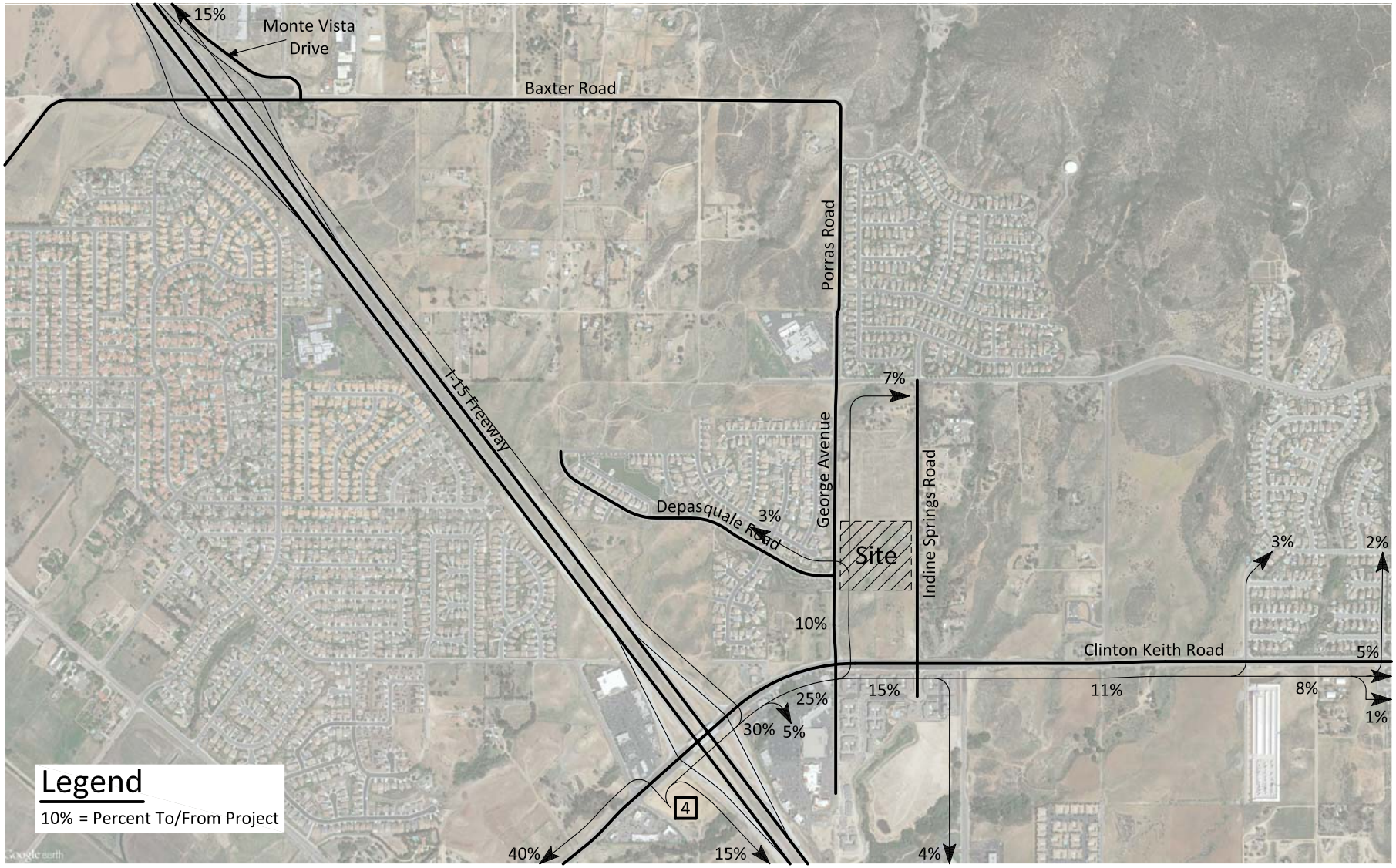

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Figure 19
Other Development Traffic Analysis Zone 5 Trip Distribution

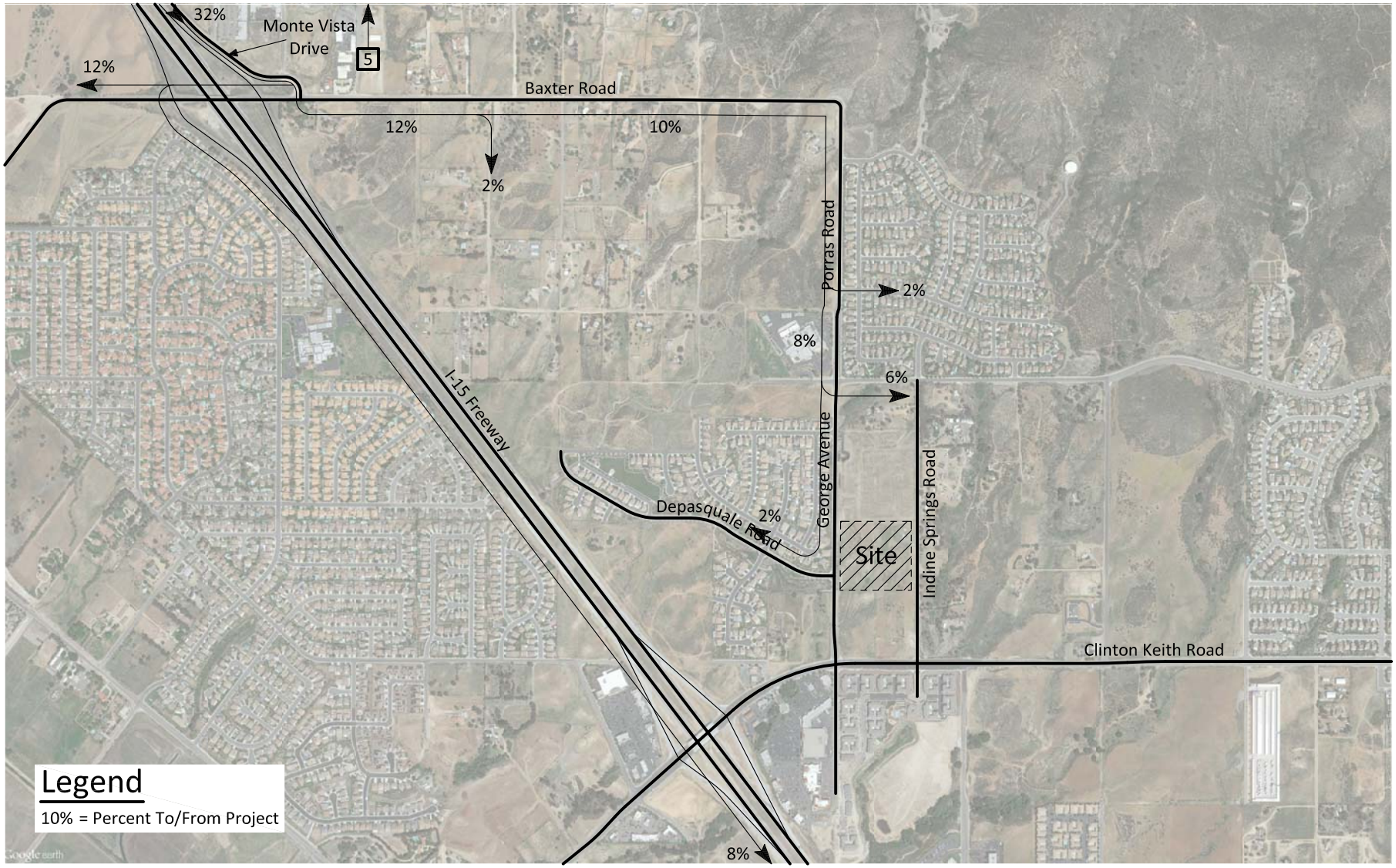

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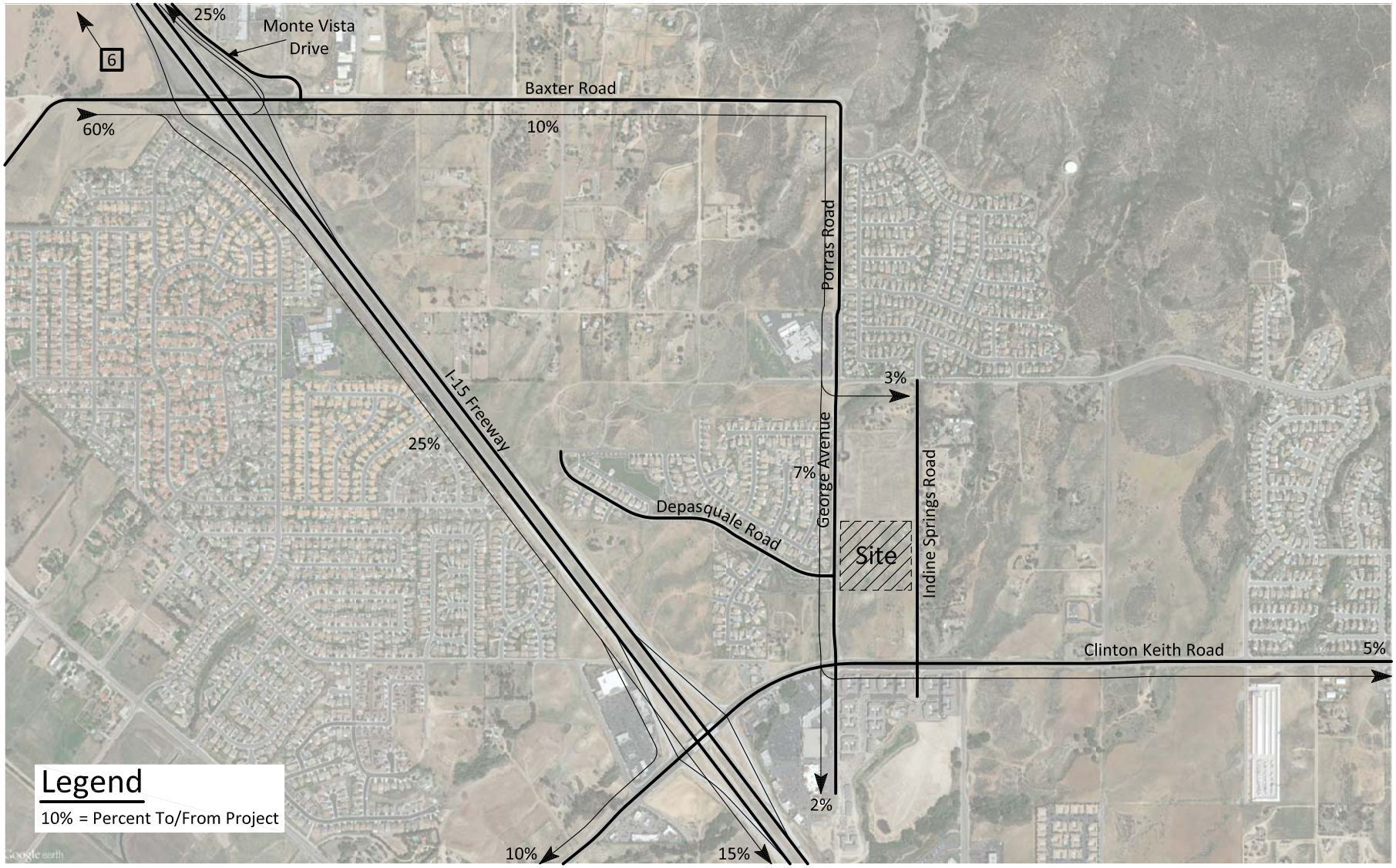
Figure 20
Other Development Traffic Analysis Zone 6 Trip Distribution



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OVER 35 YEARS OF EXCELLENT SERVICE

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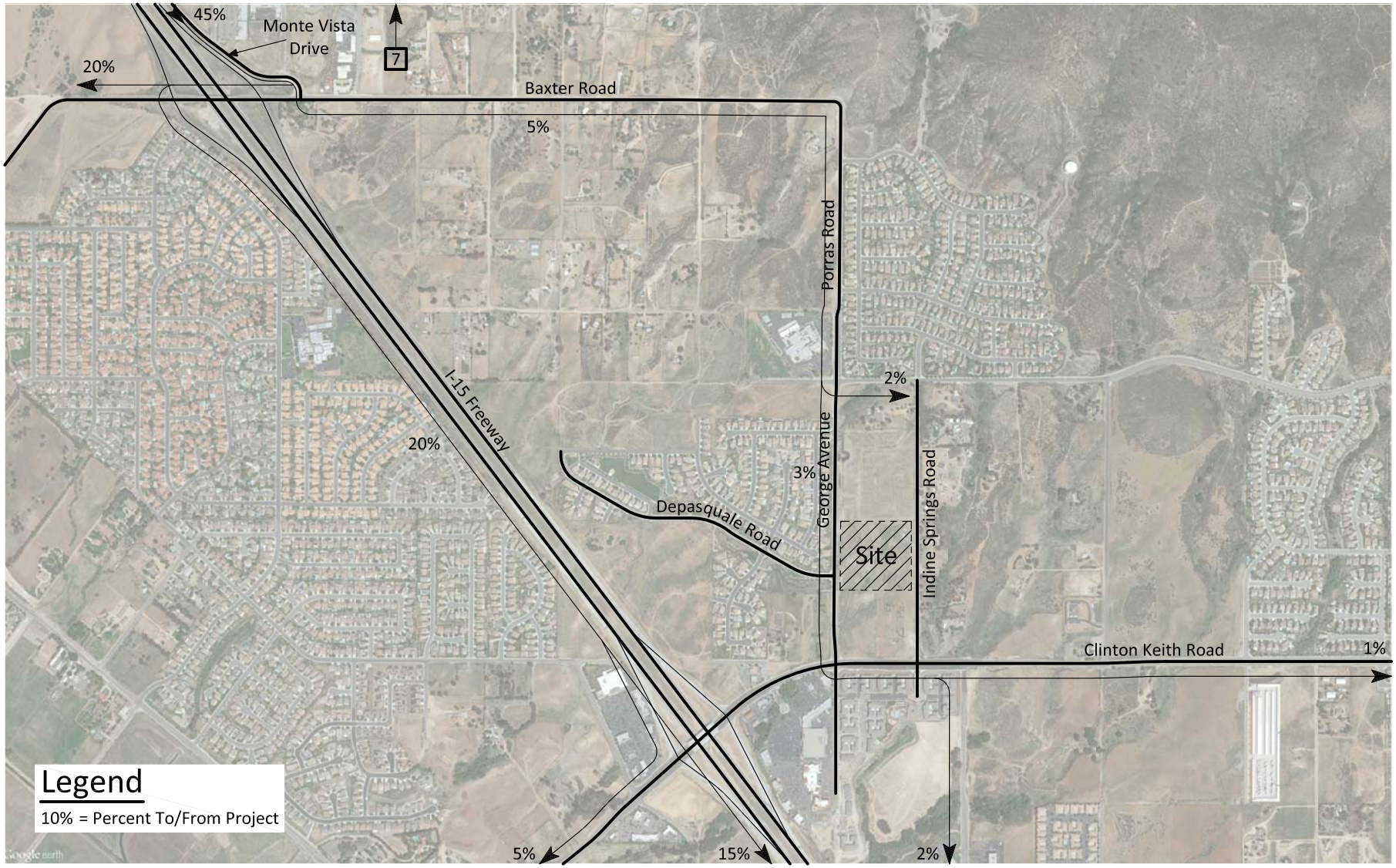
Figure 21
Other Development Traffic Analysis Zone 7 Trip Distribution



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OVER 35 YEARS OF EXCELLENT SERVICE

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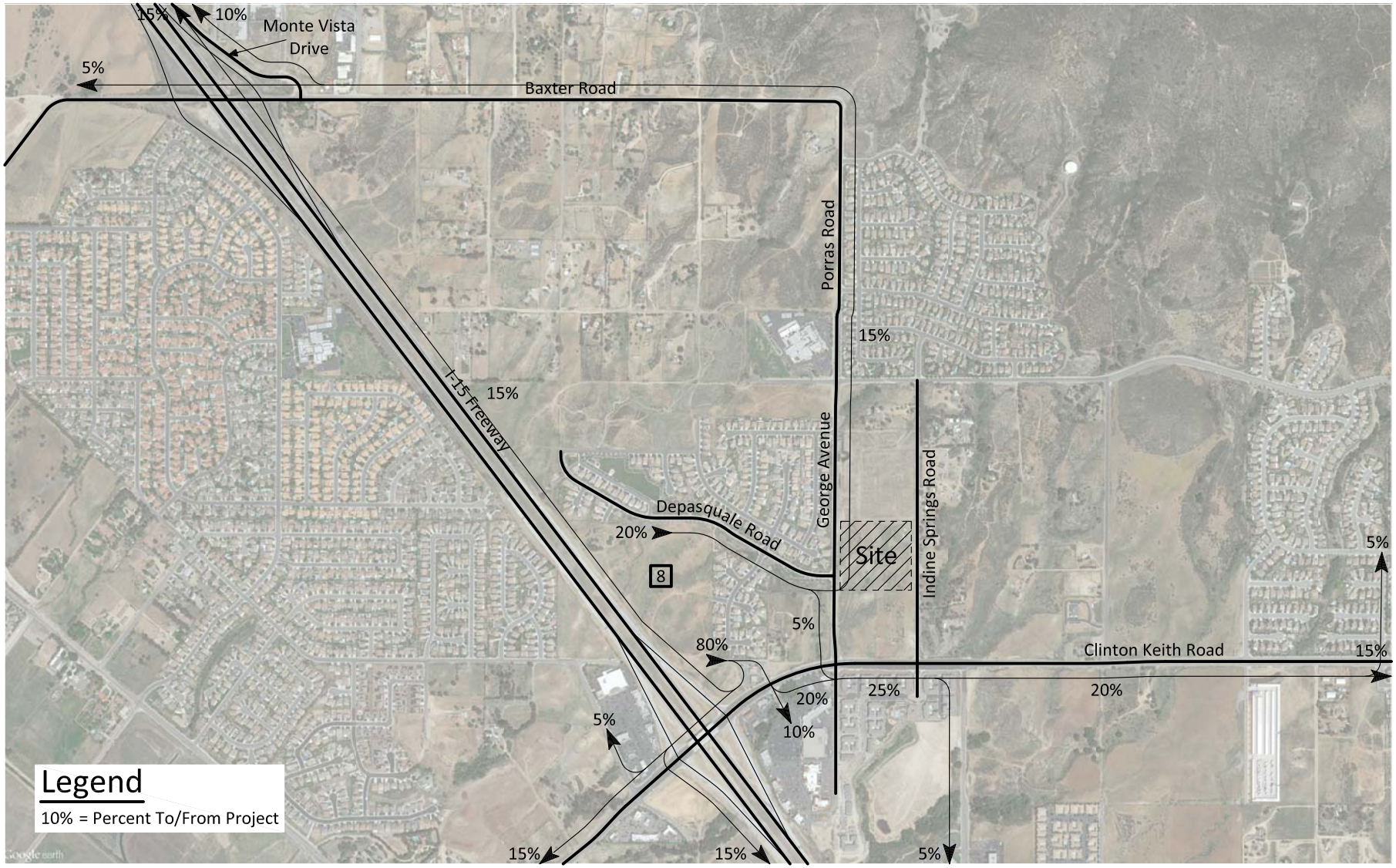
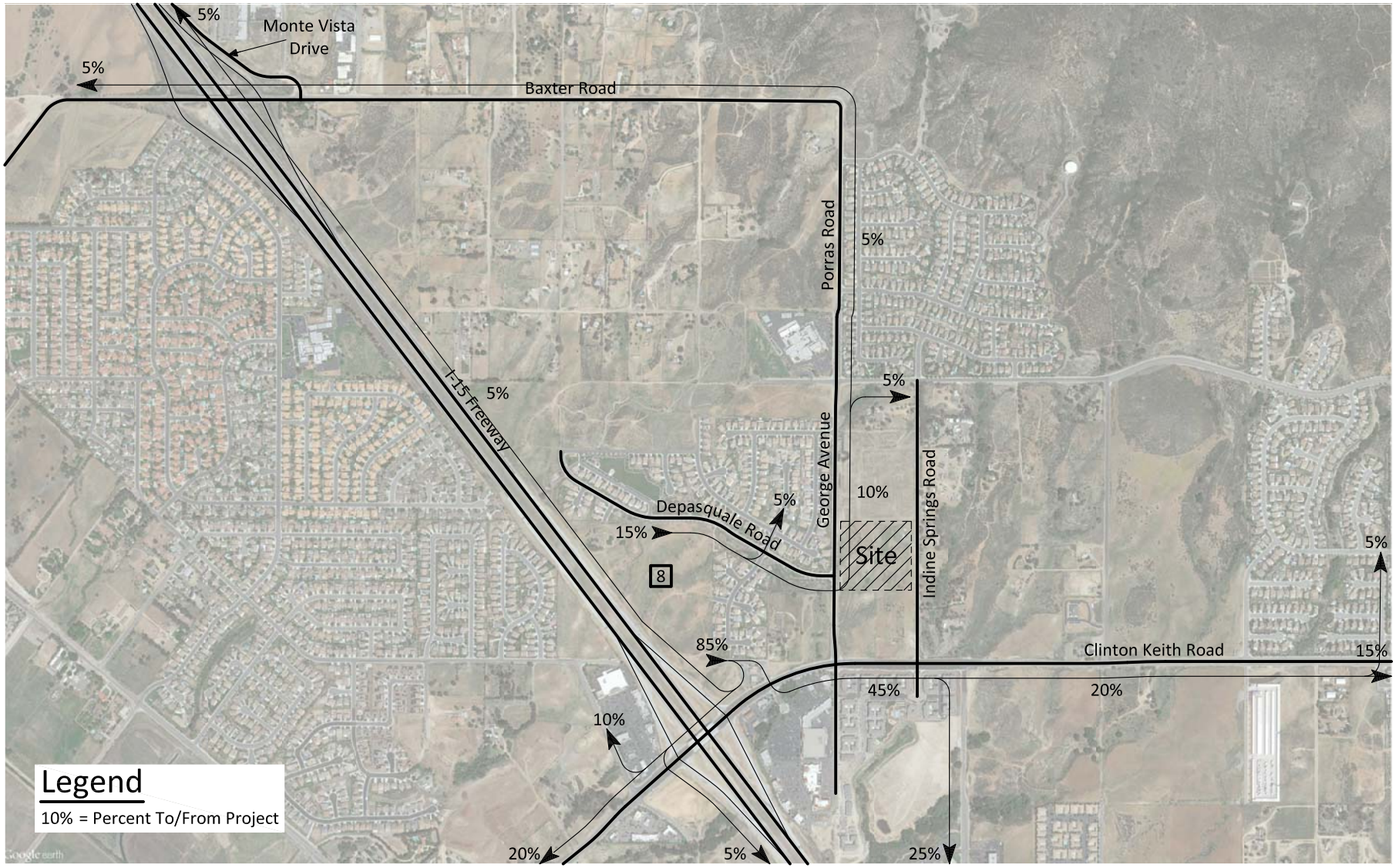
Figure 22
Other Development Traffic Analysis Zone 8 Trip Distribution - Residential



6169/22

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

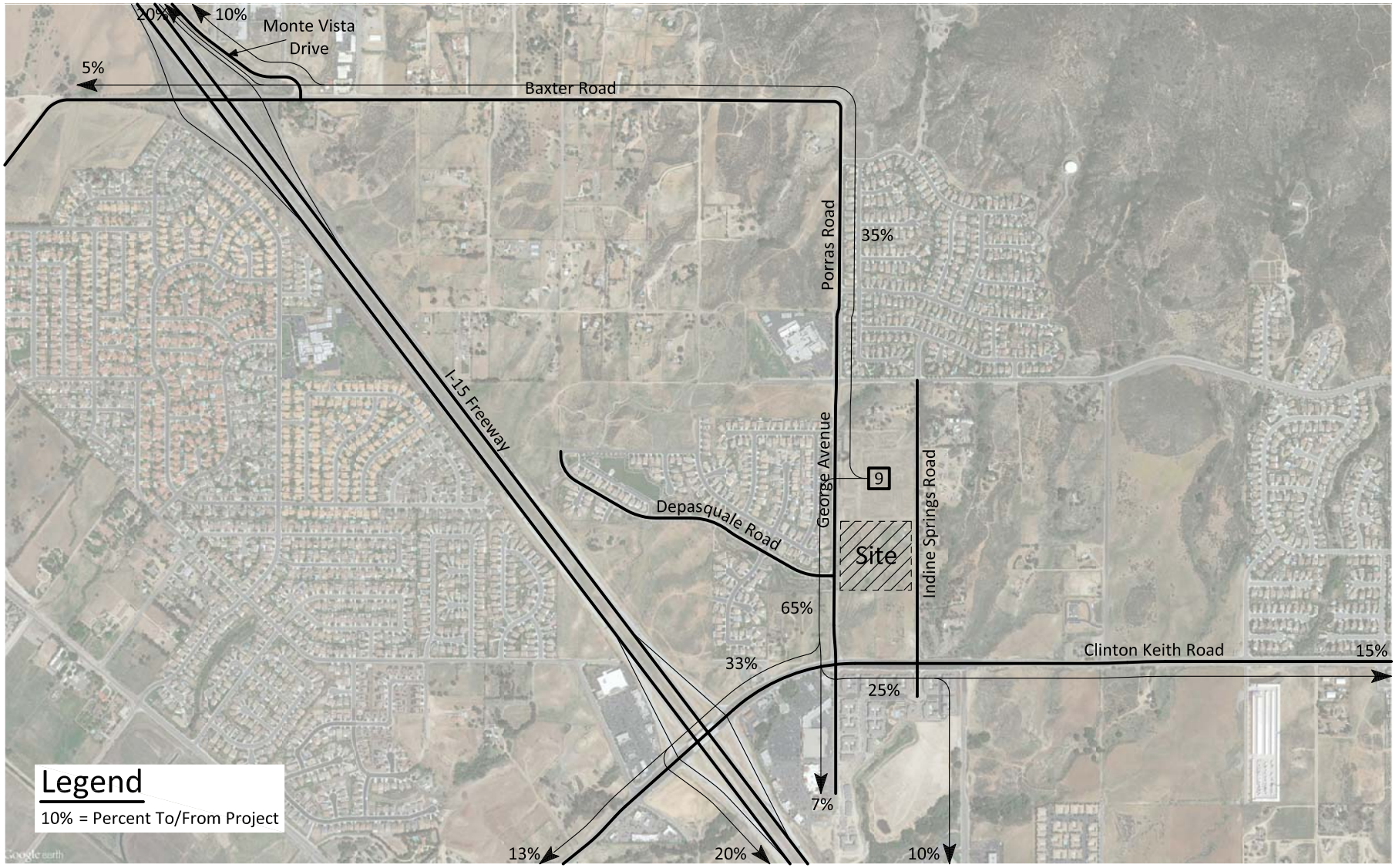
Figure 23
Other Development Traffic Analysis Zone 8 Trip Distribution - Commercial



Kunzman Associates, Inc.
Over 35 Years of Excellent Service

6169/23

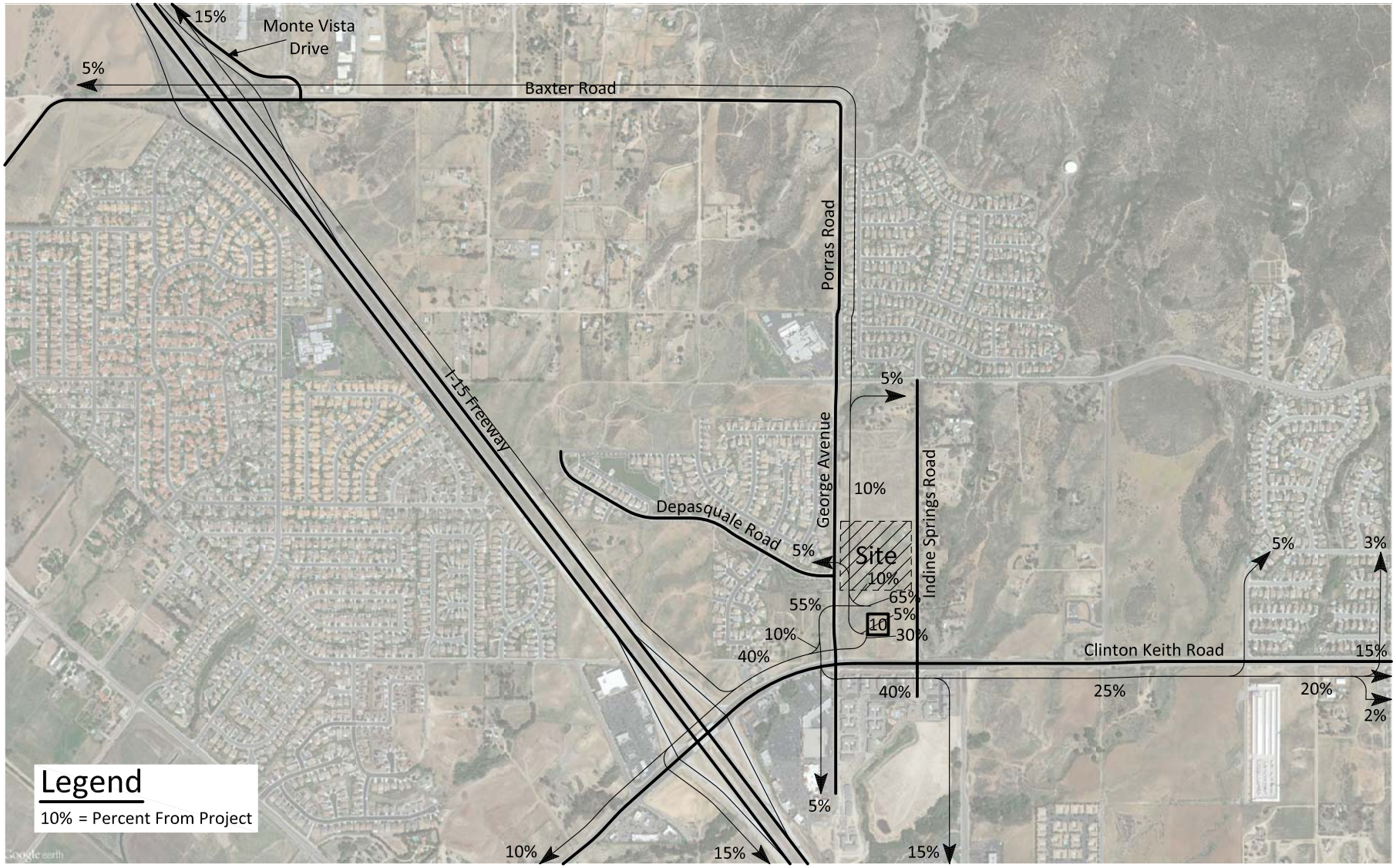
Figure 24
Other Development Traffic Analysis Zone 9 Trip Distribution



KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

6169/24

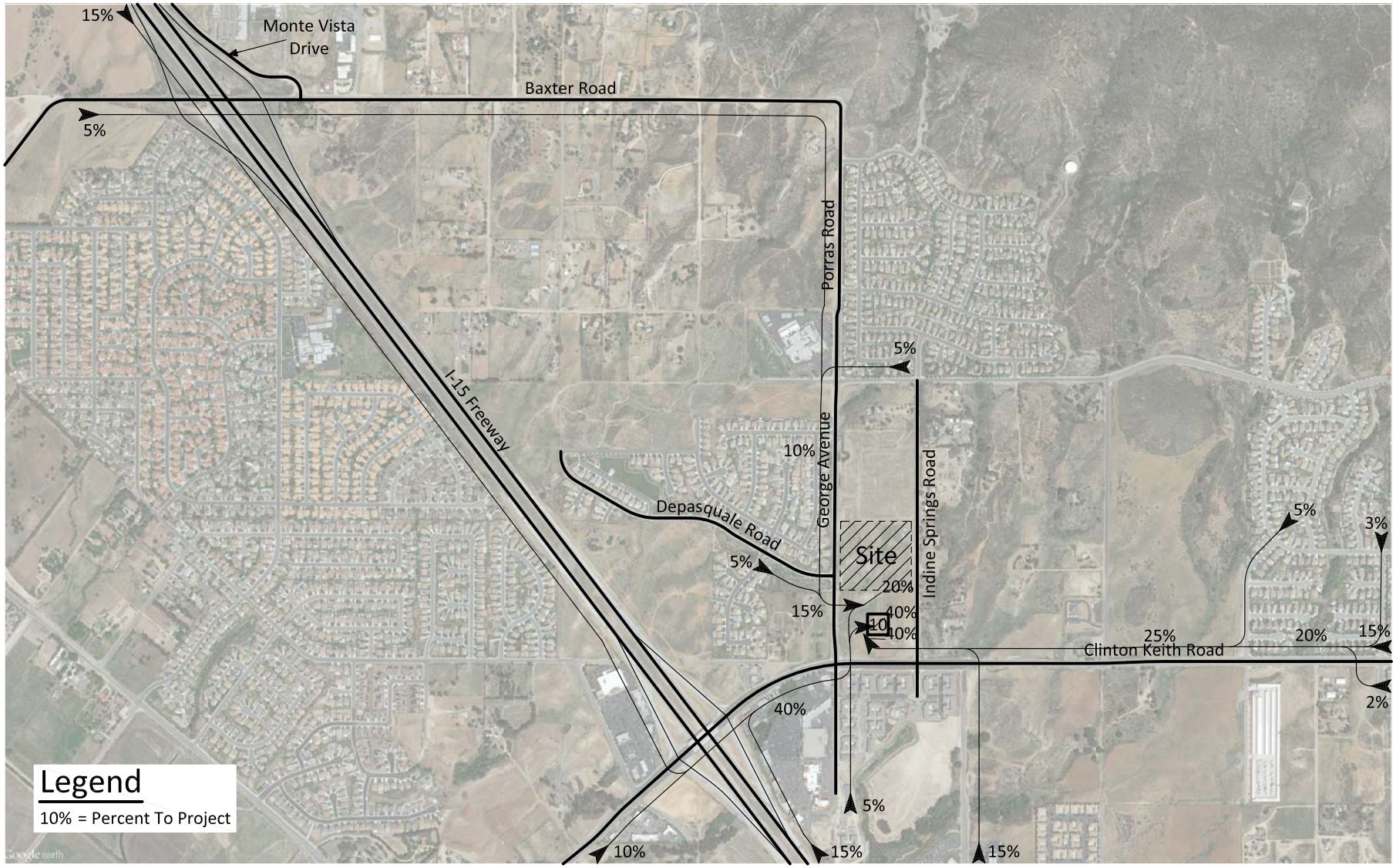
Figure 25
Other Development Traffic Analysis Zone 10 Trip Distribution - Outbound



KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

6169/25

Figure 26
Other Development Traffic Analysis Zone 10 Trip Distribution - Inbound



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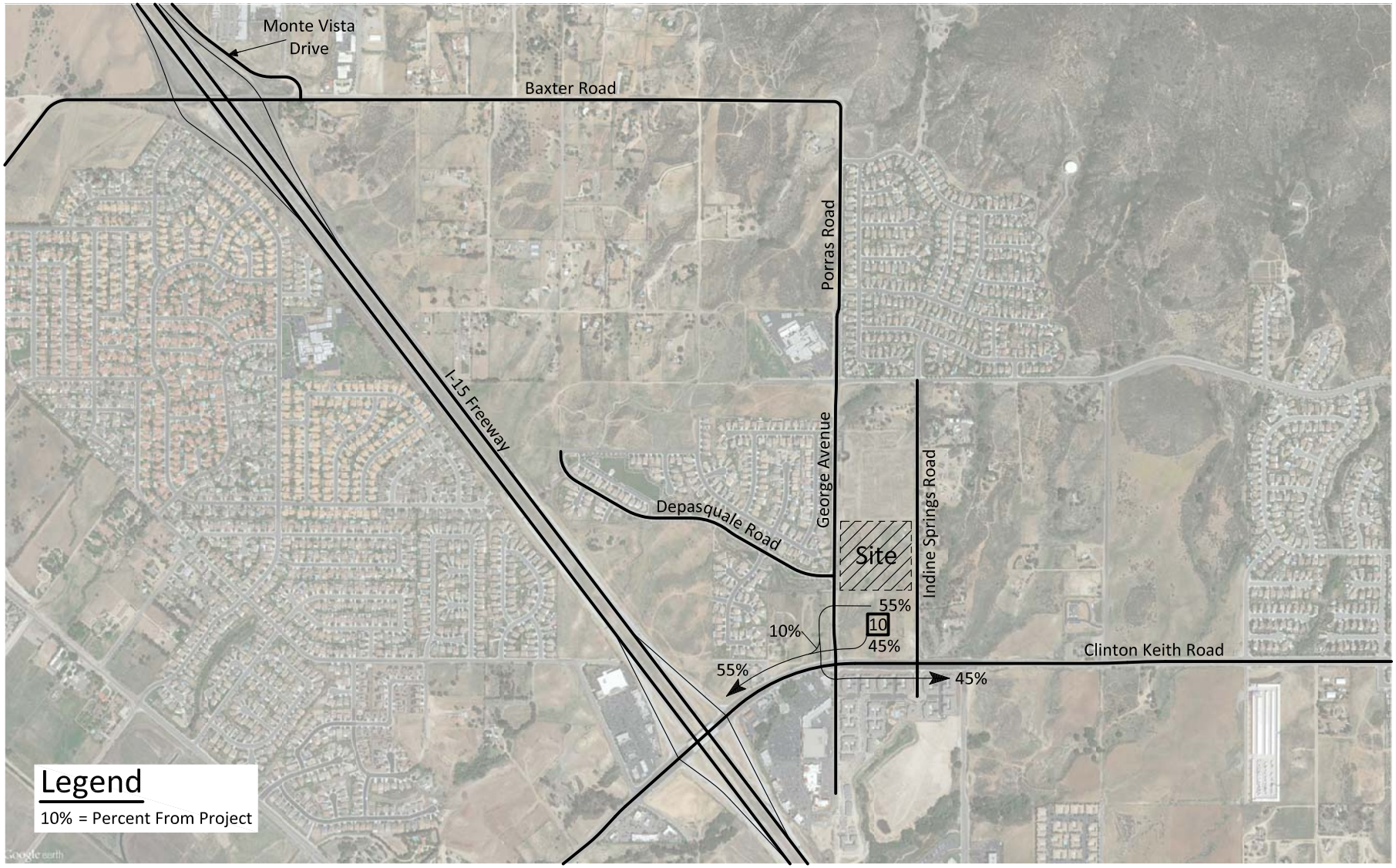
6169/26

