

BLOOMINGTON PHASE 1 PROJECT (APN 0252-051-06; APN 0252-051- 0669; AND APN 0252-051-0670) TRAFFIC IMPACT ANALYSIS

County of San Bernardino

Prepared for

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EXECUTIVE SUMMARY

This study analyzes forecast traffic conditions associated with the proposed Bloomington Phase 1 Project located in the City of Bloomington. Access for the project site is planned via one full access driveway planned to be signalized as part of the project and two right-turn exit only driveways located on Valley Boulevard. The project consists of the following land use components:

- 196 dwelling units, which consists of 65 senior units, 112 family units, and 19 Mental Health Services Act (MHSA) units;
- 1,250 square foot Senior Housing Community Building (for residents only);
- 2,000 square foot Family Housing Community Building (for residents only);
- 1,250 square foot Social Services Facility (for residents only);
- 750 square foot Leasing Office (for residents only); and
- 6,000 square foot Library.

The proposed project is forecast to generate approximately 1,432 daily trips, which include approximately 86 a.m. peak hour trips and 141 p.m. peak hour trips.

Based on applicable agency thresholds of significance, the addition of project-generated trips at the study intersections is forecast to result in no significant traffic impacts for any of the analysis scenarios.

No traffic mitigation measures are required for the proposed project since no significant traffic impacts are forecast to occur as a result of the proposed project.

INTRODUCTION

This study analyzes forecast traffic conditions associated with the proposed Bloomington Phase 1 Project located in the City of Bloomington. Access for the project site is planned via one full access driveway planned to be signalized as part of the project and two right-turn exit only driveways located on Valley Boulevard. The project consists of the following land use components:

- 196 dwelling units, which consists of 65 senior units, 112 family units, and 19 Mental Health Services Act (MHSA) units;
- 1,250 square foot Senior Housing Community Building (for residents only);
- 2,000 square foot Family Housing Community Building (for residents only);
- 1,250 square foot Social Services Facility (for residents only);
- 750 square foot Leasing Office (for residents only); and
- 6,000 square foot Library.

Exhibit 1 shows the regional location of the project site. Exhibit 2 shows the project site location.

This traffic study is based on the approved San Bernardino County Scoping Agreement dated June 5, 2013; a copy of the signed Scoping Agreement is contained in Appendix A.

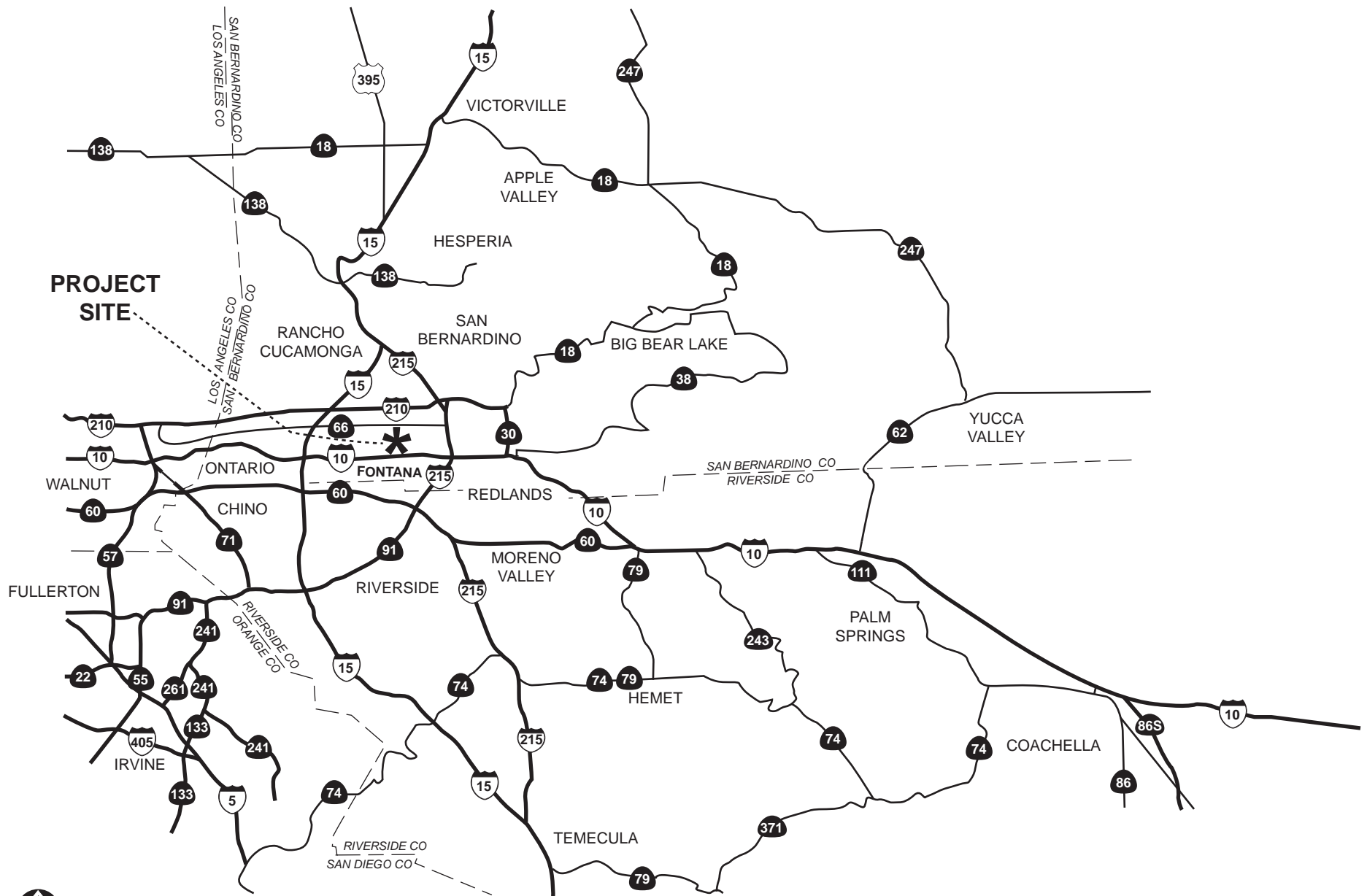
Study Area

This study analyzes the following eight (8) intersections in the vicinity of the project site:

1. Project Westerly Driveway/Valley Boulevard (future intersection);
2. Project Main Driveway/Valley Boulevard (future intersection);
3. Project Easterly Driveway/Valley Boulevard (future intersection);
4. Locust Avenue/Valley Boulevard;
5. Linden Avenue/Valley Boulevard;
6. Cedar Avenue/Valley Boulevard;
7. Cedar Avenue/I-10 Westbound Ramps; and
8. Cedar Avenue/I-10 Eastbound Ramps.

Exhibit 3 shows the location of the study intersections, which are analyzed for the following six analysis scenarios:

- Existing Conditions;
- Forecast Existing Plus Project Conditions;
- Forecast Year 2015 With Ambient Traffic Without Project Conditions;
- Forecast Year 2015 With Ambient Traffic With Project Conditions;



PROJECT SITE



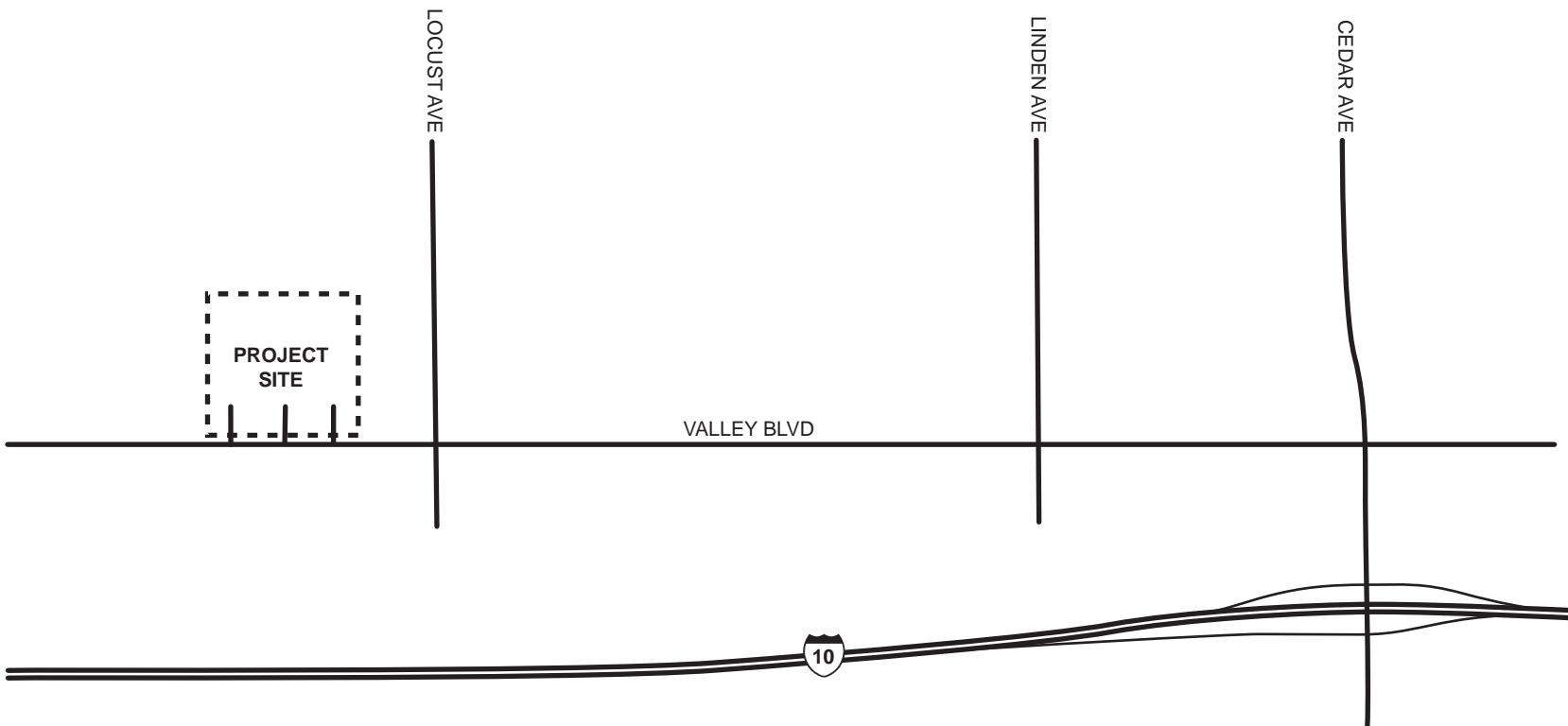
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Regional Project Location



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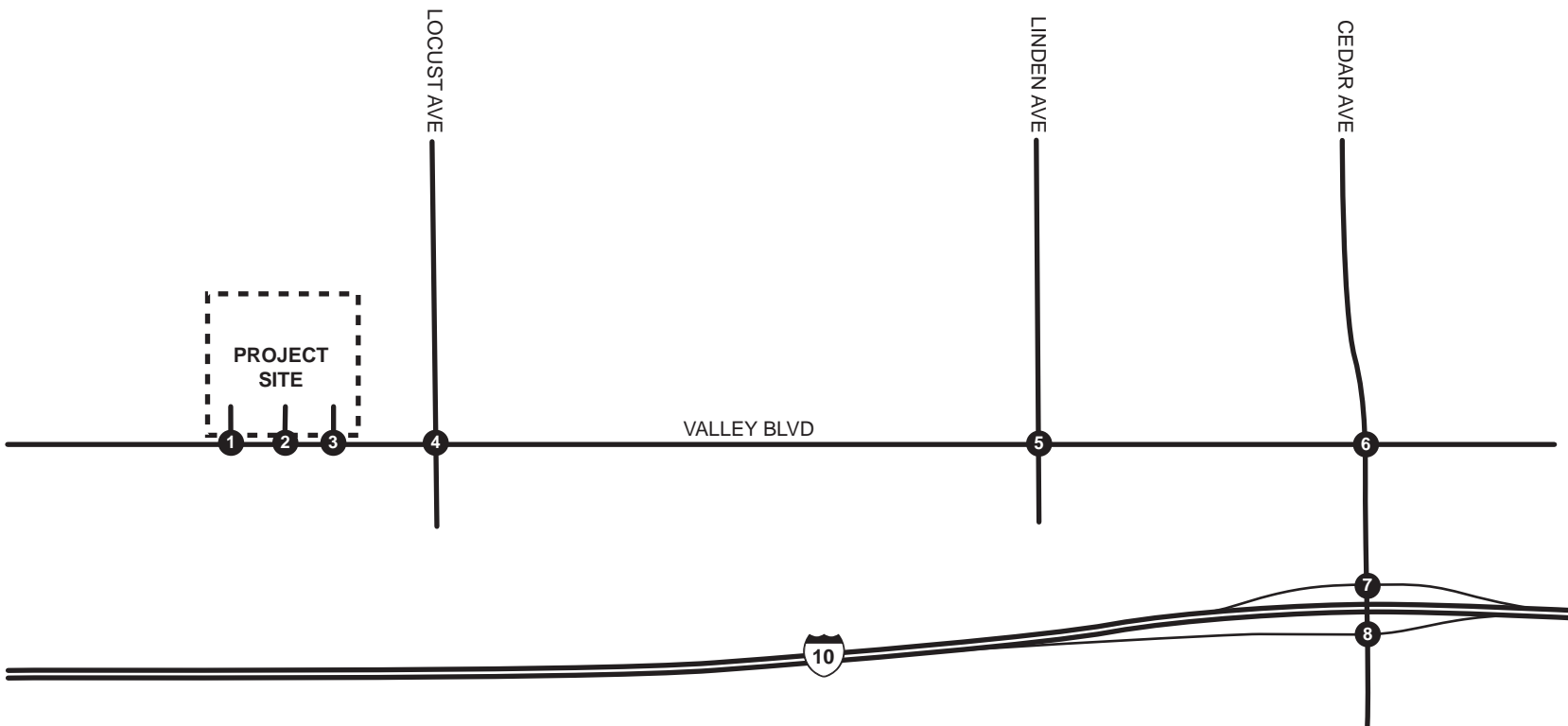
- - - Project Site Boundary



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Legend:

- X Study Intersection Location
- - - Project Site Boundary

Study Intersection Locations

- Forecast Year 2015 With Ambient & Cumulative Project Traffic Without Project Conditions; and
- Forecast Year 2015 With Ambient & Cumulative Project Traffic With Project Conditions.

ANALYSIS METHODOLOGY

Intersection Analysis Methodology

The County of San Bernardino utilizes the *Highway Capacity Manual (HCM)* intersection analysis methodology to analyze the operation of signalized and unsignalized intersections. The *HCM* analysis methodology describes the operation of an intersection using a range of level of service (LOS) from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding stopped delay experienced per vehicle for intersections shown in Table 1.

**Table 1
LOS & Delay Ranges**

LOS	Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10.0	< 10.0
B	$> 10.0 \leq 20.0$	> 10.0 to < 15.0
C	$> 20.0 \leq 35.0$	> 15.0 to < 25.0
D	$> 35.0 \leq 55.0$	> 25.0 to < 35.0
E	$> 55.0 \leq 80.0$	> 35.0 to < 50.0
F	> 80.0	> 50.0

Source: 2000 Highway Capacity Manual.

Level of service is based on the average stopped delay per vehicle for all movements of signalized intersections and all-way stop-controlled intersections; for one-way or two-way stop-controlled intersections, LOS is based on the worst stop-controlled approach.

County of San Bernardino Performance Criteria

The County of San Bernardino target for peak hour intersection operation is LOS D or better for study intersections.

County of San Bernardino Thresholds of Significance

The following criteria are used to determine if the addition of project traffic should be considered to have a significant impact and thus requires the identification of feasible mitigation measures to mitigate the significant impacts.