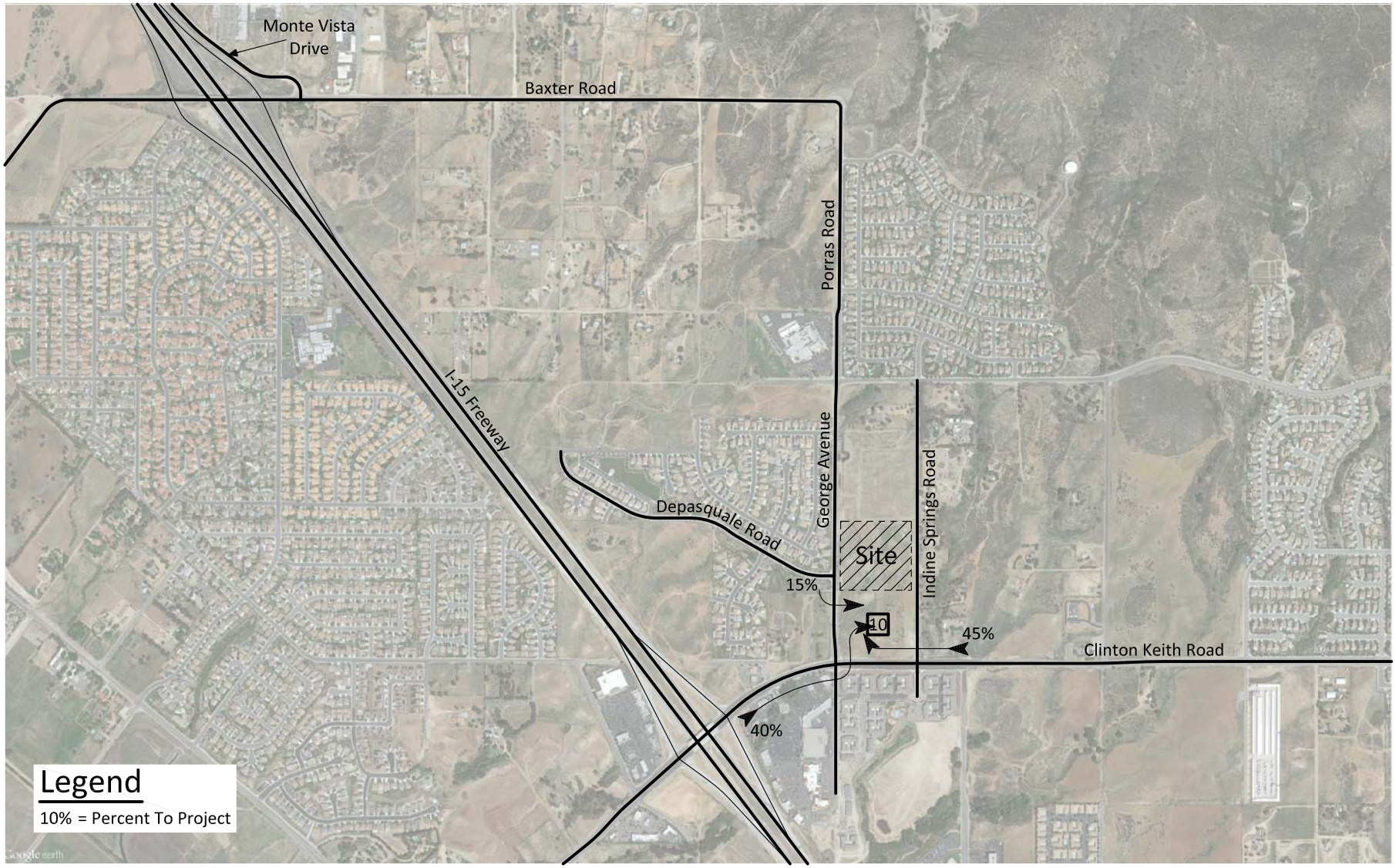
Figure 27
Other Development Traffic Analysis Zone 10
Outbound Pass-By Trip Distribution



KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

6169/27

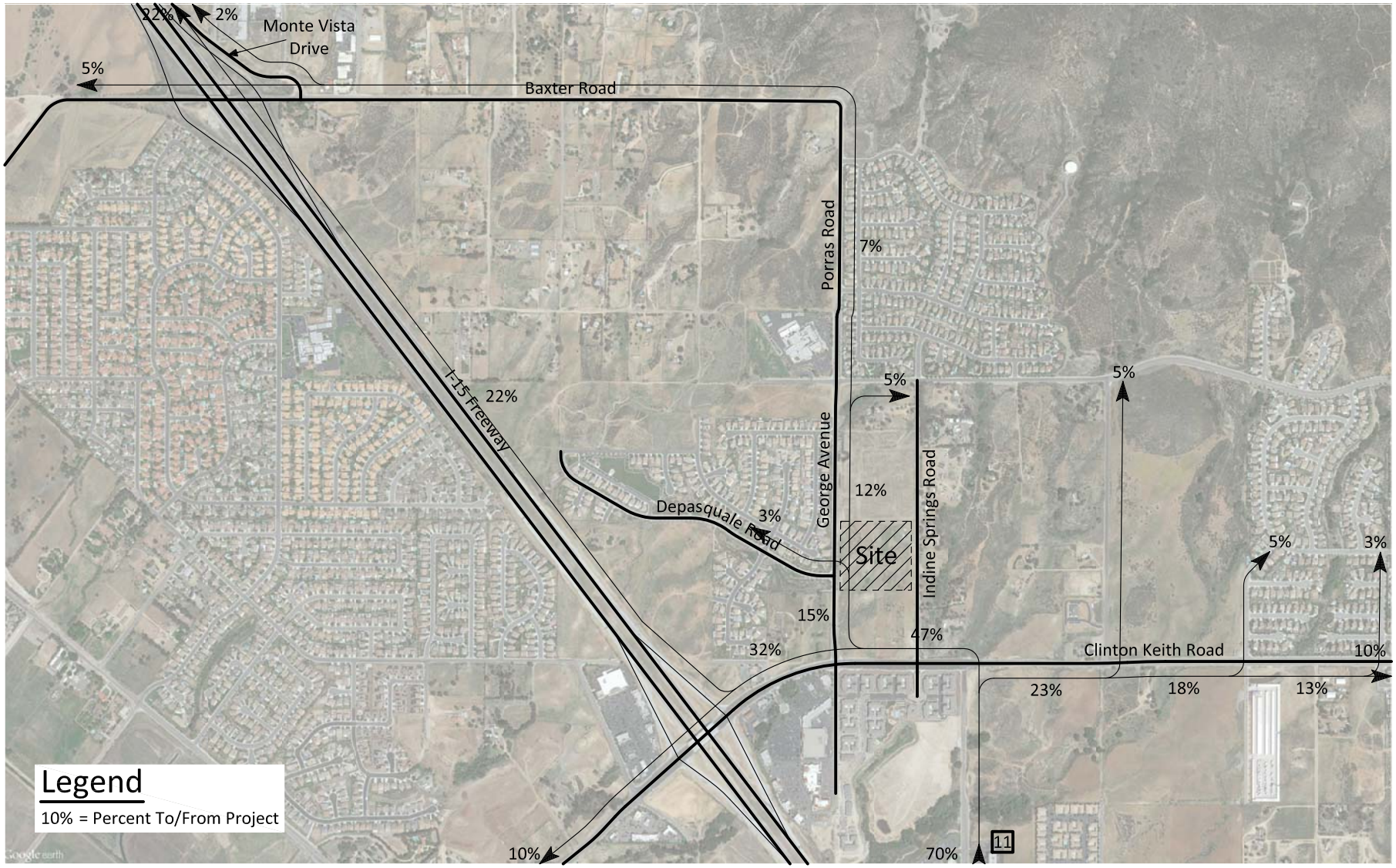
Figure 28
Other Development Traffic Analysis Zone 10
Inbound Pass-By Trip Distribution



6169/28

Kunzman Associates, Inc.
Over 35 Years of Excellent Service

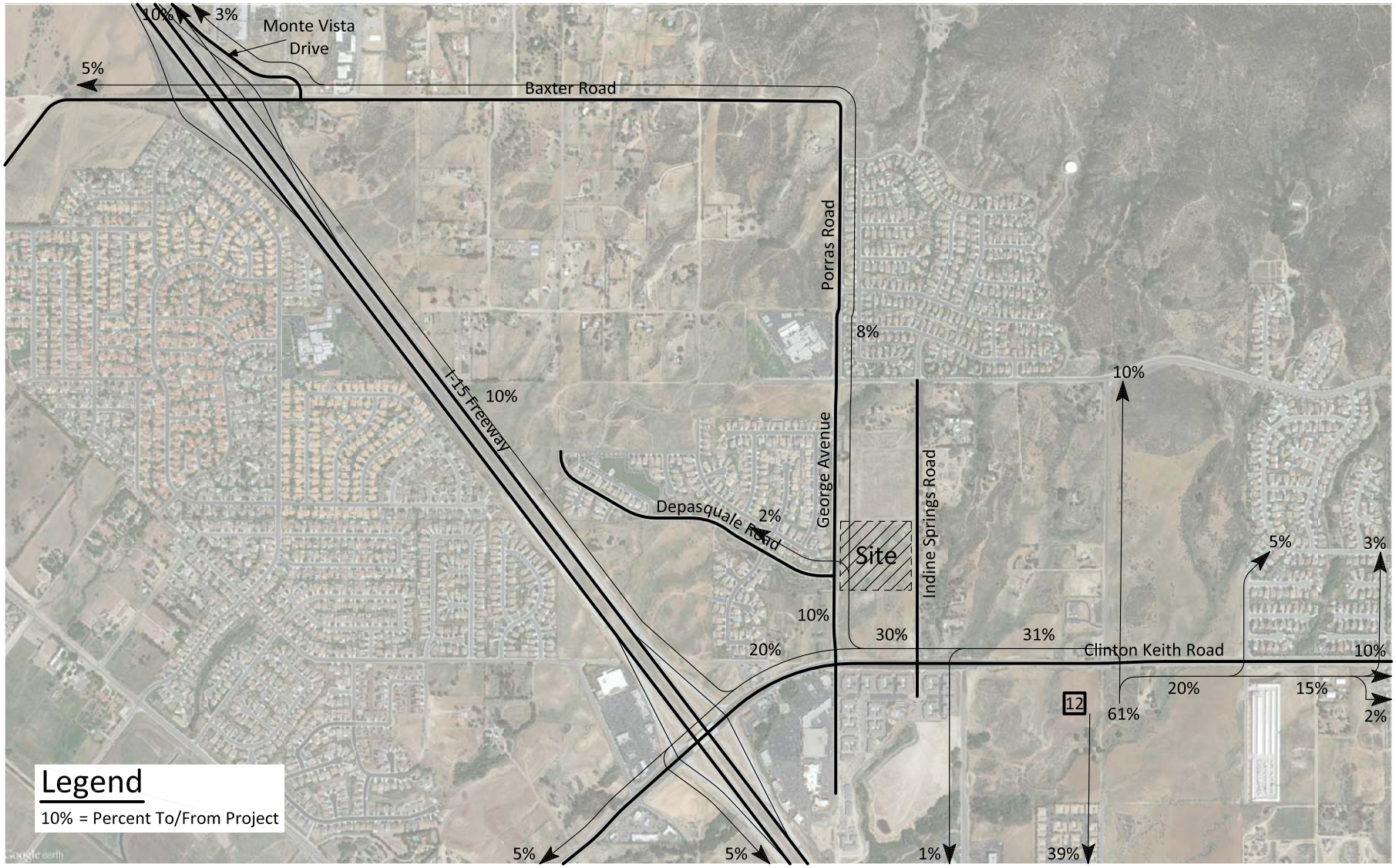
Figure 29
Other Development Traffic Analysis Zone 11 Trip Distribution



KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

6169/29

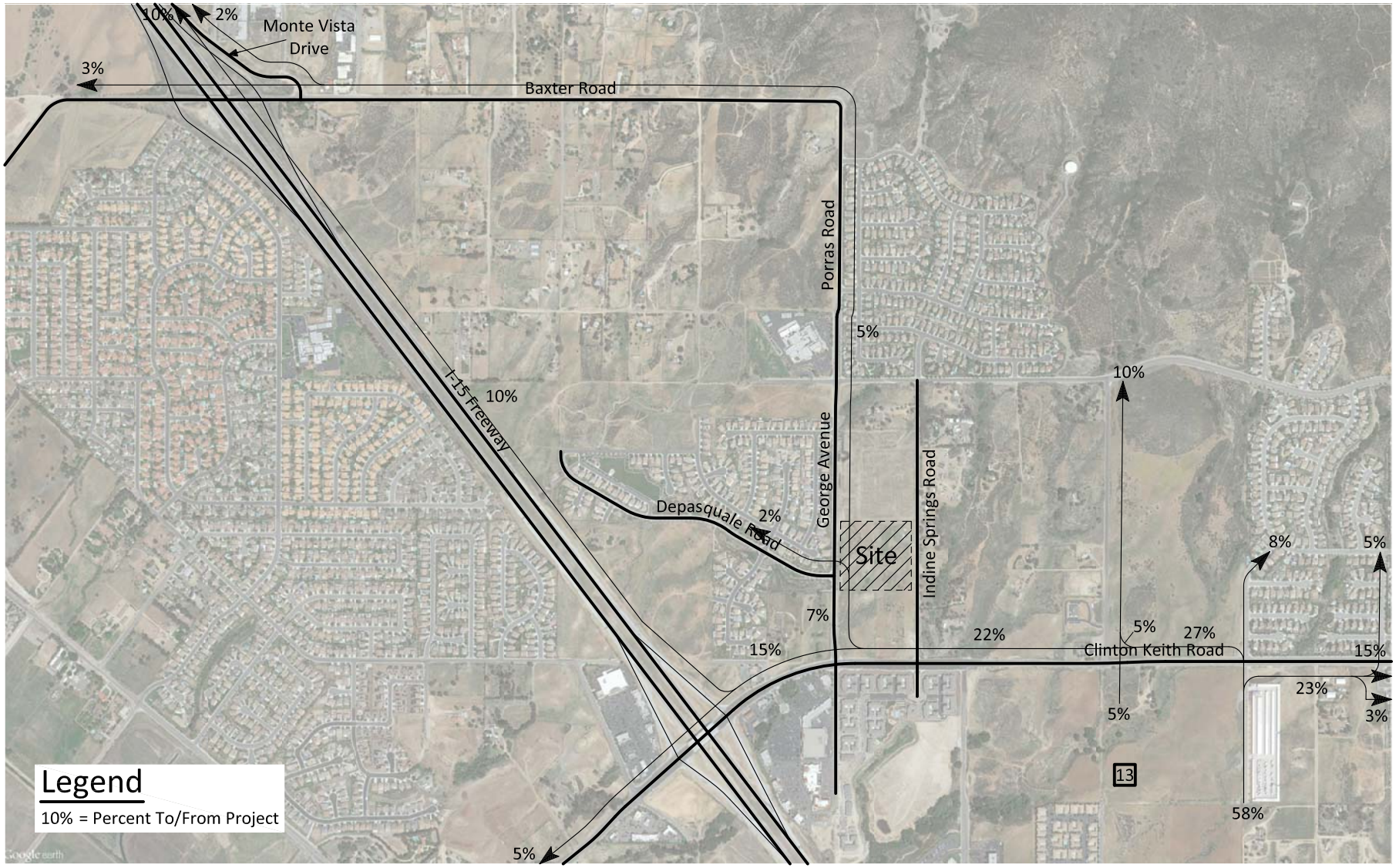
Figure 30
Other Development Traffic Analysis Zone 12 Trip Distribution



KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

6169/30

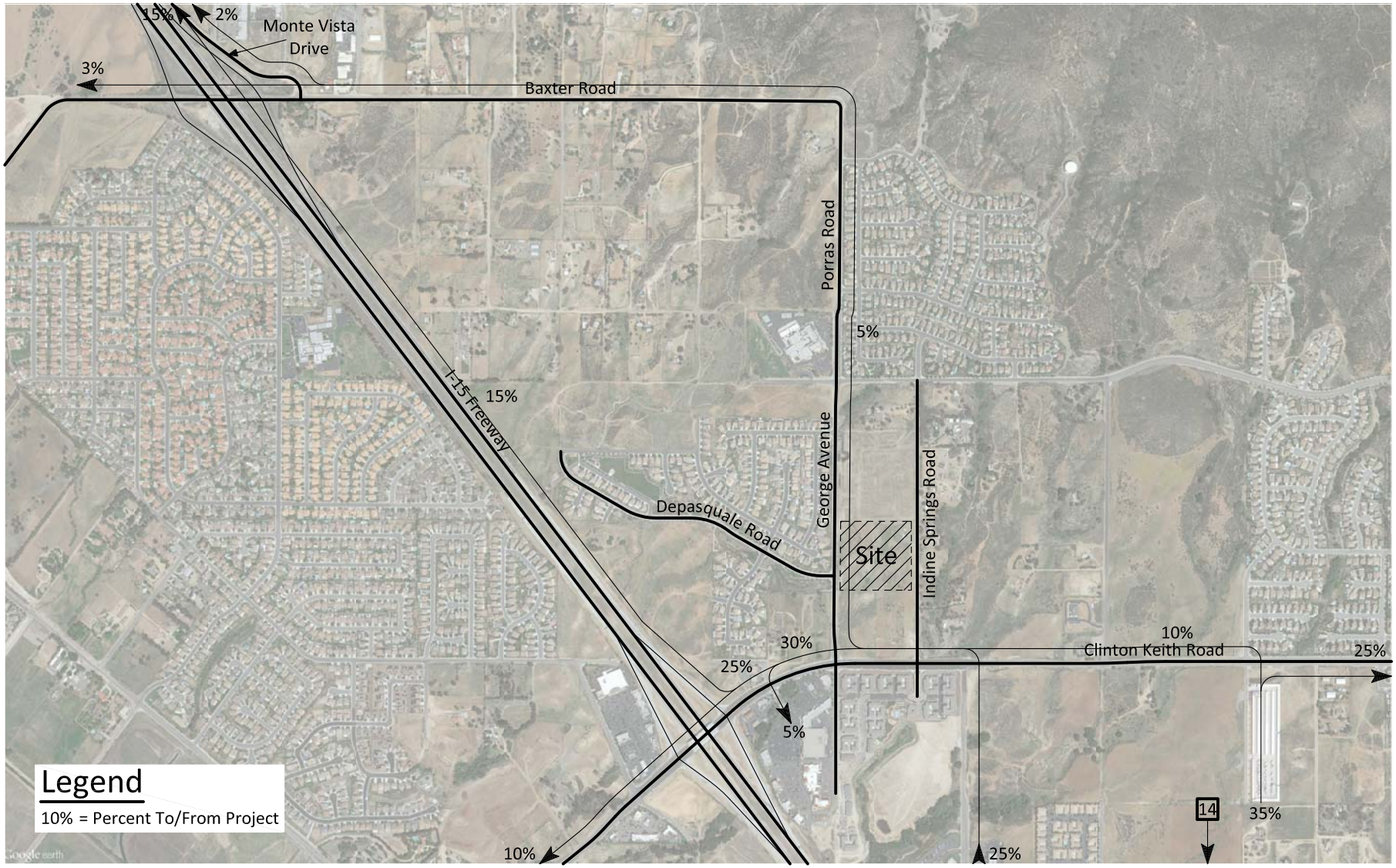
Figure 31
Other Development Traffic Analysis Zone 13 Trip Distribution



KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

6169/31

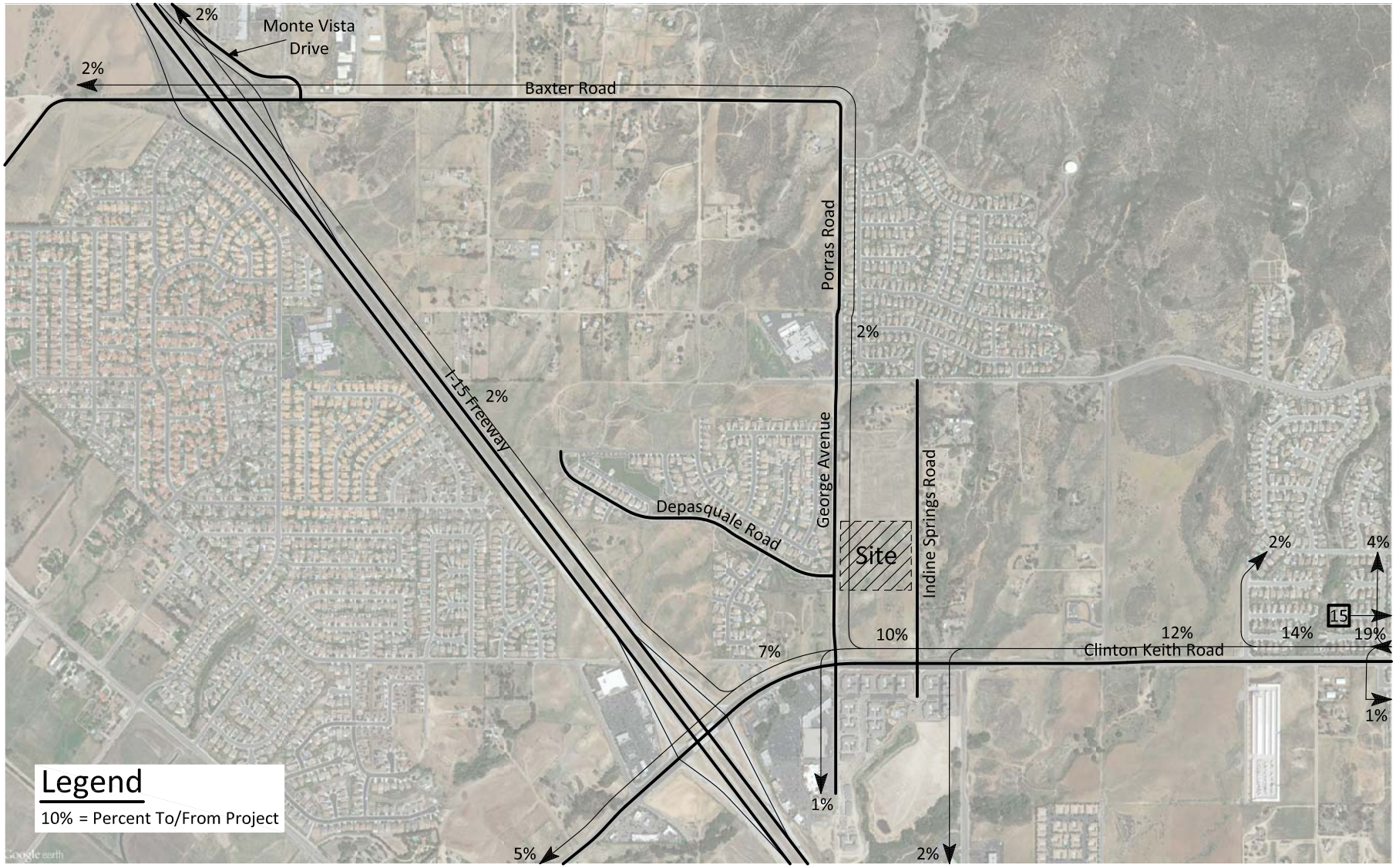
Figure 32
Other Development Traffic Analysis Zone 14 Trip Distribution



6169/32

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

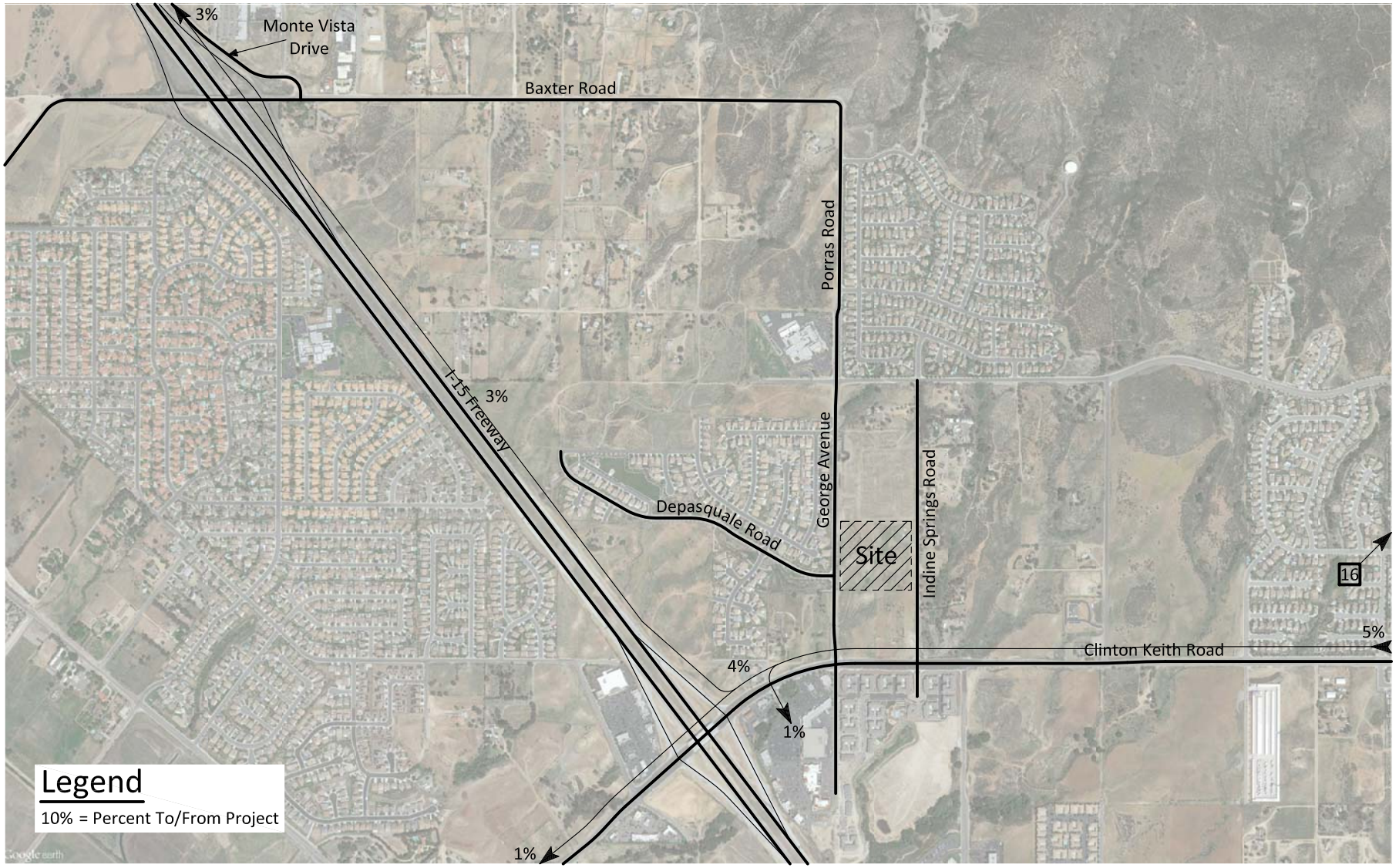
Figure 33
Other Development Traffic Analysis Zone 15 Trip Distribution



6169/33

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

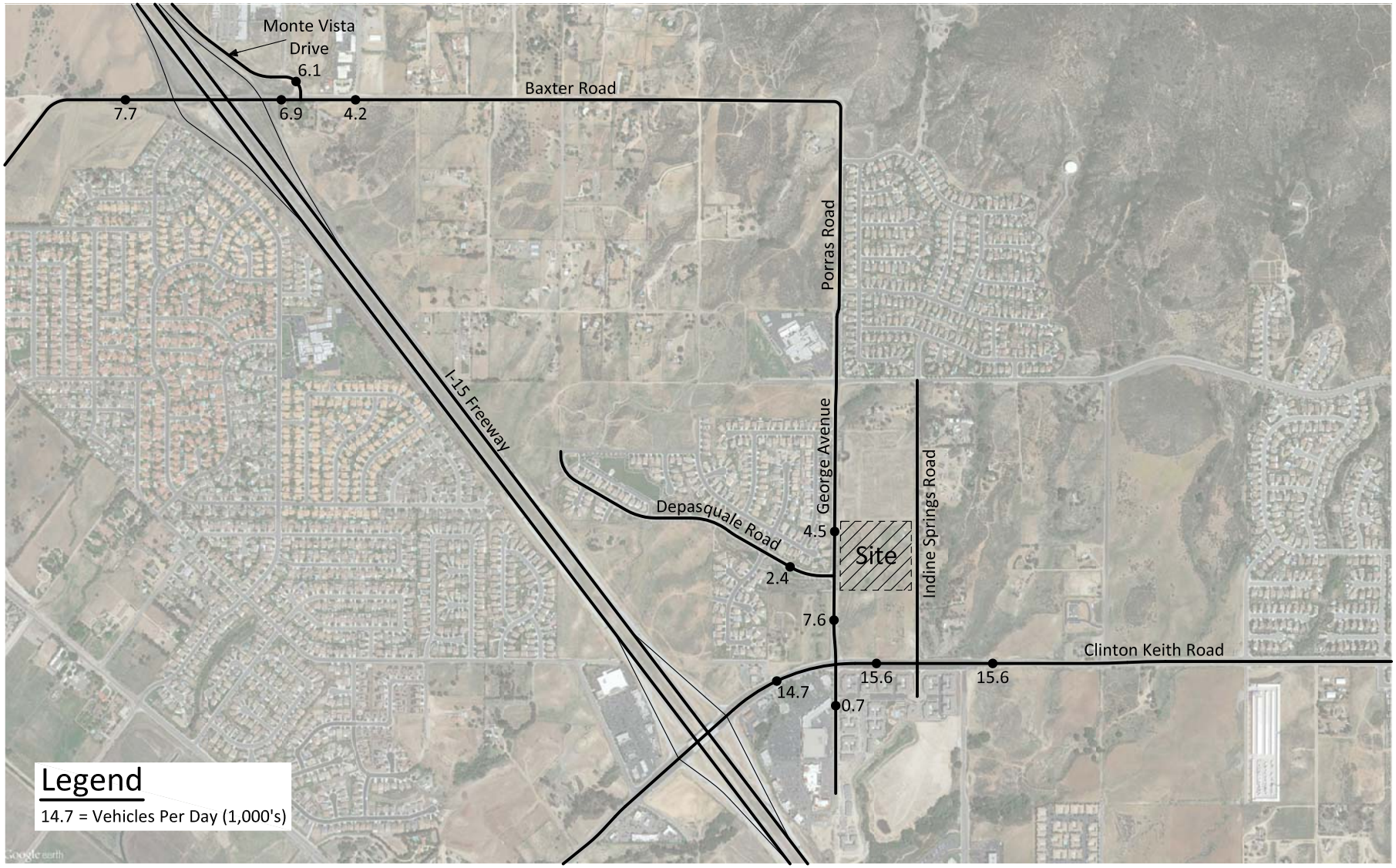
Figure 34
Other Development Traffic Analysis Zone 16 Trip Distribution



KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

6169/34

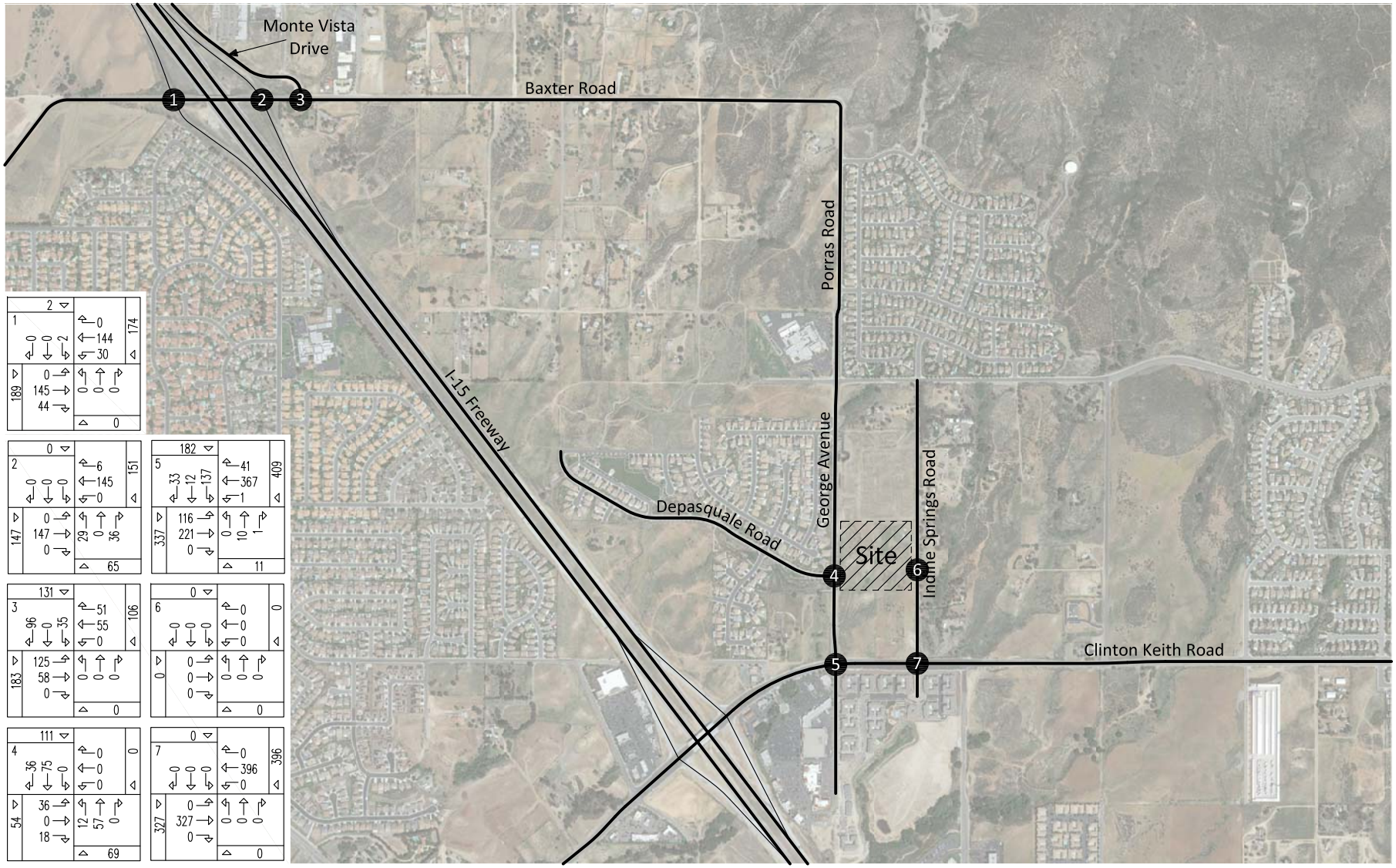
Figure 35
Other Development Average Daily Traffic Volumes



KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

6169/35

Figure 36
Other Development
Morning Peak Hour Intersection Turning Movement Volumes

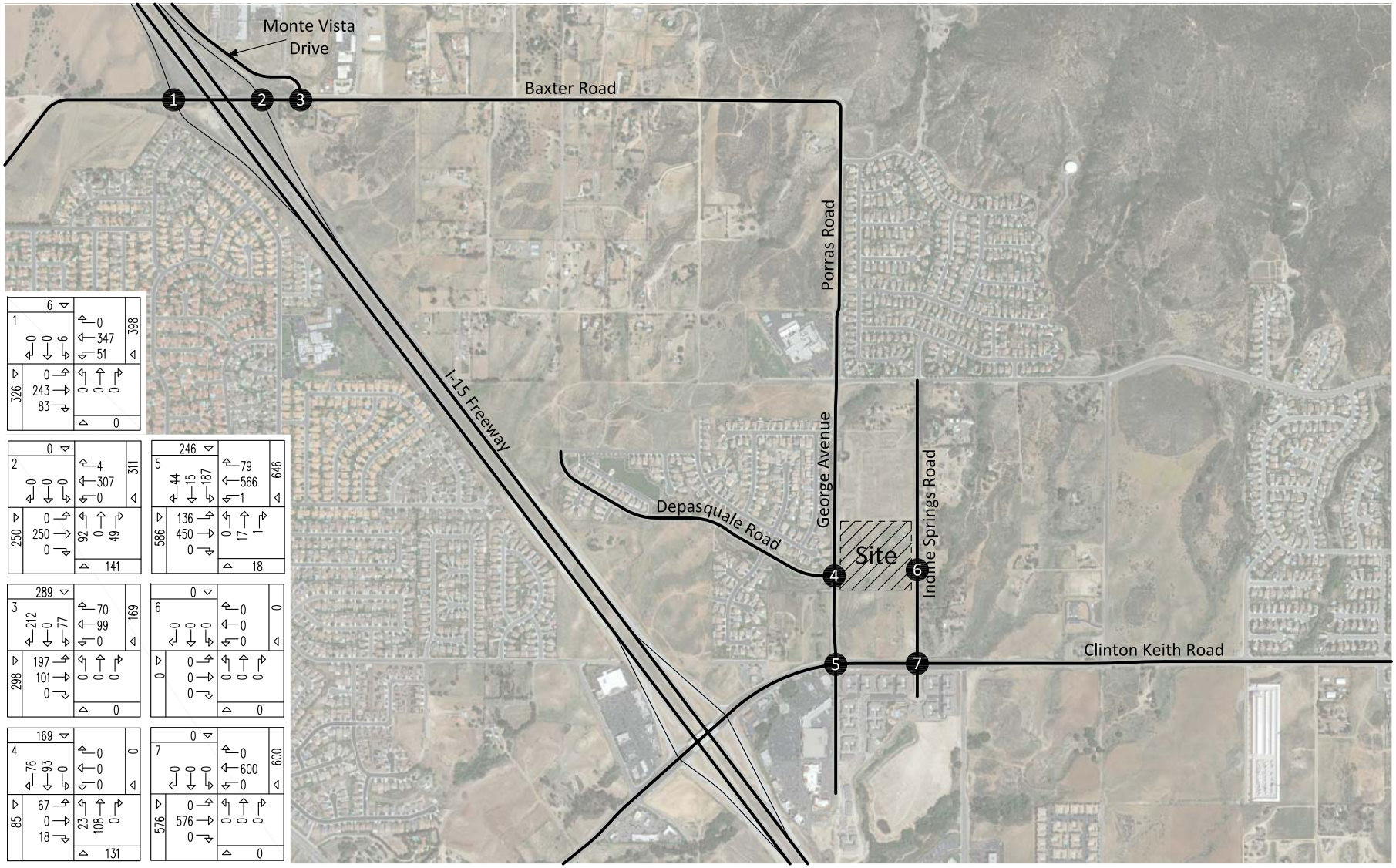


KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

6169/36

Figure 37
Other Development
Evening Peak Hour Intersection Turning Movement Volumes

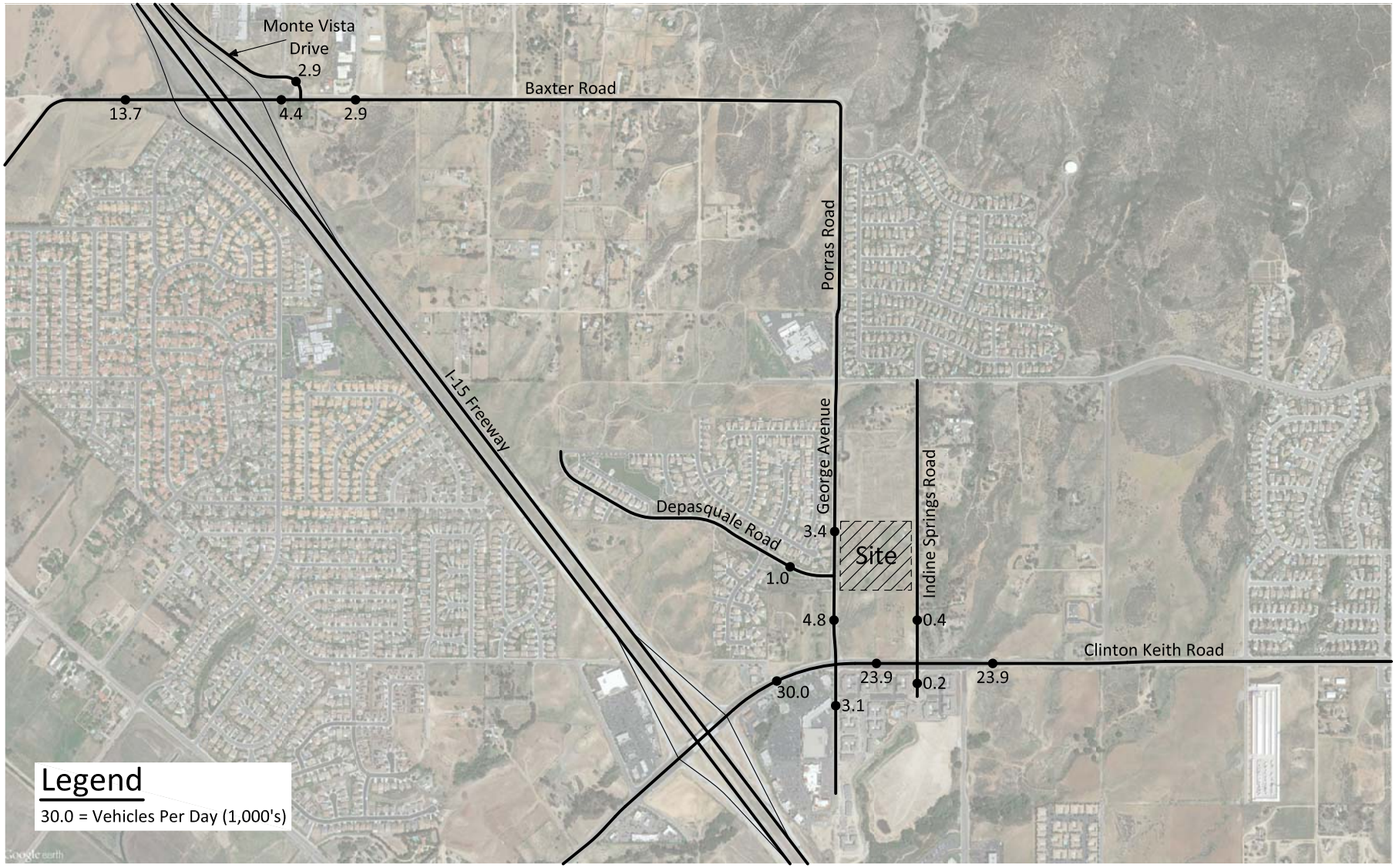


KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

6169/37

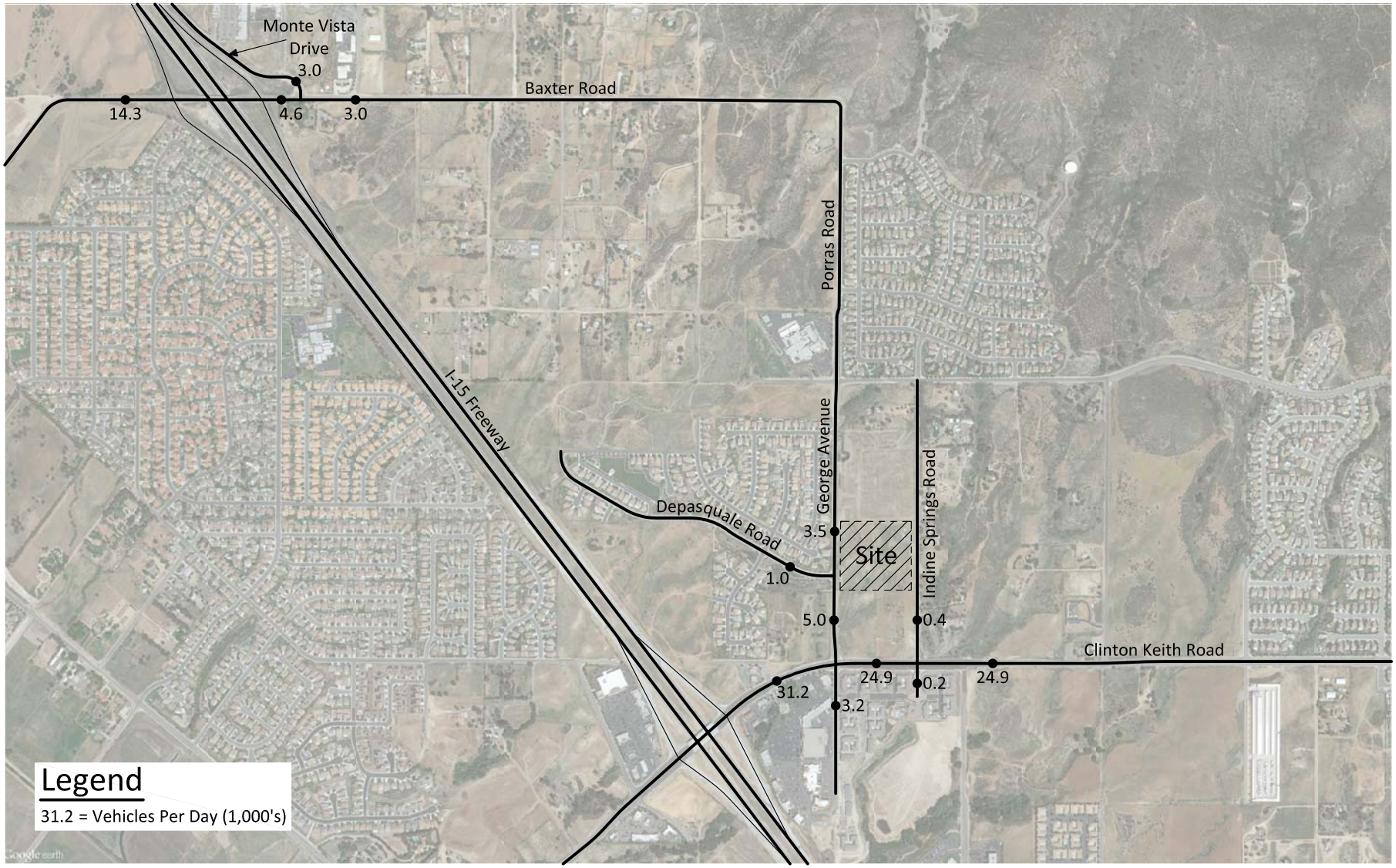
Figure 38
Existing Plus Project Average Daily Traffic Volumes



KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

6169/38

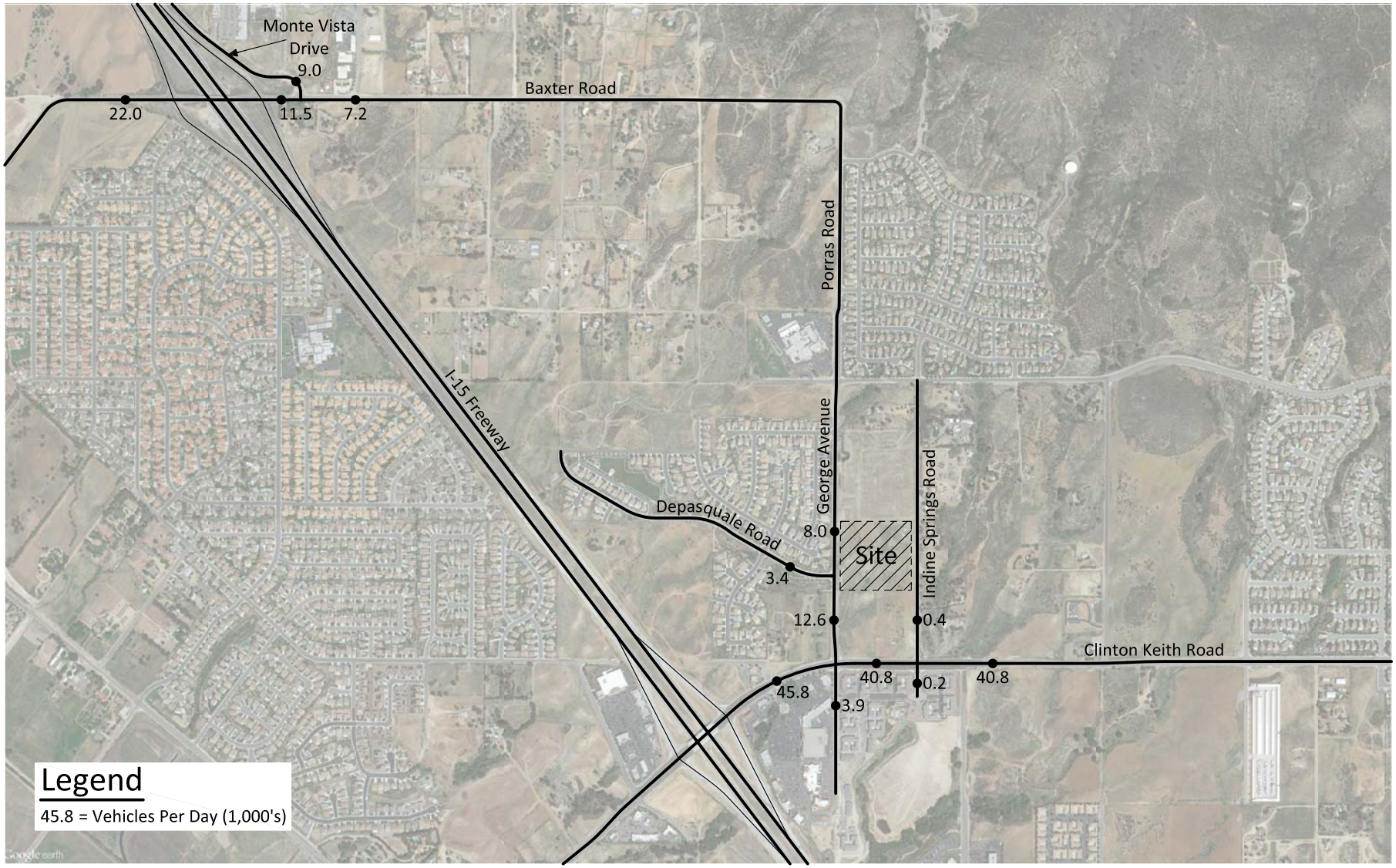
Figure 39
Existing Plus Ambient Growth Plus Project Average Daily Traffic Volumes



KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

6169/39

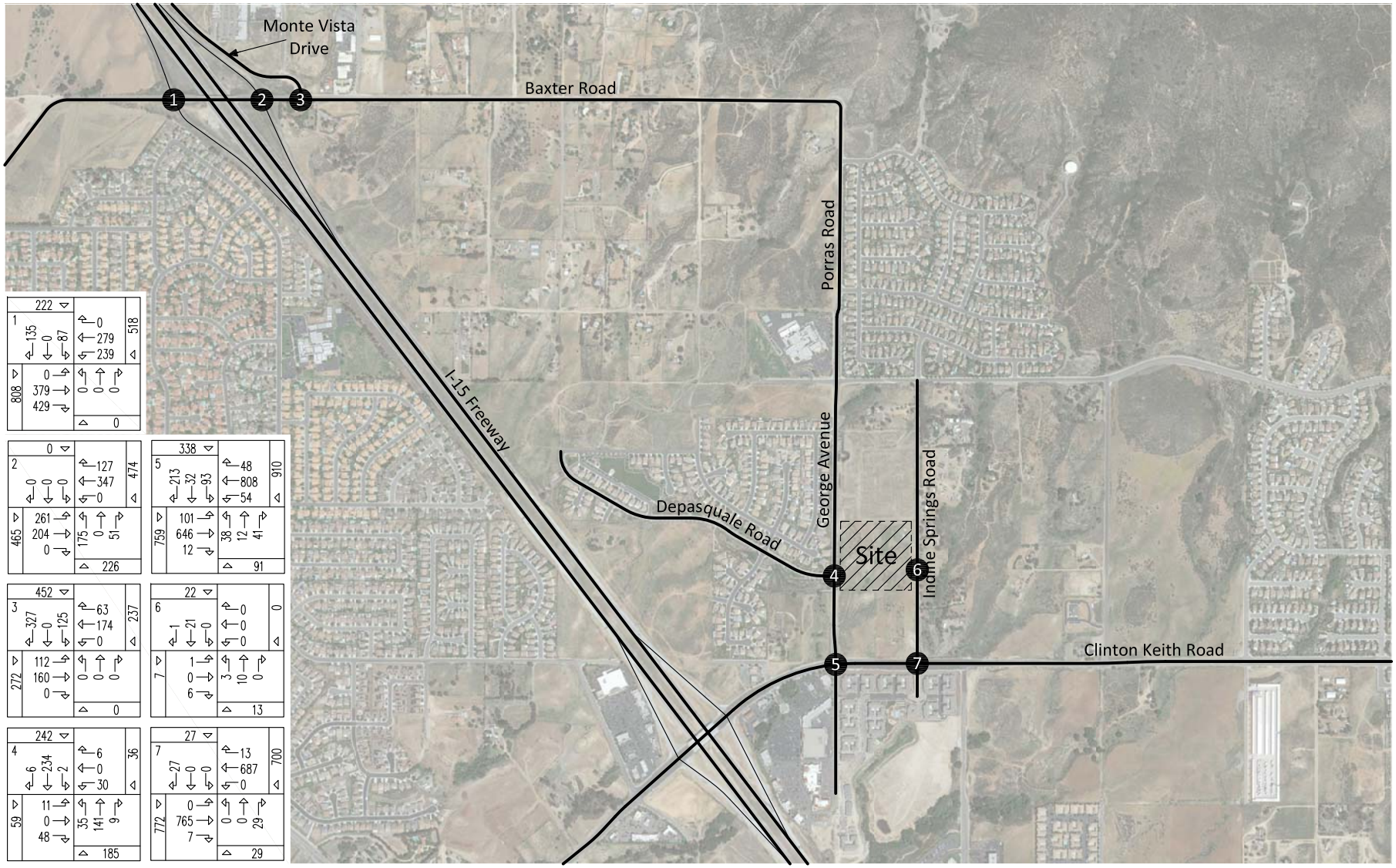
Figure 40
Existing Plus Ambient Growth Plus Project Plus Cumulative Average Daily Traffic Volumes



KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

6169/40

Figure 41
Existing Plus Project
Morning Peak Hour Intersection Turning Movement Volumes

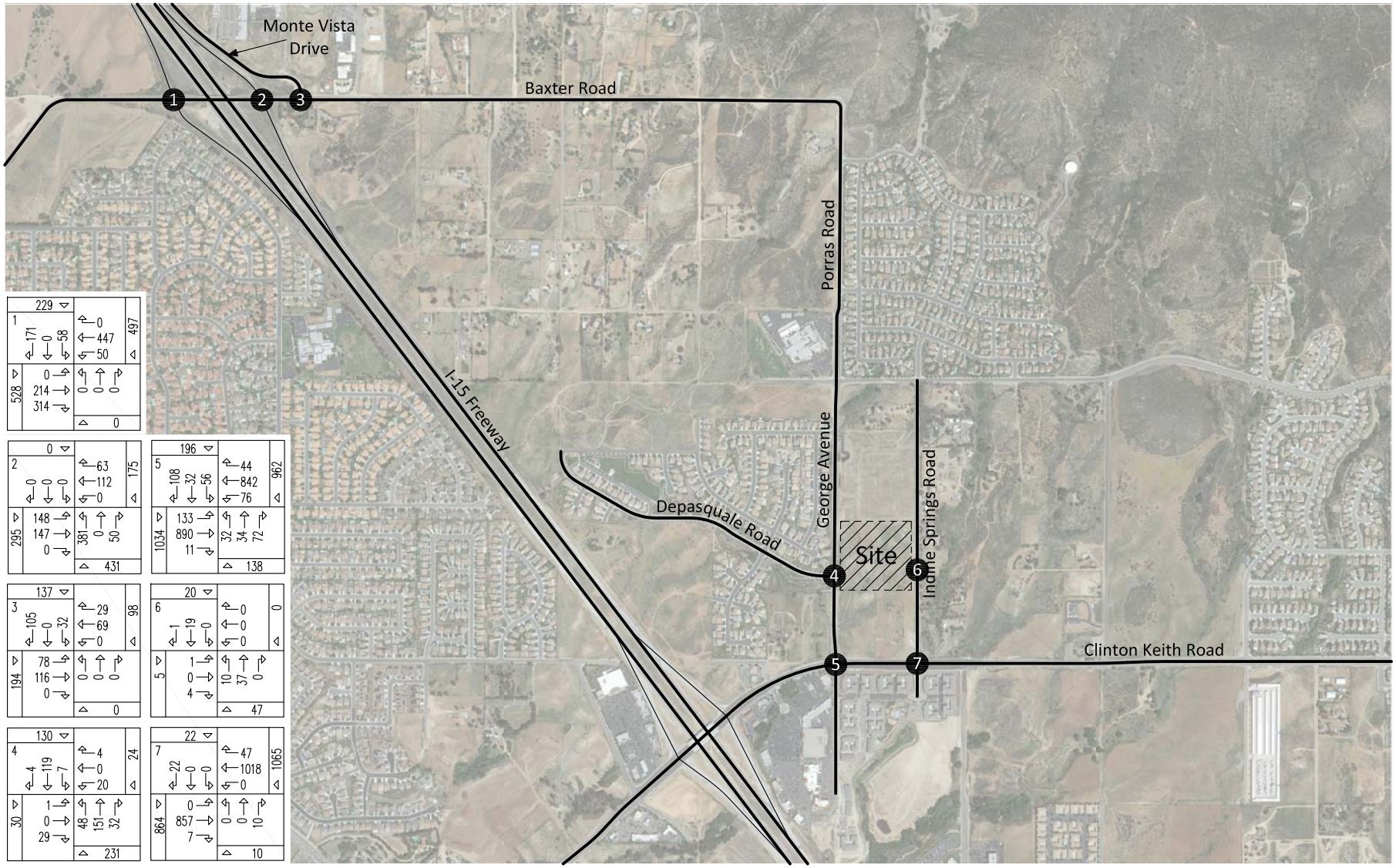


KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

6169/41

Figure 42
Existing Plus Project
Evening Peak Hour Intersection Turning Movement Volumes



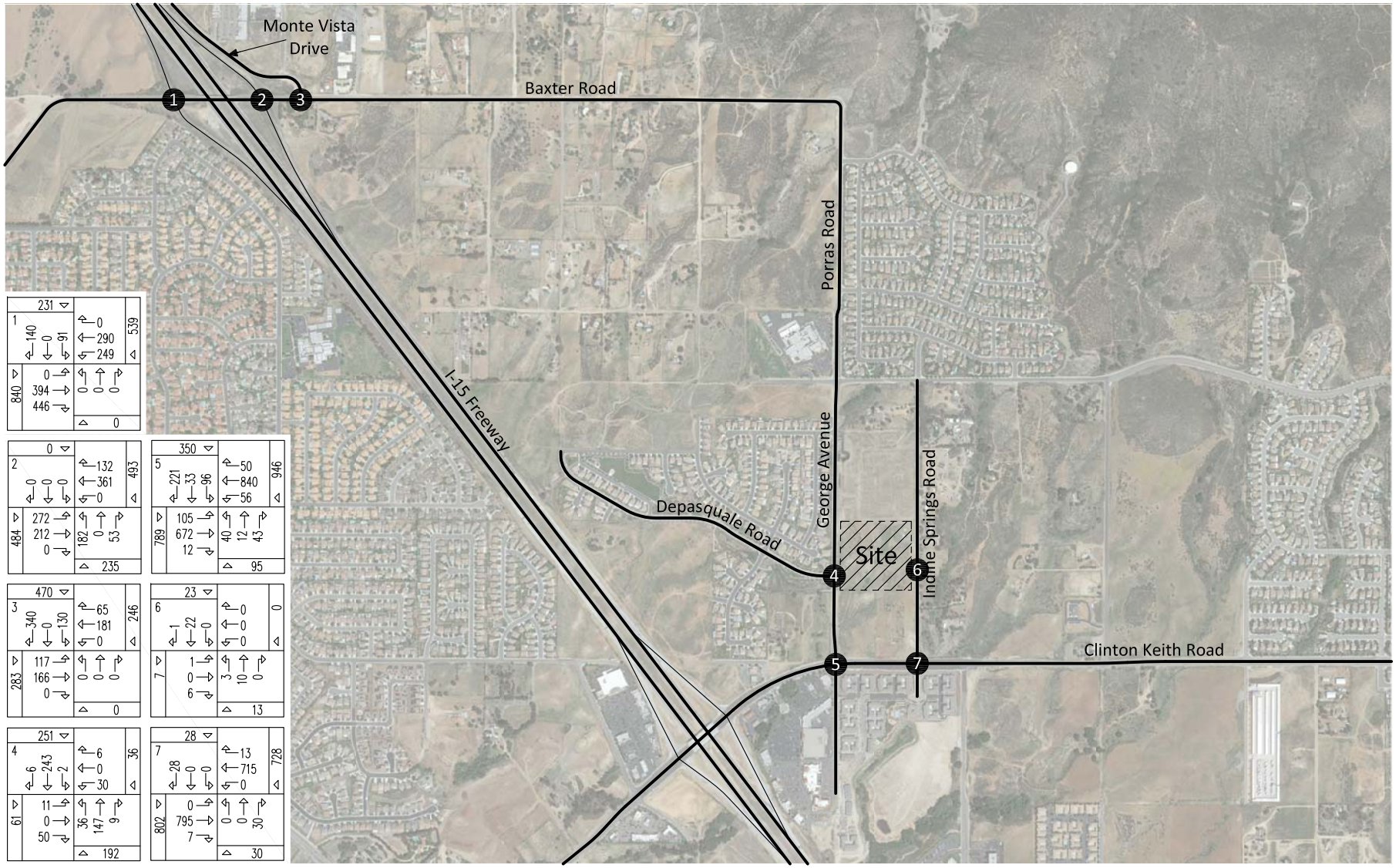
KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Intersection reference numbers are in upper left corner of turning movement boxes.

6169/42

Figure 43
Existing Plus Ambient Growth Plus Project
Morning Peak Hour Intersection Turning Movement Volumes

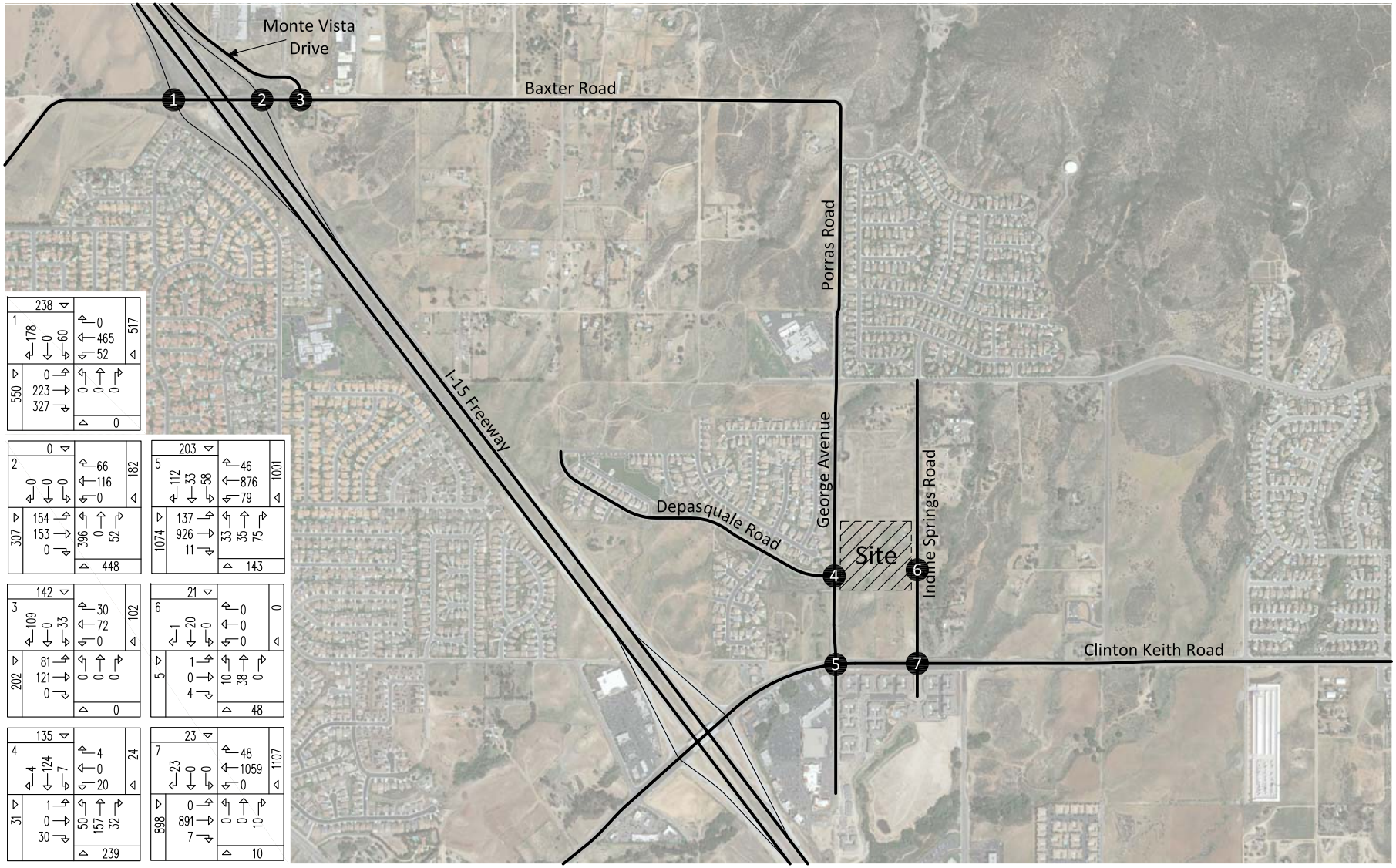


KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

6169/43

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 44
Existing Plus Ambient Growth Plus Project
Evening Peak Hour Intersection Turning Movement Volumes

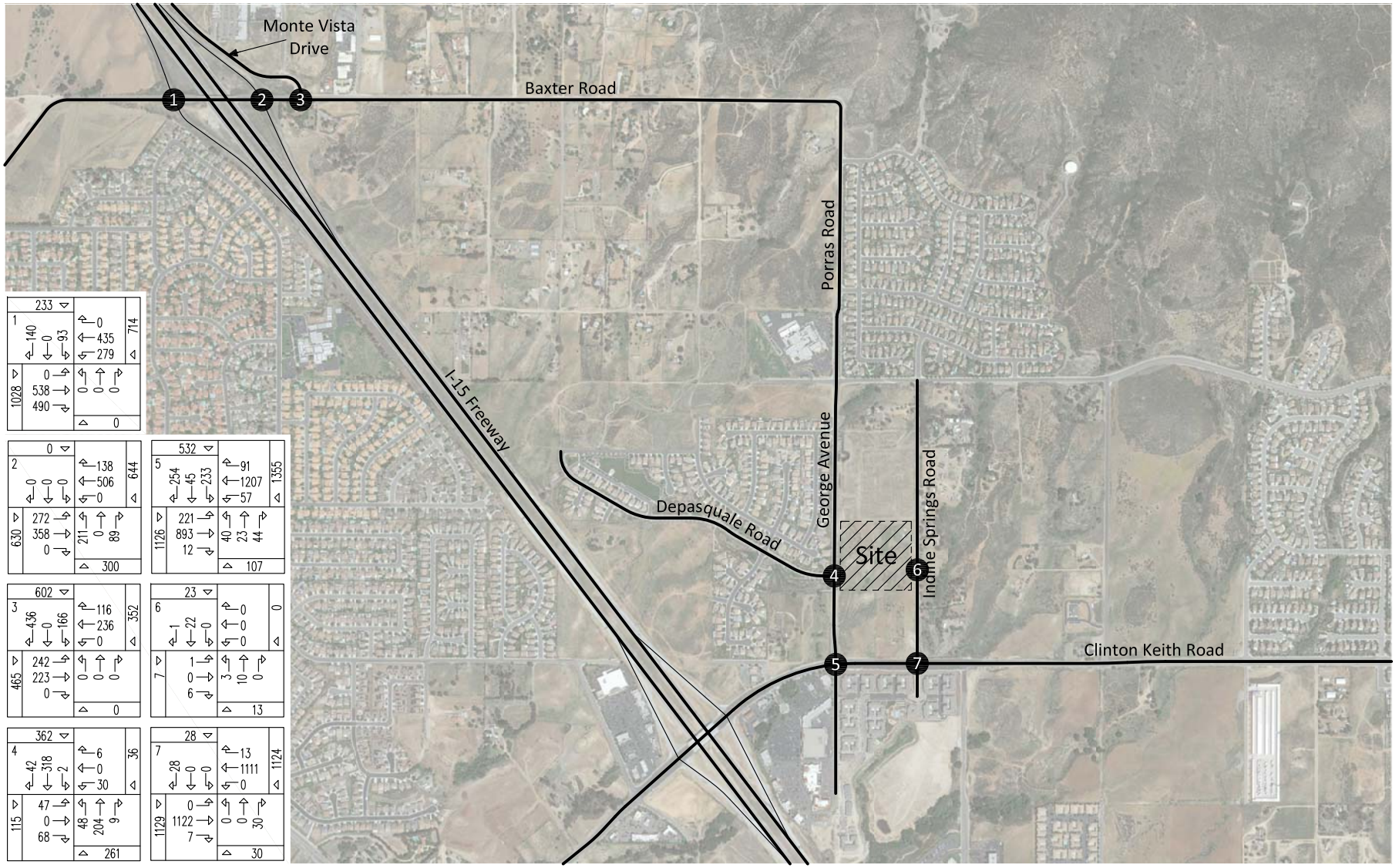


KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

OVER 35 YEARS OF EXCELLENT SERVICE

6169/44

Figure 45
Existing Plus Ambient Growth Plus Project Plus Cumulative Morning Peak Hour Intersection Turning Movement Volumes

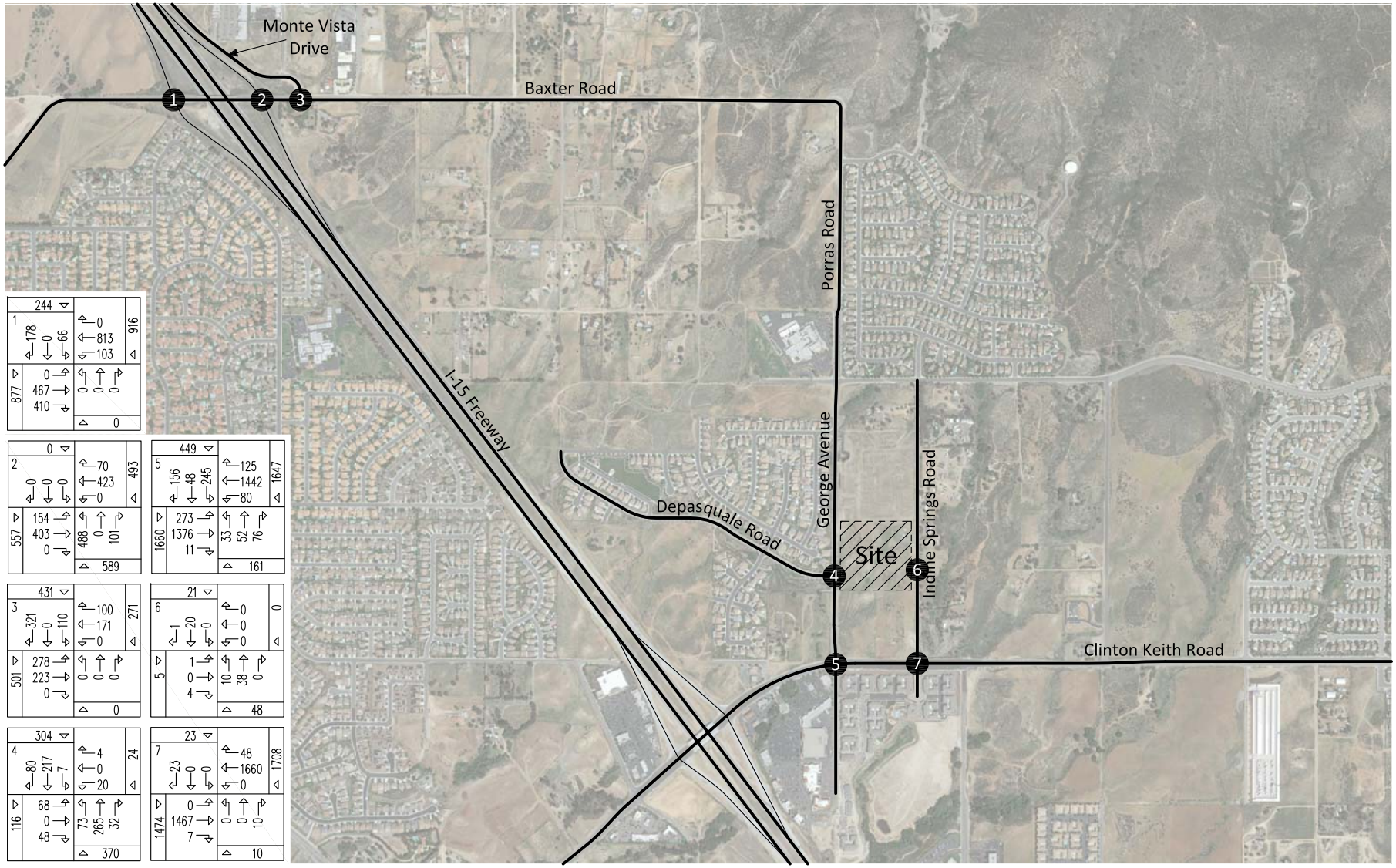


KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

Intersection reference numbers are in upper left corner of turning movement boxes.

6169/45

Figure 46
Existing Plus Ambient Growth Plus Project Plus Cumulative Evening Peak Hour Intersection Turning Movement Volumes



KUNZMAN ASSOCIATES, INC. Intersection reference numbers are in upper left corner of turning movement boxes.

6169/46

OVER 35 YEARS OF EXCELLENT SERVICE

VI. Recommendations

A. Site Access

The proposed project will have access to George Avenue and Iodine Springs Road.

B. Roadway Improvements

1. On-Site

Site-specific circulation and access recommendations are depicted on Figure 47.

Construct George Avenue from the north project boundary to the south project boundary as a Secondary (100 foot right-of-way) at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.

Construct Iodine Springs Road from the north project boundary to the south project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.

The site should provide sufficient parking spaces to meet City of Wildomar parking code requirements in order to service on-site parking demand.

On-site traffic signing/striping should be implemented in conjunction with detailed construction plans for the project site.

Sight distance at project accesses should be reviewed with respect to California Department of Transportation/City of Wildomar standards in conjunction with the preparation of final grading, landscaping, and street improvement plans. The final grading, landscaping, and street improvement plans shall demonstrate that sight distance standards are met. Such plans must be reviewed by the City and approved as consistent with this measure prior to issue of grading permits.

2. Off-Site

As is the case for any roadway design, the City of Wildomar should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

Participate in the phased construction of off-site traffic signals through payment of traffic signal mitigation fees. The traffic signals within the study area at buildout should specifically include an interconnect of the traffic signals to function in a coordinated system.

3. Phasing

For the purposes of this traffic impact analysis, it is assumed that the project will be implemented in one phase and no additional phased improvements will be necessary.

Figure 47
Circulation Recommendations

Construct George Avenue from the north project boundary to the south project boundary as a Secondary (100 foot right-of-way) at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.

Construct Iodine Springs Road from the north project boundary to the south project boundary at its ultimate half-section width including landscaping and parkway improvements in conjunction with development, as necessary.

The site should provide sufficient parking spaces to meet City of Wildomar parking code requirements in order to service on-site parking demand.

On-site traffic signing/striping should be implemented in conjunction with detailed construction plans for the project site.

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As is the case for any roadway design, the City of Wildomar should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

Participate in the phased construction of off-site traffic signals through payment of traffic signal mitigation fees. The traffic signals within the study area at buildout should specifically include an interconnect of the traffic signals to function in a coordinated system.

Legend

STOP = Stop Sign

= Full Access Driveway

6169/47

VII. Findings and Conclusions

A. Site Access

The proposed project will have access to George Avenue and Iodine Springs Road.

B. Traffic Impacts

The proposed development is projected to generate approximately 733 daily vehicle trips, 57 of which occur during the morning peak hour and 77 of which occur during the evening peak hour.

Traffic signals appear to currently be warranted at the following study area intersections for Existing traffic conditions (see Appendix E):

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1

I-15 Freeway NB Ramps (NS) at:
Baxter Road (EW) - #2

Monte Vista Drive (NS) at:
Baxter Road (EW) - #3

The unsignalized intersections have been evaluated for traffic signals using the California Department of Transportation Warrant 3 Peak Hour traffic signal warrant analysis, as specified in the California Manual of Uniform Traffic Control Devices (2014 Update).

C. Need for Improvements Off-Site to Achieve Required Level of Service

For Existing Plus Project traffic conditions, the following study area intersections are projected to operate at unacceptable Levels of Service during the peak hours, without improvements (see Table 4):

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1

Monte Vista Drive (NS) at:
Baxter Road (EW) - #3

For Existing Plus Project traffic conditions and with improvements, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours. Existing Plus Project delay worksheets are provided in Appendix D.

For Existing Plus Ambient Growth Plus Project traffic conditions, the following study area intersection is projected to operate at unacceptable Levels of Service during the peak hours, without improvements (see Table 5):

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1

Monte Vista Drive (NS) at:
Baxter Road (EW) - #3

For Existing Plus Ambient Growth Plus Project traffic conditions and with improvements, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours. Existing Plus Ambient Growth Plus Project delay worksheets are provided in Appendix D.

For Existing Plus Ambient Growth Plus Project Plus Cumulative traffic conditions, the following study area intersection is projected to operate at unacceptable Levels of Service during the peak hours, without improvements (see Table 6):

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1

I-15 Freeway NB Ramps (NS) at:
Baxter Road (EW) - #2

Monte Vista Drive (NS) at:
Baxter Road (EW) - #3

George Avenue (NS) at:
Depasquale Road/Project Access (EW) - #4

For Existing Plus Ambient Growth Plus Project Plus Cumulative traffic conditions and with improvements, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours. Existing Plus Ambient Growth Plus Project Plus Cumulative delay worksheets are provided in Appendix D.

The following intersection improvements are required for Existing Plus Ambient Growth Plus Project Plus Cumulative traffic conditions:

I-15 Freeway SB Ramps (NS) at:
Baxter Road (EW) - #1
- Construct EB Right Turn Lane
- Install Traffic Signal

I-15 Freeway NB Ramps (NS) at:
Baxter Road (EW) - #2
- Install Traffic Signal

Monte Vista Drive (NS) at:

Baxter Road (EW) - #3

- Construct SB Left Turn Lane
- Construct EB Left Turn Lane
- Install Traffic Signal

George Avenue (NS) at:

Depasquale Road (EW) - #4

- Construct Additional SB Through Lane

With all of the recommended mitigation measures above, the study area intersections are projected to operate within acceptable Levels of Service during the peak hours for Existing Plus Ambient Growth Plus Project Plus Cumulative traffic conditions.

Appendices

Appendix A – Glossary of Transportation Terms

Appendix B – Scoping Agreement

Appendix C – Traffic Count Worksheets

Appendix D – Explanation and Calculation of Intersection Delay

Appendix E – Traffic Signal Warrant Worksheets

APPENDIX A

Glossary of Transportation Terms

GLOSSARY OF TRANSPORTATION TERMS

COMMON ABBREVIATIONS

AC:	Acres
ADT:	Average Daily Traffic
Caltrans:	California Department of Transportation
DU:	Dwelling Unit
ICU:	Intersection Capacity Utilization
LOS:	Level of Service
TSF:	Thousand Square Feet
V/C:	Volume/Capacity
VMT:	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The total volume during a year divided by the number of days in a year. Usually only weekdays are included.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A constriction along a travelway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CYCLE LENGTH: The time period in seconds required for one complete signal cycle.