Signalized Intersections

Any study intersection that is operating at an acceptable LOS (LOS D or better) for any study scenario without project traffic in which the addition of project traffic causes the

intersection to degrade to a deficient LOS (LOS E or F) shall mitigate the impact to bring the intersection back to at least LOS D.

Any study intersection that is operating at a deficient LOS (LOS E or F) for any study scenario without project traffic shall mitigate any impacts so as to bring the intersection back to the overall level of delay established prior to project traffic being added.

Unsignalized Intersections

An impact is considered significant if either section a) **or** both sections b) and c) occur.

a) The addition of project related traffic causes the intersection to change from an acceptable LOS (LOC D or better) to a deficient LOS (LOS E or F).

OR

b) The project contributes additional traffic to an intersection that is already projected to operate at a deficient LOS (LOS E or F).

AND

c) One or both of the following conditions are met:

a. The project adds ten (10) or more trips to any approach.

b. The intersection meets the peak hour traffic signal warrant after the addition of project traffic.

EXISTING CONDITIONS

Roadway Description

The characteristics of the roadway system in the vicinity of the project site are described below:

Cedar Avenue is generally a four-lane divided roadway with a painted median trending in a north-south direction. The posted speed limit on Cedar Avenue is 40 miles per hour; on-street parking is prohibited.

Linden Avenue is a two-lane undivided roadway trending in a north-south direction. The posted speed limit is 40 miles per hour on Linden Avenue; on-street parking is permitted.

Locust Avenue is a two-lane undivided roadway trending in a north-south direction. The posted speed limit is 40 miles per hour on Locust Avenue; on-street parking is permitted.

Valley Boulevard is a four-lane divided roadway with a painted median trending in an east-west direction. The posted speed limit is between 40 to 45 miles per hour on Valley Boulevard; on-street parking is permitted.

Existing Conditions Traffic Volumes

To determine existing operation of the study intersections during the a.m. peak period and p.m. peak period, traffic movement counts at all study intersections were collected in June 2013 on a typical weekday.

The a.m. peak period intersection counts were collected from 7:00 a.m. to 9:00 a.m. and the p.m. peak period intersection counts were collected from 4:00 p.m. to 6:00 p.m. The traffic volumes used in this analysis were taken from the highest hour within each peak period counted. Detailed study intersection traffic count data sheets are contained in Appendix B.

Exhibit 4 shows existing conditions a.m. and p.m. peak hour volumes at the study intersections.

Exhibit 5 shows existing study intersection geometry and control.

Existing Conditions Study Intersection Peak Hour Level of Service

Table 2 summarizes existing conditions a.m. and p.m. peak hour LOS of the study intersections; detailed LOS analysis sheets are contained in Appendix C.

Table 2
Existing Conditions AM & PM
Peak Hour Study Intersection LOS

Study Intersection	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
1. Project Westerly Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>
2. Project Main Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>
3. Project Easterly Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>
4. Locust Ave/Valley Blvd	18.9 – B	15.2 – B
5. Linden Ave/Valley Blvd	14.1 – B	12.7 – B
6. Cedar Ave/Valley Blvd	23.3 – C	27.5 – C
7. Cedar Ave/I-10 WB Ramps	19.4 – B	22.1 – C
8. Cedar Ave/I-10 EB Ramps	25.5 – C	21.1 – C

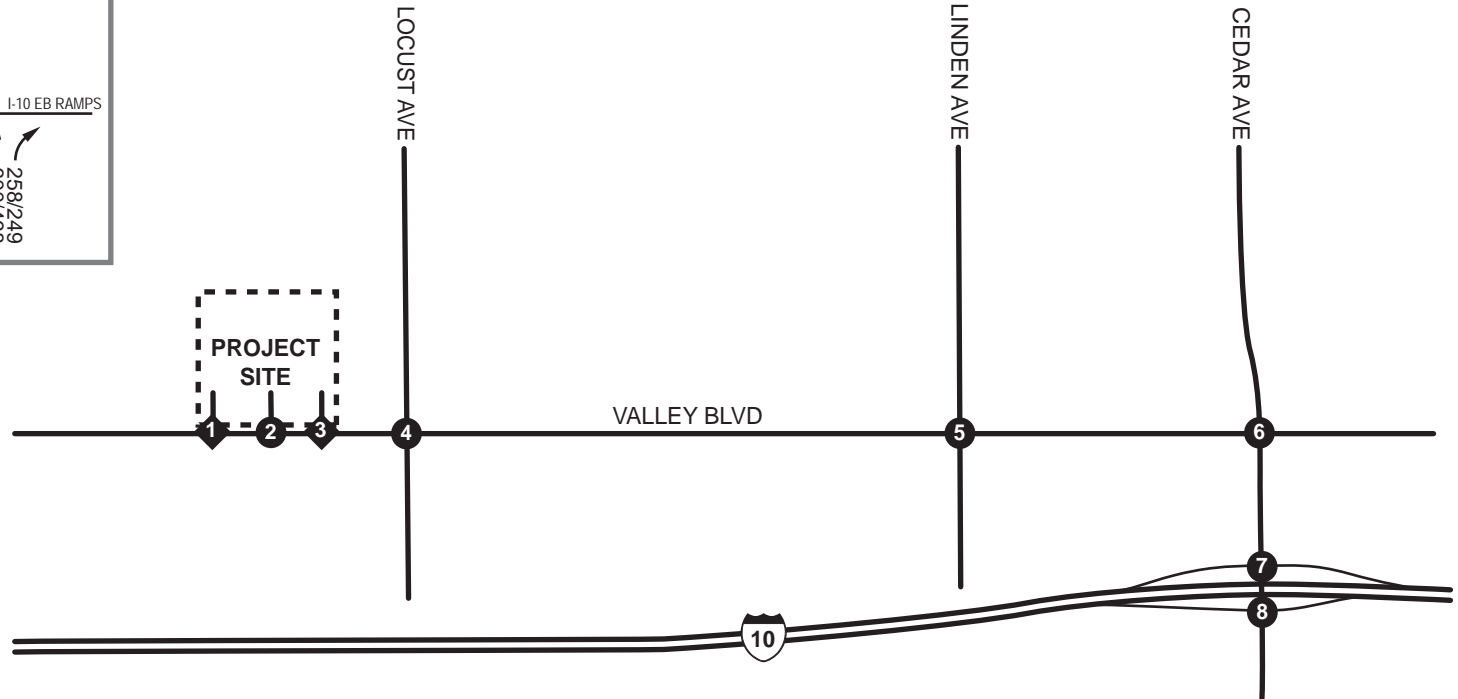
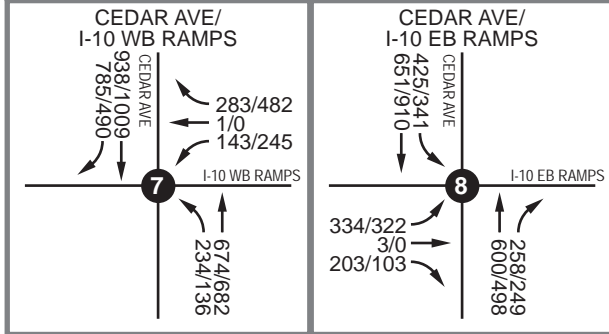
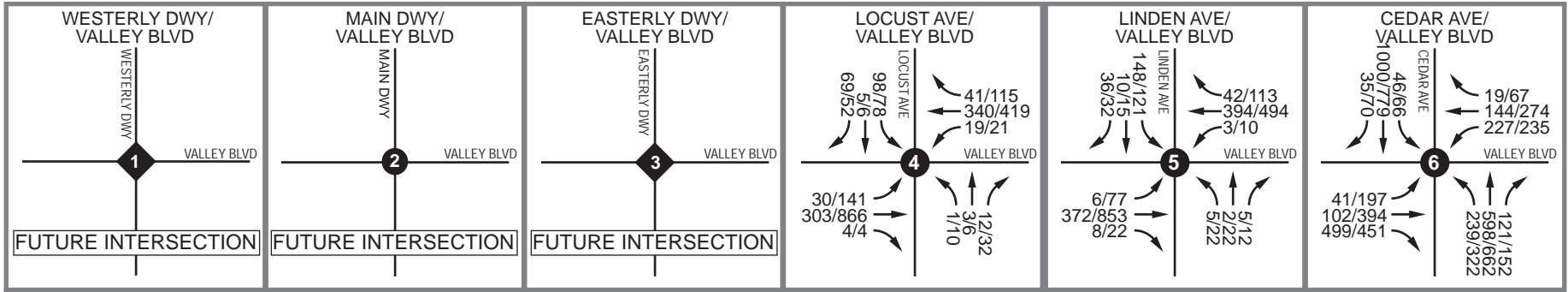
Notes: Delay shown in seconds; EB = Eastbound; WB = Westbound.

As shown in Table 2, the study intersections are currently operating at an acceptable LOS (LOS D or better) according to agency performance criteria for existing conditions.

PROPOSED PROJECT

The proposed project consists of the following land use components:

- 196 dwelling units, which consists of 65 senior units, 112 family units, and 19 Mental Health Services Act (MHSA) units;
- 1,250 square foot Senior Housing Community Building (for residents only);



Legend:

XX/XX AM/PM Peak Hour Intersection Volumes

- - - Project Site Boundary

X Signalized Study Intersection

XX Unsignalized Study Intersection

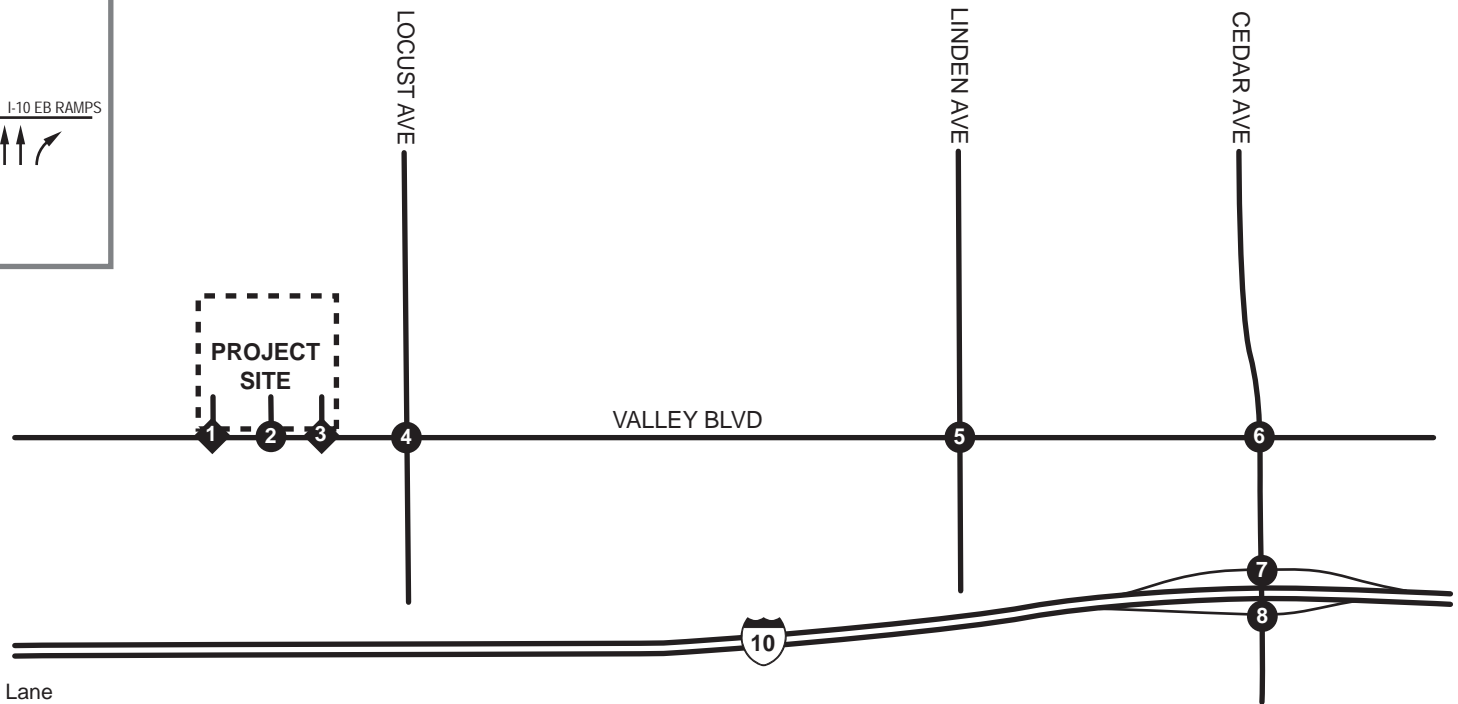
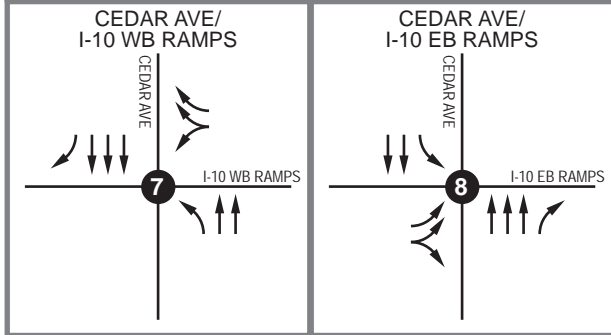
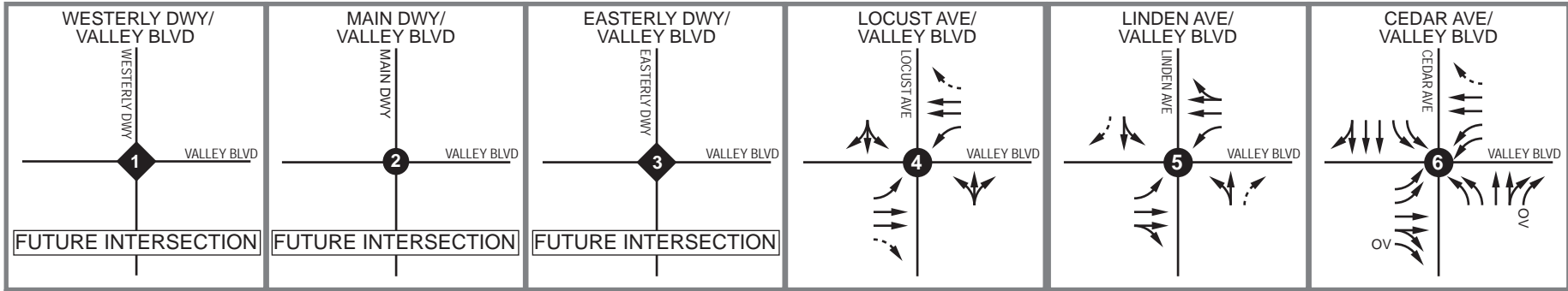


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Existing AM/PM Peak Hour Intersection Volumes



Legend:

- ← Existing Lane
- ↘ Defacto Right-Turn Lane
- OV Right-Turn Overlap
- ⊗ Signalized Study Intersection
- ⊗⊗ Unsignalized Study Intersection
- - - Project Site Boundary



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Existing Study Intersection Geometry

- 2,000 square foot Family Housing Community Building (for residents only);
- 1,250 square foot Social Services Facility (for residents only);
- 750 square foot Leasing Office (for residents only); and
- 6,000 square foot Library.

Access for the project site is planned via one full access driveway planned to be signalized as part of the project and two right-turn exit only driveways located on Valley Boulevard.

The proposed project is planned to open in 2015. Exhibit 6 shows the proposed project site plan.

Forecast Project Trip Generation

To determine forecast trip generation of the proposed project, *Institute of Transportation Engineers (ITE) Trip Generation (9th Edition, 2012)* published trip generation rates were used. Table 3 summarizes *ITE* trip generation rates used to calculate the number of trips forecast to be generated by the proposed project.