CUL-DE-SAC STREET: A local street open at one end only, and with special provisions for turning around.

DAILY CAPACITY: The daily volume of traffic that will result in a volume during the peak hour equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

ORIGIN-DESTINATION SURVEY: A survey to determine the point of origin and the point of destination for a given vehicle trip.

PASSENGER CAR EQUIVALENTS (PCE): One car is one Passenger Car Equivalent. A truck is equal to 2 or 3 Passenger Car Equivalents in that a truck requires longer to start, goes slower, and accelerates slower. Loaded trucks have a higher Passenger Car Equivalent than empty trucks.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through a signalized intersection.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination; i.e. each trip has two trip-ends. A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

Scoping Agreement

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Wildomar Transportation Department requirements for traffic impact analysis of the following project. The analysis must follow the City of Wildomar Transportation Department Traffic Study Guidelines.

Case No. _____

Related Cases -

SP No. _____

EIR No. _____

GPA No. _____

CZ No. _____

Project Name: **George Avenue/Iodine Springs Road Residential Project**

Project Address: **Adjacent to Depasquale Road between George Avenue and Iodine Springs Road**

Project Description: **77 Single-Family Detached Residential Dwelling Units**

	Consultant	Developer
Name:	**KUNZMAN ASSOCIATES, INC.**	**NOVA HOMES INC.**
Address:	**1111 Town & Country, Suite 34**	**245 Fischer Avenue, Unit A-8A**
	Orange, CA 92868	**Costa Mesa, CA 92626**
Telephone:	**(714) 973-8383**	**(714) 540-1144**

A. Trip Generation Source: **Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012**

	Current Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	**0**	**0**	**0**	**14**	**43**	**57**
PM Trips	**0**	**0**	**0**	**49**	**28**	**77**

Internal Trip Allowance Yes **No** (_____% Trip Discount) (see Attached)

Pass-By Trip Allowance Yes **No** (_____%Trip Discount) (see Attached)

B. Trip Geographic Distribution: N **10** % S **10** % E **25** % W **55** % - See Attached

(See attached exhibit for detailed assignment)

C. Background Traffic

Project Build-out Year **2017** Annual Ambient Growth Rate: **2** %

Phase Year(s) _____

Other area projects to be analyzed: **From George Avenue/Clinton Keith Road Project. Also: City of Murrieta will be contacted for updated list**

Model/Forecast methodology **Ambient Growth Rate Plus Other Development**

D. Study intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

1. I-15 SB Ramps (NS) / Baxter Road (EW) - #1
2. I-15 NB Ramps (NS) / Baxter Road (EW) - #2
3. Monte Vista Drive (NS) / Baxter Road (EW) - #3
4. George Avenue (NS) / Depasquale Road/Project Access (EW) - #4
5. George Avenue (NS) / Clinton Keith Road (EW) - #5
6. Iodine Springs Road (NS) / Project Access (EW) - #6
7. Iodine Springs Road (NS) / Clinton Keith Road (EW) - #7

E. Study Roadway Segments:

1. NA

F. Other Jurisdictional Impacts

Is this project within a City's Sphere of Influence or one-mile radius of City boundaries? [Yes] No

If so, name of City Jurisdiction: Murrieta

G. Site Plan (See attached reduced copy)

H. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline)
(To be filled out by Transportation Department)

_____

_____

_____

I. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.
Date of counts George Avenue/Clinton Keith Road Project + new

Recommended by:

Bryan Crawford, Associate — **June 25, 2015**
Consultant's Representative — Date

Approved Scoping Agreement:

Daniel A. York

_____ — June 26, 2015
Daniel A. York, Public Works Director/City Engineer — Date
City of Wildomar

#6169

Table 1

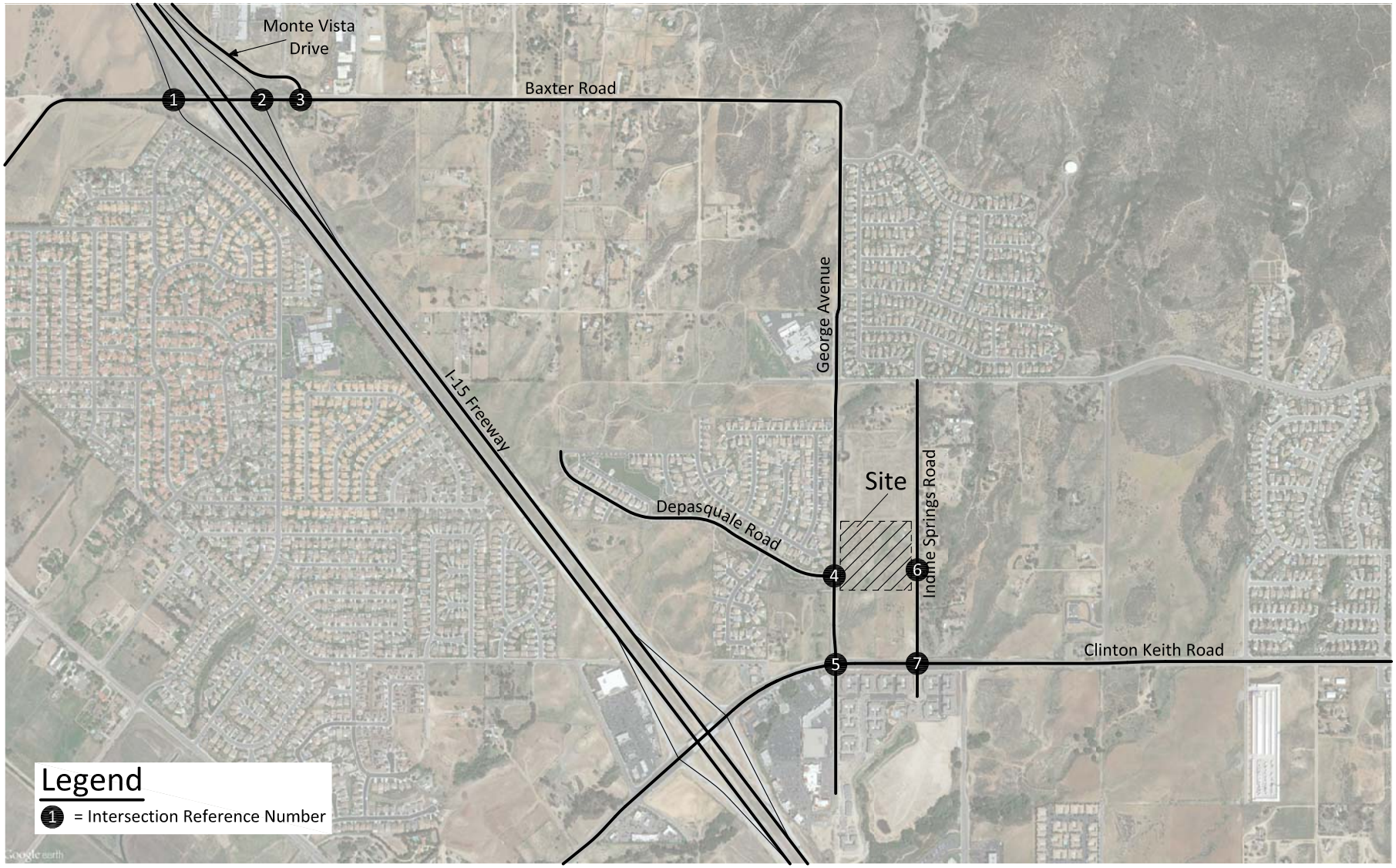
Project Trip Generation[1]

Land Use	Quantity	Units[2]	Morning			Evening			Daily
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates									
Single-Family Detached Housing	77	DU	0.19	0.56	0.75	0.63	0.37	1.00	9.52
Trips Generated									
Single-Family Detached Housing	77	DU	14	43	57	49	28	77	733

[1] Source: Institute of Transportation Engineers, Trip Generation, 9th Edition, 2012, Land Use Category 210.

[2] DU = Dwelling Units

Figure 1
Project Location Map



KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

6169/1

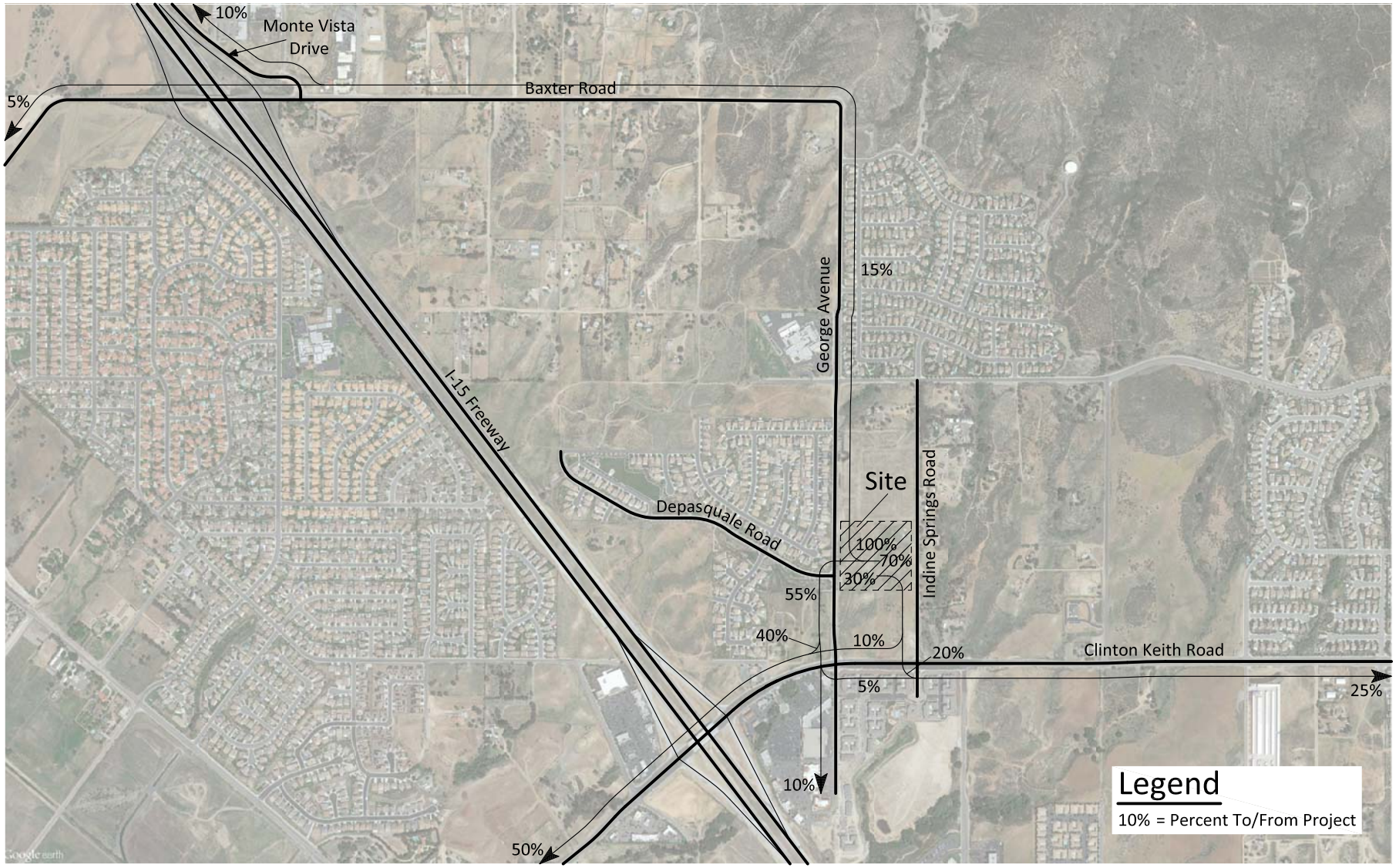
Figure 2
Site Plan

6169/2

KUNZMAN ASSOCIATES, INC.

OVER 35 YEARS OF EXCELLENT SERVICE

Figure 3
Project Trip Distribution



6169/3

KUNZMAN ASSOCIATES, INC.
OVER 35 YEARS OF EXCELLENT SERVICE

APPENDIX C

Traffic Count Worksheets

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: I-15 Southbound On / Off Ramps
E/W: Baxter Road
Weather: Clear

File Name : MUR15SBAAM
Site Code : 20115020
Start Date : 1/14/2015
Page No : 1

Groups Printed- Total Volume

	I-15 Southbound Off Ramp Southbound				Baxter Road Westbound				I-15 Southbound On Ramp Northbound				Baxter Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	7	0	42	49	28	71	0	99	0	0	0	0	0	73	82	155	303
07:15 AM	16	1	34	51	49	74	0	123	0	0	0	0	0	99	91	190	364
07:30 AM	31	1	32	64	68	63	0	131	0	0	0	0	0	104	126	230	425
07:45 AM	28	0	46	74	80	79	0	159	0	0	0	0	0	105	107	212	445
Total	82	2	154	238	225	287	0	512	0	0	0	0	0	381	406	787	1537
08:00 AM	12	0	23	35	42	61	0	103	0	0	0	0	0	70	105	175	313
08:15 AM	6	0	31	37	27	43	0	70	0	0	0	0	0	50	82	132	239
08:30 AM	3	0	29	32	25	34	0	59	0	0	0	0	0	58	111	169	260
08:45 AM	11	0	17	28	18	36	0	54	0	0	0	0	0	39	70	109	191
Total	32	0	100	132	112	174	0	286	0	0	0	0	0	217	368	585	1003
Grand Total	114	2	254	370	337	461	0	798	0	0	0	0	0	598	774	1372	2540
Apprch %	30.8	0.5	68.6		42.2	57.8	0		0	0	0		0	43.6	56.4		
Total %	4.5	0.1	10	14.6	13.3	18.1	0	31.4	0	0	0	0	0	23.5	30.5	54	

	I-15 Southbound Off Ramp Southbound				Baxter Road Westbound				I-15 Southbound On Ramp Northbound				Baxter Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	16	1	34	51	49	74	0	123	0	0	0	0	0	99	91	190	364
07:30 AM	31	1	32	64	68	63	0	131	0	0	0	0	0	104	126	230	425
07:45 AM	28	0	46	74	80	79	0	159	0	0	0	0	0	105	107	212	445
08:00 AM	12	0	23	35	42	61	0	103	0	0	0	0	0	70	105	175	313
Total Volume	87	2	135	224	239	277	0	516	0	0	0	0	0	378	429	807	1547
% App. Total	38.8	0.9	60.3		46.3	53.7	0		0	0	0		0	46.8	53.2		
PHF	.702	.500	.734	.757	.747	.877	.000	.811	.000	.000	.000	.000	.000	.900	.851	.877	.869

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City of Murrieta
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Weather: Clear

File Name : MUR15SBAAM
Site Code : 20115020
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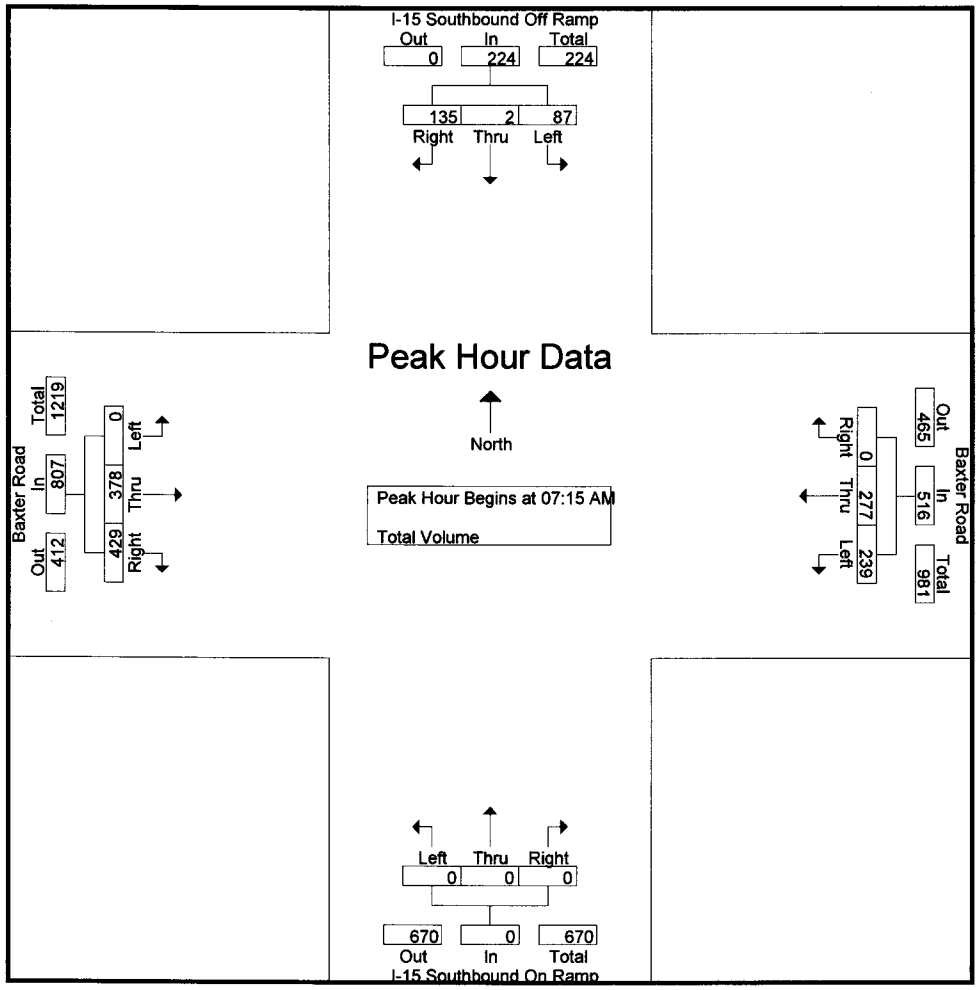
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:15 AM				07:00 AM				07:15 AM			
+0 mins.	7	0	42	49	49	74	0	123	0	0	0	0	0	99	91	190
+15 mins.	16	1	34	51	68	63	0	131	0	0	0	0	0	104	126	230
+30 mins.	31	1	32	64	80	79	0	159	0	0	0	0	0	105	107	212
+45 mins.	28	0	46	74	42	61	0	103	0	0	0	0	0	70	105	175
Total Volume	82	2	154	238	239	277	0	516	0	0	0	0	0	378	429	807
% App. Total	34.5	0.8	64.7		46.3	53.7	0		0	0	0		0	46.8	53.2	
PHF	.661	.500	.837	.804	.747	.877	.000	.811	.000	.000	.000	.000	.000	.900	.851	.877

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City of Murrieta
N/S: I-15 Southbound On / Off Ramps
E/W: Baxter Road
Weather: Clear

File Name : MUR15SBAPM
Site Code : 20115020
Start Date : 1/14/2015
Page No : 1

Groups Printed- Total Volume

	I-15 Southbound Off Ramp Southbound				Baxter Road Westbound				I-15 Southbound On Ramp Northbound				Baxter Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	17	1	42	60	20	103	0	123	0	0	0	0	0	48	70	118	301
04:15 PM	7	0	41	48	6	105	0	111	0	0	0	0	0	39	78	117	276
04:30 PM	12	1	39	52	11	111	0	122	0	0	0	0	0	45	95	140	314
04:45 PM	16	1	44	61	10	119	0	129	0	0	0	0	0	59	73	132	322
Total	52	3	166	221	47	438	0	485	0	0	0	0	0	191	316	507	1213
05:00 PM	14	0	43	57	16	102	0	118	0	0	0	0	0	47	82	129	304
05:15 PM	16	0	45	61	13	114	0	127	0	0	0	0	0	61	64	125	313
05:30 PM	17	1	37	55	15	107	0	122	0	0	0	0	0	59	67	126	303
05:45 PM	16	0	43	59	10	92	0	102	0	0	0	0	0	38	64	102	263
Total	63	1	168	232	54	415	0	469	0	0	0	0	0	205	277	482	1183
Grand Total	115	4	334	453	101	853	0	954	0	0	0	0	0	396	593	989	2396
Apprch %	25.4	0.9	73.7		10.6	89.4	0		0	0	0		0	40	60		
Total %	4.8	0.2	13.9	18.9	4.2	35.6	0	39.8	0	0	0	0	0	16.5	24.7	41.3	

	I-15 Southbound Off Ramp Southbound				Baxter Road Westbound				I-15 Southbound On Ramp Northbound				Baxter Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. 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	12	1	39	52	11	111	0	122	0	0	0	0	0	45	95	140	314
04:45 PM	16	1	44	61	10	119	0	129	0	0	0	0	0	59	73	132	322
05:00 PM	14	0	43	57	16	102	0	118	0	0	0	0	0	47	82	129	304
05:15 PM	16	0	45	61	13	114	0	127	0	0	0	0	0	61	64	125	313
Total Volume	58	2	171	231	50	446	0	496	0	0	0	0	0	212	314	526	1253
% App. Total	25.1	0.9	74		10.1	89.9	0		0	0	0		0	40.3	59.7		
PHF	.906	.500	.950	.947	.781	.937	.000	.961	.000	.000	.000	.000	.000	.869	.826	.939	.973

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Weather: Clear

File Name : MUR15SBAPM
Site Code : 20115020
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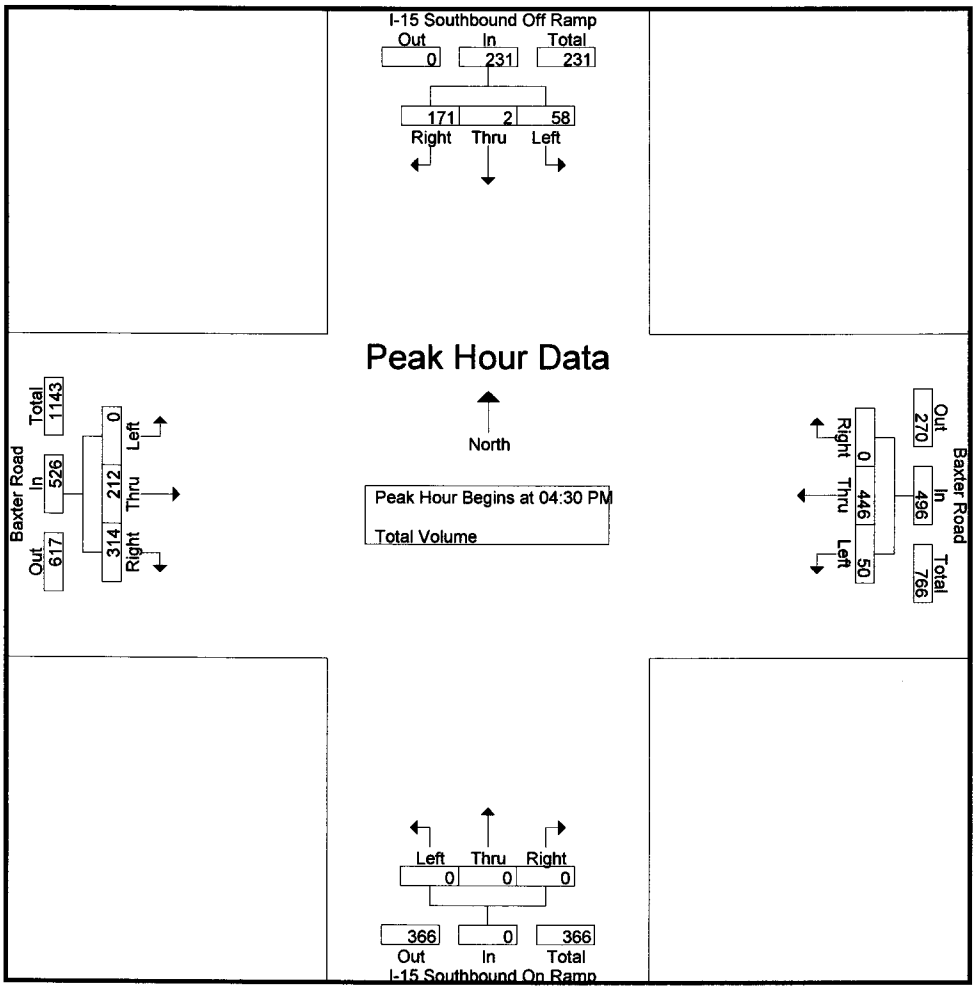
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				04:00 PM				04:30 PM			
+0 mins.	16	1	44	61	11	111	0	122	0	0	0	0	0	45	95	140
+15 mins.	14	0	43	57	10	119	0	129	0	0	0	0	0	59	73	132
+30 mins.	16	0	45	61	16	102	0	118	0	0	0	0	0	47	82	129
+45 mins.	17	1	37	55	13	114	0	127	0	0	0	0	0	61	64	125
Total Volume	63	2	169	234	50	446	0	496	0	0	0	0	0	212	314	526
% App. Total	26.9	0.9	72.2		10.1	89.9	0		0	0	0		0	40.3	59.7	
PHF	.926	.500	.939	.959	.781	.937	.000	.961	.000	.000	.000	.000	.000	.869	.826	.939

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City of Murrieta
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Weather: Clear

File Name : MUR15NBAAM
Site Code : 20115020
Start Date : 1/14/2015
Page No : 1

Groups Printed- Total Volume

	I-15 Northbound On Ramp Southbound				Baxter Road Westbound				I-15 Northbound Off Ramp Northbound				Baxter Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	64	18	82	46	0	6	52	64	20	0	84	218
07:15 AM	0	0	0	0	0	77	27	104	39	0	11	50	63	47	0	110	264
07:30 AM	0	0	0	0	0	90	40	130	45	1	28	74	65	75	0	140	344
07:45 AM	0	0	0	0	0	114	42	156	45	0	6	51	69	61	0	130	337
Total	0	0	0	0	0	345	127	472	175	1	51	227	261	203	0	464	1163
08:00 AM	0	0	0	0	0	64	36	100	26	0	6	32	52	25	0	77	209
08:15 AM	0	0	0	0	0	40	8	48	32	2	8	42	41	19	0	60	150
08:30 AM	0	0	0	0	0	30	2	32	23	0	13	36	43	10	0	53	121
08:45 AM	0	0	0	0	0	29	11	40	28	1	14	43	31	23	0	54	137
Total	0	0	0	0	0	163	57	220	109	3	41	153	167	77	0	244	617
Grand Total	0	0	0	0	0	508	184	692	284	4	92	380	428	280	0	708	1780
Apprch %	0	0	0		0	73.4	26.6		74.7	1.1	24.2		60.5	39.5	0		
Total %	0	0	0	0	0	28.5	10.3	38.9	16	0.2	5.2	21.3	24	15.7	0	39.8	

	I-15 Northbound On Ramp Southbound				Baxter Road Westbound				I-15 Northbound Off Ramp Northbound				Baxter Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	64	18	82	46	0	6	52	64	20	0	84	218
07:15 AM	0	0	0	0	0	77	27	104	39	0	11	50	63	47	0	110	264
07:30 AM	0	0	0	0	0	90	40	130	45	1	28	74	65	75	0	140	344
07:45 AM	0	0	0	0	0	114	42	156	45	0	6	51	69	61	0	130	337
Total Volume	0	0	0	0	0	345	127	472	175	1	51	227	261	203	0	464	1163
% App. Total	0	0	0		0	73.1	26.9		77.1	0.4	22.5		56.2	43.8	0		
PHF	.000	.000	.000	.000	.000	.757	.756	.756	.951	.250	.455	.767	.946	.677	.000	.829	.845

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City of Murrieta
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File Name : MUR15NBAAM
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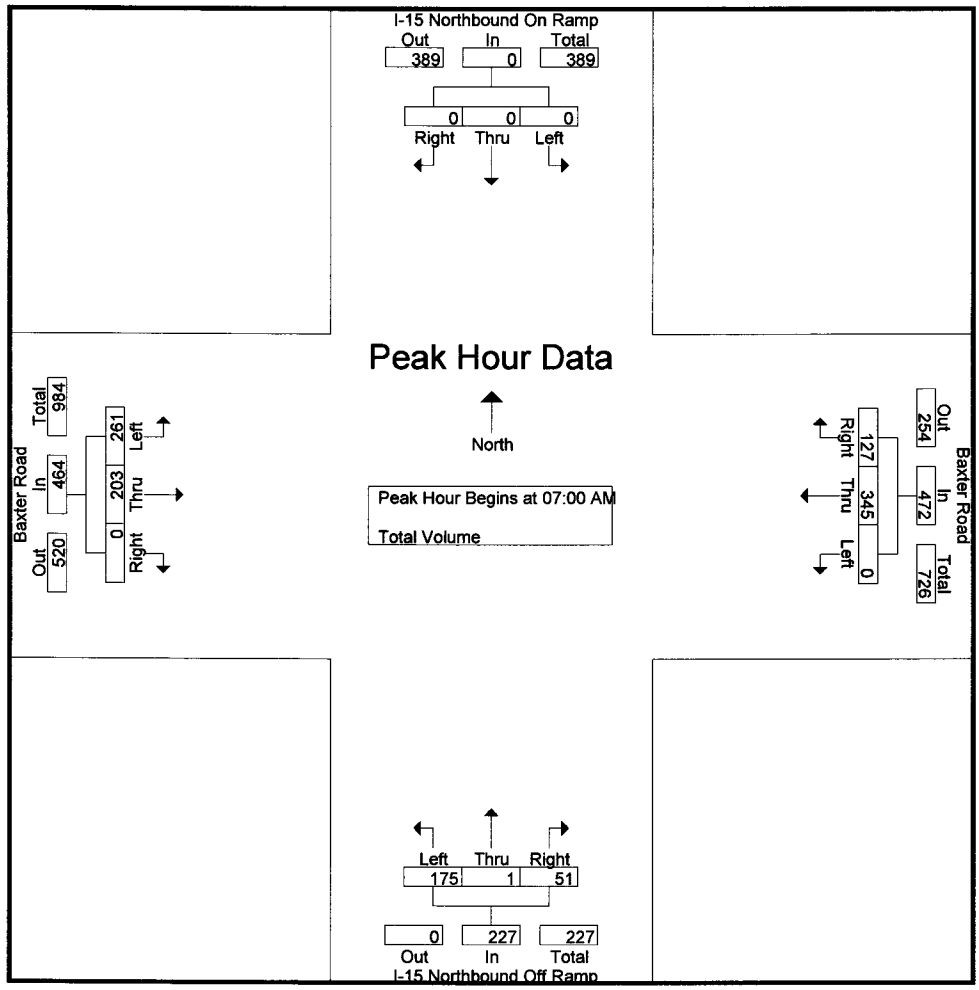
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:15 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	77	27	104	46	0	6	52	64	20	0	84
+15 mins.	0	0	0	0	0	90	40	130	39	0	11	50	63	47	0	110
+30 mins.	0	0	0	0	0	114	42	156	45	1	28	74	65	75	0	140
+45 mins.	0	0	0	0	0	64	36	100	45	0	6	51	69	61	0	130
Total Volume	0	0	0	0	0	345	145	490	175	1	51	227	261	203	0	464
% App. Total	0	0	0		0	70.4	29.6		77.1	0.4	22.5		56.2	43.8	0	
PHF	.000	.000	.000	.000	.000	.757	.863	.785	.951	.250	.455	.767	.946	.677	.000	.829

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City of Murrieta
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File Name : MUR15NBAPM
Site Code : 20115020
Start Date : 1/14/2015
Page No : 1

Groups Printed- Total Volume

	I-15 Northbound On Ramp Southbound				Baxter Road Westbound				I-15 Northbound Off Ramp Northbound				Baxter Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	39	7	46	76	0	10	86	38	30	0	68	200
04:15 PM	0	0	0	0	0	27	15	42	87	2	10	99	23	20	0	43	184
04:30 PM	0	0	0	0	0	34	12	46	96	0	11	107	33	25	0	58	211
04:45 PM	0	0	0	0	0	27	10	37	106	3	14	123	39	34	0	73	233
Total	0	0	0	0	0	127	44	171	365	5	45	415	133	109	0	242	828
05:00 PM	0	0	0	0	0	28	22	50	87	0	9	96	29	32	0	61	207
05:15 PM	0	0	0	0	0	25	10	35	101	0	19	120	39	43	0	82	237
05:30 PM	0	0	0	0	0	31	21	52	87	1	8	96	41	36	0	77	225
05:45 PM	0	0	0	0	0	25	11	36	75	0	10	85	20	33	0	53	174
Total	0	0	0	0	0	109	64	173	350	1	46	397	129	144	0	273	843
Grand Total	0	0	0	0	0	236	108	344	715	6	91	812	262	253	0	515	1671
Apprch %	0	0	0		0	68.6	31.4		88.1	0.7	11.2		50.9	49.1	0		
Total %	0	0	0	0	0	14.1	6.5	20.6	42.8	0.4	5.4	48.6	15.7	15.1	0	30.8	

	I-15 Northbound On Ramp Southbound				Baxter Road Westbound				I-15 Northbound Off Ramp Northbound				Baxter Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	27	10	37	106	3	14	123	39	34	0	73	233
05:00 PM	0	0	0	0	0	28	22	50	87	0	9	96	29	32	0	61	207
05:15 PM	0	0	0	0	0	25	10	35	101	0	19	120	39	43	0	82	237
05:30 PM	0	0	0	0	0	31	21	52	87	1	8	96	41	36	0	77	225
Total Volume	0	0	0	0	0	111	63	174	381	4	50	435	148	145	0	293	902
% App. Total	0	0	0		0	63.8	36.2		87.6	0.9	11.5		50.5	49.5	0		
PHF	.000	.000	.000	.000	.000	.895	.716	.837	.899	.333	.658	.884	.902	.843	.000	.893	.951

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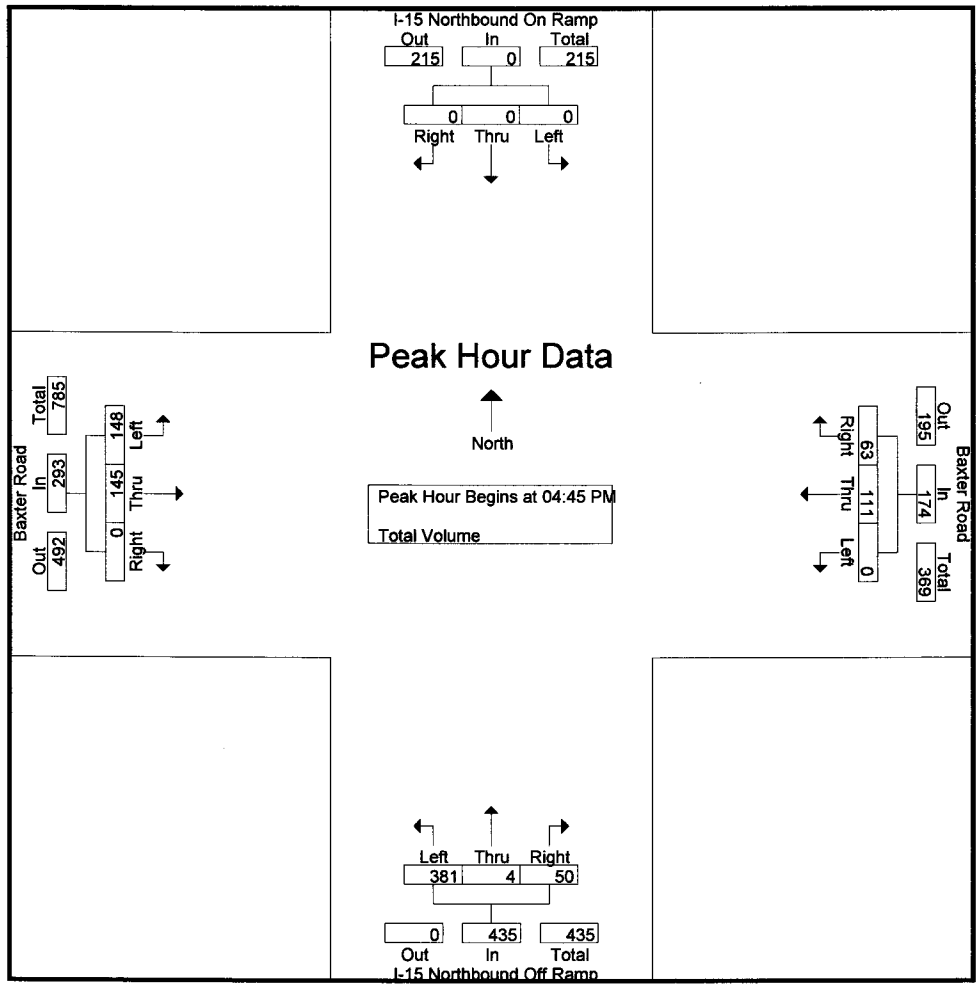
City of Murrieta
N/S: I-15 Northbound On / Off Ramps
E/W: Baxter Road
Weather: Clear

File Name : MUR15NBAPM
Site Code : 20115020
Start Date : 1/14/2015
Page No : 2



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				04:30 PM				04:45 PM			
+0 mins.	0	0	0	0	0	27	15	42	96	0	11	107	39	34	0	73
+15 mins.	0	0	0	0	0	34	12	46	106	3	14	123	29	32	0	61
+30 mins.	0	0	0	0	0	27	10	37	87	0	9	96	39	43	0	82
+45 mins.	0	0	0	0	0	28	22	50	101	0	19	120	41	36	0	77
Total Volume	0	0	0	0	0	116	59	175	390	3	53	446	148	145	0	293
% App. Total	0	0	0		0	66.3	33.7		87.4	0.7	11.9		50.5	49.5	0	
PHF	.000	.000	.000	.000	.000	.853	.670	.875	.920	.250	.697	.907	.902	.843	.000	.893

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Murrieta
N/S: Monte Vista Drive
E/W: Baxter Road
Weather: Clear

File Name : MURMVBAAM
Site Code : 20115020
Start Date : 1/14/2015
Page No : 1

Groups Printed- Total Volume

	Monte Vista Drive Southbound			Baxter Road Westbound			Baxter Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
07:00 AM	6	43	49	33	3	36	11	9	20	105
07:15 AM	14	75	89	29	9	38	22	37	59	186
07:30 AM	40	89	129	42	13	55	51	57	108	292
07:45 AM	58	109	167	50	23	73	25	46	71	311
Total	118	316	434	154	48	202	109	149	258	894
08:00 AM	12	54	66	51	14	65	14	19	33	164
08:15 AM	5	28	33	19	6	25	16	10	26	84
08:30 AM	5	22	27	12	5	17	16	5	21	65
08:45 AM	5	21	26	19	2	21	22	16	38	85
Total	27	125	152	101	27	128	68	50	118	398
Grand Total	145	441	586	255	75	330	177	199	376	1292
Apprch %	24.7	75.3		77.3	22.7		47.1	52.9		
Total %	11.2	34.1	45.4	19.7	5.8	25.5	13.7	15.4	29.1	

	Monte Vista Drive Southbound			Baxter Road Westbound			Baxter Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	14	75	89	29	9	38	22	37	59	186
07:30 AM	40	89	129	42	13	55	51	57	108	292
07:45 AM	58	109	167	50	23	73	25	46	71	311
08:00 AM	12	54	66	51	14	65	14	19	33	164
Total Volume	124	327	451	172	59	231	112	159	271	953
% App. Total	27.5	72.5		74.5	25.5		41.3	58.7		
PHF	.534	.750	.675	.843	.641	.791	.549	.697	.627	.766

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City of Murrieta
N/S: Monte Vista Drive
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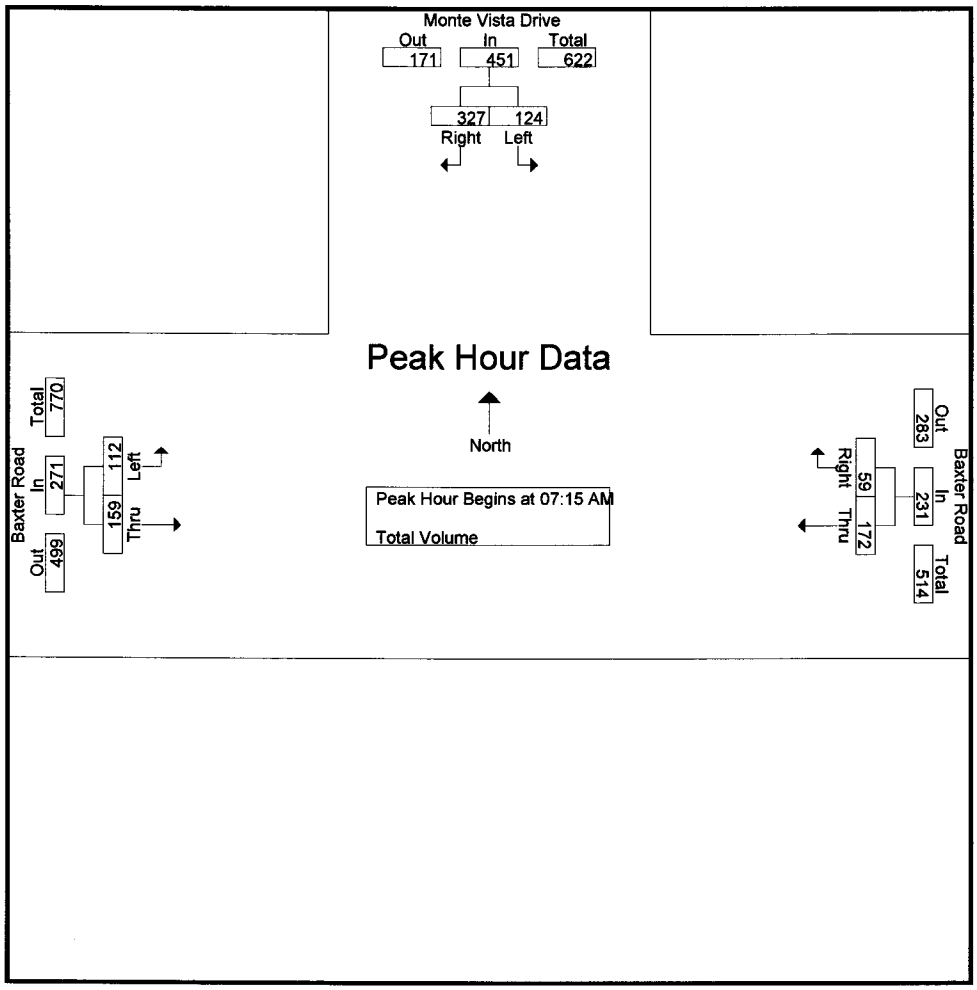
Weather: Clear

File Name : MURMVBAAM
Site Code : 20115020
Start Date : 1/14/2015
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	14	75	89	29	9	38	22	37	59
+15 mins.	40	89	129	42	13	55	51	57	108
+30 mins.	58	109	167	50	23	73	25	46	71
+45 mins.	12	54	66	51	14	65	14	19	33
Total Volume	124	327	451	172	59	231	112	159	271
% App. Total	27.5	72.5		74.5	25.5		41.3	58.7	
PHF	.534	.750	.675	.843	.641	.791	.549	.697	.627

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City of Murrieta
N/S: Monte Vista Drive
E/W: Baxter Road
Weather: Clear

File Name : MURMVBAPM
Site Code : 20115020
Start Date : 1/14/2015
Page No : 1

Groups Printed- Total Volume

	Monte Vista Drive Southbound			Baxter Road Westbound			Baxter Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
04:00 PM	11	29	40	17	4	21	13	27	40	101
04:15 PM	8	18	26	24	4	28	16	17	33	87
04:30 PM	8	23	31	24	7	31	22	15	37	99
04:45 PM	7	19	26	15	6	21	16	28	44	91
Total	34	89	123	80	21	101	67	87	154	378
05:00 PM	3	36	39	14	8	22	17	27	44	105
05:15 PM	10	19	29	18	6	24	28	30	58	111
05:30 PM	7	31	38	21	6	27	17	29	46	111
05:45 PM	2	14	16	22	5	27	16	29	45	88
Total	22	100	122	75	25	100	78	115	193	415
Grand Total	56	189	245	155	46	201	145	202	347	793
Apprch %	22.9	77.1		77.1	22.9		41.8	58.2		
Total %	7.1	23.8	30.9	19.5	5.8	25.3	18.3	25.5	43.8	

	Monte Vista Drive Southbound			Baxter Road Westbound			Baxter Road Eastbound			
Start Time	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	7	19	26	15	6	21	16	28	44	91
05:00 PM	3	36	39	14	8	22	17	27	44	105
05:15 PM	10	19	29	18	6	24	28	30	58	111
05:30 PM	7	31	38	21	6	27	17	29	46	111
Total Volume	27	105	132	68	26	94	78	114	192	418
% App. Total	20.5	79.5		72.3	27.7		40.6	59.4		
PHF	.675	.729	.846	.810	.813	.870	.696	.950	.828	.941

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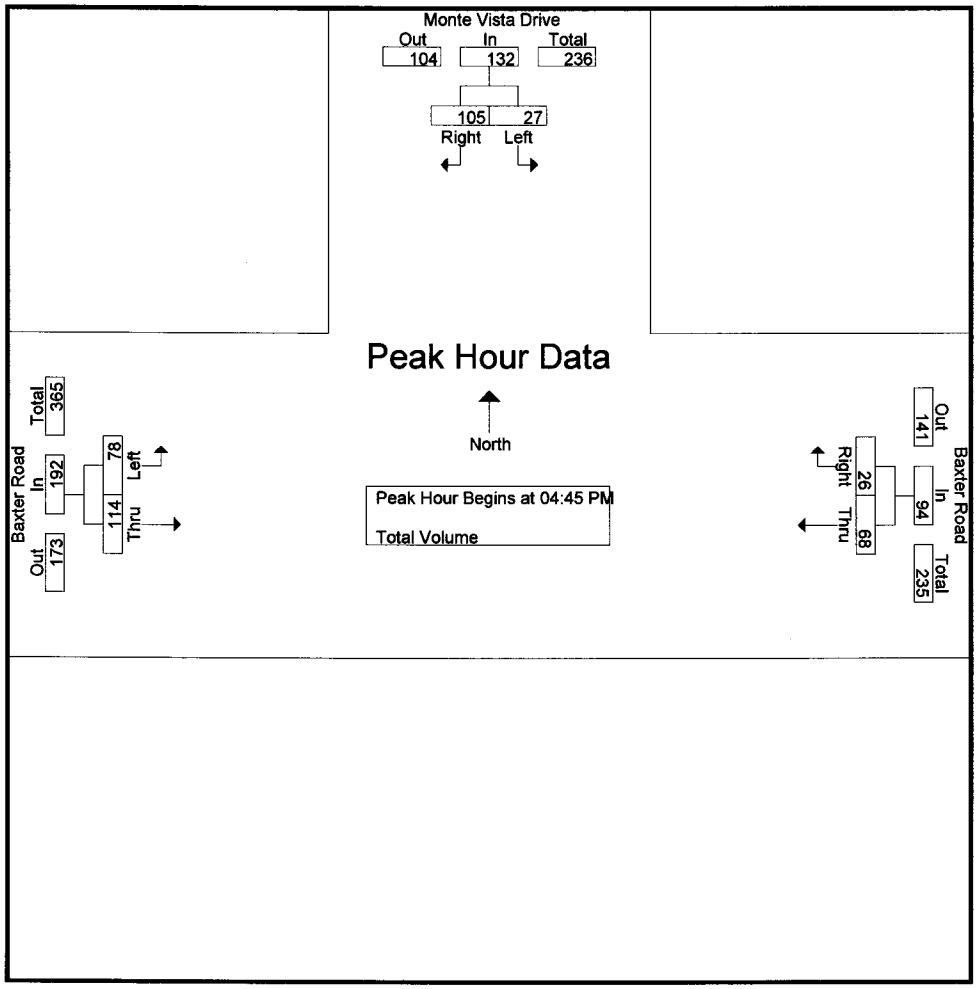
City of Murrieta
N/S: Monte Vista Drive
E/W: Baxter Road
Weather: Clear

File Name : MURMVBAPM
Site Code : 20115020
Start Date : 1/14/2015
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:15 PM			05:00 PM		
+0 mins.	7	19	26	24	4	28	17	27	44
+15 mins.	3	36	39	24	7	31	28	30	58
+30 mins.	10	19	29	15	6	21	17	29	46
+45 mins.	7	31	38	14	8	22	16	29	45
Total Volume	27	105	132	77	25	102	78	115	193
% App. Total	20.5	79.5		75.5	24.5		40.4	59.6	
PHF	.675	.729	.846	.802	.781	.823	.696	.958	.832

Counts Unlimited Inc.
PO Box 1178
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951-268-6268

City of Murrieta
N/S: George Avenue
E/W: Depasquale Road
Weather: Sunny

File Name : MURGEDPAM
Site Code : 00000098
Start Date : 5/29/2014
Page No : 1

Groups Printed- Total Volume

	George Avenue Southbound			George Avenue Northbound			Depasquale Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
07:00 AM	34	1	35	3	15	18	2	21	23	76
07:15 AM	36	0	36	7	29	36	0	16	16	88
07:30 AM	63	1	64	9	48	57	4	7	11	132
07:45 AM	87	5	92	12	42	54	7	13	20	166
Total	220	7	227	31	134	165	13	57	70	462
08:00 AM	48	0	48	7	22	29	0	12	12	89
08:15 AM	47	0	47	5	9	14	1	7	8	69
08:30 AM	28	0	28	7	13	20	1	9	10	58
08:45 AM	23	1	24	6	19	25	2	12	14	63
Total	146	1	147	25	63	88	4	40	44	279
Grand Total	366	8	374	56	197	253	17	97	114	741
Apprch %	97.9	2.1		22.1	77.9		14.9	85.1		
Total %	49.4	1.1	50.5	7.6	26.6	34.1	2.3	13.1	15.4	

	George Avenue Southbound			George Avenue Northbound			Depasquale Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	36	0	36	7	29	36	0	**16**	16	88
07:30 AM	63	1	64	9	**48**	**57**	4	7	11	132
07:45 AM	**87**	**5**	**92**	**12**	42	54	**7**	13	**20**	**166**
08:00 AM	48	0	48	7	22	29	0	12	12	89
Total Volume	234	6	240	35	141	176	11	48	59	475
% App. Total	97.5	2.5		19.9	80.1		18.6	81.4		
PHF	.672	.300	.652	.729	.734	.772	.393	.750	.738	.715

Counts Unlimited Inc.
PO Box 1178
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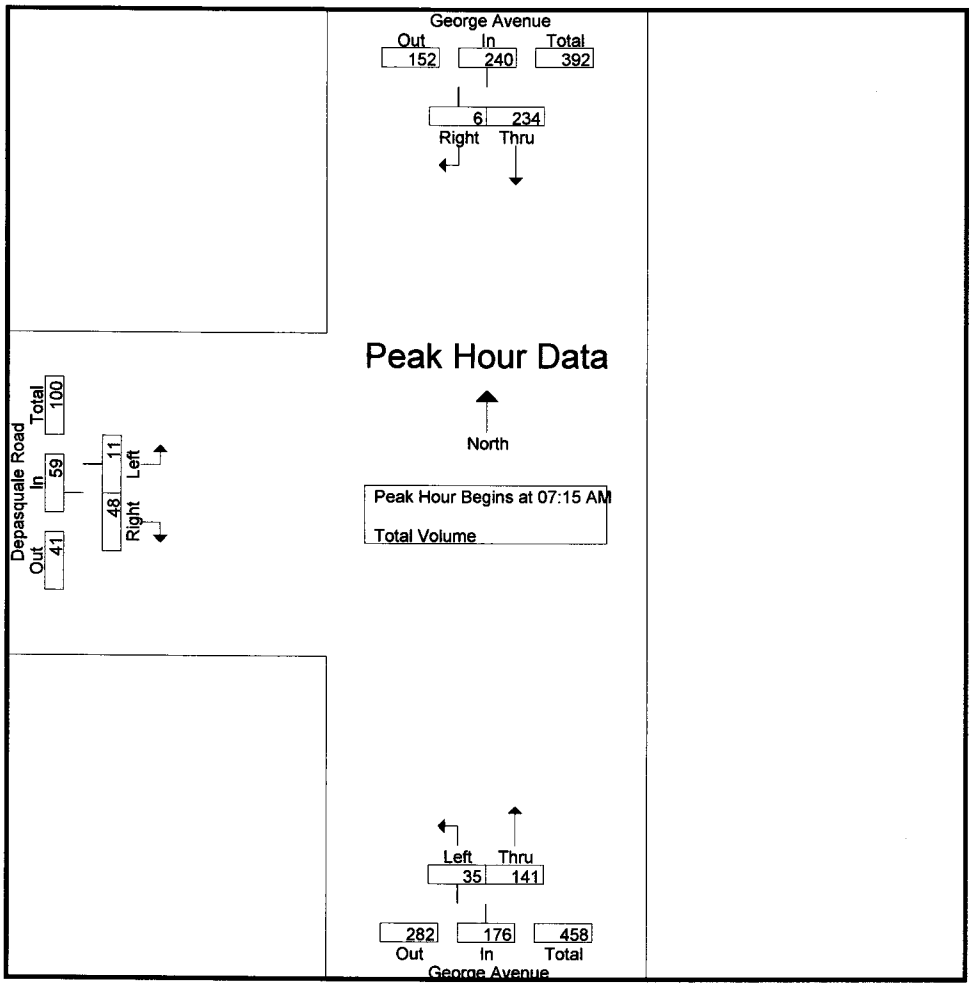
951-268-6268

City of Murrieta
N/S: George Avenue
E/W: Depasquale Road
Weather: Sunny

File Name : MURGEDPAM
Site Code : 00000098
Start Date : 5/29/2014
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:15 AM			07:00 AM		
+0 mins.	63	1	64	7	29	36	2	**21**	**23**
+15 mins.	**87**	**5**	**92**	9	**48**	**57**	0	16	16
+30 mins.	48	0	48	**12**	42	54	4	7	11
+45 mins.	47	0	47	7	22	29	**7**	13	20
Total Volume	245	6	251	35	141	176	13	57	70
% App. Total	97.6	2.4		19.9	80.1		18.6	81.4	
PHF	.704	.300	.682	.729	.734	.772	.464	.679	.761

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City of Murrieta
N/S: George Avenue
E/W: Depasquale Road
Weather: Sunny

File Name : MURGEDPPM
Site Code : 00000098
Start Date : 5/29/2014
Page No : 1

Groups Printed- Total Volume

	George Avenue Southbound			George Avenue Northbound			Depasquale Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
04:00 PM	25	0	25	15	28	43	0	11	11	79
04:15 PM	27	1	28	11	27	38	0	6	6	72
04:30 PM	29	0	29	12	26	38	0	7	7	74
04:45 PM	29	1	30	8	31	39	0	7	7	76
Total	110	2	112	46	112	158	0	31	31	301
05:00 PM	38	2	40	10	34	44	0	6	6	90
05:15 PM	26	0	26	10	31	41	1	9	10	77
05:30 PM	27	0	27	13	25	38	0	13	13	78
05:45 PM	41	1	42	10	40	50	0	11	11	103
Total	132	3	135	43	130	173	1	39	40	348
06:00 PM	30	0	30	12	39	51	0	4	4	85
06:15 PM	28	2	30	13	28	41	0	6	6	77
06:30 PM	20	1	21	13	44	57	0	8	8	86
06:45 PM	22	2	24	13	37	50	0	6	6	80
Total	100	5	105	51	148	199	0	24	24	328
Grand Total	342	10	352	140	390	530	1	94	95	977
Apprch %	97.2	2.8		26.4	73.6		1.1	98.9		
Total %	35	1	36	14.3	39.9	54.2	0.1	9.6	9.7	

	George Avenue Southbound			George Avenue Northbound			Depasquale Road Eastbound			
Start Time	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:45 PM										
05:45 PM	**41**	1	**42**	10	40	50	0	**11**	**11**	**103**
06:00 PM	30	0	30	12	39	51	0	4	4	85
06:15 PM	28	**2**	30	**13**	28	41	0	6	6	77
06:30 PM	20	1	21	13	**44**	**57**	0	8	8	86
Total Volume	119	4	123	48	151	199	0	29	29	351
% App. Total	96.7	3.3		24.1	75.9		0	100		
PHF	.726	.500	.732	.923	.858	.873	.000	.659	.659	.852

Counts Unlimited Inc.
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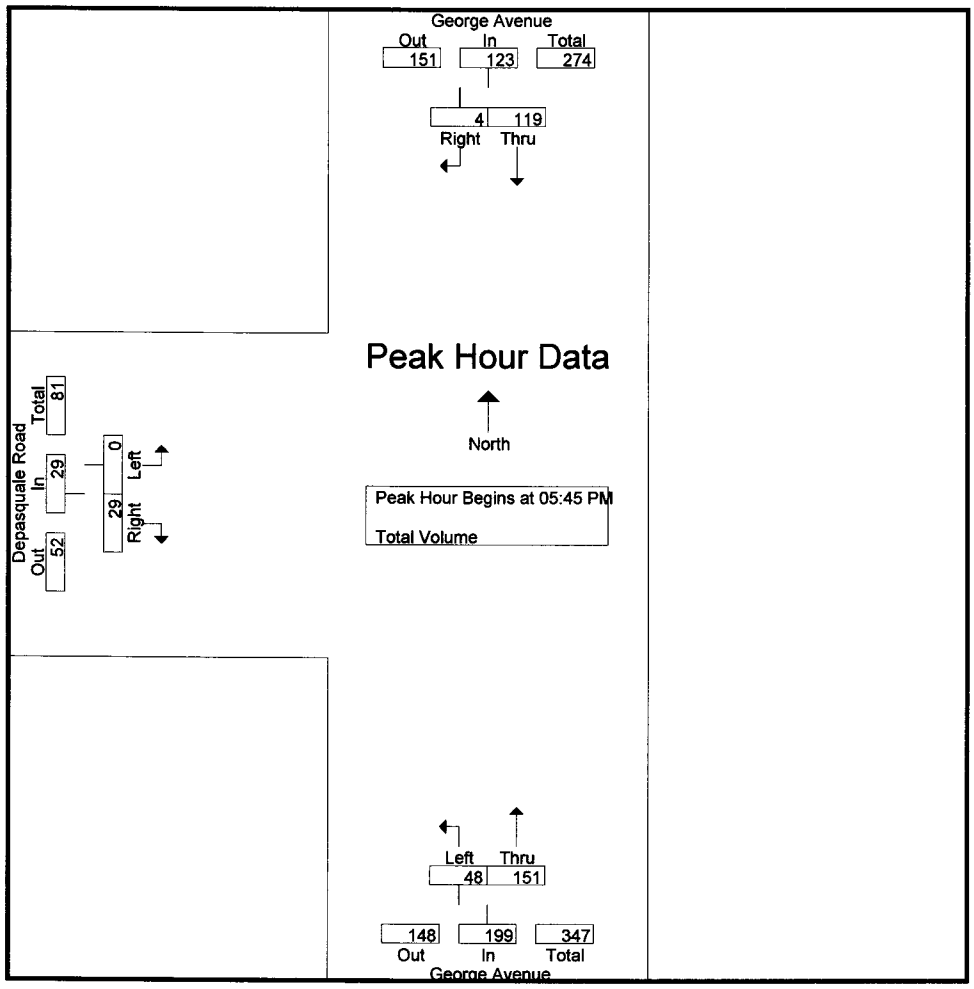
951-268-6268

City of Murrieta
N/S: George Avenue
E/W: Depasquale Road
Weather: Sunny

File Name : MURGEDPPM
Site Code : 00000098
Start Date : 5/29/2014
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM			05:45 PM			05:00 PM		
+0 mins.	38	**2**	40	10	40	50	0	6	6
+15 mins.	26	0	26	12	39	51	**1**	9	10
+30 mins.	27	0	27	**13**	28	41	0	**13**	**13**
+45 mins.	**41**	1	**42**	13	**44**	**57**	0	11	11
Total Volume	132	3	135	48	151	199	1	39	40
% App. Total	97.8	2.2		24.1	75.9		2.5	97.5	
PHF	.805	.375	.804	.923	.858	.873	.250	.750	.769

INTERSECTION TURNING MOVEMENT COUNTS

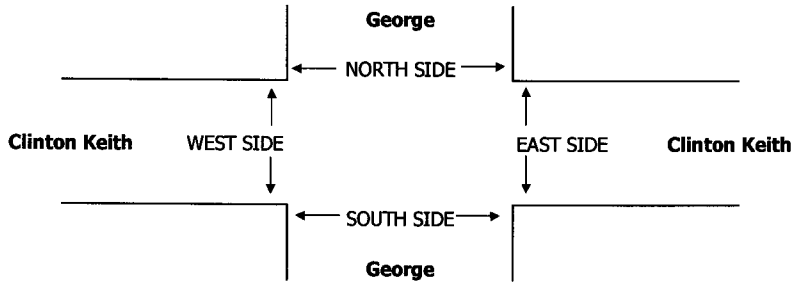
PREPARED BY: AimTD LLC. tel: 951 249 3226 pacific@aimtd.com

DATE:				
Thu, Sep 18, 14	LOCATION:	Wildomar	PROJECT #:	SC0446
	NORTH & SOUTH:	George	LOCATION #:	3
	EAST & WEST:	Clinton Keith	CONTROL:	SIGNAL

NOTES:

N ▲ ◄ W E ► S ▼

		NORTHBOUND George			SOUTHBOUND George			EASTBOUND Clinton Keith			WESTBOUND Clinton Keith				U-TURNS				
	LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 1	SR 1	EL 1	ET 3	ER 0	WL 1	WT 2	WR 0	TOTAL	NB X	SB X	EB X	WB 0	TTL
AM	7:00 AM	9	1	4	10	3	34	6	105	0	14	182	4	372	0	0	0	0	0
	7:15 AM	4	3	6	13	5	39	24	122	5	12	175	5	413	0	0	0	1	1
	7:30 AM	10	4	9	20	5	50	36	142	3	12	205	16	512	0	0	0	3	3
	7:45 AM	10	5	9	29	11	60	30	155	1	18	203	21	552	0	0	0	2	2
	8:00 AM	10	2	11	21	10	58	14	172	3	11	184	6	502	0	0	0	1	1
	8:15 AM	8	0	12	12	2	30	14	177	5	13	210	4	487	0	0	0	2	2
	8:30 AM	11	3	11	11	10	29	14	157	2	11	155	7	421	0	0	0	0	0
	8:45 AM	9	3	10	8	6	24	17	137	7	18	168	4	411	0	0	0	0	0
	VOLUMES	71	21	72	124	52	324	155	1,167	26	109	1,482	67	3,679	0	0	0	9	9
	APPROACH %	43%	13%	44%	25%	10%	65%	11%	87%	2%	7%	89%	4%						
	APP/DEPART	164	/	243	500	/	187	1,348	/	1,372	1,667	/	1,877	0					
	BEGIN PEAK HR		7:30 AM																
	VOLUMES	38	11	41	82	28	198	94	646	12	54	802	47	2,053					
	APPROACH %	42%	12%	46%	27%	9%	64%	13%	86%	2%	6%	89%	5%						
	PEAK HR FACTOR		0.938			0.770			0.959			0.933		0.930					
	APP/DEPART	90	/	152	308	/	94	752	/	769	903	/	1,038	0					
PM	4:00 PM	10	4	18	13	9	29	37	207	3	19	197	7	553	0	0	0	2	2
	4:15 PM	3	7	24	9	4	19	33	212	5	23	192	12	543	0	0	0	2	2
	4:30 PM	10	9	15	11	8	21	33	221	2	18	197	10	555	0	0	0	0	0
	4:45 PM	9	5	18	11	12	25	22	226	4	16	205	10	563	0	0	0	2	2
	5:00 PM	8	6	19	13	6	19	23	216	3	20	205	12	550	0	0	0	3	3
	5:15 PM	5	9	20	14	3	33	30	227	2	22	231	10	606	0	0	0	4	4
	5:30 PM	7	2	27	11	3	27	33	214	3	16	190	7	540	0	0	0	0	0
	5:45 PM	7	6	13	8	10	22	37	210	0	19	221	13	566	0	0	0	0	0
	VOLUMES	59	48	154	90	55	195	248	1,733	22	153	1,638	81	4,489	0	0	0	13	13
	APPROACH %	23%	18%	59%	26%	16%	57%	12%	87%	1%	8%	88%	4%						
	APP/DEPART	261	/	377	340	/	230	2,003	/	1,990	1,885	/	1,892	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	32	29	72	49	29	98	108	890	11	76	838	42	2,274					
	APPROACH %	24%	22%	54%	28%	16%	56%	11%	88%	1%	8%	88%	4%						
	PEAK HR FACTOR		0.978			0.880			0.974			0.909		0.938					
	APP/DEPART	133	/	179	176	/	116	1,009	/	1,011	956	/	968	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 pacific@aimtd.com

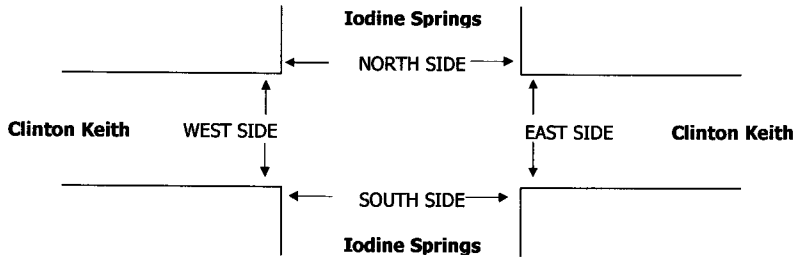
DATE:				
Thu, Jul 9, 15	LOCATION:	Wildomar	PROJECT #:	SC1507
	NORTH & SOUTH:	Iodine Springs	LOCATION #:	1
	EAST & WEST:	Clinton Keith	CONTROL:	STOP N/S

NOTES:

N ▲ ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Iodine Springs			SOUTHBOUND Iodine Springs			EASTBOUND Clinton Keith			WESTBOUND Clinton Keith				U-TURNS				
	LANES:	NL X	NT X	NR 1	SL X	ST X	SR 1	EL X	ET 3.5	ER 0.5	WL X	WT 2	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL
AM	7:00 AM	0	0	4	0	0	1	0	142	2	0	117	1	267	0	0	0	0	0
	7:15 AM	0	0	2	0	0	4	0	139	2	0	133	1	281	0	0	0	0	0
	7:30 AM	0	0	1	1	0	1	0	178	1	0	179	5	366	0	1	0	0	1
	7:45 AM	0	0	9	1	0	3	0	156	1	0	182	3	355	0	1	0	0	1
	8:00 AM	0	0	6	0	0	8	0	196	2	0	156	3	371	0	0	0	0	0
	8:15 AM	0	0	13	0	0	5	0	184	0	0	191	3	396	0	0	0	0	0
	8:30 AM	0	0	7	0	0	2	0	175	4	0	158	1	347	0	0	0	0	0
	8:45 AM	0	0	3	0	0	6	0	199	1	0	181	3	393	0	0	0	0	0
	VOLUMES	0	0	45	2	0	30	0	1,369	13	0	1,297	20	2,776	0	2	0	0	2
	APPROACH %	0%	0%	100%	6%	0%	94%	0%	99%	1%	0%	98%	2%						
	APP/DEPART	45	/	22	32	/	13	1,382	/	1,414	1,317	/	1,327	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	0	0	29	0	0	21	0	754	7	0	686	10	1,507					
	APPROACH %	0%	0%	100%	0%	0%	100%	0%	99%	1%	0%	99%	1%						
	PEAK HR FACTOR		0.558			0.656			0.951			0.897		0.951					
	APP/DEPART	29	/	10	21	/	7	761	/	783	696	/	707	0					
PM	4:00 PM	0	0	3	0	0	3	0	242	0	0	219	8	475	0	0	0	0	0
	4:15 PM	0	0	3	0	0	1	0	205	2	0	240	14	465	0	0	0	0	0
	4:30 PM	0	0	0	1	0	1	0	225	2	0	236	12	477	0	1	0	0	1
	4:45 PM	0	0	4	0	0	3	0	183	3	0	275	5	473	0	0	0	0	0
	5:00 PM	0	0	5	0	0	8	0	232	2	0	243	8	498	0	0	0	0	0
	5:15 PM	0	0	1	0	0	6	0	210	0	0	262	12	491	0	0	0	0	0
	5:30 PM	0	0	1	0	0	1	0	189	0	0	241	9	441	0	0	0	0	0
	5:45 PM	0	0	3	0	0	2	0	204	5	0	269	9	492	0	0	0	0	0
	VOLUMES	0	0	20	1	0	25	0	1,690	14	0	1,985	77	3,812	0	1	0	0	1
	APPROACH %	0%	0%	100%	4%	0%	96%	0%	99%	1%	0%	96%	4%						
	APP/DEPART	20	/	78	26	/	14	1,704	/	1,710	2,062	/	2,010	0					
	BEGIN PEAK HR		4:30 PM																
	VOLUMES	0	0	10	1	0	18	0	850	7	0	1,016	37	1,939					
	APPROACH %	0%	0%	100%	5%	0%	95%	0%	99%	1%	0%	96%	4%						
	PEAK HR FACTOR		0.500			0.625			0.916			0.940		0.973					
	APP/DEPART	10	/	38	19	/	7	857	/	860	1,053	/	1,034	0					



		PEDESTRIAN + BIKE CROSSINGS					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX D

Explanation and Calculation of Intersection Delay

EXPLANATION AND CALCULATION OF INTERSECTION LEVEL OF SERVICE USING DELAY METHODOLOGY

The levels of service at the unsignalized and signalized intersections are calculated using the delay methodology in the Highway Capacity Manual. This methodology views an intersection as consisting of several lane groups. A lane group is a set of lanes serving a movement. If there are two northbound left turn lanes, then the lane group serving the northbound left turn movement has two lanes. Similarly, there may be three lanes in the lane group serving the northbound through movement, one lane in the lane group serving the northbound right turn movement, and so forth. It is also possible for one lane to serve two lane groups. A shared lane might result in there being 1.5 lanes in the northbound left turn lane group and 2.5 lanes in the northbound through lane group.

For each lane group, there is a capacity. That capacity is calculated by multiplying the number of lanes in the lane group times a theoretical maximum lane capacity per lane time's 12 adjustment factors.

Each of the 12 adjustment factors has a value of approximately 1.00. A value less than 1.00 is generally assigned when a less than desirable condition occurs.

The 12 adjustment factors are as follows:

1. Peak hour factor (to account for peaking within the peak hour)
2. Lane utilization factor (to account for not all lanes loading equally)
3. Lane width
4. Percent of heavy trucks
5. Approach grade
6. Parking
7. Bus stops at intersections
8. Area type (CBD or other)

9. Right turns

10. Left turns

11. Pedestrian activity

12. Signal progression

The maximum theoretical lane capacity and the 12 adjustment factors for it are all unknowns for which approximate estimates have been recommended in the Highway Capacity Manual. For the most part, the recommended values are not based on statistical analysis but rather on educated estimates. However, it is possible to use the delay method and get reasonable results as will be discussed below.

Once the lane group volume is known and the lane group capacity is known, a volume to capacity ratio can be calculated for the lane group.

With a volume to capacity ratio calculated, average delay per vehicle in a lane group can be estimated. The average delay per vehicle in a lane group is calculated using a complex formula provided by the Highway Capacity Manual, which can be simplified and described as follows:

Delay per vehicle in a lane group is a function of the following:

1. Cycle length

2. Amount of red time faced by a lane group

3. Amount of yellow time for that lane group

4. The volume to capacity ratio of the lane group

The average delay per vehicle for each lane group is calculated, and eventually an overall average delay for all vehicles entering the intersection is calculated. This average delay per vehicle is then used to judge Level of Service. The Level of Services are defined in the table that follows this discussion.

Experience has shown that when a maximum lane capacity of 1,900 vehicles per hour is used (as recommended in the Highway Capacity Manual), little or no yellow time penalty is used, and none of the 12 penalty factors are applied,

calculated delay is realistic. The delay calculation for instance assumes that yellow time is totally unused. Yet experience shows that most of the yellow time is used.

An idiosyncrasy of the delay methodology is that it is possible to add traffic to an intersection and reduce the average total delay per vehicle. If the average total delay is 30 seconds per vehicle for all vehicles traveling through an intersection, and traffic is added to a movement that has an average total delay of 15 seconds per vehicle, then the overall average total delay is reduced.

The delay calculation for a lane group is based on a concept that the delay is a function of the amount of unused capacity available. As the volume approaches capacity and there is no more unused capacity available, then the delay rapidly increases. Delay is not proportional to volume, but rather increases rapidly as the unused capacity approaches zero.

Because delay is not linearly related to volumes, the delay does not reflect how close an intersection is to overloading. If an intersection is operating at Level of Service C and has an average total delay of 18 seconds per vehicle, you know very little as to what percent the traffic can increase before Level of Service E is reached.

LEVEL OF SERVICE DESCRIPTION[1]

Level Of Service	Description	Average Total Delay Per Vehicle (Seconds)	
		Signalized	Unsignalized
A	Level of Service A occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0 to 10.00	0 to 10.00
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average total delay.	10.01 to 20.00	10.01 to 15.00
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	20.01 to 35.00	15.01 to 25.00
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	35.01 to 55.00	25.01 to 35.00
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.	55.01 to 80.00	35.01 to 50.00
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	80.01 and up	50.01 and up

[1] Source: Highway Capacity Manual Special Report 209, Transportation Research Board, National Research Council, Washington, D.C., 2000.