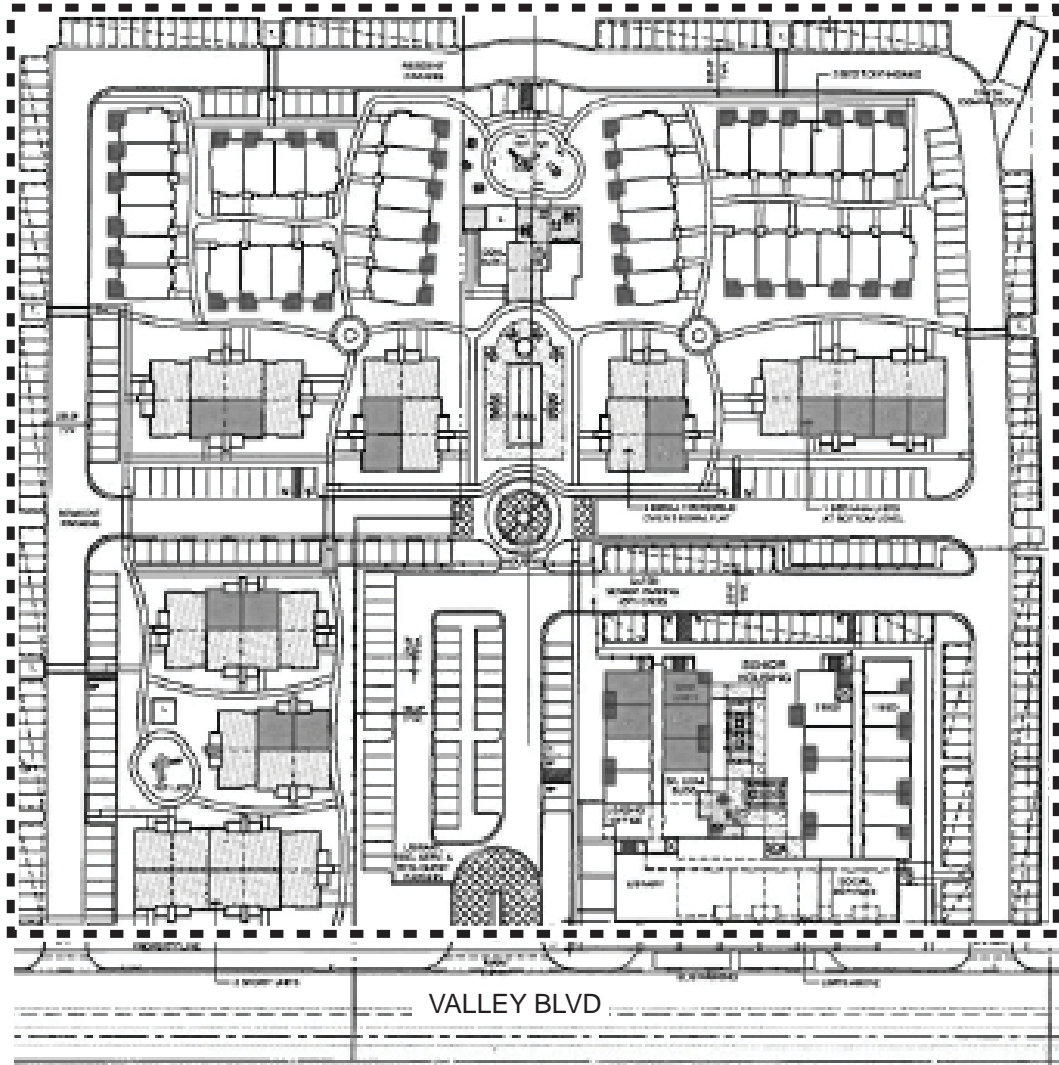
Table 3
ITE Trip Rates for Proposed Project

Land Use (ITE Code)	Units	AM Peak Hour Trip Rates			PM Peak Hour Trip Rates			Daily Trip Rate
		In	Out	Total	In	Out	Total	
Apartment (220)	du	0.10	0.41	0.51	0.40	0.22	0.62	6.65
Senior Housing Attached (252)	du	0.07	0.13	0.20	0.14	0.11	0.25	3.44
Library (590)	tsf	0.74	0.30	1.04	3.50	3.80	7.30	56.24

Sources: 2012 *ITE Trip Generation Manual, 9th Edition*.

Notes: du = dwelling units; tsf = thousand square feet.

Table 4 summarizes the forecast trip generation of the proposed project utilizing the *ITE* trip generation rates shown in Table 3.



Legend:

■ ■ ■ ■ ProjcForet Site Boundary

**Table 4
Forecast Trip Generation of Proposed Project**

Land Use	AM Peak Hour Trip Generation			PM Peak Hour Trip Generation			Daily Trip Generation
	In	Out	Total	In	Out	Total	
Apartments – 131 units	13	54	67	52	29	81	871
Senior Housing – 65 units	5	8	13	9	7	16	224
Library – 6,000 square feet	4	2	6	21	23	44	337
Proposed Project Trip Generation	22	64	86	82	59	141	1,432

As shown in Table 4, the proposed project is forecast to generate approximately 1,432 daily trips, which include approximately 86 a.m. peak hour trips and 141 p.m. peak hour trips.

This is a conservative analysis since it does not assume any onsite trip capture reduction between the compatible land uses on the project site.

Forecast Project Trip Distribution

Exhibit 7 shows forecast trip distribution of project-generated trips during the a.m. and p.m. peak hour.

Forecast Project Trip Assignment

Exhibit 8 shows the corresponding a.m. peak hour and p.m. forecast peak hour assignment of project-generated trips assuming the trip percent distribution shown in Exhibit 7.

FORECAST EXISTING PLUS PROJECT CONDITIONS

This section analyzes traffic conditions associated with the addition of trips forecast to be generated by the proposed project to existing conditions.

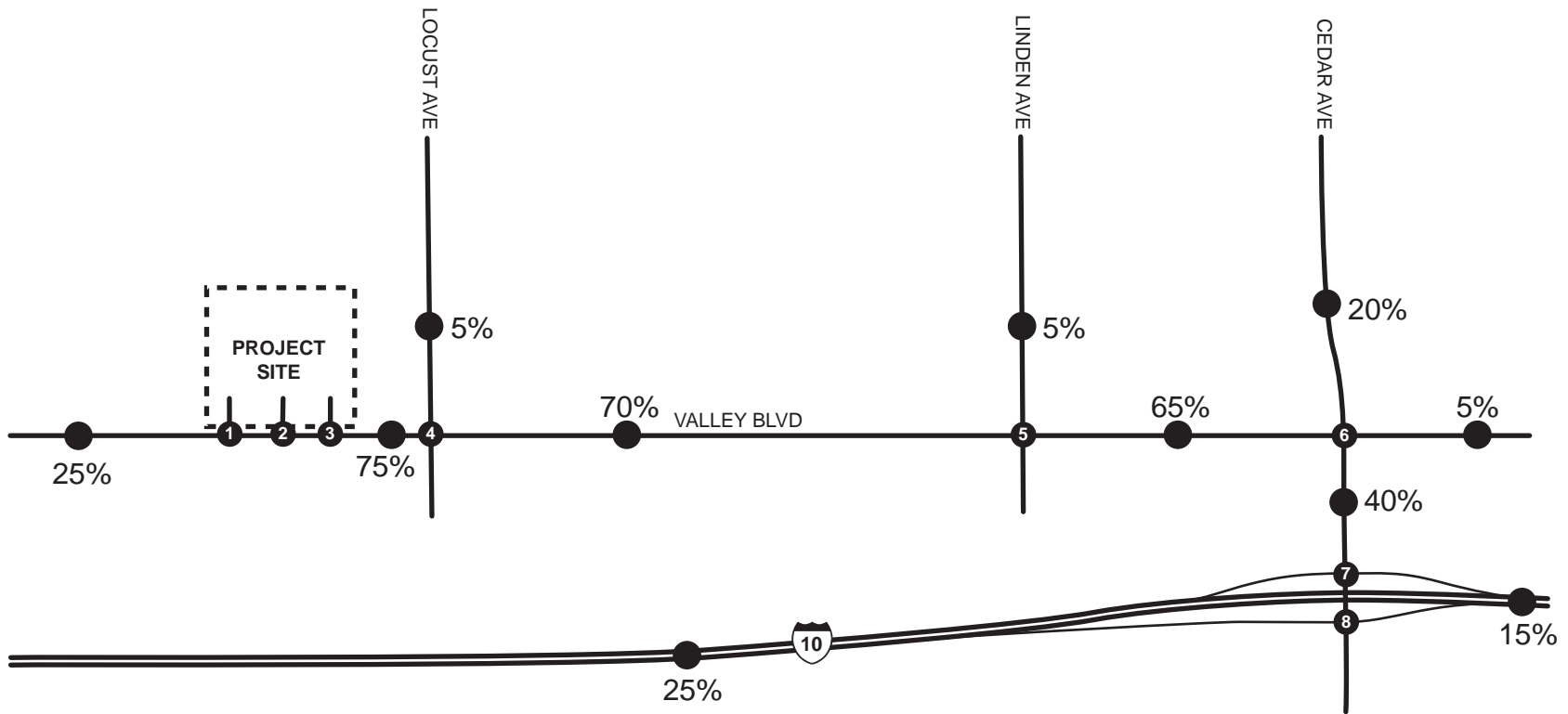
Forecast Existing Plus Project Conditions Traffic Volumes

Forecast existing plus project conditions peak hour traffic volumes were derived by adding project-generated trips to existing conditions traffic volumes.

Exhibit 9 shows forecast existing plus project conditions a.m. and p.m. peak hour volumes at the study intersections.

Forecast Existing Plus Project Conditions Study Intersection Peak Hour Level of Service

Table 5 summarizes forecast existing plus project conditions a.m. and p.m. peak hour LOS of the study intersections; detailed LOS analysis sheets are contained in Appendix C.



Legend:

- XX% Trip Percent Distribution
- - - Project Site Boundary
- ⊗ Study Intersection Location

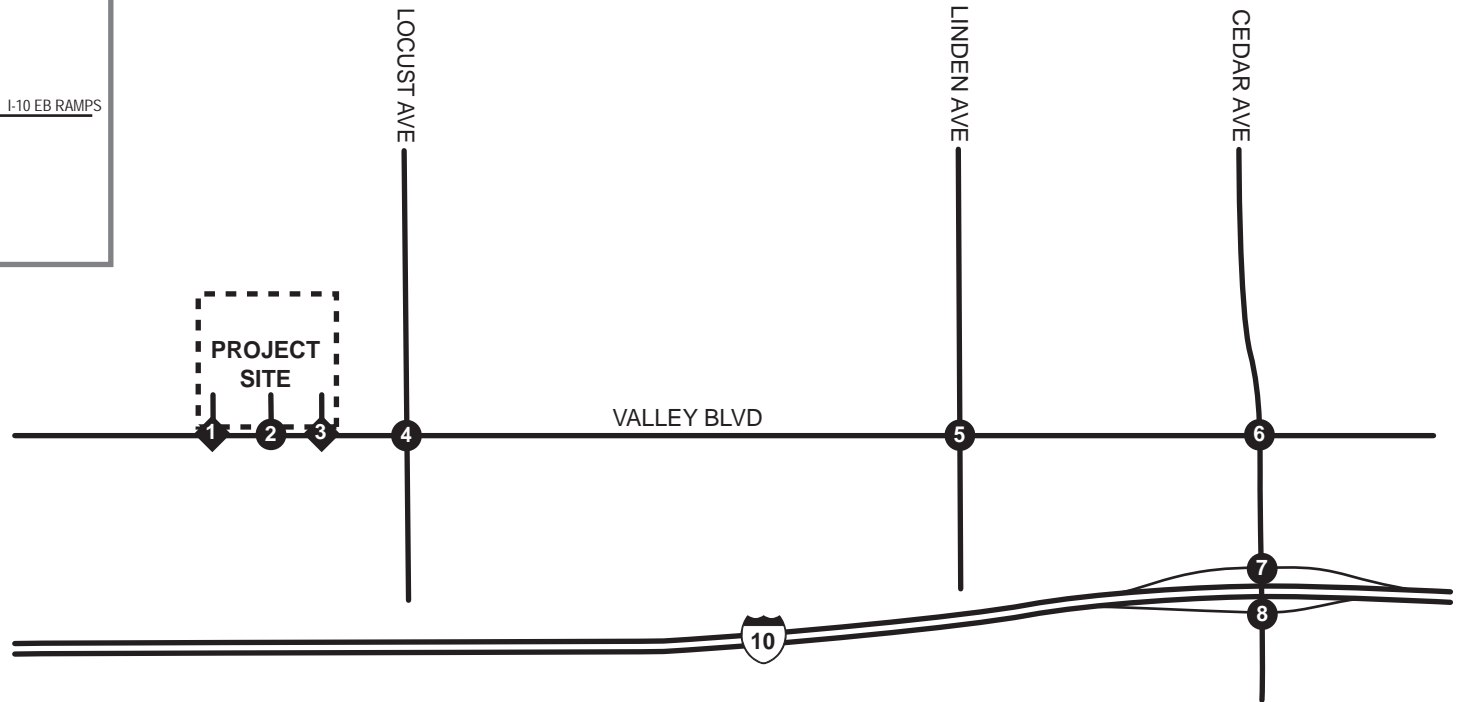
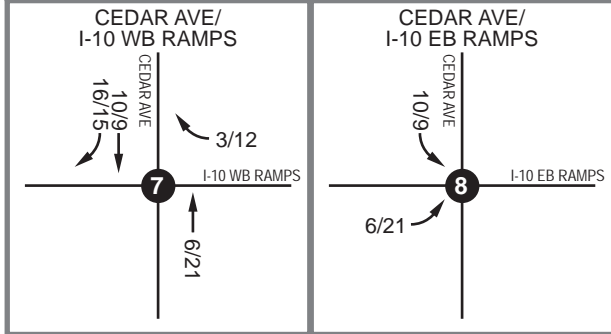
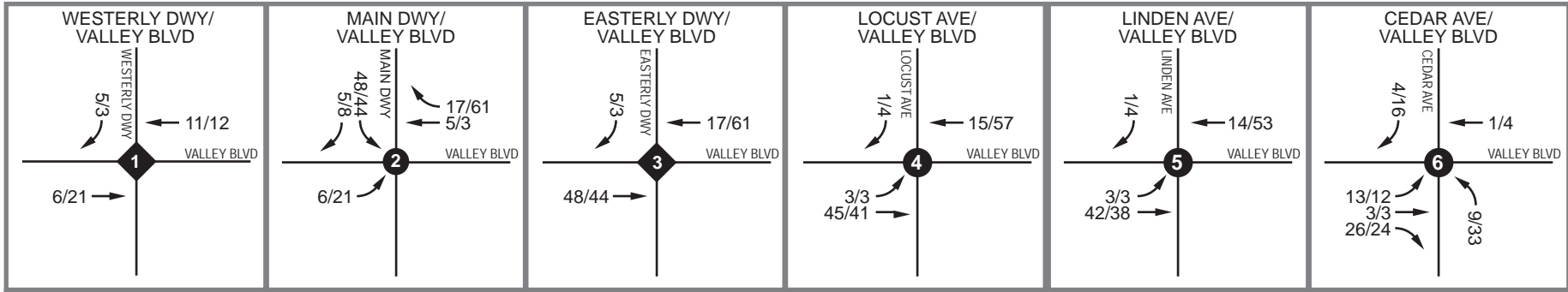


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Forecast Trip Percent Distribution of Proposed Project



Legend:

XX/XX AM/PM Peak Hour Intersection Volumes

- - - Project Site Boundary

⊗ Signalized Study Intersection

⊠ Unsignalized Study Intersection

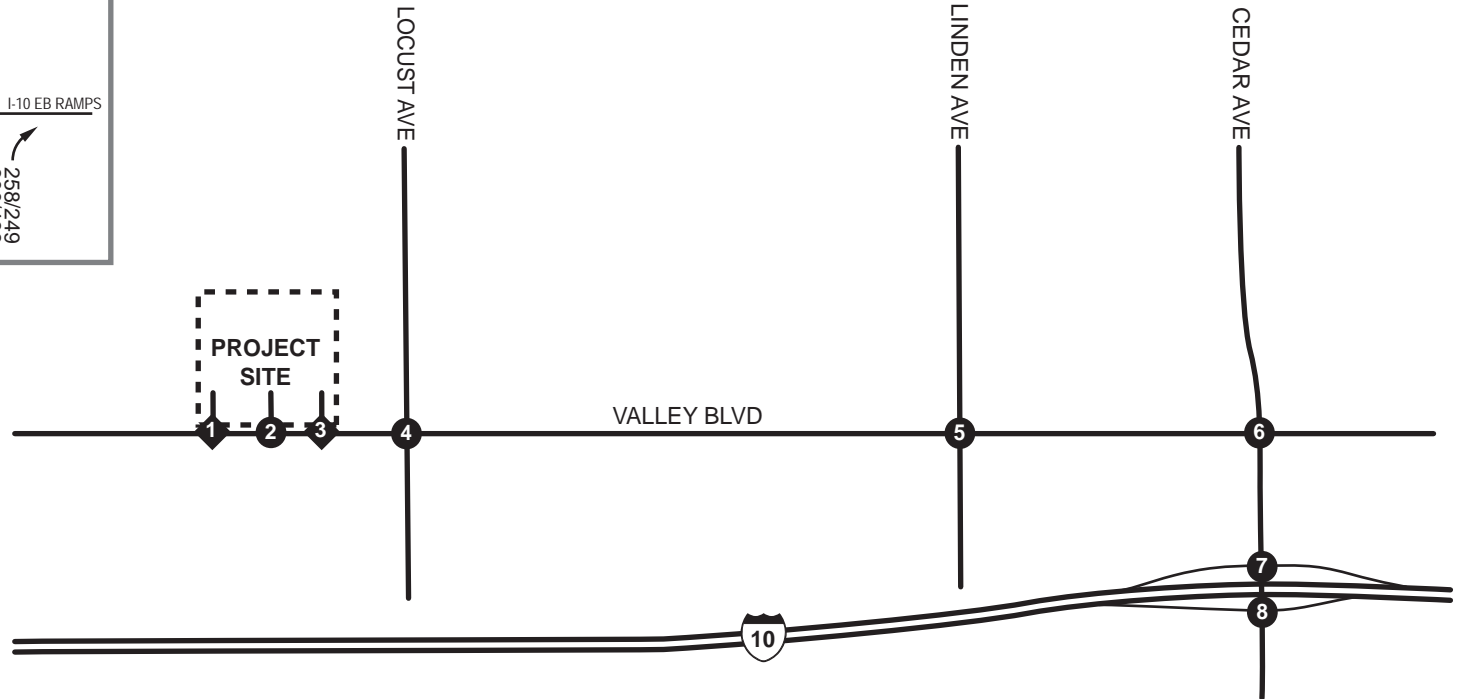
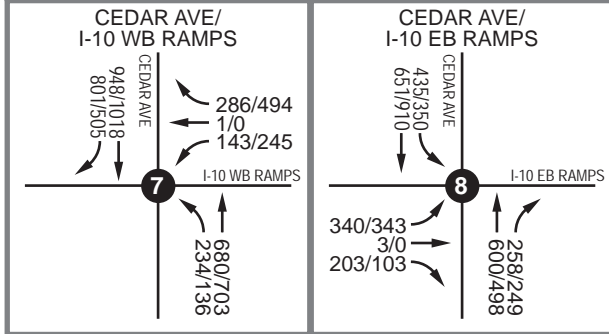
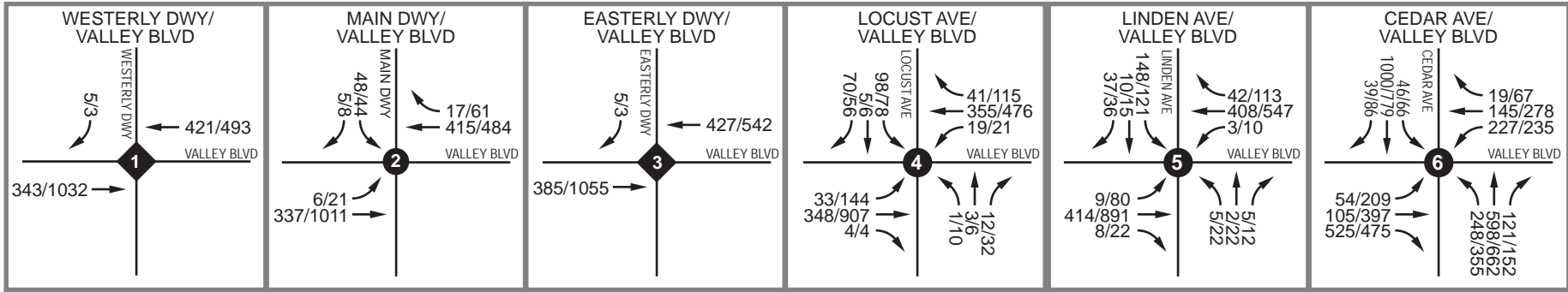


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Forecast AM/PM Peak Hour Trip Assignment of Proposed Project



Legend:

XX/XX AM/PM Peak Hour Intersection Volumes

- - - Project Site Boundary

⊗ Signalized Study Intersection

⊠ Unsignalized Study Intersection



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Forecast Existing Plus Project Conditions AM/PM Peak Hour Traffic Volumes

**Table 5
Forecast Existing Plus Project Conditions
AM & PM Peak Hour Study Intersection LOS**

Study Intersection	Existing Conditions		Forecast Existing Plus Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	Delay – LOS	Delay – LOS	Delay – LOS	Delay – LOS	
1. Project Westerly Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>	9.5 – A	9.8 – A	No
2. Project Main Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>	6.1 – A	3.9 – A	No
3. Project Easterly Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>	9.5 – A	9.9 – A	No
4. Locust Ave/Valley Blvd	18.9 – B	15.2 – B	18.7 – B	15.0 – B	No
5. Linden Ave/Valley Blvd	14.1 – B	12.7 – B	14.0 – B	12.5 – B	No
6. Cedar Ave/Valley Blvd	23.3 – C	27.5 – C	23.7 – C	27.7 – C	No
7. Cedar Ave/I-10 WB Ramps	19.4 – B	22.1 – C	19.5 – B	22.0 – C	No
8. Cedar Ave/I-10 EB Ramps	25.5 – C	21.1 – C	25.7 – C	21.4 – C	No

Notes: Delay shown in seconds; EB = Eastbound; WB = Westbound.

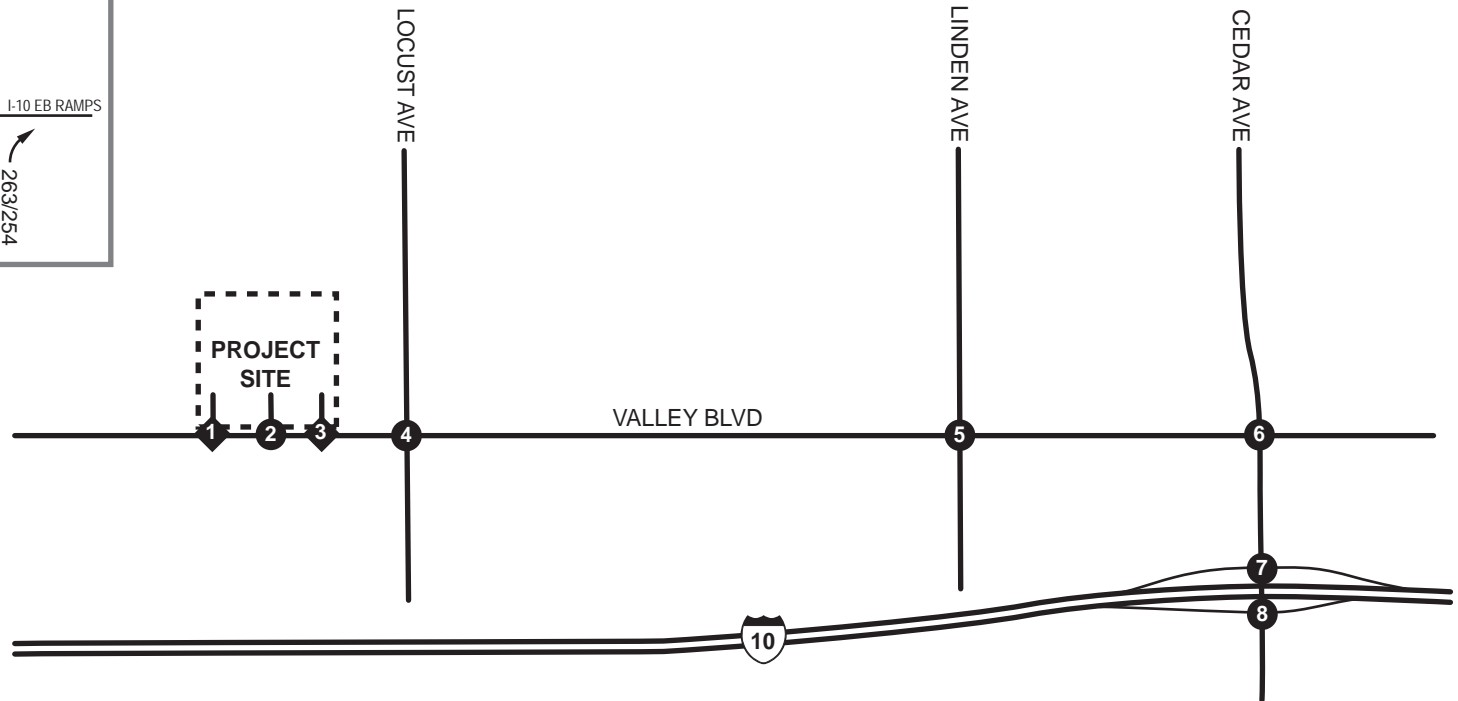
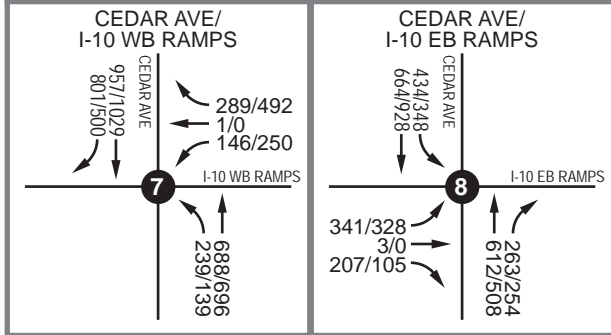
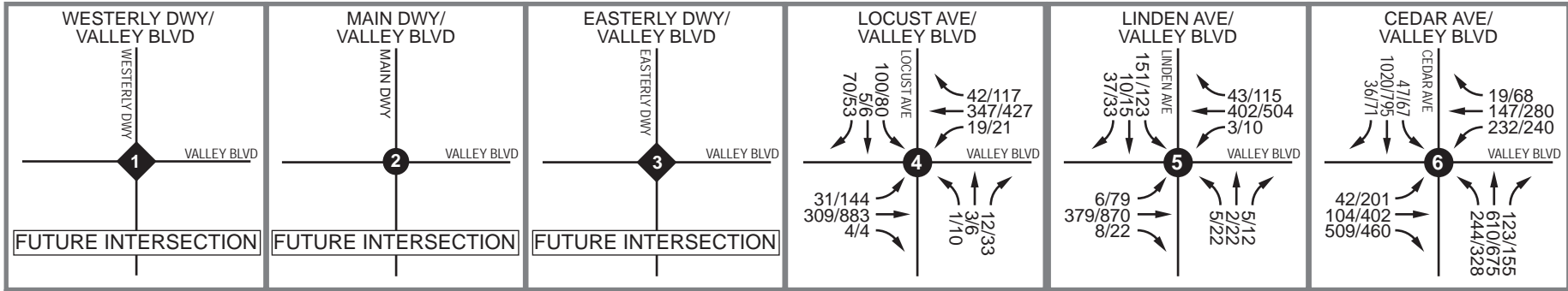
As shown in Table 5, the study intersections are forecast to operate at an acceptable LOS (LOS D or better) according to agency performance criteria for forecast existing plus project conditions.

As also shown in Table 5, based on agency thresholds of significance, the addition of project-generated trips is forecast to result in no significant traffic impacts at the study intersections for forecast existing plus project conditions.

FORECAST YEAR 2015 WITH AMBIENT TRAFFIC WITHOUT PROJECT CONDITIONS

To determine potential traffic impacts of the proposed project on the study area at the 2015 opening year, forecast year 2015 with ambient traffic without project conditions are examined prior to forecast year 2015 with ambient traffic with project conditions. An ambient annual growth rate of one percent per year is utilized to increase existing traffic volumes to the 2015 horizon year to account for regional growth in the vicinity of the project site.

Exhibit 10 shows forecast year 2015 with ambient traffic without project conditions a.m. and p.m. peak hour volumes at the study intersections.



Legend:

XX/XX AM/PM Peak Hour Intersection Volumes

- - - Project Site Boundary

⊗ Signalized Study Intersection

⊠ Unsignalized Study Intersection

Forecast Year 2015 With Ambient Traffic Without Project Conditions AM/PM Peak Hour Traffic Volumes

Forecast Year 2015 With Ambient Traffic Without Project Conditions Study Intersection Peak Hour Level of Service

Table 6 summarizes forecast year 2015 with ambient traffic without project conditions a.m. and p.m. peak hour LOS of the study intersections; detailed LOS analysis sheets are contained in Appendix C.

**Table 6
Forecast Year 2015 With Ambient Traffic Without
Project Conditions AM & PM Peak Hour Study Intersection LOS**

Study Intersection	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
1. Project Westerly Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>
2. Project Main Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>
3. Project Easterly Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>
4. Locust Ave/Valley Blvd	19.0 – B	15.3 – B
5. Linden Ave/Valley Blvd	14.1 – B	12.8 – B
6. Cedar Ave/Valley Blvd	23.5 – C	27.6 – C
7. Cedar Ave/I-10 WB Ramps	19.8 – B	22.3 – C
8. Cedar Ave/I-10 EB Ramps	25.7 – C	21.2 – C

Notes: Delay shown in seconds; EB = Eastbound; WB = Westbound.

As shown in Table 6, the study intersections are forecast to operate at an acceptable LOS (LOS D or better) according to agency performance criteria for forecast year 2015 with ambient traffic without project conditions.