Existing

George Avenue & Iodine Springs Road Residential Project
Existing
Morning Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	1.468
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	130.2
Optimal Cycle:	0	Level Of Service:	F

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	0 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	87	0	135	0	378	429	239	277	0
Growth 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
Initial Bse:	0	0	0	87	0	135	0	378	429	239	277	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	87	0	135	0	378	429	239	277	0
User 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
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	0	0	0	100	0	155	0	435	494	275	319	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	100	0	155	0	435	494	275	319	0
PCE 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
MLF 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
FinalVolume:	0	0	0	100	0	155	0	435	494	275	319	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.47	0.53	1.00	1.00	0.00
Final Sat.:	0	0	0	463	0	546	0	296	336	545	589	0
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.22	xxxx	0.28	xxxx	1.47	1.47	0.50	0.54	xxxx
Crit Moves:						****		****			****	
Delay/Veh:	0.0	0.0	0.0	12.4	0.0	11.6	0.0	236	236.0	15.7	15.6	0.0
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	12.4	0.0	11.6	0.0	236	236.0	15.7	15.6	0.0
LOS by Move:	*	*	*	B	*	B	*	F	F	C	C	*
ApproachDel:	xxxxxx			11.9			236.0			15.6		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			11.9			236.0			15.6		
LOS by Appr:	*			B			F			C		
AllWayAvgQ:	0.0	0.0	0.0	0.3	0.0	0.4	39.9	39.9	39.9	1.0	1.1	0.0

****

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing
Evening Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

****

Cycle (sec): 100 Critical Vol./Cap.(X): 0.841
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 23.6
Optimal Cycle: 0 Level Of Service: C

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	0 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	58	0	171	0	212	314	50	446	0
Growth 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
Initial Bse:	0	0	0	58	0	171	0	212	314	50	446	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	58	0	171	0	212	314	50	446	0
User 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
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	60	0	176	0	218	323	51	458	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	60	0	176	0	218	323	51	458	0
PCE 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
MLF 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
FinalVolume:	0	0	0	60	0	176	0	218	323	51	458	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.40	0.60	1.00	1.00	0.00
Final Sat.:	0	0	0	461	0	543	0	259	384	560	609	0
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.13	xxxx	0.32	xxxx	0.84	0.84	0.09	0.75	xxxx
Crit Moves:						****		****			****	
Delay/Veh:	0.0	0.0	0.0	11.1	0.0	11.6	0.0	30.3	30.3	9.7	23.5	0.0
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	11.1	0.0	11.6	0.0	30.3	30.3	9.7	23.5	0.0
LOS by Move:	*	*	*	B	*	B	*	D	D	A	C	*
ApproachDel:	xxxxxx			11.5			30.3			22.1		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			11.5			30.3			22.1		
LOS by Appr:	*			B			D			C		
AllWayAvgQ:	0.0	0.0	0.0	0.1	0.0	0.4	3.9	3.9	3.9	0.1	2.5	0.0

****

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing
Morning Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

****

Cycle (sec): 100 Critical Vol./Cap.(X): 0.926
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 27.2
Optimal Cycle: 0 Level Of Service: D

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0 0 0 1			0 0 0 0 0			1 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	175	0	51	0	0	0	261	203	0	0	345	127
Growth 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
Initial Bse:	175	0	51	0	0	0	261	203	0	0	345	127
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	175	0	51	0	0	0	261	203	0	0	345	127
User 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
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	207	0	60	0	0	0	309	240	0	0	408	150
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	207	0	60	0	0	0	309	240	0	0	408	150
PCE 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
MLF 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
FinalVolume:	207	0	60	0	0	0	309	240	0	0	408	150
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.73	0.27
Final Sat.:	465	0	549	0	0	0	534	576	0	0	441	162
Capacity Analysis Module:												
Vol/Sat:	0.45	xxxx	0.11	xxxx	xxxx	xxxx	0.58	0.42	xxxx	xxxx	0.93	0.93
Crit Moves:	****						****				****	
Delay/Veh:	15.9	0.0	9.8	0.0	0.0	0.0	17.8	13.1	0.0	0.0	44.5	44.5
Delay 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
AdjDel/Veh:	15.9	0.0	9.8	0.0	0.0	0.0	17.8	13.1	0.0	0.0	44.5	44.5
LOS by Move:	C	*	A	*	*	*	C	B	*	*	E	E
ApproachDel:		14.5			xxxxxx			15.7			44.5	
Delay Adj:		1.00			xxxxx			1.00			1.00	
ApprAdjDel:		14.5			xxxxxx			15.7			44.5	
LOS by Appr:		B			*			C			E	
AllWayAvgQ:	0.7	0.0	0.1	0.0	0.0	0.0	1.3	0.7	0.0	6.0	6.0	6.0

****

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing
Evening Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.717
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 16.2
Optimal Cycle: 0 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 0	1	0 0	0 0	0	1 0	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	381	0	50	0	0	0	148	145	0	0	111	63
Growth 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
Initial Bse:	381	0	50	0	0	0	148	145	0	0	111	63
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	381	0	50	0	0	0	148	145	0	0	111	63
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	401	0	53	0	0	0	156	152	0	0	117	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	401	0	53	0	0	0	156	152	0	0	117	66
PCE 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
MLF 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
FinalVolume:	401	0	53	0	0	0	156	152	0	0	117	66
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.64	0.36
Final Sat.:	559	0	679	0	0	0	520	561	0	0	360	204
Capacity Analysis Module:												
Vol/Sat:	0.72	xxxx	0.08	xxxx	xxxx	xxxx	0.30	0.27	xxxx	xxxx	0.32	0.32
Crit Moves:	****						****				****	
Delay/Veh:	22.8	0.0	8.3	0.0	0.0	0.0	12.0	11.0	0.0	0.0	11.8	11.8
Delay 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
AdjDel/Veh:	22.8	0.0	8.3	0.0	0.0	0.0	12.0	11.0	0.0	0.0	11.8	11.8
LOS by Move:	C	*	A	*	*	*	B	B	*	*	B	B
ApproachDel:	21.1			xxxxxx			11.5			11.8		
Delay Adj:	1.00			xxxxx			1.00			1.00		
ApprAdjDel:	21.1			xxxxxx			11.5			11.8		
LOS by Appr:	C			*			B			B		
AllWayAvgQ:	2.1	0.0	0.1	0.0	0.0	0.0	0.4	0.3	0.0	0.4	0.4	0.4

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)

****

Average Delay (sec/veh): 27.7 Worst Case Level Of Service: F[56.5]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	124	0	327	112	159	0	0	172	59
Growth 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
Initial Bse:	0	0	0	124	0	327	112	159	0	0	172	59
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	124	0	327	112	159	0	0	172	59
User 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
PHF Adj:	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
PHF Volume:	0	0	0	162	0	427	146	208	0	0	225	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	162	0	427	146	208	0	0	225	77
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	725	725	225	302	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	395	354	820	1271	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	357	310	820	1271	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.45	0.00	0.52	0.12	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	605	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	13.9	xxxxx	0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	56.5	xxxxx	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	F	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				56.5		xxxxxx			xxxxxx		
ApproachLOS:		*			F			*			*	

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)

****

Average Delay (sec/veh): 4.5 Worst Case Level Of Service: A[9.8]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	27	0	105	78	114	0	0	68	26
Growth 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
Initial Bse:	0	0	0	27	0	105	78	114	0	0	68	26
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	27	0	105	78	114	0	0	68	26
User 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
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	29	0	112	83	121	0	0	72	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	29	0	112	83	121	0	0	72	28
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	359	359	72	100	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	643	571	996	1505	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	615	538	996	1505	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.05	0.00	0.11	0.06	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	884	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	9.8	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				9.8		xxxxxx			xxxxxx		
ApproachLOS:		*			A			*			*	

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #4 George Avenue (NS) at Depasquale Road (EW)

****

Average Delay (sec/veh): 2.0 Worst Case Level Of Service: B[11.5]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0	0	0 0 0	1	0	0 0 1!	0	0	0 0 0	0	0
Volume Module:												
Base Vol:	35	141	0	0	234	6	11	0	48	0	0	0
Growth 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
Initial Bse:	35	141	0	0	234	6	11	0	48	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	35	141	0	0	234	6	11	0	48	0	0	0
User 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
PHF Adj:	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
PHF Volume:	49	197	0	0	327	8	15	0	67	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	49	197	0	0	327	8	15	0	67	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	336	xxxx	xxxxx	xxxx	xxxx	xxxxx	627	627	331	xxxx	xxxx	xxxxx
Potent Cap.:	1235	xxxx	xxxxx	xxxx	xxxx	xxxxx	451	403	715	xxxx	xxxx	xxxxx
Move Cap.:	1235	xxxx	xxxxx	xxxx	xxxx	xxxxx	437	387	715	xxxx	xxxx	xxxxx
Volume/Cap:	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	0.00	0.09	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	639	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.4	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	11.5	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			11.5			xxxxxx		
ApproachLOS:	*			*			B			*		

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #4 George Avenue (NS) at Depasquale Road (EW)

****

Average Delay (sec/veh): 1.8 Worst Case Level Of Service: A[9.2]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	48	151	0	0	119	4	1	0	29	0	0	0
Growth 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
Initial Bse:	48	151	0	0	119	4	1	0	29	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	151	0	0	119	4	1	0	29	0	0	0
User 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
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	56	177	0	0	140	5	1	0	34	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	56	177	0	0	140	5	1	0	34	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	144	xxxx	xxxxx	xxxx	xxxx	xxxxx	432	432	142	xxxx	xxxx	xxxxx
Potent Cap.:	1450	xxxx	xxxxx	xxxx	xxxx	xxxxx	584	520	911	xxxx	xxxx	xxxxx
Move Cap.:	1450	xxxx	xxxxx	xxxx	xxxx	xxxxx	567	499	911	xxxx	xxxx	xxxxx
Volume/Cap:	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.04	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	893	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.2	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			9.2			xxxxxx		
ApproachLOS:	*			*			A			*		

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #5 George Avenue (NS) at Clinton Keith Road (EW)

****

Cycle (sec): 60 Critical Vol./Cap.(X): 0.533
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 16.2
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0 0	1 0		1 0	1 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	38	11	41	82	28	198	94	646	12	54	802	47
Growth 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
Initial Bse:	38	11	41	82	28	198	94	646	12	54	802	47
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	38	11	41	82	28	198	94	646	12	54	802	47
User 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
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	41	12	44	88	30	213	101	695	13	58	862	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	12	44	88	30	213	101	695	13	58	862	51
PCE 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
MLF 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
FinalVolume:	41	12	44	88	30	213	101	695	13	58	862	51
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	0.88	0.88	0.72	1.00	0.85	0.95	0.91	0.91	0.95	0.95	0.85
Lanes:	1.00	0.21	0.79	1.00	1.00	1.00	1.00	2.95	0.05	1.00	2.00	1.00
Final Sat.:	1412	354	1321	1374	1900	1615	1805	5077	94	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.03	0.06	0.02	0.13	0.06	0.14	0.14	0.03	0.24	0.03
Crit Moves:						****	****				****	
Green/Cycle:	0.24	0.24	0.24	0.24	0.24	0.24	0.12	0.30	0.30	0.26	0.44	0.44
Volume/Cap:	0.12	0.14	0.14	0.26	0.07	0.54	0.48	0.46	0.46	0.13	0.54	0.07
Delay/Veh:	17.9	17.9	17.9	18.8	17.5	21.4	26.5	17.2	17.2	17.3	12.7	9.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.9	17.9	17.9	18.8	17.5	21.4	26.5	17.2	17.2	17.3	12.7	9.7
LOS by Move:	B	B	B	B	B	C	C	B	B	B	B	A
HCM2kAvgQ:	1	1	1	2	0	4	2	4	4	1	7	1

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #5 George Avenue (NS) at Clinton Keith Road (EW)

****

Cycle (sec): 60 Critical Vol./Cap.(X): 0.470
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 13.8
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0	0 1	0	1 0	1 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	32	29	72	49	29	98	108	890	11	76	838	42
Growth 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
Initial Bse:	32	29	72	49	29	98	108	890	11	76	838	42
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	29	72	49	29	98	108	890	11	76	838	42
User 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
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	34	31	77	52	31	104	115	949	12	81	893	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	34	31	77	52	31	104	115	949	12	81	893	45
PCE 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
MLF 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
FinalVolume:	34	31	77	52	31	104	115	949	12	81	893	45
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	0.89	0.89	0.68	1.00	0.85	0.95	0.91	0.91	0.95	0.95	0.85
Lanes:	1.00	0.29	0.71	1.00	1.00	1.00	1.00	2.96	0.04	1.00	2.00	1.00
Final Sat.:	1412	487	1210	1300	1900	1615	1805	5113	63	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.06	0.06	0.04	0.02	0.06	0.06	0.19	0.19	0.04	0.25	0.03
Crit Moves:						****	****				****	
Green/Cycle:	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.41	0.41	0.26	0.53	0.53
Volume/Cap:	0.18	0.46	0.46	0.29	0.12	0.47	0.47	0.46	0.46	0.18	0.47	0.05
Delay/Veh:	23.3	25.3	25.3	24.2	22.9	25.4	25.4	13.1	13.1	17.6	9.1	6.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.3	25.3	25.3	24.2	22.9	25.4	25.4	13.1	13.1	17.6	9.1	6.9
LOS by Move:	C	C	C	C	C	C	C	B	B	B	A	A
HCM2kAvgQ:	1	2	2	1	1	2	3	5	5	1	6	0

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #6 Iodine Springs Road (NS) at Project Access (EW)

****

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1 0 0			0 0 1 0 0			0 0 0 0 0			0 0 0 0 0		
Volume Module:												
Base Vol:	0	10	0	0	21	0	0	0	0	0	0	0
Growth 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
Initial Bse:	0	10	0	0	21	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	10	0	0	21	0	0	0	0	0	0	0
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	11	0	0	22	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	11	0	0	22	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

****

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #6 Iodine Springs Road (NS) at Project Access (EW)

****

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[0.0]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1 0 0			0 0 1 0 0			0 0 0 0 0			0 0 0 0 0		
Volume Module:												
Base Vol:	0	37	0	0	19	0	0	0	0	0	0	0
Growth 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
Initial Bse:	0	37	0	0	19	0	0	0	0	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	37	0	0	19	0	0	0	0	0	0	0
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	39	0	0	20	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	39	0	0	20	0	0	0	0	0	0	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	*			*			*			*		

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #7 Iodine Springs Road (NS) at Clinton Keith Road (EW)

****

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: B[10.9]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 1			0 0 0 0 1			0 0 3 1 0			0 0 1 1 0		
Volume Module:												
Base Vol:	0	0	29	0	0	21	0	754	7	0	686	10
Growth 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
Initial Bse:	0	0	29	0	0	21	0	754	7	0	686	10
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	29	0	0	21	0	754	7	0	686	10
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	30	0	0	22	0	793	7	0	721	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	30	0	0	22	0	793	7	0	721	11
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	202	xxxx	xxxx	366	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	812	xxxx	xxxx	637	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	812	xxxx	xxxx	637	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.04	xxxx	xxxx	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.1	xxxx	xxxx	0.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	9.6	xxxxx	xxxx	10.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	9.6			10.9			xxxxxx			xxxxxx		
ApproachLOS:	A			B			*			*		

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #7 Iodine Springs Road (NS) at Clinton Keith Road (EW)

****

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[12.8]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 1			0 0 0 0 1			0 0 3 1 0			0 0 1 1 0		
Volume Module:												
Base Vol:	0	0	10	0	0	18	0	850	7	0	1016	37
Growth 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
Initial Bse:	0	0	10	0	0	18	0	850	7	0	1016	37
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	10	0	0	18	0	850	7	0	1016	37
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	11	0	0	19	0	894	7	0	1068	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	11	0	0	19	0	894	7	0	1068	39
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	227	xxxx	xxxx	554	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	782	xxxx	xxxx	481	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	782	xxxx	xxxx	481	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.01	xxxx	xxxx	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.0	xxxx	xxxx	0.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	9.7	xxxxx	xxxx	12.8	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	9.7			12.8			xxxxxx			xxxxxx		
ApproachLOS:	A			B			*			*		

****

Note: Queue reported is the number of cars per lane.

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Existing Plus Project

George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

****

Cycle (sec):	100	Critical Vol./Cap.(X):	1.471
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	130.7
Optimal Cycle:	0	Level Of Service:	F

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	0 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	87	0	135	0	378	429	239	277	0
Growth 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
Initial Bse:	0	0	0	87	0	135	0	378	429	239	277	0
Added Vol:	0	0	0	0	0	0	0	1	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	87	0	135	0	379	429	239	279	0
User 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
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	0	0	0	100	0	155	0	436	494	275	321	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	100	0	155	0	436	494	275	321	0
PCE 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
MLF 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
FinalVolume:	0	0	0	100	0	155	0	436	494	275	321	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.47	0.53	1.00	1.00	0.00
Final Sat.:	0	0	0	463	0	546	0	297	336	545	589	0
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.22	xxxx	0.28	xxxx	1.47	1.47	0.50	0.54	xxxx
Crit Moves:						****			****		****	
Delay/Veh:	0.0	0.0	0.0	12.4	0.0	11.7	0.0	237	237.0	15.7	15.7	0.0
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	12.4	0.0	11.7	0.0	237	237.0	15.7	15.7	0.0
LOS by Move:	*	*	*	B	*	B	*	F	F	C	C	*
ApproachDel:	xxxxxx			11.9			237.0			15.7		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			11.9			237.0			15.7		
LOS by Appr:	*			B			F			C		
AllWayAvgQ:	0.0	0.0	0.0	0.3	0.0	0.4	40.1	40.1	40.1	1.0	1.1	0.0

****

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.845
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	23.9
Optimal Cycle:	0	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	0 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	58	0	171	0	212	314	50	446	0
Growth 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
Initial Bse:	0	0	0	58	0	171	0	212	314	50	446	0
Added Vol:	0	0	0	0	0	0	0	2	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	58	0	171	0	214	314	50	447	0
User 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
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	60	0	176	0	220	323	51	459	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	60	0	176	0	220	323	51	459	0
PCE 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
MLF 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
FinalVolume:	0	0	0	60	0	176	0	220	323	51	459	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.41	0.59	1.00	1.00	0.00
Final Sat.:	0	0	0	461	0	543	0	260	382	560	609	0
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.13	xxxx	0.32	xxxx	0.85	0.85	0.09	0.75	xxxx
Crit Moves:						****		****			****	
Delay/Veh:	0.0	0.0	0.0	11.1	0.0	11.6	0.0	30.7	30.7	9.7	23.6	0.0
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	11.1	0.0	11.6	0.0	30.7	30.7	9.7	23.6	0.0
LOS by Move:	*	*	*	B	*	B	*	D	D	A	C	*
ApproachDel:	xxxxxx				11.5			30.7			22.2	
Delay Adj:	xxxxx				1.00			1.00			1.00	
ApprAdjDel:	xxxxxx				11.5			30.7			22.2	
LOS by Appr:	*				B			D			C	
AllWayAvgQ:	0.0	0.0	0.0	0.1	0.0	0.4	4.0	4.0	4.0	0.1	2.6	0.0

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Morning Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

Cycle (sec): 90 Critical Vol./Cap.(X): 0.895
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.6
Optimal Cycle: OPTIMIZED Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	7	7	7	7	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	0 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	87	0	135	0	378	429	239	277	0
Growth 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
Initial Bse:	0	0	0	87	0	135	0	378	429	239	277	0
Added Vol:	0	0	0	0	0	0	0	1	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	87	0	135	0	379	429	239	279	0
User 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
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	0	0	0	100	0	155	0	436	494	275	321	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	100	0	155	0	436	494	275	321	0
PCE 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
MLF 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
FinalVolume:	0	0	0	100	0	155	0	436	494	275	321	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.77	1.00	0.85	1.00	0.93	0.93	0.95	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.47	0.53	1.00	1.00	0.00
Final Sat.:	0	0	0	1461	0	1615	0	827	936	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.10	0.00	0.53	0.53	0.15	0.17	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.11	0.00	0.11	0.00	0.59	0.59	0.17	0.76	0.00
Volume/Cap:	0.00	0.00	0.00	0.64	0.00	0.90	0.00	0.90	0.90	0.90	0.22	0.00
Delay/Veh:	0.0	0.0	0.0	47.0	0.0	79.7	0.0	26.2	26.2	63.2	3.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	47.0	0.0	79.7	0.0	26.2	26.2	63.2	3.2	0.0
LOS by Move:	A	A	A	D	A	E	A	C	C	E	A	A
HCM2kAvgQ:	0	0	0	4	0	7	0	26	26	11	3	0

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Evening Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

****

Cycle (sec): 60 Critical Vol./Cap.(X): 0.560
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 12.7
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	7	7	7	7	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	0 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	58	0	171	0	212	314	50	446	0
Growth 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
Initial Bse:	0	0	0	58	0	171	0	212	314	50	446	0
Added Vol:	0	0	0	0	0	0	0	2	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	58	0	171	0	214	314	50	447	0
User 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
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	60	0	176	0	220	323	51	459	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	60	0	176	0	220	323	51	459	0
PCE 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
MLF 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
FinalVolume:	0	0	0	60	0	176	0	220	323	51	459	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.78	1.00	0.85	1.00	0.92	0.92	0.95	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.41	0.59	1.00	1.00	0.00
Final Sat.:	0	0	0	1478	0	1615	0	708	1040	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.11	0.00	0.31	0.31	0.03	0.24	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.18	0.00	0.18	0.00	0.51	0.51	0.12	0.62	0.00
Volume/Cap:	0.00	0.00	0.00	0.23	0.00	0.61	0.00	0.61	0.61	0.24	0.39	0.00
Delay/Veh:	0.0	0.0	0.0	21.6	0.0	26.7	0.0	11.9	11.9	24.7	5.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.6	0.0	26.7	0.0	11.9	11.9	24.7	5.8	0.0
LOS by Move:	A	A	A	C	A	C	A	B	B	C	A	A
HCM2kAvgQ:	0	0	0	1	0	4	0	8	8	1	4	0

****

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.931
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 27.5
Optimal Cycle: 0 Level Of Service: D

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Min. Green:	0		0		0		0		0		0		0		0		0		0		0		0	
Lanes:	1	0	0	0	1		0	0	0	0	0		1	0	1	0	0		0	0	0	1	0	
Volume Module:																								
Base Vol:	175		0		51		0		0		0		261		203		0		0		345		127	
Growth 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	
Initial Bse:	175		0		51		0		0		0		261		203		0		0		345		127	
Added Vol:	0		0		0		0		0		0		0		1		0		0		2		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	175		0		51		0		0		0		261		204		0		0		347		127	
User 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	
PHF Adj:	0.85		0.85		0.85		0.85		0.85		0.85		0.85		0.85		0.85		0.85		0.85		0.85	
PHF Volume:	207		0		60		0		0		0		309		241		0		0		411		150	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	207		0		60		0		0		0		309		241		0		0		411		150	
PCE 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	
MLF 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	
FinalVolume:	207		0		60		0		0		0		309		241		0		0		411		150	
Saturation Flow Module:																								
Adjustment:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Lanes:	1.00		0.00		1.00		0.00		0.00		0.00		1.00		1.00		0.00		0.00		0.73		0.27	
Final Sat.:	466		0		549		0		0		0		534		576		0		0		441		162	
Capacity Analysis Module:																								
Vol/Sat:	0.44		xxxx		0.11		xxxx		xxxx		xxxx		0.58		0.42		xxxx		xxxx		0.93		0.93	
Crit Moves:	****												****								****			
Delay/Veh:	15.9		0.0		9.8		0.0		0.0		0.0		17.9		13.1		0.0		0.0		45.3		45.3	
Delay 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	
AdjDel/Veh:	15.9		0.0		9.8		0.0		0.0		0.0		17.9		13.1		0.0		0.0		45.3		45.3	
LOS by Move:	C		*		A		*		*		*		C		B		*		*		E		E	
ApproachDel:			14.5				xxxxxx								15.8						45.3			
Delay Adj:			1.00				xxxxx								1.00						1.00			
ApprAdjDel:			14.5				xxxxxx								15.8						45.3			
LOS by Appr:			B				*								C						E			
AllWayAvgQ:	0.7		0.0		0.1		0.0		0.0		0.0		1.3		0.7		0.0		6.1		6.1		6.1	

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

****

Cycle (sec): 100 Critical Vol./Cap.(X): 0.718
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 16.2
Optimal Cycle: 0 Level Of Service: C

****

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Min. Green:	0		0		0		0		0		0		0		0		0		0		0		0	
Lanes:	1	0	0	0	1		0	0	0	0	0		1	0	1	0	0		0	0	0	1	0	
Volume Module:																								
Base Vol:	381		0		50		0		0		0		148		145		0		0		111		63	
Growth 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	
Initial Bse:	381		0		50		0		0		0		148		145		0		0		111		63	
Added Vol:	0		0		0		0		0		0		0		2		0		0		1		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	381		0		50		0		0		0		148		147		0		0		112		63	
User 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	
PHF Adj:	0.95	0.95			0.95		0.95	0.95			0.95		0.95	0.95			0.95		0.95	0.95			0.95	
PHF Volume:	401		0		53		0		0		0		156		155		0		0		118		66	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	401		0		53		0		0		0		156		155		0		0		118		66	
PCE 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	
MLF 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	
FinalVolume:	401		0		53		0		0		0		156		155		0		0		118		66	
Saturation Flow Module:																								
Adjustment:	1.00	1.00			1.00		1.00	1.00			1.00		1.00	1.00			1.00		1.00	1.00			1.00	
Lanes:	1.00	0.00			1.00		0.00	0.00			0.00		1.00	1.00			0.00		0.00	0.64			0.36	
Final Sat.:	558		0		678		0		0		0		520		561		0		0		361		203	
Capacity Analysis Module:																								
Vol/Sat:	0.72	xxxx			0.08		xxxx	xxxx			xxxx		0.30	0.28			xxxx		xxxx	0.33			0.33	
Crit Moves:	****												****										****	
Delay/Veh:	22.8	0.0			8.3		0.0	0.0			0.0		12.0	11.1			0.0		0.0	11.9			11.9	
Delay 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	
AdjDel/Veh:	22.8	0.0			8.3		0.0	0.0			0.0		12.0	11.1			0.0		0.0	11.9			11.9	
LOS by Move:	C	*			A		*	*			*		B	B			*		*	B			B	
ApproachDel:		21.2					xxxxxx							11.6						11.9				
Delay Adj:		1.00					xxxxx							1.00						1.00				
ApprAdjDel:		21.2					xxxxxx							11.6						11.9				
LOS by Appr:		C					*							B						B				
AllWayAvgQ:	2.1	0.0			0.1		0.0	0.0			0.0		0.4	0.3			0.0		0.4	0.4			0.4	

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Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Morning Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

Cycle (sec): 60 Critical Vol./Cap.(X): 0.774
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 22.8
Optimal Cycle: OPTIMIZED Level Of Service: C

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Permitted						Permitted						Protected						Permitted					
Rights:	Include						Include						Include						Include					
Min. Green:	0	0	0				0	0	0				7	7	0				0	7	7			
Lanes:	1	0	0	0	1		0	0	0	0	0		1	0	1	0	0		0	0	0	1	0	
Volume Module:																								
Base Vol:	175	0	51				0	0	0				261	203	0				0	345	127			
Growth 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			
Initial Bse:	175	0	51				0	0	0				261	203	0				0	345	127			
Added Vol:	0	0	0				0	0	0				0	1	0				0	2	0			
PasserByVol:	0	0	0				0	0	0				0	0	0				0	0	0			
Initial Fut:	175	0	51				0	0	0				261	204	0				0	347	127			
User 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			
PHF Adj:	0.85	0.85	0.85				0.85	0.85	0.85				0.85	0.85	0.85				0.85	0.85	0.85			
PHF Volume:	207	0	60				0	0	0				309	241	0				0	411	150			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Reduced Vol:	207	0	60				0	0	0				309	241	0				0	411	150			
PCE 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			
MLF 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			
FinalVolume:	207	0	60				0	0	0				309	241	0				0	411	150			
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900				1900	1900	1900				1900	1900	1900				1900	1900	1900			
Adjustment:	0.77	1.00	0.85				1.00	1.00	1.00				0.95	1.00	1.00				1.00	0.96	0.96			
Lanes:	1.00	0.00	1.00				0.00	0.00	0.00				1.00	1.00	0.00				0.00	0.73	0.27			
Final Sat.:	1461	0	1615				0	0	0				1805	1900	0				0	1341	491			
Capacity Analysis Module:																								
Vol/Sat:	0.14	0.00	0.04				0.00	0.00	0.00				0.17	0.13	0.00				0.00	0.31	0.31			
Crit Moves:	****												****							****				
Green/Cycle:	0.18	0.00	0.18				0.00	0.00	0.00				0.22	0.62	0.00				0.00	0.40	0.40			
Volume/Cap:	0.77	0.00	0.20				0.00	0.00	0.00				0.77	0.21	0.00				0.00	0.77	0.77			
Delay/Veh:	36.4	0.0	21.1				0.0	0.0	0.0				31.1	5.1	0.0				0.0	21.0	21.0			
User DelAdj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
AdjDel/Veh:	36.4	0.0	21.1				0.0	0.0	0.0				31.1	5.1	0.0				0.0	21.0	21.0			
LOS by Move:	D	A	C				A	A	A				C	A	A				A	C	C			
HCM2kAvgQ:	6	0	1				0	0	0				8	2	0				0	11	11			

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Evening Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

****

Cycle (sec): 60 Critical Vol./Cap.(X): 0.578
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 17.6
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Permitted						Permitted						Protected						Permitted					
Rights:	Include						Include						Include						Include					
Min. Green:	0	0	0				0	0	0				7	7	0				0	7	7			
Lanes:	1	0	0	0	1		0	0	0	0	0		1	0	1	0	0		0	0	0	1	0	
Volume Module:																								
Base Vol:	381		0		50		0		0		0		148		145		0		0		111		63	
Growth 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			
Initial Bse:	381		0		50		0		0		0		148		145		0		0		111		63	
Added Vol:	0		0		0		0		0		0		0		2		0		0		1		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	381		0		50		0		0		0		148		147		0		0		112		63	
User 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			
PHF Adj:	0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95				0.95	0.95	0.95			
PHF Volume:	401		0		53		0		0		0		156		155		0		0		118		66	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
Reduced Vol:	401		0		53		0		0		0		156		155		0		0		118		66	
PCE 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			
MLF 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			
FinalVolume:	401		0		53		0		0		0		156		155		0		0		118		66	
Saturation Flow Module:																								
Sat/Lane:	1900	1900	1900				1900	1900	1900				1900	1900	1900				1900	1900	1900			
Adjustment:	0.77	1.00	0.85				1.00	1.00	1.00				0.95	1.00	1.00				1.00	0.95	0.95			
Lanes:	1.00	0.00	1.00				0.00	0.00	0.00				1.00	1.00	0.00				0.00	0.64	0.36			
Final Sat.:	1461		0		1615		0		0		0		1805		1900		0		0		1156		650	
Capacity Analysis Module:																								
Vol/Sat:	0.27	0.00	0.03				0.00	0.00	0.00				0.09	0.08	0.00				0.00	0.10	0.10			
Crit Moves:	****												****							****				
Green/Cycle:	0.47	0.00	0.47				0.00	0.00	0.00				0.15	0.33	0.00				0.00	0.18	0.18			
Volume/Cap:	0.58	0.00	0.07				0.00	0.00	0.00				0.58	0.25	0.00				0.00	0.58	0.58			
Delay/Veh:	12.6	0.0	8.6				0.0	0.0	0.0				26.9	15.1	0.0				0.0	25.3	25.3			
User DelAdj:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
AdjDel/Veh:	12.6	0.0	8.6				0.0	0.0	0.0				26.9	15.1	0.0				0.0	25.3	25.3			
LOS by Move:	B		A		A		A		A		A		C		B		A		A		C		C	
HCM2kAvgQ:	6		0		1		0		0		0		4		2		0		0		4		4	

****

Note: Queue reported is the number of cars per lane.

****

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)

Average Delay (sec/veh): 28.5 Worst Case Level Of Service: F[58.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	124	0	327	112	159	0	0	172	59
Growth 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
Initial Bse:	0	0	0	124	0	327	112	159	0	0	172	59
Added Vol:	0	0	0	1	0	0	0	1	0	0	2	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	125	0	327	112	160	0	0	174	63
User 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
PHF Adj:	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
PHF Volume:	0	0	0	163	0	427	146	209	0	0	227	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	163	0	427	146	209	0	0	227	82
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	728	728	227	309	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	393	352	817	1263	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	355	308	817	1263	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.46	0.00	0.52	0.12	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	601	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	14.2	xxxxx	0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	58.5	xxxxx	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	F	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			58.5			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****
Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)
****
Average Delay (sec/veh): 4.6 Worst Case Level Of Service: A[10.0]
****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	27	0	105	78	114	0	0	68	26
Growth 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
Initial Bse:	0	0	0	27	0	105	78	114	0	0	68	26
Added Vol:	0	0	0	5	0	0	0	2	0	0	1	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	32	0	105	78	116	0	0	69	29
User 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
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	34	0	112	83	123	0	0	73	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	34	0	112	83	123	0	0	73	31
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	362	362	73	104	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	641	568	994	1500	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	612	535	994	1500	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.06	0.00	0.11	0.06	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	868	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	10.0	xxxxx	7.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	A	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.0			xxxxxx			xxxxxx		
ApproachLOS:	*			A			*			*		

****
Note: Queue reported is the number of cars per lane.
****

George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Morning Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)

****

Cycle (sec): 60 Critical Vol./Cap.(X): 0.732
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 16.9
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	7	0	7	7	7	0	0	7	7
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	124	0	327	112	159	0	0	172	59
Growth 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
Initial Bse:	0	0	0	124	0	327	112	159	0	0	172	59
Added Vol:	0	0	0	1	0	0	0	1	0	0	2	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	125	0	327	112	160	0	0	174	63
User 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
PHF Adj:	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
PHF Volume:	0	0	0	163	0	427	146	209	0	0	227	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	163	0	427	146	209	0	0	227	82
PCE 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
MLF 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
FinalVolume:	0	0	0	163	0	427	146	209	0	0	227	82
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.82	1.00	0.82	0.73	0.73	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	0.28	0.00	0.72	0.41	0.59	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	430	0	1125	574	820	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.38	0.00	0.38	0.25	0.25	0.00	0.00	0.12	0.05
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.52	0.00	0.52	0.35	0.35	0.00	0.00	0.35	0.35
Volume/Cap:	0.00	0.00	0.00	0.73	0.00	0.73	0.73	0.73	0.00	0.00	0.34	0.15
Delay/Veh:	0.0	0.0	0.0	14.7	0.0	14.7	22.8	22.8	0.0	0.0	14.8	13.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	14.7	0.0	14.7	22.8	22.8	0.0	0.0	14.8	13.6
LOS by Move:	A	A	A	B	A	B	C	C	A	A	B	B
HCM2kAvgQ:	0	0	0	10	0	10	8	8	0	0	3	1

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Evening Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)

Cycle (sec): 60 Critical Vol./Cap.(X): 0.249
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 10.0
Optimal Cycle: OPTIMIZED Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	7	0	7	7	7	0	0	7	7
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	27	0	105	78	114	0	0	68	26
Growth 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
Initial Bse:	0	0	0	27	0	105	78	114	0	0	68	26
Added Vol:	0	0	0	5	0	0	0	2	0	0	1	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	32	0	105	78	116	0	0	69	29
User 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
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	34	0	112	83	123	0	0	73	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	34	0	112	83	123	0	0	73	31
PCE 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
MLF 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
FinalVolume:	0	0	0	34	0	112	83	123	0	0	73	31
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	1.00	0.85	0.87	0.87	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	0.23	0.00	0.77	0.40	0.60	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	377	0	1236	662	985	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.09	0.00	0.09	0.13	0.13	0.00	0.00	0.04	0.02
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.36	0.00	0.36	0.50	0.50	0.00	0.00	0.50	0.50
Volume/Cap:	0.00	0.00	0.00	0.25	0.00	0.25	0.25	0.25	0.00	0.00	0.08	0.04
Delay/Veh:	0.0	0.0	0.0	13.6	0.0	13.6	8.6	8.6	0.0	0.0	7.7	7.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	13.6	0.0	13.6	8.6	8.6	0.0	0.0	7.7	7.6
LOS by Move:	A	A	A	B	A	B	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	2	0	2	2	2	0	0	1	0

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 George Avenue (NS) at Depasquale Road (EW)

Average Delay (sec/veh): 3.0 Worst Case Level Of Service: C[16.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	35	141	0	0	234	6	11	0	48	0	0	0
Growth 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
Initial Bse:	35	141	0	0	234	6	11	0	48	0	0	0
Added Vol:	0	0	9	2	0	0	0	0	0	30	0	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	35	141	9	2	234	6	11	0	48	30	0	6
User 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
PHF Adj:	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
PHF Volume:	49	197	13	3	327	8	15	0	67	42	0	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	49	197	13	3	327	8	15	0	67	42	0	8
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	336	xxxx	xxxxx	210	xxxx	xxxxx	643	645	331	672	643	203
Potent Cap.:	1235	xxxx	xxxxx	1373	xxxx	xxxxx	389	394	715	372	395	842
Move Cap.:	1235	xxxx	xxxxx	1373	xxxx	xxxxx	373	377	715	326	378	842
Volume/Cap:	0.04	xxxx	xxxx	0.00	xxxx	xxxx	0.04	0.00	0.09	0.13	0.00	0.01
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.0	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	610	xxxxx	xxxx	363	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	0.5	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	11.8	xxxxx	xxxxx	16.5	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			11.8			16.5		
ApproachLOS:	*			*			B			C		

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

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Intersection #4 George Avenue (NS) at Depasquale Road (EW)

****

Average Delay (sec/veh): 2.4 Worst Case Level Of Service: B[12.6]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	48	151	0	0	119	4	1	0	29	0	0	0
Growth 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
Initial Bse:	48	151	0	0	119	4	1	0	29	0	0	0
Added Vol:	0	0	32	7	0	0	0	0	0	20	0	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	151	32	7	119	4	1	0	29	20	0	4
User 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
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	56	177	38	8	140	5	1	0	34	23	0	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	56	177	38	8	140	5	1	0	34	23	0	5
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	144	xxxx	xxxxx	215	xxxx	xxxxx	469	486	142	484	469	196
Potent Cap.:	1450	xxxx	xxxxx	1367	xxxx	xxxxx	508	484	911	496	495	850
Move Cap.:	1450	xxxx	xxxxx	1367	xxxx	xxxxx	487	462	911	461	472	850
Volume/Cap:	0.04	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.04	0.05	0.00	0.01
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.6	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	885	xxxxx	xxxx	499	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	0.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.2	xxxxx	xxxxx	12.6	xxxxx
Shared LOS:	*	*	*	*	*	*	*	A	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			9.2			12.6		
ApproachLOS:	*			*			A			B		

****

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 George Avenue (NS) at Clinton Keith Road (EW)

Cycle (sec): 60 Critical Vol./Cap.(X): 0.553
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 16.6
Optimal Cycle: OPTIMIZED Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0	0 1	0	1 0	1 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	38	11	41	82	28	198	94	646	12	54	802	47
Growth 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
Initial Bse:	38	11	41	82	28	198	94	646	12	54	802	47
Added Vol:	0	1	0	11	4	15	7	0	0	0	6	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	38	12	41	93	32	213	101	646	12	54	808	48
User 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
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	41	13	44	100	34	229	109	695	13	58	869	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	13	44	100	34	229	109	695	13	58	869	52
PCE 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
MLF 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
FinalVolume:	41	13	44	100	34	229	109	695	13	58	869	52
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	0.88	0.88	0.72	1.00	0.85	0.95	0.91	0.91	0.95	0.95	0.85
Lanes:	1.00	0.23	0.77	1.00	1.00	1.00	1.00	2.95	0.05	1.00	2.00	1.00
Final Sat.:	1406	380	1299	1372	1900	1615	1805	5077	94	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.03	0.07	0.02	0.14	0.06	0.14	0.14	0.03	0.24	0.03
Crit Moves:						****	****				****	
Green/Cycle:	0.25	0.25	0.25	0.25	0.25	0.25	0.12	0.30	0.30	0.25	0.43	0.43
Volume/Cap:	0.11	0.13	0.13	0.29	0.07	0.56	0.52	0.46	0.46	0.13	0.56	0.07
Delay/Veh:	17.4	17.5	17.5	18.5	17.1	21.2	27.1	17.5	17.5	17.5	13.3	10.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.4	17.5	17.5	18.5	17.1	21.2	27.1	17.5	17.5	17.5	13.3	10.1
LOS by Move:	B	B	B	B	B	C	C	B	B	B	B	B
HCM2kAvgQ:	1	1	1	2	1	5	3	4	4	1	7	1

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #5 George Avenue (NS) at Clinton Keith Road (EW)

****

Cycle (sec): 60 Critical Vol./Cap.(X): 0.498
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 14.5
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0 0	1 0		1 0	1 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	32	29	72	49	29	98	108	890	11	76	838	42
Growth 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
Initial Bse:	32	29	72	49	29	98	108	890	11	76	838	42
Added Vol:	0	5	0	7	3	10	25	0	0	0	4	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	34	72	56	32	108	133	890	11	76	842	44
User 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
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	34	36	77	60	34	115	142	949	12	81	898	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	34	36	77	60	34	115	142	949	12	81	898	47
PCE 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
MLF 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
FinalVolume:	34	36	77	60	34	115	142	949	12	81	898	47
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	0.90	0.90	0.68	1.00	0.85	0.95	0.91	0.91	0.95	0.95	0.85
Lanes:	1.00	0.32	0.68	1.00	1.00	1.00	1.00	2.96	0.04	1.00	2.00	1.00
Final Sat.:	1406	547	1159	1294	1900	1615	1805	5113	63	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.07	0.07	0.05	0.02	0.07	0.08	0.19	0.19	0.04	0.25	0.03
Crit Moves:						****	****				****	
Green/Cycle:	0.14	0.14	0.14	0.14	0.14	0.14	0.16	0.40	0.40	0.25	0.50	0.50
Volume/Cap:	0.17	0.46	0.46	0.32	0.13	0.50	0.50	0.46	0.46	0.18	0.50	0.06
Delay/Veh:	23.0	25.0	25.0	24.1	22.6	25.4	24.5	13.3	13.3	17.7	10.2	7.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.0	25.0	25.0	24.1	22.6	25.4	24.5	13.3	13.3	17.7	10.2	7.8
LOS by Move:	C	C	C	C	C	C	C	B	B	B	B	A
HCM2kAvgQ:	1	3	3	1	1	3	3	5	5	1	6	0

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Iodine Springs Road (NS) at Project Access (EW)

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: A[8.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Volume Module:												
Base Vol:	0	10	0	0	21	1	1	0	0	0	0	0
Growth 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
Initial Bse:	0	10	0	0	21	1	1	0	0	0	0	0
Added Vol:	3	0	0	0	0	0	0	0	6	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	10	0	0	21	1	1	0	6	0	0	0
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	3	11	0	0	22	1	1	0	6	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	11	0	0	22	1	1	0	6	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	23	xxxx	xxxxx	xxxx	xxxx	xxxxx	39	39	23	xxxx	xxxx	xxxxx
Potent Cap.:	1605	xxxx	xxxxx	xxxx	xxxx	xxxxx	977	857	1060	xxxx	xxxx	xxxxx
Move Cap.:	1605	xxxx	xxxxx	xxxx	xxxx	xxxxx	976	855	1060	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.01	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1047	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.5	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.5			xxxxxx		
ApproachLOS:	*			*			A			*		

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #6 Iodine Springs Road (NS) at Project Access (EW)

****

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: A[8.5]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0	0 0		0 0 0	1 0		0 0 1!	0 0		0 0 0	0 0	
Volume Module:												
Base Vol:	0	37	0	0	19	1	1	0	0	0	0	0
Growth 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
Initial Bse:	0	37	0	0	19	1	1	0	0	0	0	0
Added Vol:	10	0	0	0	0	0	0	0	4	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	37	0	0	19	1	1	0	4	0	0	0
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	39	0	0	20	1	1	0	4	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	11	39	0	0	20	1	1	0	4	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	21	xxxx	xxxxx	xxxx	xxxx	xxxxx	81	81	21	xxxx	xxxx	xxxxx
Potent Cap.:	1608	xxxx	xxxxx	xxxx	xxxx	xxxxx	927	814	1063	xxxx	xxxx	xxxxx
Move Cap.:	1608	xxxx	xxxxx	xxxx	xxxx	xxxxx	922	808	1063	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1031	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.5	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.5			xxxxxx		
ApproachLOS:	*			*			A			*		

****

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #7 Iodine Springs Road (NS) at Clinton Keith Road (EW)

****

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[10.9]

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 1			0 0 0 0 1			0 0 3 1 0			0 0 1 1 0		
Volume Module:												
Base Vol:	0	0	29	0	0	21	0	754	7	0	686	10
Growth 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
Initial Bse:	0	0	29	0	0	21	0	754	7	0	686	10
Added Vol:	0	0	0	0	0	6	0	11	0	0	1	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	29	0	0	27	0	765	7	0	687	13
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	30	0	0	28	0	804	7	0	722	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	30	0	0	28	0	804	7	0	722	14
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	205	xxxx	xxxx	368	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	808	xxxx	xxxx	635	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	808	xxxx	xxxx	635	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.04	xxxx	xxxx	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.1	xxxx	xxxx	0.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	9.6	xxxxx	xxxx	10.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	9.6			10.9			xxxxxx			xxxxxx		
ApproachLOS:	A			B			*			*		

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Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Iodine Springs Road (NS) at Clinton Keith Road (EW)

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[12.9]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0	1	0 0 0	0	1	0 0 3	1	0	0 0 1	1	0
Volume Module:												
Base Vol:	0	0	10	0	0	18	0	850	7	0	1016	37
Growth 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
Initial Bse:	0	0	10	0	0	18	0	850	7	0	1016	37
Added Vol:	0	0	0	0	0	4	0	7	0	0	2	10
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	10	0	0	22	0	857	7	0	1018	47
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	11	0	0	23	0	901	7	0	1070	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	11	0	0	23	0	901	7	0	1070	49
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	229	xxxx	xxxx	560	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	780	xxxx	xxxx	477	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	780	xxxx	xxxx	477	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.01	xxxx	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.0	xxxx	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	9.7	xxxxx	xxxx	12.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	B	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		9.7			12.9			xxxxxx			xxxxxx	
ApproachLOS:		A			B			*			*	

Note: Queue reported is the number of cars per lane.