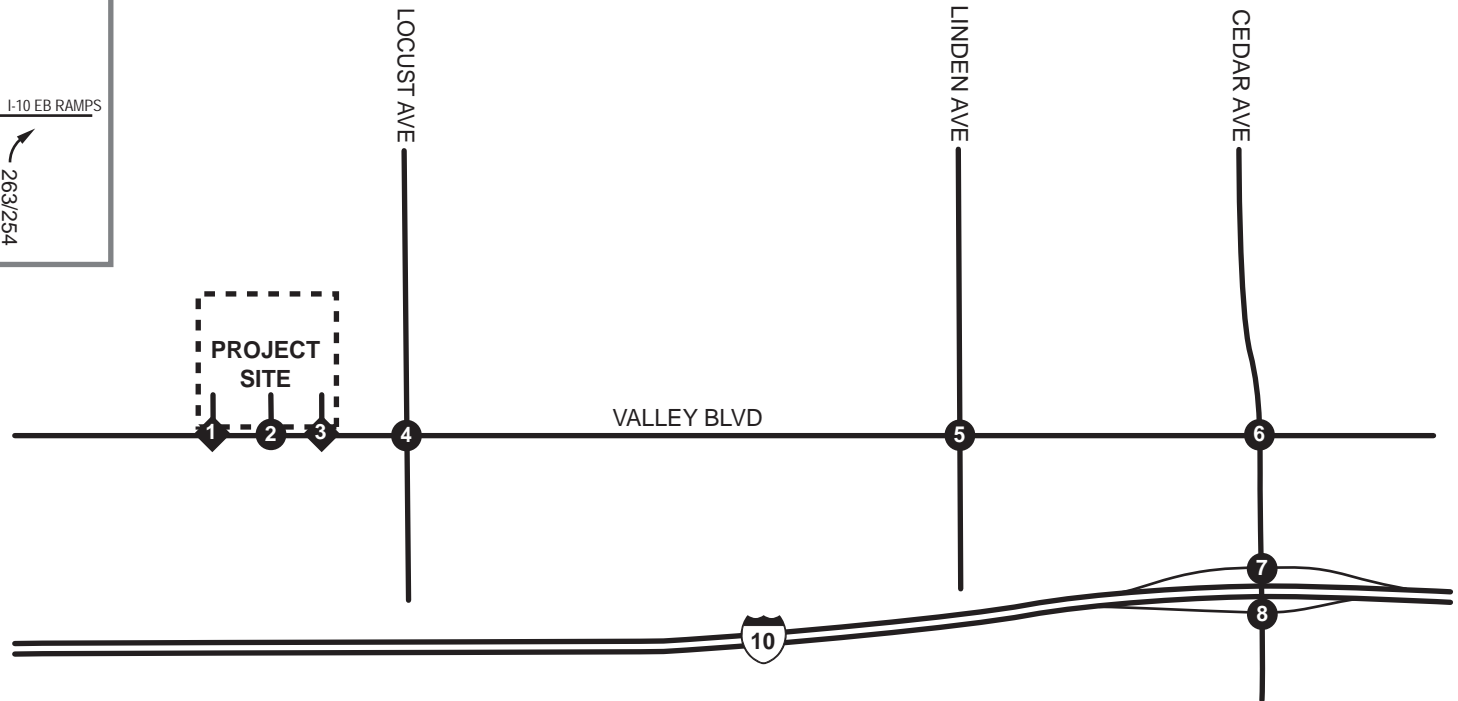
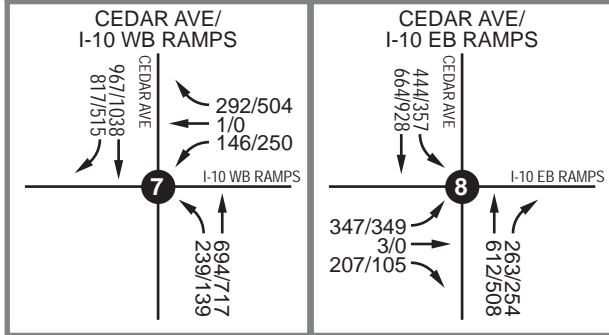
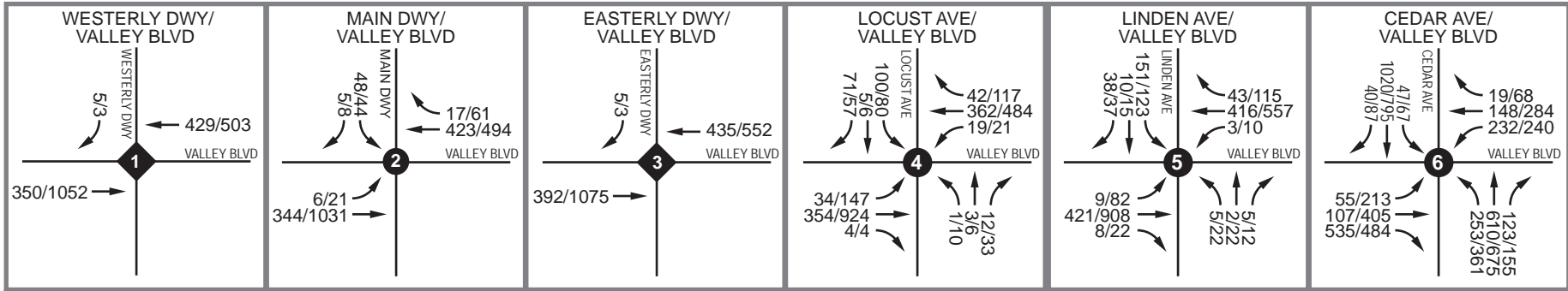
FORECAST YEAR 2015 WITH AMBIENT TRAFFIC WITH PROJECT CONDITIONS

This section analyzes traffic conditions associated with the addition of trips forecast to be generated by the proposed project to forecast year 2015 with ambient traffic without project conditions.

Forecast Year 2015 With Ambient Traffic With Project Conditions Traffic Volumes

Forecast year 2015 with ambient traffic with project conditions volumes were derived by adding project-generated trips to forecast year 2015 with ambient traffic without project conditions traffic volumes.

Exhibit 11 shows forecast year 2015 with ambient traffic with project conditions a.m. and p.m. peak hour volumes at the study intersections.



Legend:

XX/XX AM/PM Peak Hour Intersection Volumes

--- Project Site Boundary

X Signalized Study Intersection

xx Unsignalized Study Intersection

Forecast Year 2015 With Ambient Traffic With Project Conditions AM/PM Peak Hour Traffic Volumes

Forecast Year 2015 With Ambient Traffic With Project Conditions Study Intersection Peak Hour Level of Service

Table 7 summarizes forecast year 2015 with ambient traffic with project conditions a.m. and p.m. peak hour LOS of the study intersections; detailed LOS analysis sheets are contained in Appendix C.

**Table 7
Forecast Year 2015 With Ambient Traffic With Project
Conditions AM & PM Peak Hour Study Intersection LOS**

Study Intersection	FY 2015 With Ambient Traffic Without Project Conditions		FY 2015 With Ambient Traffic With Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	Delay – LOS	Delay – LOS	Delay – LOS	Delay – LOS	
1. Project Westerly Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>	9.5 – A	9.8 – A	No
2. Project Main Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>	6.0 – A	3.8 – A	No
3. Project Easterly Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>	9.6 – A	10.0 – A	No
4. Locust Ave/Valley Blvd	19.0 – B	15.3 – B	18.7 – B	15.0 – B	No
5. Linden Ave/Valley Blvd	14.1 – B	12.8 – B	14.0 – B	12.5 – B	No
6. Cedar Ave/Valley Blvd	23.5 – C	27.6 – C	23.8 – C	27.8 – C	No
7. Cedar Ave/I-10 WB Ramps	19.8 – B	22.3 – C	19.9 – B	22.3 – C	No
8. Cedar Ave/I-10 EB Ramps	25.7 – C	21.2 – C	25.9 – C	21.5 – C	No

Notes: Delay shown in seconds; EB = Eastbound; WB = Westbound.

As shown in Table 7, the study intersections are forecast to operate at an acceptable LOS (LOS D or better) according to agency performance criteria for forecast year 2015 with ambient traffic with project conditions.

As also shown in Table 7, based on agency thresholds of significance, the addition of project-generated trips is forecast to result in no significant traffic impacts at the study intersections for forecast year 2015 with ambient traffic with project conditions.

FORECAST YEAR 2015 WITH AMBIENT & CUMULATIVE PROJECT TRAFFIC WITHOUT PROJECT CONDITIONS

To determine potential traffic impacts of the proposed project on the study area at the 2015 opening year, forecast year 2015 with ambient and cumulative project traffic without project

conditions are examined prior to forecast year 2015 with ambient and cumulative project traffic with project conditions.

Forecast Year 2015 With Ambient & Cumulative Project Traffic Without Project Conditions Peak Hour Traffic Volumes

To derive forecast year 2015 with ambient and cumulative project traffic without project conditions traffic volumes, an ambient annual growth rate of one percent per year was applied to existing traffic volumes to the 2015 horizon year to account for regional growth in the vicinity of the project site. Additionally, forecast year 2015 with ambient and cumulative traffic without project conditions includes the addition of trips associated with the following twelve (12) cumulative projects identified by County of San Bernardino staff that are assumed to be constructed by year 2015, which are not yet built and therefore, not yet generating trips:

1. APN 0252-032-70-0000 (Project #P200500635): 15,000 square feet of retail & office;
2. APN 0252-141-64-0000 (Project #P200900316): 3,294 square feet of take-out food service;
3. APN 0252-041-58-0000 (Project #P201000004): 13,492 square feet addition of recreational center to an existing church;
4. APN 0252-151-08-0000 (Project #P200600703): 3,265 square feet of drive through restaurant, 7,200 square feet of retail and 20,750 square feet of industrial building;
5. APN 0252-151-67-0000 (Project #P201200382): 610,120 square feet of warehouse;
6. APN 0256-031-10-0000 (Project #P201000234): Contractor storage yard with 1,317 square feet of office;
7. APN 0252-173-28-0000 (Project #P201200105): 19,836 square feet of warehouse;
8. APN 0257-081-01-0000 (Project #P200800292): Gas station with 3,250 square feet of convenience market and a 2,800 square feet of fast restaurant;
9. APN 0257 081-01-0000 (Project #P201200375): 11,543 square feet of discount retail;
10. APN 0253-271-24-0000 (Project #P200600148): 17 single family detached residential units;
11. APN 0253-123-39-0000 (Project #P200700765): 9,148 square feet of auto dealership; and
12. APN 0253-203-25-0000 (Project #P200700872): 45-seat fast food with drive through restaurant.

Trip Generation of Cumulative Projects

Table 8 summarizes peak hour trips forecast to be generated by the cumulative projects.

**Table 8
Forecast Trip Generation of Cumulative Projects**

Cumulative Project No.	Land Use	AM Peak Hour Trip Generation			PM Peak Hour Trip Generation			Daily Trip Generation
		In	Out	Total	In	Out	Total	
P200500635 ¹	7.5 tsf Retail	5	3	8	9	9	18	311
	7.5 tsf Office	10	1	11	2	9	11	83
P200900316 ²	3.294 tsf Take Out Food Service	39	37	76	28	26	54	1,580
P201000004 ³	13.492 tsf Recreational Center	18	9	27	18	19	37	456
P200600703 ^{2, 4, 5}	3.265 tsf Drive Through Restaurant	39	37	76	27	25	52	1,566
	7.2 tsf Retail	4	3	7	9	9	18	298
	20.75 tsf Industrial	17	2	19	2	18	20	145
P201200382 ⁶	610.12 tsf Warehouse	146	37	183	49	146	195	2,172
P201000234 ⁷	1.317 tsf Office	2	0	2	0	2	2	15
P201200105 ⁶	19.836 tsf Warehouse	5	1	6	2	5	7	71
P200800292 ^{2, 8}	Gas Station with Convenience Store	23	23	46	36	36	72	1,863
	2.8 tsf Fast Food Restaurant	33	32	65	24	22	46	1,343
P201200375 ⁹	11.543 tsf Discount Retail	17	12	29	37	37	74	1,027
P200600148	17 du Single Family Detached Residential	3	10	13	11	6	17	162
P200700765 ¹¹	9.148 tsf Auto Dealership	13	4	17	10	14	24	295
P200700872 ²	45 seat Fast Food With Drive Through Restaurant	15	14	29	11	10	21	856
Proposed Project Trip Generation		389	225	614	275	393	668	12,243

Notes: Trip generates are based on ITE *Trip Generation manual (9th Edition)*

1 = Based on ITE Retail Land Use (Code 820) with ITE-identified 34% PM Peak Hour Pass-by Trip Reduction and ITE General Office Land Use (Code 710). Assumes 50% of Land Use is Retail (ITE Code 820) and 50% is Office (ITE Code 710);

2 = Based on Fast Food with Drive Through Land Use (ITE Code 934) with ITE-identified 49% AM Peak Hour and 50% PM Peak Hour Pass-by Trip Reduction;

3 = Based on ITE Recreational Community Center Land Use (Code 495);

4 = Based on retail land use (ITE Code 820) with ITE-identified 34% PM peak hour pass-by trip reduction;

5 = Based on ITE General Industrial Land Use (Code 110);

6 = Based on ITE Warehouse Land Use (Code 150);

7 = Based on ITE General Office Land Use (Code 710);

8 = Based on ITE Gasoline/service Station with Convenience Market Land Use (Code 945) with ITE-identified 62% AM Peak Hour and 56% PM Peak Hour Pass-by Trip Reduction. Assumes 12 Vehicle Fueling Positions;

9 = Based on ITE Discount Supermarket Land Use (Code 854) with ITE-identified 23% PM Peak Hour Pass-by Trip Reduction;

10 = Based on ITE Single Family Detached Residential Land Use (Code 210); and

11 = Based on ITE Automobile Sales Land Use (Code 841).

As shown in Table 8, the cumulative projects are forecast to generate approximately 12,243 daily trips which include approximately 614 a.m. peak hour trips and 668 p.m. peak hour trips.

Exhibit 12 shows forecast year 2015 with ambient and cumulative project traffic without project conditions a.m. and p.m. peak hour volumes at the study intersections.

Forecast Year 2015 With Ambient & Cumulative Project Traffic Without Project Conditions Study Intersection Peak Hour Level of Service

Table 9 summarizes forecast year 2015 with ambient and cumulative project traffic without project conditions a.m. and p.m. peak hour LOS of the study intersections; detailed LOS analysis sheets are contained in Appendix C.

**Table 9
Forecast Year 2015 With Ambient & Cumulative Project Traffic
Without Project Conditions AM & PM Peak Hour Study Intersection LOS**

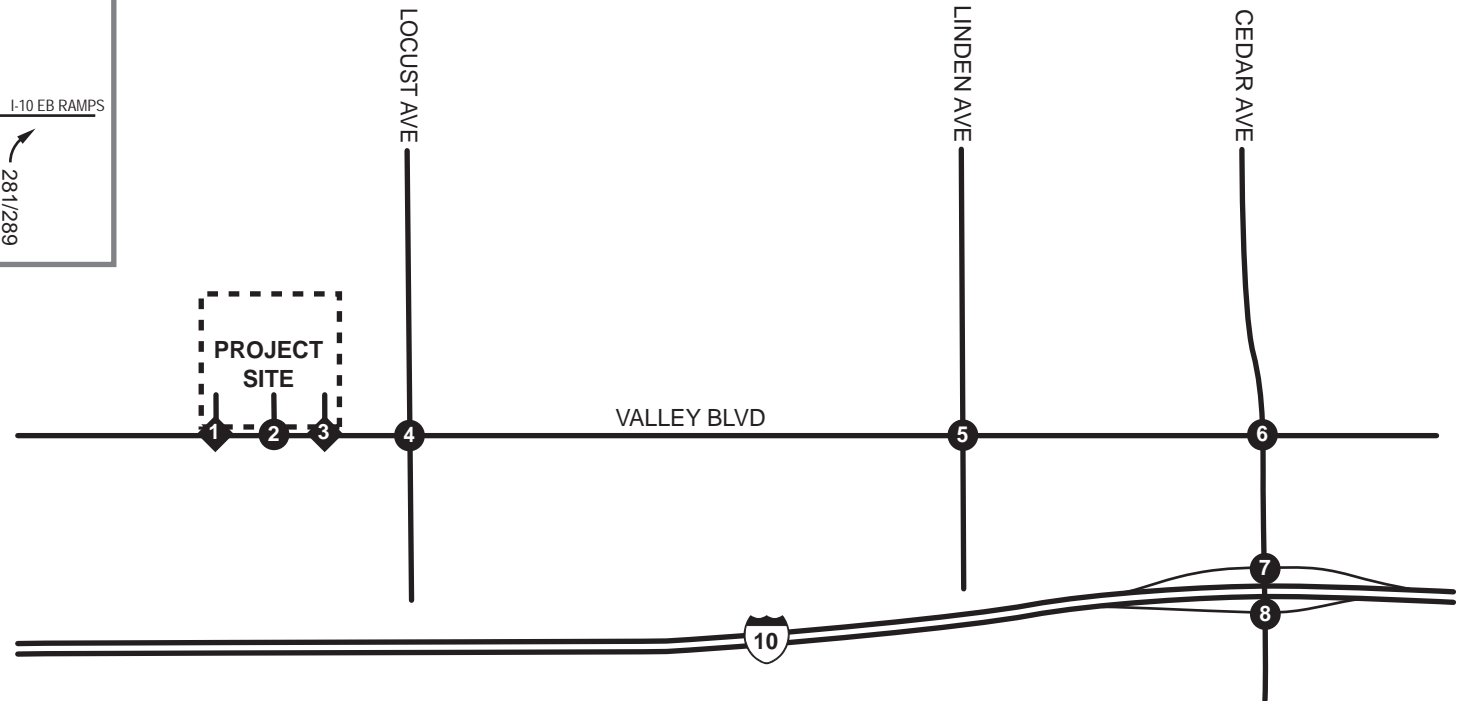
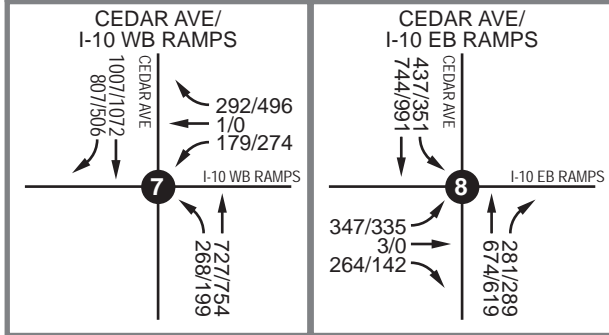
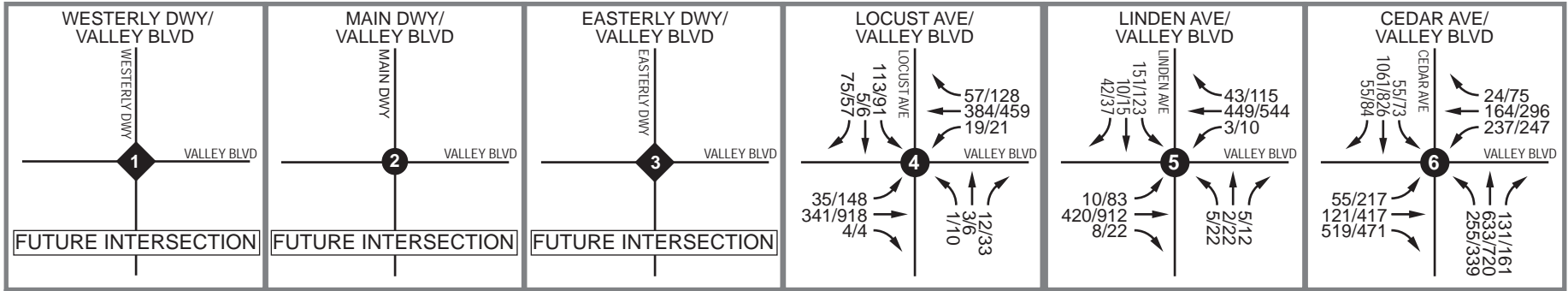
Study Intersection	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
1. Westerly Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>
2. Main Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>
3. Easterly Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>
4. Locust Ave/Valley Blvd	19.0 – B	15.6 – B
5. Linden Ave/Valley Blvd	13.7 – B	12.6 – B
6. Cedar Ave/Valley Blvd	23.8 – C	27.9 – C
7. Cedar Ave/I-10 WB Ramps	21.9 – C	24.2 – C
8. Cedar Ave/I-10 EB Ramps	26.8 – C	22.1 – C

Notes: Delay shown in seconds; EB = Eastbound; WB = Westbound.

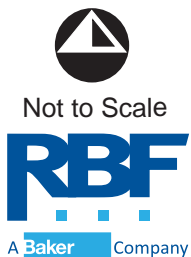
As shown in Table 9, the study intersections are forecast to operate at an acceptable LOS (LOS D or better) according to agency performance criteria for forecast year 2015 with ambient and cumulative project traffic without project conditions.

FORECAST YEAR 2015 WITH AMBIENT & CUMULATIVE PROJECT TRAFFIC WITH PROJECT CONDITIONS

This section analyzes traffic conditions associated with the addition of trips forecast to be generated by the proposed project to forecast year 2015 with ambient and cumulative project traffic without project conditions.



- Legend:
- XX/XX AM/PM Peak Hour Intersection Volumes
 - - - Project Site Boundary
 - X Signalized Study Intersection
 - XX Unsignalized Study Intersection



Forecast Year 2015 With Ambient and Cumulative Project Traffic Without Project Conditions AM/PM Peak Hour Traffic Volumes

Forecast Year 2015 With Ambient & Cumulative Project Traffic With Project Conditions Traffic Volumes

Forecast year 2015 with ambient and cumulative project traffic with project conditions volumes were derived by adding project-generated trips to forecast year 2015 with ambient and cumulative project traffic without project conditions traffic volumes.

Exhibit 13 shows forecast year 2015 with ambient and cumulative project traffic with project conditions a.m. and p.m. peak hour volumes at the study intersections.

Forecast Year 2015 With Ambient & Cumulative Project Traffic With Project Conditions Study Intersection Peak Hour Level of Service

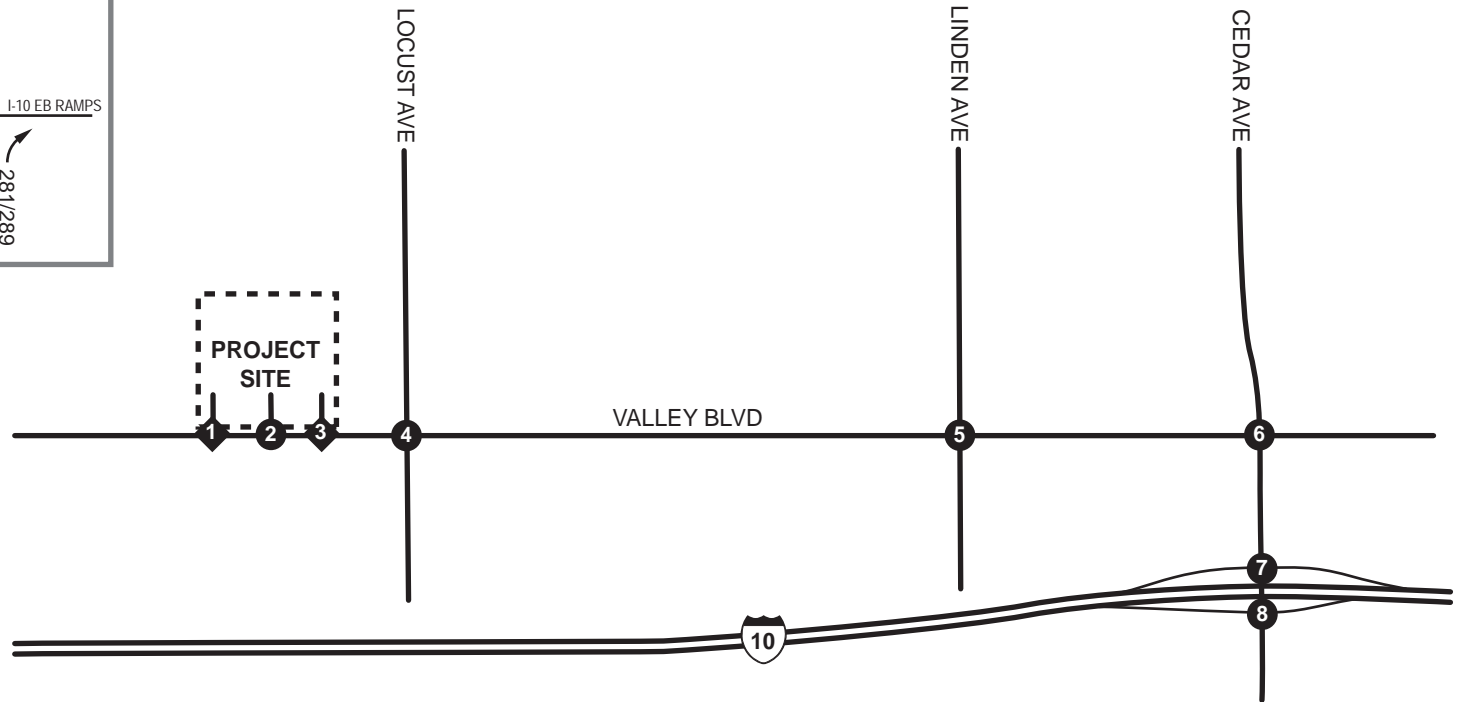
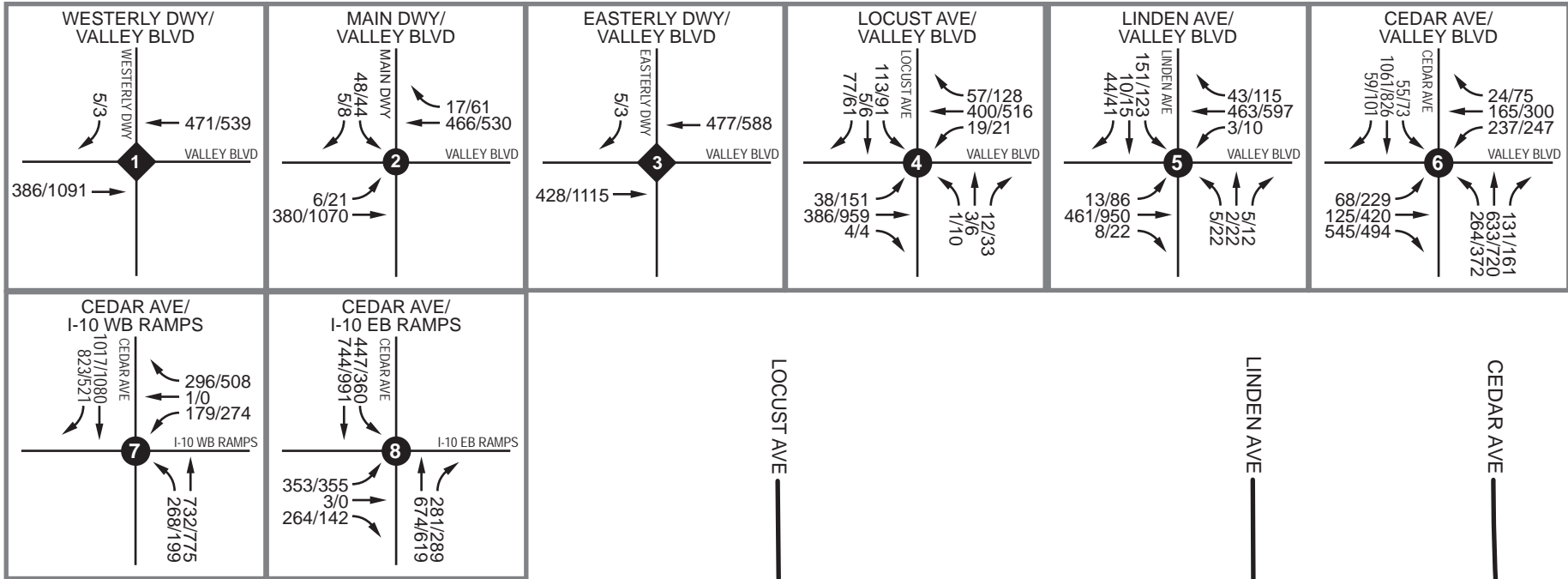
Table 10 summarizes forecast year 2015 with ambient and cumulative project traffic with project conditions a.m. and p.m. peak hour LOS of the study intersections; detailed LOS analysis sheets are contained in Appendix C.

Table 10
Forecast Year 2015 With Ambient & Cumulative Project Traffic
With Project Conditions AM & PM Peak Hour Study Intersection LOS

Study Intersection	FY 2015 With Ambient & Cumulative Project Traffic Without Project Conditions		FY 2015 With Ambient & Cumulative Project Traffic With Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	Delay – LOS	Delay – LOS	Delay – LOS	Delay – LOS	
1. Westerly Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>	9.7 – A	9.9 – A	No
2. Main Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>	5.5 – A	3.7 – A	No
3. Easterly Dwy/Valley Blvd	<i>Future Intersection</i>	<i>Future Intersection</i>	9.7 – A	10.1 – B	No
4. Locust Ave/Valley Blvd	19.0 – B	15.6 – B	18.8 – B	15.4 – B	No
5. Linden Ave/Valley Blvd	13.7 – B	12.6 – B	13.6 – B	12.4 – B	No
6. Cedar Ave/Valley Blvd	23.8 – C	27.9 – C	24.0 – C	28.1 – C	No
7. Cedar Ave/I-10 WB Ramps	21.9 – C	24.2 – C	22.2 – C	24.2 – C	No
8. Cedar Ave/I-10 EB Ramps	26.8 – C	22.1 – C	27.0 – C	22.4 – C	No

Notes: Delay shown in seconds; EB = Eastbound; WB = Westbound.

As shown in Table 10, the study intersections are forecast to operate at an acceptable LOS (LOS D or better) according to agency performance criteria for forecast year 2015 with ambient and cumulative project traffic with project conditions.



Legend:

XX/XX AM/PM Peak Hour Intersection Volumes

- - - Project Site Boundary

⊗ Signalized Study Intersection

⊠ Unsignalized Study Intersection

Forecast Year 2015 With Ambient and Cumulative Project Traffic With Project Conditions AM/PM Peak Hour Traffic Volumes

As also shown in Table 10, based on agency thresholds of significance, the addition of project-generated trips is forecast to result in no significant traffic impacts at the study intersections for forecast year 2015 with ambient and cumulative project traffic with project conditions.

ON-SITE CIRCULATION

Access for the project site is planned via one full access driveway planned to be signalized as part of the project and two right-turn exit only driveways located on Valley Boulevard. As shown in Exhibit 6, traffic is disbursed throughout the project site via an inner loop and outer loop circulation layout.

PEDESTRIAN & BICYCLE CIRCULATION

Sidewalk improvements are intermittently provided along Valley Boulevard in the vicinity of the project where improved parcels have installed sidewalks; dirt shoulders are provided along unimproved parcels. The proposed project will install sidewalks along the project frontage. No on-street bike trails are provided along Valley Boulevard in the vicinity of the project site.

TRANSIT ACCESSIBILITY

The project site is served by OmniTrans Route 29 bus transit on Valley Boulevard. A bus turnout lane is planned to be installed along the project frontage.

STATE HIGHWAY INTERSECTION ANALYSIS

This State Highway intersection analysis has been prepared in accordance with the Caltrans *Guide for the Preparation of Traffic Impact Studies* (State of California Department of Transportation, December 2002). This section evaluates the potential impact of project-generated trips at the following two (2) State Highway study intersections:

7. Cedar Avenue/I-10 Westbound Ramps; and
8. Cedar Avenue/I-10 Eastbound Ramps.

State Highway Intersection Analysis Methodology

Caltrans advocates use of *Highway Capacity Manual (HCM)* intersection analysis methodology to analyze the operation of signalized intersections. The *HCM* analysis methodology describes the operation of a signalized intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding stopped delay experienced per vehicle as shown in Table 11.

**Table 11
State Highway Signalized Study
Intersection LOS & Delay Ranges**

LOS	Delay (seconds per vehicle)
A	≤ 10.0
B	> 10.0 to ≤ 20.0
C	> 20.0 to ≤ 35.0
D	> 35.0 to ≤ 55.0
E	> 55.0 to ≤ 80.0
F	> 80.0

Source: 2000 Highway Capacity Manual

Level of service is based on the average stopped delay per vehicle for all movements of signalized intersections. Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State Highway facilities.