Existing Plus Ambient Growth Plus Project

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	1.545
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	147.9
Optimal Cycle:	0	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	0 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	87	0	135	0	378	429	239	277	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	91	0	140	0	393	446	249	288	0
Added Vol:	0	0	0	0	0	0	0	1	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	91	0	140	0	394	446	249	290	0
User 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
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	0	0	0	104	0	162	0	454	514	286	334	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	104	0	162	0	454	514	286	334	0
PCE 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
MLF 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
FinalVolume:	0	0	0	104	0	162	0	454	514	286	334	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.47	0.53	1.00	1.00	0.00
Final Sat.:	0	0	0	461	0	543	0	294	332	542	586	0
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.23	xxxx	0.30	xxxx	1.55	1.55	0.53	0.57	xxxx
Crit Moves:						****		****			****	
Delay/Veh:	0.0	0.0	0.0	12.6	0.0	11.9	0.0	269	269.4	16.4	16.5	0.0
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	12.6	0.0	11.9	0.0	269	269.4	16.4	16.5	0.0
LOS by Move:	*	*	*	B	*	B	*	F	F	C	C	*
ApproachDel:	xxxxxx			12.1			269.4			16.4		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			12.1			269.4			16.4		
LOS by Appr:	*			B			F			C		
AllWayAvgQ:	0.0	0.0	0.0	0.3	0.0	0.4	45.3	45.3	45.3	1.1	1.2	0.0

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.889
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	27.6
Optimal Cycle:	0	Level Of Service:	D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	0 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	58	0	171	0	212	314	50	446	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	60	0	178	0	221	327	52	464	0
Added Vol:	0	0	0	0	0	0	0	2	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	60	0	178	0	223	327	52	465	0
User 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
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	62	0	183	0	229	336	53	478	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	62	0	183	0	229	336	53	478	0
PCE 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
MLF 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
FinalVolume:	0	0	0	62	0	183	0	229	336	53	478	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.41	0.59	1.00	1.00	0.00
Final Sat.:	0	0	0	458	0	540	0	257	378	554	602	0
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.14	xxxx	0.34	xxxx	0.89	0.89	0.10	0.79	xxxx
Crit Moves:						****		****			****	
Delay/Veh:	0.0	0.0	0.0	11.3	0.0	12.0	0.0	36.7	36.7	9.8	26.9	0.0
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	11.3	0.0	12.0	0.0	36.7	36.7	9.8	26.9	0.0
LOS by Move:	*	*	*	B	*	B	*	E	E	A	D	*
ApproachDel:	xxxxxx			11.8			36.7			25.2		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			11.8			36.7			25.2		
LOS by Appr:	*			B			E			D		
AllWayAvgQ:	0.0	0.0	0.0	0.1	0.0	0.4	4.9	4.9	4.9	0.1	3.1	0.0

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Morning Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

Cycle (sec): 60 Critical Vol./Cap.(X): 0.721
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 17.7
Optimal Cycle: OPTIMIZED Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	7	7	7	7	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	1 0	1	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	87	0	135	0	378	429	239	277	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	91	0	140	0	393	446	249	288	0
Added Vol:	0	0	0	0	0	0	0	1	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	91	0	140	0	394	446	249	290	0
User 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
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	0	0	0	104	0	162	0	454	514	286	334	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	104	0	162	0	454	514	286	334	0
PCE 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
MLF 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
FinalVolume:	0	0	0	104	0	162	0	454	514	286	334	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.77	1.00	0.85	1.00	1.00	0.85	0.95	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Final Sat.:	0	0	0	1461	0	1615	0	1900	1615	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.10	0.00	0.24	0.32	0.16	0.18	0.00
Crit Moves:						****			****	****		
Green/Cycle:	0.00	0.00	0.00	0.14	0.00	0.14	0.00	0.44	0.44	0.22	0.66	0.00
Volume/Cap:	0.00	0.00	0.00	0.51	0.00	0.72	0.00	0.54	0.72	0.72	0.27	0.00
Delay/Veh:	0.0	0.0	0.0	26.2	0.0	35.6	0.0	13.0	17.3	28.0	4.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	26.2	0.0	35.6	0.0	13.0	17.3	28.0	4.3	0.0
LOS by Move:	A	A	A	C	A	D	A	B	B	C	A	A
HCM2kAvgQ:	0	0	0	3	0	5	0	7	9	7	3	0

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Evening Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

Cycle (sec): 70 Critical Vol./Cap.(X): 0.440
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 32.5
Optimal Cycle: OPTIMIZED Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	7	7	7	7	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	1 0	1	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	58	0	171	0	212	314	50	446	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	60	0	178	0	221	327	52	464	0
Added Vol:	0	0	0	0	0	0	0	2	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	60	0	178	0	223	327	52	465	0
User 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
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	62	0	183	0	229	336	53	478	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	62	0	183	0	229	336	53	478	0
PCE 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
MLF 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
FinalVolume:	0	0	0	62	0	183	0	229	336	53	478	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.77	1.00	0.85	1.00	1.00	0.85	0.95	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Final Sat.:	0	0	0	1461	0	1615	0	1900	1615	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.11	0.00	0.12	0.21	0.03	0.25	0.00
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.19	0.00	0.19	0.00	0.21	0.21	0.43	0.64	0.00
Volume/Cap:	0.00	0.00	0.00	0.22	0.00	0.59	0.00	0.59	1.01	0.07	0.40	0.00
Delay/Veh:	0.0	0.0	0.0	24.2	0.0	28.5	0.0	27.4	80.0	11.8	6.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	24.2	0.0	28.5	0.0	27.4	80.0	11.8	6.4	0.0
LOS by Move:	A	A	A	C	A	C	A	C	F	B	A	A
HCM2kAvgQ:	0	0	0	1	0	5	0	5	13	1	5	0

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

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Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

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Cycle (sec):	100	Critical Vol./Cap.(X):	0.978
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	32.4
Optimal Cycle:	0	Level Of Service:	D

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 0	1	0 0	0 0	0	1 0	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	175	0	51	0	0	0	261	203	0	0	345	127
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	182	0	53	0	0	0	272	211	0	0	359	132
Added Vol:	0	0	0	0	0	0	0	1	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	182	0	53	0	0	0	272	212	0	0	361	132
User 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
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	215	0	63	0	0	0	321	251	0	0	427	156
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	215	0	63	0	0	0	321	251	0	0	427	156
PCE 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
MLF 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
FinalVolume:	215	0	63	0	0	0	321	251	0	0	427	156
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.73	0.27
Final Sat.:	464	0	547	0	0	0	528	569	0	0	437	160
Capacity Analysis Module:												
Vol/Sat:	0.46	xxxx	0.11	xxxx	xxxx	xxxx	0.61	0.44	xxxx	xxxx	0.98	0.98
Crit Moves:	****						****					****
Delay/Veh:	16.6	0.0	10.0	0.0	0.0	0.0	19.2	13.7	0.0	0.0	55.9	55.9
Delay 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
AdjDel/Veh:	16.6	0.0	10.0	0.0	0.0	0.0	19.2	13.7	0.0	0.0	55.9	55.9
LOS by Move:	C	*	A	*	*	*	C	B	*	*	F	F
ApproachDel:	15.1			xxxxxx			16.8			55.9		
Delay Adj:	1.00			xxxxx			1.00			1.00		
ApprAdjDel:	15.1			xxxxxx			16.8			55.9		
LOS by Appr:	C			*			C			F		
AllWayAvgQ:	0.8	0.0	0.1	0.0	0.0	0.0	1.4	0.8	0.0	7.8	7.8	7.8

****

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.752
Loss Time (sec):	0 (Y+R=4.0 sec)	Average Delay (sec/veh):	17.4
Optimal Cycle:	0	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T		R	L	T		R	L	T		R	L	T		R
Control:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0		0	0	0		0	0	0		0	0	0		0
Lanes:	1 0	0	0	1	0 0	0	0	0	1 0	1	0	0	0 0	0	1	0
Volume Module:																
Base Vol:	381	0		50	0	0		0	148	145		0	0	111		63
Growth Adj:	1.04	1.04		1.04	1.04	1.04		1.04	1.04	1.04		1.04	1.04	1.04		1.04
Initial Bse:	396	0		52	0	0		0	154	151		0	0	115		66
Added Vol:	0	0		0	0	0		0	0	2		0	0	1		0
PasserByVol:	0	0		0	0	0		0	0	0		0	0	0		0
Initial Fut:	396	0		52	0	0		0	154	153		0	0	116		66
User 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
PHF Adj:	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95
PHF Volume:	417	0		55	0	0		0	162	161		0	0	122		69
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	417	0		55	0	0		0	162	161		0	0	122		69
PCE 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
MLF 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
FinalVolume:	417	0		55	0	0		0	162	161		0	0	122		69
Saturation Flow Module:																
Adjustment:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
Lanes:	1.00	0.00		1.00	0.00	0.00		0.00	1.00	1.00		0.00	0.00	0.64		0.36
Final Sat.:	554	0		671	0	0		0	514	553		0	0	356		200
Capacity Analysis Module:																
Vol/Sat:	0.75	xxxx		0.08	xxxx	xxxx		xxxx	0.32	0.29		xxxx	xxxx	0.34		0.34
Crit Moves:	****								****							****
Delay/Veh:	25.3	0.0		8.4	0.0	0.0		0.0	12.4	11.4		0.0	0.0	12.2		12.2
Delay 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
AdjDel/Veh:	25.3	0.0		8.4	0.0	0.0		0.0	12.4	11.4		0.0	0.0	12.2		12.2
LOS by Move:	D	*		A	*	*		*	B	B		*	*	B		B
ApproachDel:	23.3				xxxxxx				11.9				12.2			
Delay Adj:	1.00				xxxxx				1.00				1.00			
ApprAdjDel:	23.3				xxxxxx				11.9				12.2			
LOS by Appr:	C				*				B				B			
AllWayAvgQ:	2.5	0.0		0.1	0.0	0.0		0.0	0.4	0.4		0.0	0.5	0.5		0.5

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Morning Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

Cycle (sec): 60 Critical Vol./Cap.(X): 0.805
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 24.5
Optimal Cycle: OPTIMIZED Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Permitted				Permitted				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		7	7	0		0	7	7	
Lanes:	1	0 0	0	1	0	0 0	0	0	1	0 1	0	0	0	0 0	1	0
Volume Module:																
Base Vol:	175	0	51		0	0	0		261	203	0		0	345	127	
Growth Adj:	1.04	1.04	1.04		1.04	1.04	1.04		1.04	1.04	1.04		1.04	1.04	1.04	
Initial Bse:	182	0	53		0	0	0		272	211	0		0	359	132	
Added Vol:	0	0	0		0	0	0		0	1	0		0	2	0	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	182	0	53		0	0	0		272	212	0		0	361	132	
User 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	
PHF Adj:	0.85	0.85	0.85		0.85	0.85	0.85		0.85	0.85	0.85		0.85	0.85	0.85	
PHF Volume:	215	0	63		0	0	0		321	251	0		0	427	156	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	215	0	63		0	0	0		321	251	0		0	427	156	
PCE 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	
MLF 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	
FinalVolume:	215	0	63		0	0	0		321	251	0		0	427	156	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.77	1.00	0.85		1.00	1.00	1.00		0.95	1.00	1.00		1.00	0.96	0.96	
Lanes:	1.00	0.00	1.00		0.00	0.00	0.00		1.00	1.00	0.00		0.00	0.73	0.27	
Final Sat.:	1461	0	1615		0	0	0		1805	1900	0		0	1341	491	
Capacity Analysis Module:																
Vol/Sat:	0.15	0.00	0.04		0.00	0.00	0.00		0.18	0.13	0.00		0.00	0.32	0.32	
Crit Moves:	****								****					****		
Green/Cycle:	0.18	0.00	0.18		0.00	0.00	0.00		0.22	0.62	0.00		0.00	0.40	0.40	
Volume/Cap:	0.80	0.00	0.21		0.00	0.00	0.00		0.81	0.21	0.00		0.00	0.81	0.81	
Delay/Veh:	39.6	0.0	21.2		0.0	0.0	0.0		33.5	5.2	0.0		0.0	22.6	22.6	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	39.6	0.0	21.2		0.0	0.0	0.0		33.5	5.2	0.0		0.0	22.6	22.6	
LOS by Move:	D	A	C		A	A	A		C	A	A		A	C	C	
HCM2kAvgQ:	6	0	1		0	0	0		8	2	0		0	12	12	

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Evening Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

Cycle (sec): 60 Critical Vol./Cap.(X): 0.601
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 18.1
Optimal Cycle: OPTIMIZED Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	7	7	0	0	7	7
Lanes:	1 0	0 0	1	0 0	0 0	0	1 0	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	381	0	50	0	0	0	148	145	0	0	111	63
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	396	0	52	0	0	0	154	151	0	0	115	66
Added Vol:	0	0	0	0	0	0	0	2	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	396	0	52	0	0	0	154	153	0	0	116	66
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	417	0	55	0	0	0	162	161	0	0	122	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	417	0	55	0	0	0	162	161	0	0	122	69
PCE 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
MLF 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
FinalVolume:	417	0	55	0	0	0	162	161	0	0	122	69
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.77	1.00	0.85	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95	0.95
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.64	0.36
Final Sat.:	1461	0	1615	0	0	0	1805	1900	0	0	1156	651
Capacity Analysis Module:												
Vol/Sat:	0.29	0.00	0.03	0.00	0.00	0.00	0.09	0.08	0.00	0.00	0.11	0.11
Crit Moves:	****						****				****	
Green/Cycle:	0.47	0.00	0.47	0.00	0.00	0.00	0.15	0.33	0.00	0.00	0.18	0.18
Volume/Cap:	0.60	0.00	0.07	0.00	0.00	0.00	0.60	0.26	0.00	0.00	0.60	0.60
Delay/Veh:	13.1	0.0	8.6	0.0	0.0	0.0	27.6	15.1	0.0	0.0	26.0	26.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.1	0.0	8.6	0.0	0.0	0.0	27.6	15.1	0.0	0.0	26.0	26.0
LOS by Move:	B	A	A	A	A	A	C	B	A	A	C	C
HCM2kAvgQ:	7	0	1	0	0	0	4	2	0	0	4	4

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)

Average Delay (sec/veh): 37.4 Worst Case Level Of Service: F[77.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 1 0 1		
Volume Module:												
Base Vol:	0	0	0	124	0	327	112	159	0	0	172	59
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	129	0	340	117	165	0	0	179	61
Added Vol:	0	0	0	1	0	0	0	1	0	0	2	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	130	0	340	117	166	0	0	181	65
User 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
PHF Adj:	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
PHF Volume:	0	0	0	170	0	444	152	217	0	0	236	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	170	0	444	152	217	0	0	236	85
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	758	758	236	322	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	378	339	808	1250	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	339	294	808	1250	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.50	0.00	0.55	0.12	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	585	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	17.1	xxxxx	0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	77.5	xxxxx	8.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	F	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			77.5			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: B[10.1]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	27	0	105	78	114	0	0	68	26
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	28	0	109	81	119	0	0	71	27
Added Vol:	0	0	0	5	0	0	0	2	0	0	1	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	33	0	109	81	121	0	0	72	30
User 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
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	35	0	116	86	128	0	0	76	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	35	0	116	86	128	0	0	76	32
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	377	377	76	108	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	629	558	990	1495	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	600	524	990	1495	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.06	0.00	0.12	0.06	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	860	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	0.6	xxxxx	0.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	B	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			10.1			xxxxxx			xxxxxx		
ApproachLOS:	*			B			*			*		

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Morning Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)

Cycle (sec): 60 Critical Vol./Cap.(X): 0.769
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 18.2
Optimal Cycle: OPTIMIZED Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	7	0	7	7	7	0	0	7	7
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	124	0	327	112	159	0	0	172	59
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	129	0	340	117	165	0	0	179	61
Added Vol:	0	0	0	1	0	0	0	1	0	0	2	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	130	0	340	117	166	0	0	181	65
User 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
PHF Adj:	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
PHF Volume:	0	0	0	170	0	444	152	217	0	0	236	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	170	0	444	152	217	0	0	236	85
PCE 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
MLF 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
FinalVolume:	0	0	0	170	0	444	152	217	0	0	236	85
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.82	1.00	0.82	0.72	0.72	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	0.28	0.00	0.72	0.41	0.59	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	430	0	1125	561	801	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.39	0.00	0.39	0.27	0.27	0.00	0.00	0.12	0.05
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.51	0.00	0.51	0.35	0.35	0.00	0.00	0.35	0.35
Volume/Cap:	0.00	0.00	0.00	0.77	0.00	0.77	0.77	0.77	0.00	0.00	0.35	0.15
Delay/Veh:	0.0	0.0	0.0	16.3	0.0	16.3	24.6	24.6	0.0	0.0	14.7	13.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	16.3	0.0	16.3	24.6	24.6	0.0	0.0	14.7	13.4
LOS by Move:	A	A	A	B	A	B	C	C	A	A	B	B
HCM2kAvgQ:	0	0	0	11	0	11	8	8	0	0	3	1

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Evening Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)

Cycle (sec): 60 Critical Vol./Cap.(X): 0.259
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 10.0
Optimal Cycle: OPTIMIZED Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	7	0	7	7	7	0	0	7	7
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	27	0	105	78	114	0	0	68	26
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	28	0	109	81	119	0	0	71	27
Added Vol:	0	0	0	5	0	0	0	2	0	0	1	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	33	0	109	81	121	0	0	72	30
User 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
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	35	0	116	86	128	0	0	76	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	35	0	116	86	128	0	0	76	32
PCE 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
MLF 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
FinalVolume:	0	0	0	35	0	116	86	128	0	0	76	32
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.85	1.00	0.85	0.87	0.87	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	0.23	0.00	0.77	0.40	0.60	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	374	0	1235	661	982	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.09	0.00	0.09	0.13	0.13	0.00	0.00	0.04	0.02
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.36	0.00	0.36	0.50	0.50	0.00	0.00	0.50	0.50
Volume/Cap:	0.00	0.00	0.00	0.26	0.00	0.26	0.26	0.26	0.00	0.00	0.08	0.04
Delay/Veh:	0.0	0.0	0.0	13.7	0.0	13.7	8.7	8.7	0.0	0.0	7.7	7.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	13.7	0.0	13.7	8.7	8.7	0.0	0.0	7.7	7.6
LOS by Move:	A	A	A	B	A	B	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	2	0	2	2	2	0	0	1	0

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 George Avenue (NS) at Depasquale Road (EW)

Average Delay (sec/veh): 3.1 Worst Case Level Of Service: C[17.1]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	35	141	0	0	234	6	11	0	48	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	36	147	0	0	243	6	11	0	50	0	0	0
Added Vol:	0	0	9	2	0	0	0	0	0	30	0	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	36	147	9	2	243	6	11	0	50	30	0	6
User 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
PHF Adj:	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
PHF Volume:	51	205	13	3	340	9	16	0	70	42	0	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	51	205	13	3	340	9	16	0	70	42	0	8
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	349	xxxx	xxxxx	218	xxxx	xxxxx	668	670	345	699	668	211
Potent Cap.:	1221	xxxx	xxxxx	1364	xxxx	xxxxx	375	381	703	357	382	834
Move Cap.:	1221	xxxx	xxxxx	1364	xxxx	xxxxx	358	364	703	311	364	834
Volume/Cap:	0.04	xxxx	xxxx	0.00	xxxx	xxxx	0.04	0.00	0.10	0.14	0.00	0.01
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.1	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	596	xxxxx	xxxx	347	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	0.5	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.1	xxxxx	xxxxx	17.1	xxxxx
Shared LOS:	*	*	*	*	*	*	*	B	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			12.1			17.1		
ApproachLOS:	*			*			B			C		

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 George Avenue (NS) at Depasquale Road (EW)

Average Delay (sec/veh): 2.4 Worst Case Level Of Service: B[12.9]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	48	151	0	0	119	4	1	0	29	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	50	157	0	0	124	4	1	0	30	0	0	0
Added Vol:	0	0	32	7	0	0	0	0	0	20	0	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	157	32	7	124	4	1	0	30	20	0	4
User 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
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	59	184	38	8	145	5	1	0	35	23	0	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	59	184	38	8	145	5	1	0	35	23	0	5
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	150	xxxx	xxxxx	222	xxxx	xxxxx	487	503	148	502	487	203
Potent Cap.:	1443	xxxx	xxxxx	1359	xxxx	xxxxx	494	474	904	483	484	843
Move Cap.:	1443	xxxx	xxxxx	1359	xxxx	xxxxx	474	451	904	447	461	843
Volume/Cap:	0.04	xxxx	xxxx	0.01	xxxx	xxxx	0.00	0.00	0.04	0.05	0.00	0.01
Level Of Service Module:												
2Way95thQ:	0.1	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.6	xxxx	xxxxx	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	878	xxxxx	xxxx	485	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	0.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	9.3	xxxxx	xxxxx	12.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	A	*	*	B	*
ApproachDel:	xxxxxx			xxxxxx			9.3			12.9		
ApproachLOS:	*			*			A			B		

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 George Avenue (NS) at Clinton Keith Road (EW)

Cycle (sec): 60 Critical Vol./Cap.(X): 0.575
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 16.7
Optimal Cycle: OPTIMIZED Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T		R	L	T		R	L	T		R	L	T		R
Control:	Permitted				Permitted				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	7	7		7	7	7		7	7	7		7	7	7		7
Lanes:	1 0	0	1	0	1 0	1	0	1	1 0	2	1	0	1 0	2	0	1
Volume Module:																
Base Vol:	38	11		41	82	28		198	94	646		12	54	802		47
Growth Adj:	1.04	1.04		1.04	1.04	1.04		1.04	1.04	1.04		1.04	1.04	1.04		1.04
Initial Bse:	40	11		43	85	29		206	98	672		12	56	834		49
Added Vol:	0	1		0	11	4		15	7	0		0	0	6		1
PasserByVol:	0	0		0	0	0		0	0	0		0	0	0		0
Initial Fut:	40	12		43	96	33		221	105	672		12	56	840		50
User 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
PHF Adj:	0.93	0.93		0.93	0.93	0.93		0.93	0.93	0.93		0.93	0.93	0.93		0.93
PHF Volume:	43	13		46	104	36		238	113	723		13	60	904		54
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	43	13		46	104	36		238	113	723		13	60	904		54
PCE 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
MLF 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
FinalVolume:	43	13		46	104	36		238	113	723		13	60	904		54
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.74	0.88		0.88	0.72	1.00		0.85	0.95	0.91		0.91	0.95	0.95		0.85
Lanes:	1.00	0.23		0.77	1.00	1.00		1.00	1.00	2.95		0.05	1.00	2.00		1.00
Final Sat.:	1404	379		1300	1368	1900		1615	1805	5077		94	1805	3610		1615
Capacity Analysis Module:																
Vol/Sat:	0.03	0.04		0.04	0.08	0.02		0.15	0.06	0.14		0.14	0.03	0.25		0.03
Crit Moves:								****	****					****		
Green/Cycle:	0.25	0.25		0.25	0.25	0.25		0.25	0.12	0.30		0.30	0.25	0.43		0.43
Volume/Cap:	0.12	0.14		0.14	0.30	0.07		0.58	0.54	0.47		0.47	0.14	0.58		0.08
Delay/Veh:	17.4	17.5		17.5	18.6	17.1		21.8	27.6	17.3		17.3	17.8	13.5		10.1
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	17.4	17.5		17.5	18.6	17.1		21.8	27.6	17.3		17.3	17.8	13.5		10.1
LOS by Move:	B	B		B	B	B		C	C	B		B	B	B		B
HCM2kAvgQ:	1	1		1	2	1		5	3	5		5	1	7		1

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #5 George Avenue (NS) at Clinton Keith Road (EW)

****

Cycle (sec): 60 Critical Vol./Cap.(X): 0.517
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 14.5
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0 0	1 0		1 0 1	0 1		1 0 2	1 0		1 0 2	0 1	
Volume Module:												
Base Vol:	32	29	72	49	29	98	108	890	11	76	838	42
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	33	30	75	51	30	102	112	926	11	79	872	44
Added Vol:	0	5	0	7	3	10	25	0	0	0	4	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	33	35	75	58	33	112	137	926	11	79	876	46
User 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
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	35	37	80	62	35	119	146	987	12	84	934	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	37	80	62	35	119	146	987	12	84	934	49
PCE 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
MLF 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
FinalVolume:	35	37	80	62	35	119	146	987	12	84	934	49
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.74	0.90	0.90	0.68	1.00	0.85	0.95	0.91	0.91	0.95	0.95	0.85
Lanes:	1.00	0.32	0.68	1.00	1.00	1.00	1.00	2.96	0.04	1.00	2.00	1.00
Final Sat.:	1404	545	1161	1288	1900	1615	1805	5113	63	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.07	0.07	0.05	0.02	0.07	0.08	0.19	0.19	0.05	0.26	0.03
Crit Moves:						****	****				****	
Green/Cycle:	0.14	0.14	0.14	0.14	0.14	0.14	0.16	0.41	0.41	0.25	0.50	0.50
Volume/Cap:	0.18	0.48	0.48	0.34	0.13	0.52	0.52	0.47	0.47	0.19	0.52	0.06
Delay/Veh:	23.0	25.2	25.2	24.2	22.7	25.8	24.9	13.1	13.1	18.0	10.4	7.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.0	25.2	25.2	24.2	22.7	25.8	24.9	13.1	13.1	18.0	10.4	7.8
LOS by Move:	C	C	C	C	C	C	C	B	B	B	B	A
HCM2kAvgQ:	1	3	3	1	1	3	3	5	5	1	7	0

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #6 Iodine Springs Road (NS) at Project Access (EW)

****

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: A[8.5]

****

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0 1	0	0	0	0	0	0 1	0	0	0	1! 0	0	0	0	0	0
Volume Module:																
Base Vol:	0	10	0	0	21	1	1	0	0	0	0	0				
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04				
Initial Bse:	0	10	0	0	22	1	1	0	0	0	0	0				
Added Vol:	3	0	0	0	0	0	0	0	6	0	0	0				
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0				
Initial Fut:	3	10	0	0	22	1	1	0	6	0	0	0				
User 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				
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95				
PHF Volume:	3	11	0	0	23	1	1	0	6	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
FinalVolume:	3	11	0	0	23	1	1	0	6	0	0	0				
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx				
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx				
Capacity Module:																
Cnflict Vol:	24	xxxx	xxxxx	xxxx	xxxx	xxxxx	41	41	24	xxxx	xxxx	xxxxx				
Potent Cap.:	1604	xxxx	xxxxx	xxxx	xxxx	xxxxx	976	855	1059	xxxx	xxxx	xxxxx				
Move Cap.:	1604	xxxx	xxxxx	xxxx	xxxx	xxxxx	974	853	1059	xxxx	xxxx	xxxxx				
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.01	xxxx	xxxx	xxxx				
Level Of Service Module:																
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
Control Del:	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*				
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT				
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1045	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.5	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*				
ApproachDel:	xxxxxx			xxxxxx			8.5			xxxxxx						
ApproachLOS:	*			*			A			*						

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #6 Iodine Springs Road (NS) at Project Access (EW)

****

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: A[8.5]

****

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Uncontrolled					Uncontrolled					Stop Sign					Stop Sign				
Rights:	Include					Include					Include					Include				
Lanes:	0	1	0	0	0	0	0	0	1	0	0	0	1!	0	0	0	0	0	0	0
Volume Module:																				
Base Vol:	0	37	0	0	19	1	1	0	0	0	0	0								
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04								
Initial Bse:	0	38	0	0	20	1	1	0	0	0	0	0								
Added Vol:	10	0	0	0	0	0	0	0	4	0	0	0								
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0								
Initial Fut:	10	38	0	0	20	1	1	0	4	0	0	0								
User 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								
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95								
PHF Volume:	11	41	0	0	21	1	1	0	4	0	0	0								
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0								
FinalVolume:	11	41	0	0	21	1	1	0	4	0	0	0								
Critical Gap Module:																				
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx								
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx								
Capacity Module:																				
Cnflict Vol:	22	xxxx	xxxxx	xxxx	xxxx	xxxxx	83	83	21	xxxx	xxxx	xxxxx								
Potent Cap.:	1607	xxxx	xxxxx	xxxx	xxxx	xxxxx	924	811	1062	xxxx	xxxx	xxxxx								
Move Cap.:	1607	xxxx	xxxxx	xxxx	xxxx	xxxxx	919	806	1062	xxxx	xxxx	xxxxx								
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.00	xxxx	xxxx	xxxx								
Level Of Service Module:																				
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx								
Control Del:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx								
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*								
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1029	xxxxx	xxxx	xxxx	xxxxx								
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx								
Shrd ConDel:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.5	xxxxx	xxxxx	xxxx	xxxxx								
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*								
ApproachDel:	xxxxxx			xxxxxx			8.5			xxxxxx										
ApproachLOS:	*			*			A			*										

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #7 Iodine Springs Road (NS) at Clinton Keith Road (EW)

****

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[11.1]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0	0	1	0 0 0	0	1	0 0 3	1	0	0 0 1	1	0
Volume Module:												
Base Vol:	0	0	29	0	0	21	0	754	7	0	686	10
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	30	0	0	22	0	784	7	0	714	10
Added Vol:	0	0	0	0	0	6	0	11	0	0	1	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	30	0	0	28	0	795	7	0	715	13
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	32	0	0	29	0	836	8	0	752	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	32	0	0	29	0	836	8	0	752	14
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	213	xxxx	xxxx	383	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	798	xxxx	xxxx	621	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	798	xxxx	xxxx	621	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.04	xxxx	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.1	xxxx	xxxx	0.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	9.7	xxxxx	xxxx	11.1	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	B	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		9.7			11.1			xxxxxx			xxxxxx	
ApproachLOS:		A			B			*			*	

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #7 Iodine Springs Road (NS) at Clinton Keith Road (EW)

****

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[13.2]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 1			0 0 0 0 1			0 0 3 1 0			0 0 1 1 0		
Volume Module:												
Base Vol:	0	0	10	0	0	18	0	850	7	0	1016	37
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	10	0	0	19	0	884	7	0	1057	38
Added Vol:	0	0	0	0	0	4	0	7	0	0	2	10
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	10	0	0	23	0	891	7	0	1059	48
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	11	0	0	24	0	937	8	0	1114	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	11	0	0	24	0	937	8	0	1114	51
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	238	xxxx	xxxx	582	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	769	xxxx	xxxx	461	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	769	xxxx	xxxx	461	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.01	xxxx	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.0	xxxx	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	9.7	xxxxx	xxxx	13.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	9.7			13.2			xxxxxx			xxxxxx		
ApproachLOS:	A			B			*			*		

****

Note: Queue reported is the number of cars per lane.

****

Existing Plus Ambient Growth Plus Project Plus Cumulative

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 1.956
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 246.6
Optimal Cycle: 0 Level Of Service: F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	0 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	87	0	135	0	378	429	239	277	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	91	0	140	0	393	446	249	288	0
Added Vol:	0	0	0	2	0	0	0	145	44	30	147	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	93	0	140	0	538	490	279	435	0
User 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
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	0	0	0	106	0	162	0	619	564	321	501	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	106	0	162	0	619	564	321	501	0
PCE 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
MLF 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
FinalVolume:	0	0	0	106	0	162	0	619	564	321	501	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.52	0.48	1.00	1.00	0.00
Final Sat.:	0	0	0	451	0	530	0	317	288	540	585	0
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.24	xxxx	0.31	xxxx	1.96	1.96	0.59	0.86	xxxx
Crit Moves:						****			****		****	
Delay/Veh:	0.0	0.0	0.0	12.9	0.0	12.2	0.0	451	451.1	18.5	34.7	0.0
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	12.9	0.0	12.2	0.0	451	451.1	18.5	34.7	0.0
LOS by Move:	*	*	*	B	*	B	*	F	F	C	D	*
ApproachDel:	xxxxxx			12.5			451.1			28.4		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			12.5			451.1			28.4		
LOS by Appr:	*			B			F			D		
AllWayAvgQ:	0.0	0.0	0.0	0.3	0.0	0.4	74.3	74.3	74.3	1.4	4.2	0.0

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

****

Cycle (sec): 100 Critical Vol./Cap.(X): 1.490
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 192.9
Optimal Cycle: 0 Level Of Service: F

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	0 1	0	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	58	0	171	0	212	314	50	446	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	60	0	178	0	221	327	52	464	0
Added Vol:	0	0	0	6	0	0	0	246	83	51	349	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	66	0	178	0	467	410	103	813	0
User 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
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	68	0	183	0	480	421	106	836	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	68	0	183	0	480	421	106	836	0
PCE 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
MLF 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
FinalVolume:	0	0	0	68	0	183	0	480	421	106	836	0
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.53	0.47	1.00	1.00	0.00
Final Sat.:	0	0	0	457	0	537	0	322	283	546	592	0
Capacity Analysis Module:												
Vol/Sat:	xxxx	xxxx	xxxx	0.15	xxxx	0.34	xxxx	1.49	1.49	0.19	1.41	xxxx
Crit Moves:						****		****			****	
Delay/Veh:	0.0	0.0	0.0	11.9	0.0	12.8	0.0	246	246.4	10.8	213	0.0
Delay 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
AdjDel/Veh:	0.0	0.0	0.0	11.9	0.0	12.8	0.0	246	246.4	10.8	213	0.0
LOS by Move:	*	*	*	B	*	B	*	F	F	B	F	*
ApproachDel:	xxxxxx			12.6			246.4			189.8		
Delay Adj:	xxxxx			1.00			1.00			1.00		
ApprAdjDel:	xxxxxx			12.6			246.4			189.8		
LOS by Appr:	*			B			F			F		
AllWayAvgQ:	0.0	0.0	0.0	0.2	0.0	0.5	39.9	39.9	39.9	0.2	33.5	0.0

****

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Morning Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

****

Cycle (sec):	60	Critical Vol./Cap.(X):	0.784
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):	19.4
Optimal Cycle: OPTIMIZED		Level Of Service:	B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	7	7	7	7	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	1 0	1	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	87	0	135	0	378	429	239	277	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	91	0	140	0	393	446	249	288	0
Added Vol:	0	0	0	2	0	0	0	145	44	30	147	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	93	0	140	0	538	490	279	435	0
User 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
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	0	0	0	106	0	162	0	619	564	321	501	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	106	0	162	0	619	564	321	501	0
PCE 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
MLF 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
FinalVolume:	0	0	0	106	0	162	0	619	564	321	501	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.77	1.00	0.85	1.00	1.00	0.85	0.95	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Final Sat.:	0	0	0	1461	0	1615	0	1900	1615	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.10	0.00	0.33	0.35	0.18	0.26	0.00
Crit Moves:						****			****	****		
Green/Cycle:	0.00	0.00	0.00	0.13	0.00	0.13	0.00	0.45	0.45	0.23	0.67	0.00
Volume/Cap:	0.00	0.00	0.00	0.57	0.00	0.78	0.00	0.73	0.78	0.78	0.39	0.00
Delay/Veh:	0.0	0.0	0.0	28.8	0.0	43.0	0.0	17.0	19.8	31.4	4.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	28.8	0.0	43.0	0.0	17.0	19.8	31.4	4.6	0.0
LOS by Move:	A	A	A	C	A	D	A	B	B	C	A	A
HCM2kAvgQ:	0	0	0	3	0	5	0	11	11	8	4	0

****

Note: Queue reported is the number of cars per lane.