State Highway Intersection Thresholds of Significance

While Caltrans has not established traffic thresholds of significance, this traffic analysis utilizes the following traffic thresholds of significance:

- A significant project impact occurs at a State Highway signalized study intersection when the addition of project-generated trips causes the peak hour level of service of the study intersection to change from acceptable operation (LOS A, B, or C) to deficient operation (LOS D, E or F).

Existing Conditions State Highway Study Intersection Peak Hour Level of Service

Table 12 summarizes existing conditions a.m. peak hour and p.m. peak hour LOS of the State Highway study intersections; detailed LOS analysis sheets are contained in Appendix C.

**Table 12
Existing Conditions
AM & PM Peak Hour State Highway Study Intersection LOS**

Study Intersection	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
7. Cedar Ave/I-10 WB Ramps	19.4 – B	22.1 – C
8. Cedar Ave/I-10 EB Ramps	25.5 – C	21.1 – C

Note: Delay shown in seconds; EB = Eastbound; WB = Westbound.

As shown in Table 12, the State Highway study intersections are currently operating at an acceptable LOS (LOS C or better) according to Caltrans performance criteria for existing conditions.

Forecast Existing Plus Project Conditions State Highway Study Intersection Peak Hour Level of Service

Table 13 summarizes forecast existing plus project conditions a.m. peak hour and p.m. peak hour LOS of the State Highway study intersections; detailed LOS analysis sheets are contained in Appendix C.

**Table 13
Forecast Existing Plus Project
Conditions AM & PM Peak Hour State Highway Study Intersection LOS**

Study Intersection	Existing Conditions		Forecast Existing Plus Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	Delay - LOS	Delay - LOS	Delay - LOS	Delay - LOS	
7. Cedar Ave/I-10 WB Ramps	19.4 – B	22.1 – C	19.5 – B	22.0 – C	No
8. Cedar Ave/I-10 EB Ramps	25.5 – C	21.1 – C	25.7 – C	21.4 – C	No

Note: Delay Shown in seconds; EB = Eastbound; WB = Westbound.

As shown in Table 13, with the addition of project-generated trips, the State Highway study intersections are forecast to continue to operate at an acceptable LOS (LOS C or better) according to Caltrans performance criteria for forecast existing plus project conditions.

As also shown in Table 13, based on the thresholds of significance, the proposed project is forecast to result in no significant traffic impacts at the State Highway study intersections for forecast existing plus project conditions.

Forecast Year 2015 With Ambient Traffic Without Project Conditions State Highway Study Intersection Peak Hour Level of Service

Table 14 summarizes forecast year 2015 with ambient traffic without project conditions a.m. peak hour and p.m. peak hour LOS of the State Highway study intersections; detailed LOS analysis sheets are contained in Appendix C.

**Table 14
Forecast Year 2015 With Ambient Traffic Without Project
Conditions AM & PM Peak Hour State Highway Study Intersection LOS**

Study Intersection	AM Peak Hour	PM Peak Hour
	Delay – LOS	Delay – LOS
7. Cedar Ave/I-10 WB Ramps	19.8 – B	22.3 – C
8. Cedar Ave/I-10 EB Ramps	25.7 – C	21.2 – C

Note: Delay shown in seconds; EB = Eastbound; WB = Westbound.

As shown in Table 14, the State Highway study intersections are forecast to operate at an acceptable LOS (LOS C or better) according to Caltrans performance criteria for forecast year 2015 with ambient traffic without project conditions.

Forecast Year 2015 With Ambient Traffic With Project Conditions State Highway Study Intersection Peak Hour Level of Service

Table 15 summarizes forecast year 2015 with ambient traffic with project conditions a.m. peak hour and p.m. peak hour LOS of the State Highway study intersections; detailed LOS analysis sheets are contained in Appendix C.

**Table 15
Forecast Year 2015 With Ambient Traffic With Project
Conditions AM & PM Peak Hour State Highway Study Intersection LOS**

Study Intersection	Forecast Year 2015 With Ambient Traffic Without Project Conditions		Forecast Year 2015 With Ambient Traffic With Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	Delay - LOS	Delay - LOS	Delay - LOS	Delay - LOS	
7. Cedar Ave/I-10 WB Ramps	19.8 - B	22.3 - C	19.9 - B	22.3 - C	No
8. Cedar Ave/I-10 EB Ramps	25.7 - C	21.2 - C	25.9 - C	21.5 - C	No

Note: Delay Shown in seconds; EB = Eastbound; WB = Westbound.

As shown in Table 15, with the addition of project-generated trips, the State Highway study intersections are forecast to continue to operate at an acceptable LOS (LOS C or better) according to Caltrans performance criteria for forecast year 2015 with ambient traffic with project conditions.

As also shown in Table 15, based on the thresholds of significance, the proposed project is forecast to result in no significant traffic impacts at the State Highway study intersections for forecast year 2015 with ambient traffic with project conditions.

Forecast Year 2015 With Ambient & Cumulative Project Traffic Without Project Conditions State Highway Study Intersection Peak Hour Level of Service

Table 16 summarizes forecast year 2015 with ambient and cumulative project traffic without project conditions a.m. peak hour and p.m. peak hour LOS of the State Highway study intersections; detailed LOS analysis sheets are contained in Appendix C.

**Table 16
Forecast Year 2015 With Ambient & Cumulative Project Traffic
Without Project Conditions AM & PM Peak Hour State Highway Intersection LOS**

Study Intersection	AM Peak Hour	PM Peak Hour
	Delay - LOS	Delay - LOS
7. Cedar Ave/I-10 WB Ramps	21.9 - C	24.2 - C
8. Cedar Ave/I-10 EB Ramps	26.8 - C	22.1 - C

Note: Delay shown in seconds; EB = Eastbound; WB = Westbound.

As shown in Table 16, the State Highway study intersections are forecast to operate at an acceptable LOS (LOS C or better) according to Caltrans performance criteria for forecast year 2015 with ambient and cumulative project traffic without project conditions.

**Forecast Year 2015 With Ambient & Cumulative Project Traffic With Project Conditions
State Highway Study Intersection Peak Hour Level of Service**

Table 17 summarizes forecast year 2015 with ambient and cumulative project traffic with project conditions a.m. peak hour and p.m. peak hour LOS of the State Highway study intersections; detailed LOS analysis sheets are contained in Appendix C.

**Table 17
Forecast Year 2015 With Ambient & Cumulative Project Traffic
With Project Conditions AM & PM Peak Hour State Highway Intersection LOS**

Study Intersection	Forecast Year 2015 With Ambient & Cumulative Project Traffic Without Project Conditions		Forecast Year 2015 With Ambient & Cumulative Project Traffic With Project Conditions		Significant Impact?
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	
	Delay - LOS	Delay - LOS	Delay - LOS	Delay - LOS	
Cedar Ave/I-10 WB Ramps	21.9 – C	24.2 – C	22.2 – C	24.2 – C	No
Cedar Ave/I-10 EB Ramps	26.8 – C	22.1 – C	27.0 – C	22.4 – C	No

Note: Delay Shown in seconds; EB = Eastbound; WB = Westbound.

As shown in Table 17, with the addition of project-generated trips, the State Highway study intersections are forecast to continue to operate at an acceptable LOS (LOS C or better) according to Caltrans performance criteria for forecast year 2015 with ambient and cumulative project traffic with project conditions.

As also shown in Table 17, based on the thresholds of significance, the proposed project is forecast to result in no significant traffic impacts at the State Highway study intersections for forecast year 2015 with ambient and cumulative project traffic with project conditions.

CONGESTION MANAGEMENT PROGRAM

Since the proposed project does not generate 250 or more two-way peak hour trips, a San Bernardino County Congestion Management Program (CMP) traffic analysis is not required for the proposed project.

MITIGATION MEASURES

No traffic mitigation measures are required for the proposed project since no significant traffic impacts are forecast to occur as a result of the proposed project.

CONCLUSIONS

The proposed project is forecast to generate approximately 1,432 daily trips, which include approximately 86 a.m. peak hour trips and 141 p.m. peak hour trips.

Based on applicable agency thresholds of significance, the addition of project-generated trips at the study intersections is forecast to result in no significant traffic impacts for any of the analysis scenarios.

No traffic mitigation measures are required for the proposed project since no significant traffic impacts are forecast to occur as a result of the proposed project.

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APPENDIX A
Signed Scoping Agreement

LETTER OF TRANSMITTAL

To:
 County of San Bernardino
 Dept of Public Works, Traffic Division
 825 E. 3rd Street, Rm 115
 San Bernardino, CA 92415-0835

DATE: May 30, 2013
RBF JOB No: 135614
REFERENCE: Bloomington Traffic Study
DESCRIPTION: Scope for Traffic Study

ATTN: Mohammad "Dr. Q" Qureshi

SENT TO YOU VIA: Mail Blueprinter Overnight Delivery (Carrier) _____
 E-Mail Your Pick-Up RBF Messenger Messenger (Other Courier) _____

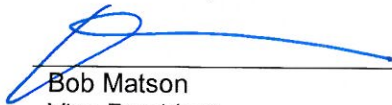
No. of Copies	No. of Originals	DESCRIPTION
	1	Signed Scope for Traffic Study

SENT FOR YOUR: Approval Review Comments Per Your Request
 Files Signature Use Information _____

REMARKS:

76000
RECEIVED
 JUN 05 2013
 TRANSPORTATION DEPT.
 TRAFFIC DIVISION

RBF CONSULTING, a Company of Michael Baker Corporation

BY: 
 Bob Matson
 Vice President

COPIES TO:
 File _____



SCOPE FOR TRAFFIC STUDY

Project Name:	Bloomington Housing Project
----------------------	-----------------------------

This Scope for Traffic Study acknowledges San Bernardino County Department of Public Works, Traffic Division requirements of traffic impact analysis for the project and is subject to change:

Project Address:	18010 Valley Boulevard, Bloomington, CA 92316		
Project Description:	<p>The project would consist of affordable housing and community facilities on the 8.9-acre site, consisting of:</p> <ul style="list-style-type: none"> 196 dwelling units (which consists of 65 senior units, 112 family units, and 19 MHA units). 1,250 SF Senior Housing Community Building (for residents only); 2,000 SF Family Housing Community Building (for residents only); 1,250 SF Social Services Facility (for residents only); 750 SF Leasing Office (for residents only); and 6,000 SF Library. <p>19 of the 196 apartment units would be designated for Mental Health Services Act (MHSA) use. All community/social services facilities would serve only on-site residents, with the exception of the library (which would be open to the general public). In total, 363 parking spaces would be constructed at the site.</p>		
City:	Community of Bloomington		
Project Buildout Year:	2015	Ambient Growth Rate per Year:	1%
Closest Intersection (Xtn) to the Project			
Xtn N/S Street Name:	Locust Avenue		
Xtn E/W Street Name:	Valley Boulevard		
Thomas Guide Pg+Grid:	605 C6	County Supervisorial District:	5


	Engineer	Developer
Company:	RBF Consulting	Related California
Name:	Bob Matson	Stan Smith
Address:	14725 Alton Parkway	18201 Von Karman Ave, Suite 900
City, State, Zip Code:	Irvine, CA, 92618-2027	Irvine, CA, 92612
Phone #:	949.855.5736	949.660.7272




SCOPE FOR TRAFFIC STUDY

Project Name: Bloomington Housing Project

Email:	bobmatson@rbf.com	ssmith@related.com
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By: 
Print Name: Bob Matson
Consultant/Developer's Representative

Date 5/29/13

Reviewed By: 
Print Name: Eloy Rovalcaba
Traffic Division Representative

Date 6/5/13



SCOPE FOR TRAFFIC STUDY

Project Name:	Bloomington Housing Project
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1. Traffic Distribution: Refer to Attachment A.

2. Trip Credit: Exact amount of credit subject to approval by Traffic Division.

Transportation Demand Management (TDM)	Yes/no	No Trip Credit
Existing Active Land Use	Yes/no	No Trip Credit
Previous Land Use	Yes/no	No Trip Credit
Internal Trip Reduction	Yes/no	No Trip Credit
Pass-by Trip Reduction	Yes/no	No Trip Credit

3. Related Projects: Consultant should check with Planning in the San Bernardino County Department of Land Use Services and planning departments of adjoining Cities. Documentation of the consultation from these agencies shall be included in the traffic study. Related projects list shall be submitted to Traffic Division for our review and approval before being incorporated in the study.

4. Freeway Analysis: The potential traffic impact on the following Freeway(s) must be considered.
The I-10 freeway ramp intersections along Cedar Avenue will be analyzed.

The applicant shall consult with the State of California Department of Transportation (Caltrans) to determine the California Environmental Quality Act levels of significance with regard to traffic impacts on Caltrans' freeway facilities. This consultation shall also include a determination of Caltrans requirements for the study of traffic impacts to its facilities and the mitigation of any such impacts. This analysis must follow the most current Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002) and can be obtained from <http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tiguide.pdf>. If Caltrans finds that the project has a significant impact on the freeway, Caltrans shall be requested to include the basis for this finding in their response. If fees are proposed to mitigate the freeway impact, Caltrans shall be requested to identify the specific project to which the fees will apply. These written comments from Caltrans shall be included with the traffic study and submitted to Public Works for review and approval. If a documented good faith effort is made to consult with Caltrans and written comments cannot be obtained from within a reasonable amount of time, an analysis of the freeway impact shall be made using HCM procedures. Appendix A of the SANBAG CMP outlines allowable modifications to these procedures. The SANBAG CMP can be viewed online at: http://www.sanbag.ca.gov/planning/subr_congestion.html



SCOPE FOR TRAFFIC STUDY

Project Name: Bloomington Housing Project

5. Trip Generation

Land Use Code	Land Use	Rate Based on	Qty	*AVTE vs Dwelling Units Thousand Square Feet	ADT	Weekday a.m. peak		Weekday p.m. peak		Weekend peak hour	
						In	Out	In	Out	In	Out
220	Apartment	1	131	Dwelling Units	871	13	54	52	29		
252	Senior Housing	1	65	Dwelling Units	224	5	8	9	7		
590	Library	1	6	Thousand Square Feet	337	4	2	21	23		

Trip Generation Rate(s) Source: I – Institute of Transportation Engineers; S – San Diego Traffic Generators; C – County; O – Other:

Note: The Apartment trip generation shown above includes 19 Mental Health Services (MHS) dwelling units which may generate less trips than Apartments. However, for purposes of this scope, the trip generation and study intersection locations are based on the most conservative trip generation shown above since the MHS units are calculated based on the "Apartment" land use category.
 * - Average Vehicle Trip Ends.



SCOPE FOR TRAFFIC STUDY

Project Name:	Bloomington Housing Project
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6. Study Intersections: At minimum, the study shall include the following intersections. The list is subject to change after related projects, trip generation and distribution are determined. Consultant should check with adjoining Cities regarding their requirements in addition to the following County/City intersections. Documentation of the consultation from these agencies shall be included in the traffic study.

Xtn #	% County	Thomas Guide Page+Grid	N S/E/W Street Name	City	Signalized	CMP
1	35% Out	605 C6	Driveway #1/Valley Boulevard	Bloomington	No	No
2	100% In 30% Out ¹	605 C6	Main Project Driveway/Valley Boulevard	Bloomington	No	No
3	35% Out	605 C6	Driveway #2/Valley Boulevard	Bloomington	No	No
4	75%	605 C6	Locust Avenue/Valley Boulevard	Bloomington	Yes	No
5	70%	605 D6	Linden Avenue/Valley Boulevard	Bloomington	Yes	No
6	65%	605 E6	Cedar Avenue/Valley Boulevard	Bloomington	Yes	Yes
7	40%	605 E6	Cedar Avenue/I-10 Westbound Ramps ²	Bloomington	Yes	Yes
8	40%	605 E6	Cedar Avenue/I-10 Eastbound Ramps ²	Bloomington	Yes	Yes

¹ = Remaining 70% of outbound project trips are planned to be dispersed at other two exit only driveways.