****

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Evening Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 I-15 Freeway SB Ramps (NS) at Baxter Road (EW)

Cycle (sec): 90 Critical Vol./Cap.(X): 0.638
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 37.3
Optimal Cycle: OPTIMIZED Level Of Service: D

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	7	7	7	7	0
Lanes:	0 0	0 0	0	1 0	0 0	1	0 0	1 0	1	1 0	1 0	0
Volume Module:												
Base Vol:	0	0	0	58	0	171	0	212	314	50	446	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	60	0	178	0	221	327	52	464	0
Added Vol:	0	0	0	6	0	0	0	246	83	51	349	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	66	0	178	0	467	410	103	813	0
User 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
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	0	0	0	68	0	183	0	480	421	106	836	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	68	0	183	0	480	421	106	836	0
PCE 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
MLF 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
FinalVolume:	0	0	0	68	0	183	0	480	421	106	836	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.77	1.00	0.85	1.00	1.00	0.85	0.95	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Final Sat.:	0	0	0	1461	0	1615	0	1900	1615	1805	1900	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.11	0.00	0.25	0.26	0.06	0.44	0.00
Crit Moves:						****					****	
Green/Cycle:	0.00	0.00	0.00	0.12	0.00	0.12	0.00	0.27	0.27	0.47	0.74	0.00
Volume/Cap:	0.00	0.00	0.00	0.38	0.00	0.93	0.00	0.93	0.96	0.12	0.59	0.00
Delay/Veh:	0.0	0.0	0.0	37.8	0.0	83.7	0.0	55.3	65.0	13.3	5.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	37.8	0.0	83.7	0.0	55.3	65.0	13.3	5.9	0.0
LOS by Move:	A	A	A	D	A	F	A	E	E	B	A	A
HCM2kAvgQ:	0	0	0	2	0	9	0	17	17	2	11	0

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

Cycle (sec): 100 Critical Vol./Cap.(X): 1.365
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 93.0
Optimal Cycle: 0 Level Of Service: F

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Min. Green:	0	0	0				0	0	0				0	0	0				0	0	0			
Lanes:	1	0	0	0	1		0	0	0	0	0		1	0	1	0	0		0	0	0	1	0	
Volume Module:																								
Base Vol:	175	0	51				0	0	0				261	203	0				0	345	127			
Growth Adj:	1.04	1.04	1.04				1.04	1.04	1.04				1.04	1.04	1.04				1.04	1.04	1.04			
Initial Bse:	182	0	53				0	0	0				272	211	0				0	359	132			
Added Vol:	29	0	36				0	0	0				0	147	0				0	147	6			
PasserByVol:	0	0	0				0	0	0				0	0	0				0	0	0			
Initial Fut:	211	0	89				0	0	0				272	358	0				0	506	138			
User 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			
PHF Adj:	0.85	0.85	0.85				0.85	0.85	0.85				0.85	0.85	0.85				0.85	0.85	0.85			
PHF Volume:	250	0	105				0	0	0				321	424	0				0	599	163			
Reduct Vol:	0	0	0				0	0	0				0	0	0				0	0	0			
Reduced Vol:	250	0	105				0	0	0				321	424	0				0	599	163			
PCE 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			
MLF 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			
FinalVolume:	250	0	105				0	0	0				321	424	0				0	599	163			
Saturation Flow Module:																								
Adjustment:	1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00				1.00	1.00	1.00			
Lanes:	1.00	0.00	1.00				0.00	0.00	0.00				1.00	1.00	0.00				0.00	0.79	0.21			
Final Sat.:	454	0	533				0	0	0				508	546	0				0	439	120			
Capacity Analysis Module:																								
Vol/Sat:	0.55	xxxx	0.20				xxxx	xxxx	xxxx				0.63	0.78	xxxx				xxxx	1.36	1.36			
Crit Moves:	****													****						****				
Delay/Veh:	19.5	0.0	11.0				0.0	0.0	0.0				21.1	28.1	0.0				0.0	195	194.9			
Delay 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			
AdjDel/Veh:	19.5	0.0	11.0				0.0	0.0	0.0				21.1	28.1	0.0				0.0	195	194.9			
LOS by Move:	C	*	B				*	*	*				C	D	*				*	F	F			
ApproachDel:	17.0						xxxxxx						25.1						194.9					
Delay Adj:	1.00						xxxxx						1.00						1.00					
ApprAdjDel:	17.0						xxxxxx						25.1						194.9					
LOS by Appr:	C						*						D						F					
AllWayAvgQ:	1.1	0.0	0.2				0.0	0.0	0.0				1.6	2.9	0.0				28.8	28.8	28.8			

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Future Volume Alternative)

****

Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

****

Cycle (sec): 100 Critical Vol./Cap.(X): 1.115
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 68.2
Optimal Cycle: 0 Level Of Service: F

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 0	1	0 0	0 0	0	1 0	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	381	0	50	0	0	0	148	145	0	0	111	63
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	396	0	52	0	0	0	154	151	0	0	115	66
Added Vol:	92	0	49	0	0	0	0	252	0	0	308	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	488	0	101	0	0	0	154	403	0	0	423	70
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	514	0	106	0	0	0	162	424	0	0	445	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	514	0	106	0	0	0	162	424	0	0	445	73
PCE 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
MLF 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
FinalVolume:	514	0	106	0	0	0	162	424	0	0	445	73
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.86	0.14
Final Sat.:	461	0	541	0	0	0	451	481	0	0	425	70
Capacity Analysis Module:												
Vol/Sat:	1.11	xxxx	0.20	xxxx	xxxx	xxxx	0.36	0.88	xxxx	xxxx	1.05	1.05
Crit Moves:	****							****				****
Delay/Veh:	104.0	0.0	10.9	0.0	0.0	0.0	15.1	44.0	0.0	0.0	80.8	80.8
Delay 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
AdjDel/Veh:	104.0	0.0	10.9	0.0	0.0	0.0	15.1	44.0	0.0	0.0	80.8	80.8
LOS by Move:	F	*	B	*	*	*	C	E	*	*	F	F
ApproachDel:	88.1			xxxxxx			36.0			80.8		
Delay Adj:	1.00			xxxxx			1.00			1.00		
ApprAdjDel:	88.1			xxxxxx			36.0			80.8		
LOS by Appr:	F			*			E			F		
AllWayAvgQ:	12.0	0.0	0.2	0.0	0.0	0.0	0.6	4.5	0.0	9.7	9.7	9.7

****

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Morning Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

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Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

****

Cycle (sec): 80 Critical Vol./Cap.(X): 0.897
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 33.7
Optimal Cycle: OPTIMIZED Level Of Service: C

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	7	7	0	0	7	7
Lanes:	1 0 0 0 1			0 0 0 0 0			1 0 1 0 0			0 0 0 1 0		
Volume Module:												
Base Vol:	175	0	51	0	0	0	261	203	0	0	345	127
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	182	0	53	0	0	0	272	211	0	0	359	132
Added Vol:	29	0	36	0	0	0	0	147	0	0	147	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	211	0	89	0	0	0	272	358	0	0	506	138
User 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
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	250	0	105	0	0	0	321	424	0	0	599	163
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	250	0	105	0	0	0	321	424	0	0	599	163
PCE 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
MLF 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
FinalVolume:	250	0	105	0	0	0	321	424	0	0	599	163
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.77	1.00	0.85	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.97	0.97
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.79	0.21
Final Sat.:	1461	0	1615	0	0	0	1805	1900	0	0	1449	396
Capacity Analysis Module:												
Vol/Sat:	0.17	0.00	0.07	0.00	0.00	0.00	0.18	0.22	0.00	0.00	0.41	0.41
Crit Moves:	****						****				****	
Green/Cycle:	0.19	0.00	0.19	0.00	0.00	0.00	0.20	0.66	0.00	0.00	0.46	0.46
Volume/Cap:	0.90	0.00	0.34	0.00	0.00	0.00	0.90	0.34	0.00	0.00	0.90	0.90
Delay/Veh:	60.4	0.0	28.7	0.0	0.0	0.0	55.2	6.1	0.0	0.0	32.0	32.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	60.4	0.0	28.7	0.0	0.0	0.0	55.2	6.1	0.0	0.0	32.0	32.0
LOS by Move:	E	A	C	A	A	A	E	A	A	A	C	C
HCM2kAvgQ:	9	0	3	0	0	0	11	5	0	0	21	21

****

Note: Queue reported is the number of cars per lane.

****

Traffix 7.9.0215 (c) 2008 Dowling Assoc. Licensed to KUNZMAN ASSOC, ORANGE CA

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Evening Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #2 I-15 Freeway NB Ramps (NS) at Baxter Road (EW)

****

Cycle (sec): 65 Critical Vol./Cap.(X): 0.882
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 30.7
Optimal Cycle: OPTIMIZED Level Of Service: C

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	7	7	0	0	7	7
Lanes:	1 0	0 0	1	0 0	0 0	0	1 0	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	381	0	50	0	0	0	148	145	0	0	111	63
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	396	0	52	0	0	0	154	151	0	0	115	66
Added Vol:	92	0	49	0	0	0	0	252	0	0	308	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	488	0	101	0	0	0	154	403	0	0	423	70
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	514	0	106	0	0	0	162	424	0	0	445	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	514	0	106	0	0	0	162	424	0	0	445	73
PCE 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
MLF 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
FinalVolume:	514	0	106	0	0	0	162	424	0	0	445	73
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.77	1.00	0.85	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.98	0.98
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	0.86	0.14
Final Sat.:	1461	0	1615	0	0	0	1805	1900	0	0	1601	263
Capacity Analysis Module:												
Vol/Sat:	0.35	0.00	0.07	0.00	0.00	0.00	0.09	0.22	0.00	0.00	0.28	0.28
Crit Moves:	****						****				****	
Green/Cycle:	0.40	0.00	0.40	0.00	0.00	0.00	0.11	0.42	0.00	0.00	0.31	0.31
Volume/Cap:	0.89	0.00	0.17	0.00	0.00	0.00	0.83	0.53	0.00	0.00	0.89	0.89
Delay/Veh:	34.1	0.0	12.9	0.0	0.0	0.0	53.7	14.7	0.0	0.0	36.9	36.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.1	0.0	12.9	0.0	0.0	0.0	53.7	14.7	0.0	0.0	36.9	36.9
LOS by Move:	C	A	B	A	A	A	D	B	A	A	D	D
HCM2kAvgQ:	14	0	1	0	0	0	6	7	0	0	14	14

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Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)

****

Average Delay (sec/veh): 257.6 Worst Case Level Of Service: F[603.5]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 0			0 0 1! 0 0			0 1 0 0 0			0 0 1 0 1		
Volume Module:												
Base Vol:	0	0	0	124	0	327	112	159	0	0	172	59
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	129	0	340	117	165	0	0	179	61
Added Vol:	0	0	0	37	0	96	125	58	0	0	57	55
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	166	0	436	242	223	0	0	236	116
User 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
PHF Adj:	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
PHF Volume:	0	0	0	217	0	569	315	292	0	0	308	152
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	217	0	569	315	292	0	0	308	152
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1230	1230	308	460	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	198	179	737	1112	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	145	117	737	1112	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	1.49	0.00	0.77	0.28	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.2	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	9.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	347	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	59.8	xxxxx	1.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	603	xxxxx	9.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	F	*	A	*	*	*	*	*
ApproachDel:	xxxxxx			603.5			xxxxxx			xxxxxx		
ApproachLOS:	*			F			*			*		

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)

Average Delay (sec/veh): 22.9 Worst Case Level Of Service: F[58.2]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	0	0 0	1! 0	0	0 1	0 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	27	0	105	78	114	0	0	68	26
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	28	0	109	81	119	0	0	71	27
Added Vol:	0	0	0	82	0	212	197	104	0	0	100	73
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	110	0	321	278	223	0	0	171	100
User 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
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	117	0	341	296	237	0	0	181	106
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	0	117	0	341	296	237	0	0	181	106
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	1009	1009	181	288	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	268	242	866	1286	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	211	175	866	1286	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	0.55	0.00	0.39	0.23	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.9	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	A	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	484	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	11.6	xxxxx	0.9	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	58.2	xxxxx	8.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	F	*	A	*	*	*	*	*
ApproachDel:	xxxxxx				58.2		xxxxxx			xxxxxx		
ApproachLOS:		*			F			*			*	

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Morning Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)

Cycle (sec): 60 Critical Vol./Cap.(X): 0.792
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 16.7
Optimal Cycle: OPTIMIZED Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	7	0	7	7	7	0	0	7	7
Lanes:	0 0	0 0	0	1 0	0 0	1	1 0	1 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	124	0	327	112	159	0	0	172	59
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	129	0	340	117	165	0	0	179	61
Added Vol:	0	0	0	37	0	96	125	58	0	0	57	55
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	166	0	436	242	223	0	0	236	116
User 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
PHF Adj:	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
PHF Volume:	0	0	0	217	0	569	315	292	0	0	308	152
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	217	0	569	315	292	0	0	308	152
PCE 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
MLF 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
FinalVolume:	0	0	0	217	0	569	315	292	0	0	308	152
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.77	1.00	0.85	0.50	1.00	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	1461	0	1615	944	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.15	0.00	0.35	0.33	0.15	0.00	0.00	0.16	0.09
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.45	0.00	0.45	0.42	0.42	0.00	0.00	0.42	0.42
Volume/Cap:	0.00	0.00	0.00	0.33	0.00	0.79	0.79	0.36	0.00	0.00	0.38	0.22
Delay/Veh:	0.0	0.0	0.0	11.1	0.0	20.3	25.4	12.1	0.0	0.0	12.3	11.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	11.1	0.0	20.3	25.4	12.1	0.0	0.0	12.3	11.2
LOS by Move:	A	A	A	B	A	C	C	B	A	A	B	B
HCM2kAvgQ:	0	0	0	3	0	11	8	4	0	0	4	2

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Evening Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #3 Monte Vista Drive (NS) at Baxter Road (EW)

****

Cycle (sec): 60 Critical Vol./Cap.(X): 0.526
Loss Time (sec): 8 (Y+R=4.0 sec) Average Delay (sec/veh): 11.8
Optimal Cycle: OPTIMIZED Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	7	0	7	7	7	0	0	7	7
Lanes:	0 0	0 0	0	1 0	0 0	1	1 0	1 0	0	0 0	1 0	1
Volume Module:												
Base Vol:	0	0	0	27	0	105	78	114	0	0	68	26
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	0	28	0	109	81	119	0	0	71	27
Added Vol:	0	0	0	82	0	212	197	104	0	0	100	73
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	110	0	321	278	223	0	0	171	100
User 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
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	0	0	117	0	341	296	237	0	0	181	106
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	117	0	341	296	237	0	0	181	106
PCE 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
MLF 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
FinalVolume:	0	0	0	117	0	341	296	237	0	0	181	106
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.79	1.00	0.85	0.64	1.00	1.00	1.00	1.00	0.85
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Final Sat.:	0	0	0	1495	0	1615	1208	1900	0	0	1900	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.21	0.24	0.12	0.00	0.00	0.10	0.07
Crit Moves:						****	****					
Green/Cycle:	0.00	0.00	0.00	0.40	0.00	0.40	0.46	0.46	0.00	0.00	0.46	0.46
Volume/Cap:	0.00	0.00	0.00	0.19	0.00	0.53	0.53	0.27	0.00	0.00	0.21	0.14
Delay/Veh:	0.0	0.0	0.0	11.8	0.0	14.4	12.3	10.0	0.0	0.0	9.6	9.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	11.8	0.0	14.4	12.3	10.0	0.0	0.0	9.6	9.3
LOS by Move:	A	A	A	B	A	B	B	A	A	A	A	A
HCM2kAvgQ:	0	0	0	2	0	5	5	3	0	0	2	1

****

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #4 George Avenue (NS) at Depasquale Road (EW)

****

Average Delay (sec/veh): 5.1 Worst Case Level Of Service: D[26.3]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	35	141	0	0	234	6	11	0	48	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	36	147	0	0	243	6	11	0	50	0	0	0
Added Vol:	12	57	9	2	75	36	36	0	18	30	0	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	204	9	2	318	42	47	0	68	30	0	6
User 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
PHF Adj:	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
PHF Volume:	68	285	13	3	445	59	66	0	95	42	0	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	68	285	13	3	445	59	66	0	95	42	0	8
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	504	xxxx	xxxxx	297	xxxx	xxxxx	911	913	475	955	937	291
Potent Cap.:	1071	xxxx	xxxxx	1275	xxxx	xxxxx	257	275	594	240	267	753
Move Cap.:	1071	xxxx	xxxxx	1275	xxxx	xxxxx	241	257	594	191	249	753
Volume/Cap:	0.06	xxxx	xxxx	0.00	xxxx	xxxx	0.28	0.00	0.16	0.22	0.00	0.01
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.6	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	371	xxxxx	xxxx	218	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	2.1	xxxxx	xxxxx	0.9	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	22.0	xxxxx	xxxxx	26.3	xxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	D	*
ApproachDel:	xxxxxx			xxxxxx			22.0			26.3		
ApproachLOS:	*			*			C			D		

****

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #4 George Avenue (NS) at Depasquale Road (EW)

****

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: C[20.1]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	48	151	0	0	119	4	1	0	29	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	50	157	0	0	124	4	1	0	30	0	0	0
Added Vol:	23	108	32	7	93	76	67	0	18	20	0	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	73	265	32	7	217	80	68	0	48	20	0	4
User 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
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	86	311	38	8	254	94	80	0	57	23	0	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	86	311	38	8	254	94	80	0	57	23	0	5
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	349	xxxx	xxxxx	349	xxxx	xxxxx	821	838	302	847	866	330
Potent Cap.:	1222	xxxx	xxxxx	1221	xxxx	xxxxx	296	305	743	284	293	716
Move Cap.:	1222	xxxx	xxxxx	1221	xxxx	xxxxx	276	280	743	246	270	716
Volume/Cap:	0.07	xxxx	xxxx	0.01	xxxx	xxxx	0.29	0.00	0.08	0.10	0.00	0.01
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.2	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	373	xxxxx	xxxx	276	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.6	xxxxx	xxxxx	0.3	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	20.1	xxxxx	xxxxx	19.5	xxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			20.1			19.5		
ApproachLOS:	*			*			C			C		

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Morning Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #4 George Avenue (NS) at Depasquale Road (EW)

****

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: C[19.5]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 1	0 1	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	35	141	0	0	234	6	11	0	48	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	36	147	0	0	243	6	11	0	50	0	0	0
Added Vol:	12	57	9	2	75	36	36	0	18	30	0	6
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	48	204	9	2	318	42	47	0	68	30	0	6
User 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
PHF Adj:	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
PHF Volume:	68	285	13	3	445	59	66	0	95	42	0	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	68	285	13	3	445	59	66	0	95	42	0	8
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	504	xxxx	xxxxx	297	xxxx	xxxxx	911	913	252	655	937	291
Potent Cap.:	1071	xxxx	xxxxx	1275	xxxx	xxxxx	257	275	791	382	267	753
Move Cap.:	1071	xxxx	xxxxx	1275	xxxx	xxxxx	241	257	791	319	249	753
Volume/Cap:	0.06	xxxx	xxxx	0.00	xxxx	xxxx	0.28	0.00	0.12	0.13	0.00	0.01
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.6	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	408	xxxxx	xxxx	353	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	1.9	xxxxx	xxxxx	0.5	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.8	xxxx	xxxxx	xxxxx	19.5	xxxxx	xxxxx	16.9	xxxxx
Shared LOS:	*	*	*	A	*	*	*	C	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			19.5			16.9		
ApproachLOS:	*			*			C			C		

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Evening Peak Hour - With Improvements

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #4 George Avenue (NS) at Depasquale Road (EW)

****

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: C[19.4]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	1! 0	0	0 1	0 1	0	0 0	1! 0	0	0 0	1! 0	0
Volume Module:												
Base Vol:	48	151	0	0	119	4	1	0	29	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	50	157	0	0	124	4	1	0	30	0	0	0
Added Vol:	23	108	32	7	93	76	67	0	18	20	0	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	73	265	32	7	217	80	68	0	48	20	0	4
User 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
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PHF Volume:	86	311	38	8	254	94	80	0	57	23	0	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	86	311	38	8	254	94	80	0	57	23	0	5
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	349	xxxx	xxxxx	349	xxxx	xxxxx	821	838	174	645	866	330
Potent Cap.:	1222	xxxx	xxxxx	1221	xxxx	xxxxx	296	305	874	388	293	716
Move Cap.:	1222	xxxx	xxxxx	1221	xxxx	xxxxx	276	280	874	341	270	716
Volume/Cap:	0.07	xxxx	xxxx	0.01	xxxx	xxxx	0.29	0.00	0.06	0.07	0.00	0.01
Level Of Service Module:												
2Way95thQ:	0.2	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.2	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	385	xxxxx	xxxx	373	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	1.6	xxxxx	xxxxx	0.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx	xxxxx	19.4	xxxxx	xxxxx	15.4	xxxxx
Shared LOS:	*	*	*	A	*	*	*	C	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			19.4			15.4		
ApproachLOS:	*			*			C			C		

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #5 George Avenue (NS) at Clinton Keith Road (EW)

****

Cycle (sec): 60 Critical Vol./Cap.(X): 0.846
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 22.8
Optimal Cycle: OPTIMIZED Level Of Service: C

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0 0	1 0		1 0	1 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	38	11	41	82	28	198	94	646	12	54	802	47
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	40	11	43	85	29	206	98	672	12	56	834	49
Added Vol:	0	12	1	148	16	48	123	221	0	1	373	42
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	40	23	44	233	45	254	221	893	12	57	1207	91
User 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
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	43	25	47	251	49	273	237	960	13	61	1298	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	43	25	47	251	49	273	237	960	13	61	1298	98
PCE 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
MLF 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
FinalVolume:	43	25	47	251	49	273	237	960	13	61	1298	98
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.73	0.90	0.90	0.71	1.00	0.85	0.95	0.91	0.91	0.95	0.95	0.85
Lanes:	1.00	0.35	0.65	1.00	1.00	1.00	1.00	2.96	0.04	1.00	2.00	1.00
Final Sat.:	1383	599	1115	1349	1900	1615	1805	5105	71	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.04	0.04	0.19	0.03	0.17	0.13	0.19	0.19	0.03	0.36	0.06
Crit Moves:				****			****				****	
Green/Cycle:	0.22	0.22	0.22	0.22	0.22	0.22	0.16	0.36	0.36	0.22	0.42	0.42
Volume/Cap:	0.14	0.19	0.19	0.85	0.12	0.77	0.85	0.53	0.53	0.15	0.85	0.14
Delay/Veh:	19.1	19.3	19.3	42.1	18.9	31.9	45.2	15.5	15.5	19.0	20.1	10.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.1	19.3	19.3	42.1	18.9	31.9	45.2	15.5	15.5	19.0	20.1	10.7
LOS by Move:	B	B	B	D	B	C	D	B	B	B	C	B
HCM2kAvgQ:	1	1	1	7	1	7	7	6	6	1	15	1

****

Note: Queue reported is the number of cars per lane.

****

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

****

Intersection #5 George Avenue (NS) at Clinton Keith Road (EW)

****

Cycle (sec): 75 Critical Vol./Cap.(X): 0.957
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 30.7
Optimal Cycle: OPTIMIZED Level Of Service: C

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1 0	0 1	0	1 0	1 0	1	1 0	2 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	32	29	72	49	29	98	108	890	11	76	838	42
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	33	30	75	51	30	102	112	926	11	79	872	44
Added Vol:	0	22	1	194	18	54	161	450	0	1	570	81
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	33	52	76	245	48	156	273	1376	11	80	1442	125
User 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
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	35	56	81	261	51	166	291	1467	12	85	1537	133
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	56	81	261	51	166	291	1467	12	85	1537	133
PCE 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
MLF 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
FinalVolume:	35	56	81	261	51	166	291	1467	12	85	1537	133
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.73	0.91	0.91	0.63	1.00	0.85	0.95	0.91	0.91	0.95	0.95	0.85
Lanes:	1.00	0.41	0.59	1.00	1.00	1.00	1.00	2.98	0.02	1.00	2.00	1.00
Final Sat.:	1379	705	1026	1205	1900	1615	1805	5139	43	1805	3610	1615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.08	0.08	0.22	0.03	0.10	0.16	0.29	0.29	0.05	0.43	0.08
Crit Moves:				****			****				****	
Green/Cycle:	0.23	0.23	0.23	0.23	0.23	0.23	0.17	0.46	0.46	0.15	0.44	0.44
Volume/Cap:	0.11	0.35	0.35	0.96	0.12	0.45	0.96	0.62	0.62	0.31	0.96	0.19
Delay/Veh:	23.2	24.9	24.9	71.4	23.2	25.9	70.9	15.7	15.7	29.0	33.8	12.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.2	24.9	24.9	71.4	23.2	25.9	70.9	15.7	15.7	29.0	33.8	12.7
LOS by Move:	C	C	C	E	C	C	E	B	B	C	C	B
HCM2kAvgQ:	1	3	3	10	1	4	11	10	10	2	24	2

****

Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #6 Iodine Springs Road (NS) at Project Access (EW)

****

Average Delay (sec/veh): 1.9 Worst Case Level Of Service: A[8.5]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1	0 0	0	0 0	0 1	0	0 0	1! 0	0	0 0	0 0	0
Volume Module:												
Base Vol:	0	10	0	0	21	1	1	0	0	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	10	0	0	22	1	1	0	0	0	0	0
Added Vol:	3	0	0	0	0	0	0	0	6	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	10	0	0	22	1	1	0	6	0	0	0
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	3	11	0	0	23	1	1	0	6	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	11	0	0	23	1	1	0	6	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	24	xxxx	xxxxx	xxxx	xxxx	xxxxx	41	41	24	xxxx	xxxx	xxxxx
Potent Cap.:	1604	xxxx	xxxxx	xxxx	xxxx	xxxxx	976	855	1059	xxxx	xxxx	xxxxx
Move Cap.:	1604	xxxx	xxxxx	xxxx	xxxx	xxxxx	974	853	1059	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.01	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1045	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.5	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.5			xxxxxx		
ApproachLOS:	*			*			A			*		

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Note: Queue reported is the number of cars per lane.

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George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #6 Iodine Springs Road (NS) at Project Access (EW)

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: A[8.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 1 0 0 0			0 0 0 1 0			0 0 1! 0 0			0 0 0 0 0		
Volume Module:												
Base Vol:	0	37	0	0	19	1	1	0	0	0	0	0
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	38	0	0	20	1	1	0	0	0	0	0
Added Vol:	10	0	0	0	0	0	0	0	4	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	10	38	0	0	20	1	1	0	4	0	0	0
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	11	41	0	0	21	1	1	0	4	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	11	41	0	0	21	1	1	0	4	0	0	0
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	22	xxxx	xxxxx	xxxx	xxxx	xxxxx	83	83	21	xxxx	xxxx	xxxxx
Potent Cap.:	1607	xxxx	xxxxx	xxxx	xxxx	xxxxx	924	811	1062	xxxx	xxxx	xxxxx
Move Cap.:	1607	xxxx	xxxxx	xxxx	xxxx	xxxxx	919	806	1062	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	0.00	0.00	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	1029	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.5	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.5			xxxxxx		
ApproachLOS:	*			*			A			*		

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Morning Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Iodine Springs Road (NS) at Clinton Keith Road (EW)

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: B[13.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 1			0 0 0 0 1			0 0 3 1 0			0 0 1 1 0		
Volume Module:												
Base Vol:	0	0	29	0	0	21	0	754	7	0	686	10
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	30	0	0	22	0	784	7	0	714	10
Added Vol:	0	0	0	0	0	6	0	338	0	0	397	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	30	0	0	28	0	1122	7	0	1111	13
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	32	0	0	29	0	1180	8	0	1168	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	32	0	0	29	0	1180	8	0	1168	14
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	299	xxxx	xxxx	591	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	703	xxxx	xxxx	455	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	703	xxxx	xxxx	455	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.05	xxxx	xxxx	0.06	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.1	xxxx	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	10.4	xxxxx	xxxx	13.5	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	B	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	10.4			13.5			xxxxxx			xxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the number of cars per lane.

George Avenue & Iodine Springs Road Residential Project
Existing Plus Ambient Growth Plus Project Plus Cumulative
Evening Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #7 Iodine Springs Road (NS) at Clinton Keith Road (EW)

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: C[18.7]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0	0 0	1	0 0	0 0	1	0 0	3 1	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	10	0	0	18	0	850	7	0	1016	37
Growth Adj:	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
Initial Bse:	0	0	10	0	0	19	0	884	7	0	1057	38
Added Vol:	0	0	0	0	0	4	0	583	0	0	603	10
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	10	0	0	23	0	1467	7	0	1660	48
User 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
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	0	11	0	0	24	0	1543	8	0	1746	51
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	11	0	0	24	0	1543	8	0	1746	51
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.9	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	390	xxxx	xxxx	898	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	615	xxxx	xxxx	286	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	615	xxxx	xxxx	286	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.02	xxxx	xxxx	0.08	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.1	xxxx	xxxx	0.3	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	11.0	xxxxx	xxxx	18.7	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	C	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:		11.0			18.7			xxxxxx			xxxxxx	
ApproachLOS:		B			C			*			*	

Note: Queue reported is the number of cars per lane.

APPENDIX E

Traffic Signal Warrant Worksheets

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing

Major Street Name = **Baxter Road**

Total of Both Approaches (VPH) = **1022**

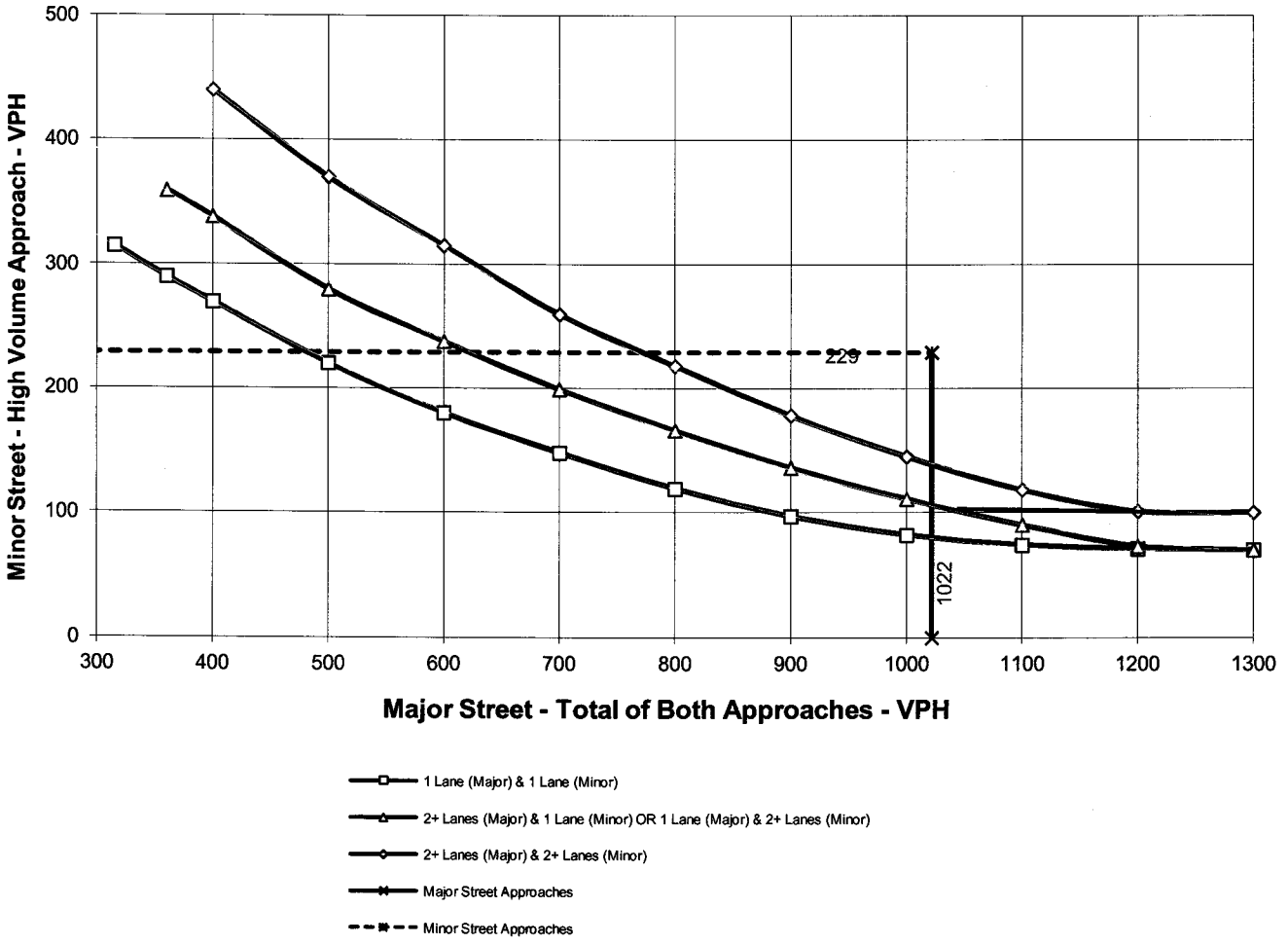
Number of Approach Lanes Major Street = **1**

Minor Street Name = **I-15 Freeway SB Ramps**

High Volume Approach (VPH) = **229**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

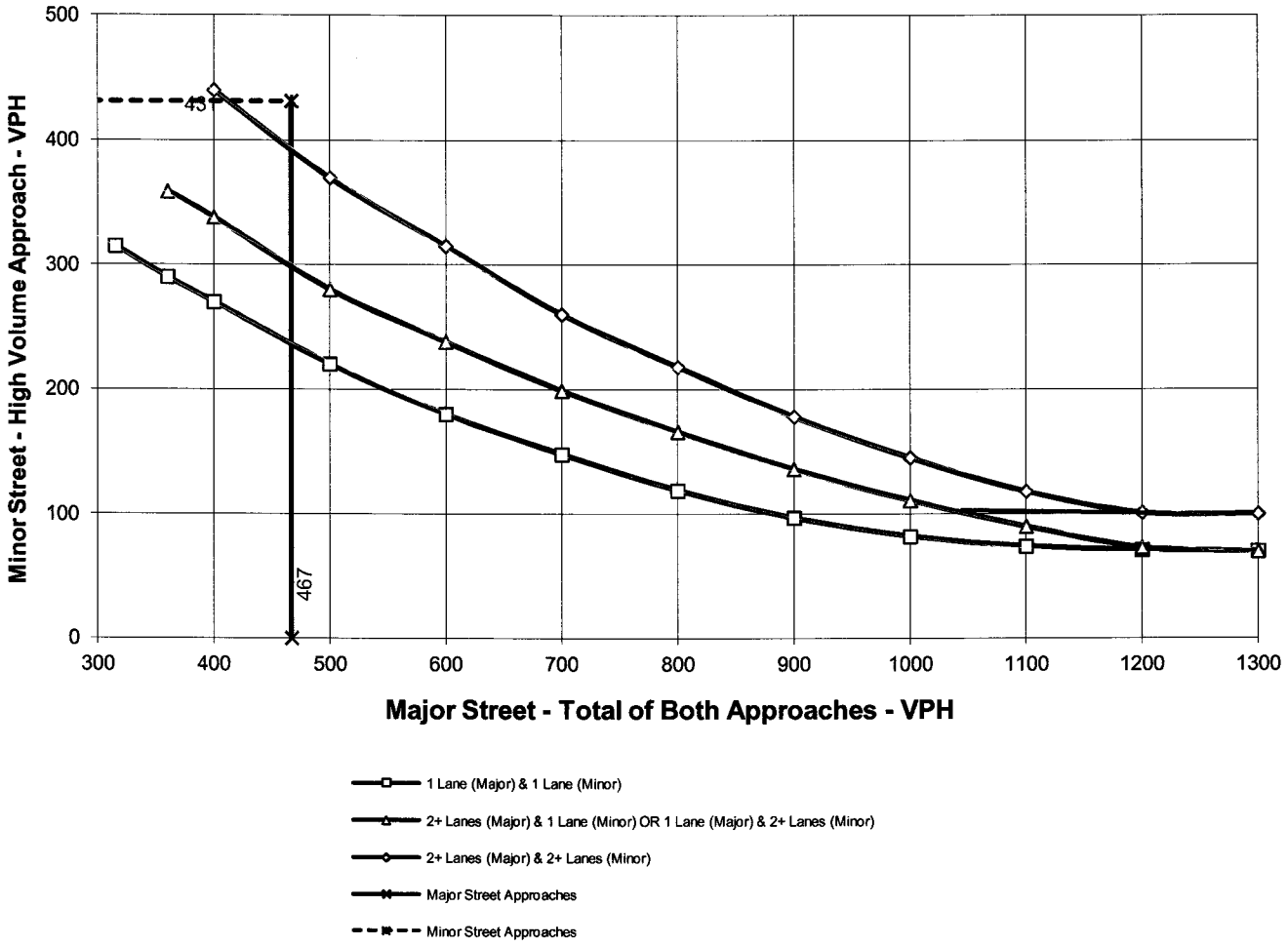
PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing

Major Street Name = **Baxter Road** Total of Both Approaches (VPH) = **467**
Number of Approach Lanes Major Street = **1**

Minor Street Name = **I-15 Freeway NB Ramps** High Volume Approach (VPH) = **431**
Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

Existing

Major Street Name = **Baxter Road**

Total of Both Approaches (VPH) = **502**

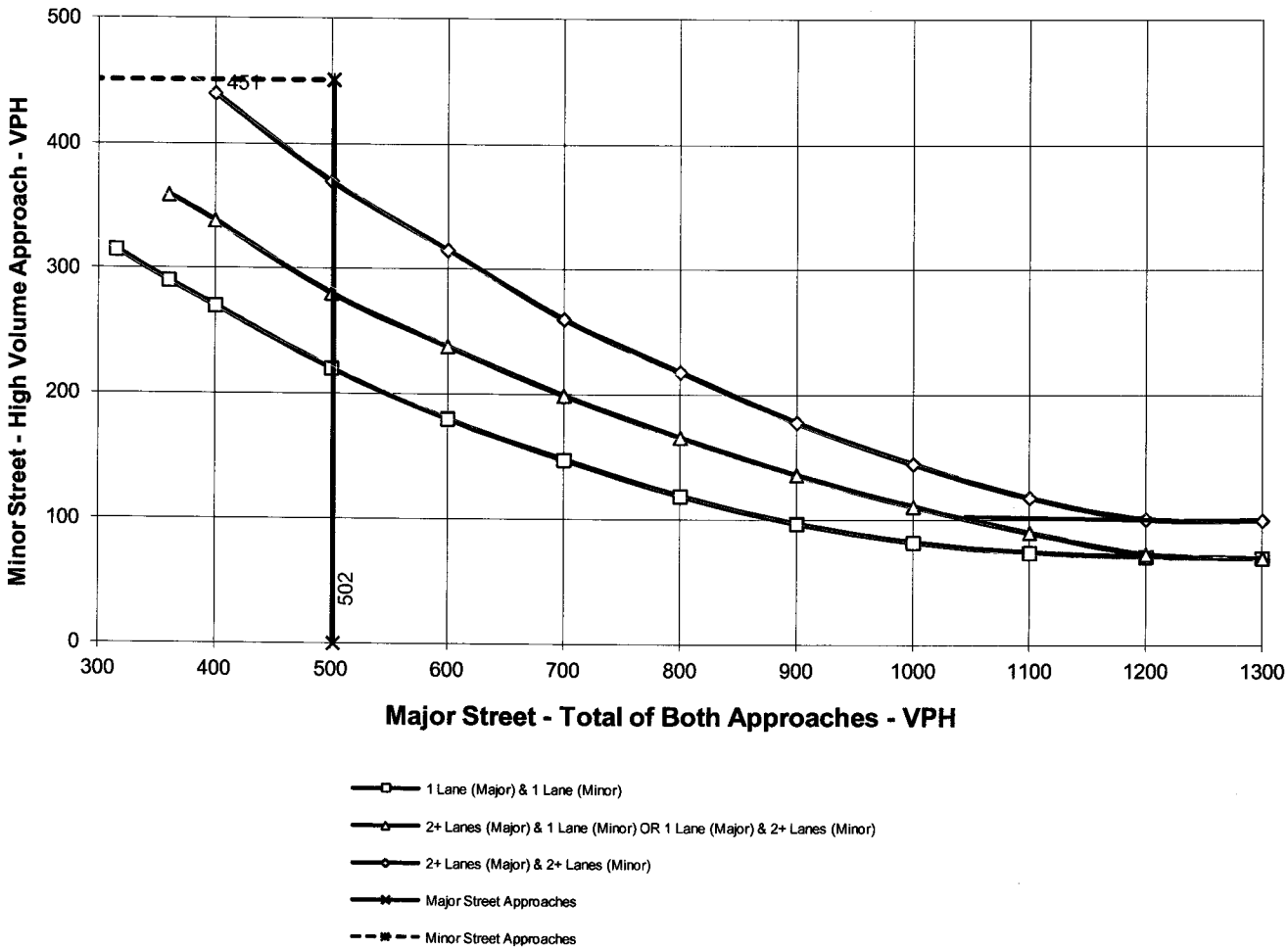
Number of Approach Lanes Major Street = **1**

Minor Street Name = **Monte Vista Drive**

High Volume Approach (VPH) = **451**

Number of Approach Lanes Minor Street = **1**

WARRANTED FOR A SIGNAL



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

Kunzman Associates, Inc.

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