² = 25% of project trips are forecast to be traveling to/from the west on the I-10 freeway; 15% of project trips are forecast to be traveling to/from the east on the I-10 freeway.

Cities to be consulted: City of Rialto and Caltrans



SCOPE FOR TRAFFIC STUDY

Project Name:	Bloomington Housing Project
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7. Other:

Traffic counts may be conducted immediately per the following:
<ul style="list-style-type: none"> • Must be taken on Tuesdays, Wednesdays or Thursdays.
<ul style="list-style-type: none"> • Must exclude holidays, and the first weekdays before and after the holiday.
<ul style="list-style-type: none"> • Must be taken on days when local schools or colleges are in session.
<ul style="list-style-type: none"> • Must be taken on days of good weather, and avoid atypical conditions (e.g., road construction, detours, or major traffic incidents).
<ul style="list-style-type: none"> • Traffic counts used for other traffic studies in the area shall NOT be reused again, unless 25% of the counts conducted for that particular traffic study are validated with new counts. The difference in volumes between the old and new counts at each corresponding movement should not be more than 10%.
<ul style="list-style-type: none"> • New traffic counts shall be checked to ensure the difference in volumes at corresponding approaches, if applicable, between two adjacent intersections is no more than 10% unless the difference can be justified.
<ul style="list-style-type: none"> • For all proposed mitigation measures, a conceptual plan for the improvements shall be submitted to our Traffic Studies section for review and approval prior to the approval of the Traffic Impact Analysis. All proposed improvements shall be within the right-of-way.
<ul style="list-style-type: none"> • For all cumulative mitigation measures, a cost estimate for the improvement shall be submitted.

This analysis must follow the most current Traffic Impact Study Guidelines for the County as stated in the County's Road Planning and Design Standards.

8. Fees

The County charges on an actual cost basis for review of traffic studies. An initial deposit of \$3400 is required at the time that a land use application is filed with the Department of Land Use Services. If the review costs exceed the initial deposit, the applicant will be expected to provide additional funds and the review will be suspended until the additional funds are deposited.



SCOPE FOR TRAFFIC STUDY

Project Name:	Bloomington Housing Project
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9. Contact Information:

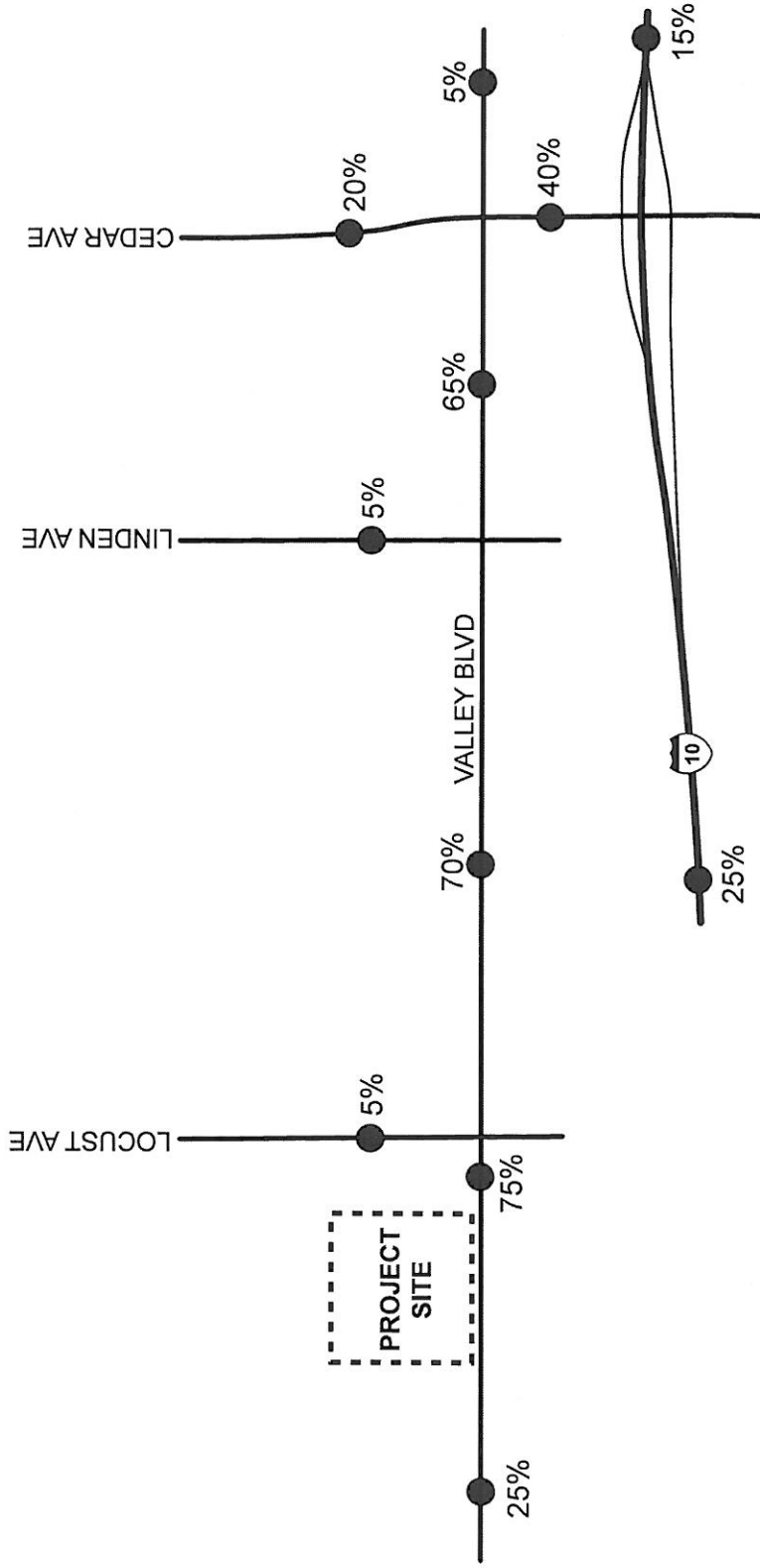
Please submit a signed copy of this MOU for approval by the Traffic Division. The MOU may be submitted in person, by fax, by email or by US Mail to:

County of San Bernardino
Dept. of Public Works, Traffic Division
825 E. 3rd Street, Rm 115
San Bernardino, CA 92415-0835

Phone: 909-387-8186

Fax: 909-387-7809

Email: epetre@dpw.sbcounty.gov (Ed Petre)



Legend:
 XX% Trip Percent Distribution

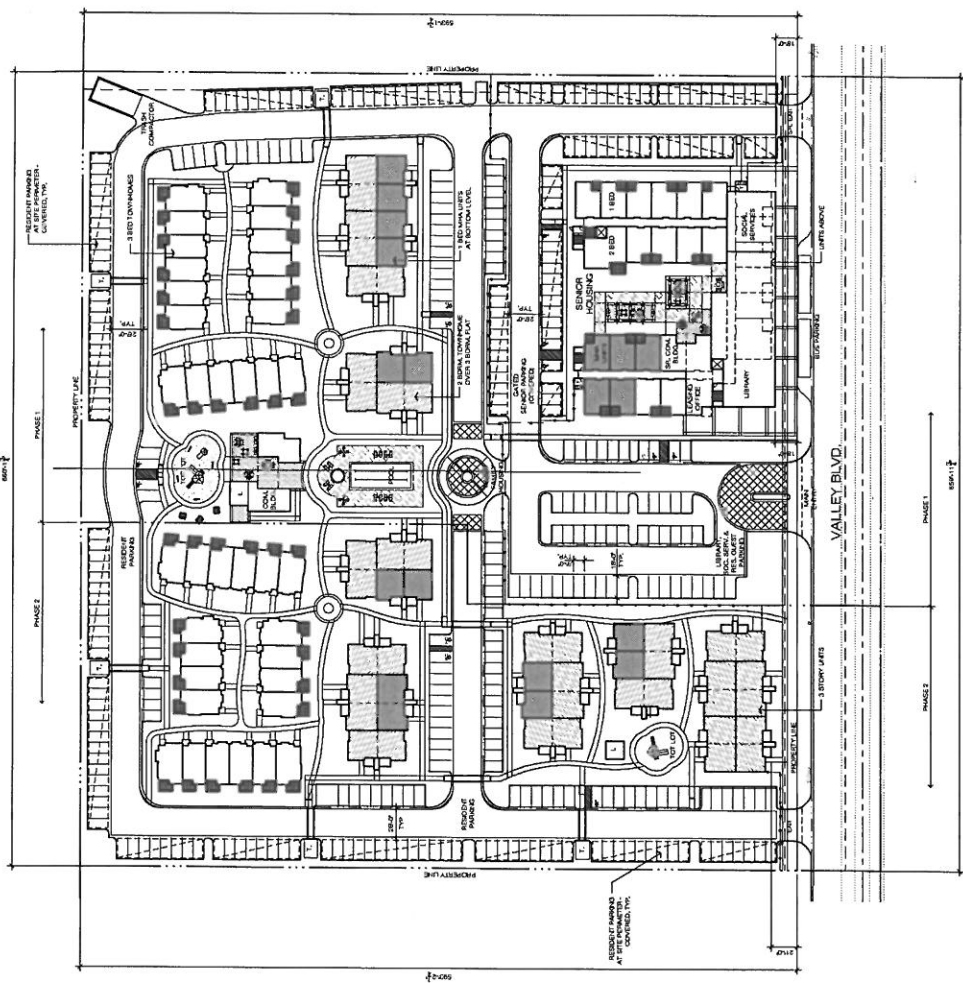


Not to Scale



A Baker Company

Forecast Trip Percent Distribution of Proposed Project



PROJECT SUMMARY
 TOTAL LOT AREA: 6.9 ACRES (4381,056 SF)
 TOTAL PARKING: 363 SPACES
 TOTAL UNITS: 113 UNITS
 SENIOR - 65 PLATS
 FAMILY - 112 UNITS
 MHA - 19 UNITS

PHASE 1
 LOT AREA: 5.51 ACRES (3840,101 SF)

PROGRAM SUMMARY:
 SENIOR HOUSING 65 UNITS
 FAMILY HOUSING 39 UNITS
 MHA HOUSING 11 UNITS
 TOTAL PHASE 1 UNITS 115 UNITS

SENIOR HOUSING COMMUNITY BLDG 1,256 SF
 LEASING OFFICE 750 SF
 HOUSING COMMUNITY BLDG 6,006 SF
 LIBRARY 6,006 SF
 SOCIAL SERVICES 1,256 SF

PARKING:
 LIBRARY / SOCIAL SERVICES & RESIDENT VISITORS 65 SPACES
 SENIOR HOUSING 1 SPACE / UNIT = 65 SPACES
 FAMILY HOUSING 2 SPACES / UNIT = 78 SPACES
 MHA HOUSING 1 SPACE / UNIT = 11 SPACES
 TOTAL SPACES 208 SPACES

PHASE 2
 LOT AREA: 3.38 ACRES (4100,875 SF)

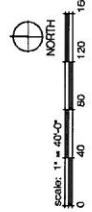
PROGRAM SUMMARY:
 FAMILY HOUSING 73 UNITS
 MHA HOUSING 8 UNITS
 TOTAL PHASE 2 UNITS 81 UNITS

PARKING:
 FAMILY HOUSING 2 SPACES / UNIT = 154 SPACES
 TOTAL SPACES 154 SPACES

BLOOMINGTON
 SAN BERNARDINO COUNTY, CA

DEVELOPER:
RELATED
 14000 Wilshire Blvd., Suite 3000 Irvine CA 92612
 Tel: (949) 606-7272
 Job No. 03009
 DATE: 05-14-2013

ARCHITECT:
 Whitton Haberman Architects, LLP
 2251 W. 180th Street
 Torrance, CA 90504
 Tel: (310) 271-6385
 Fax: (310) 217-6425



APPENDIX B

Count Data

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TRAFFIC DATA SERVICES

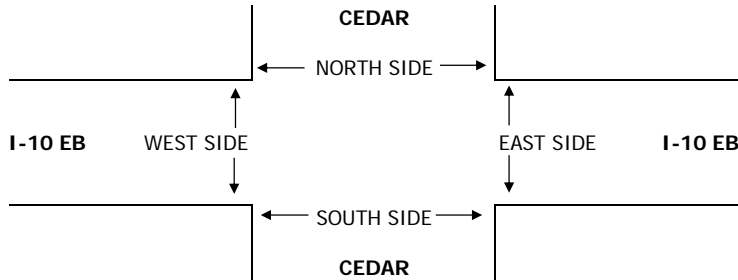
DATE:
6/6/13
THURSDAY

LOCATION:
NORTH & SOUTH: BLOOMINGTON
EAST & WEST: CEDAR
I-10 EB

PROJECT #: SC0195
LOCATION #: 5
CONTROL: SIGNAL

NOTES:	AM		▲ N	
	PM			
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

	NORTHBOUND CEDAR			SOUTHBOUND CEDAR			EASTBOUND I-10 EB			WESTBOUND I-10 EB			TOTAL	U-TURNS				
	NL X	NT 3	NR 1	SL 1	ST 2	SR X	EL 1.5	ET 0	ER 0.5	WL X	WT X	WR X		NB X	SB X	EB X	WB X	TTL
AM																		
7:00 AM		140	45	99	138		75	1	47								0	
7:15 AM		146	58	114	156		84	2	55								0	
7:30 AM		163	81	110	199		69	0	53								0	
7:45 AM		138	73	111	154		95	0	43								0	
8:00 AM		153	46	90	142		86	1	52								0	
8:15 AM		163	35	83	131		78	1	44								0	
8:30 AM		141	50	86	146		58	0	36								0	
8:45 AM		120	44	97	119		87	2	42								0	
VOLUMES	0	1,164	432	790	1,185	0	632	7	372	0	0	0					4,582	
APPROACH %	0%	73%	27%	40%	60%	0%	63%	1%	37%	0%	0%	0%						
APP/DEPART	1,596	/	1,796	1,975	/	1,557	1,011	/	1,229	0	/	0					0	
BEGIN PEAK HR	7:15 AM																	
VOLUMES	0	600	258	425	651	0	334	3	203	0	0	0					2,474	
APPROACH %	0%	70%	30%	39%	61%	0%	62%	1%	38%	0%	0%	0%						
PEAK HR FACTOR		0.879			0.871			0.957			0.000						0.916	
APP/DEPART	858	/	934	1,076	/	854	540	/	686	0	/	0					0	
PM																		
4:00 PM		102	55	94	155		101	0	36								0	
4:15 PM		88	53	78	179		79	0	25								0	
4:30 PM		127	59	75	238		92	0	30								0	
4:45 PM		133	77	82	243		71	0	24								0	
5:00 PM		120	51	95	227		94	0	30								0	
5:15 PM		118	62	89	202		65	0	19								0	
5:30 PM		152	33	37	261		72	0	15								0	
5:45 PM		160	29	49	247		69	0	19								0	
VOLUMES	0	1,000	419	599	1,752	0	643	0	198	0	0	0					4,611	
APPROACH %	0%	70%	30%	25%	75%	0%	76%	0%	24%	0%	0%	0%						
APP/DEPART	1,419	/	1,643	2,351	/	1,950	841	/	1,018	0	/	0					0	
BEGIN PEAK HR	4:30 PM																	
VOLUMES	0	498	249	341	910	0	322	0	103	0	0	0					2,423	
APPROACH %	0%	67%	33%	27%	73%	0%	76%	0%	24%	0%	0%	0%						
PEAK HR FACTOR		0.889			0.962			0.857			0.000						0.962	
APP/DEPART	747	/	820	1,251	/	1,013	425	/	590	0	/	0					0	



		7:00 AM																
		7:15 AM																
		7:30 AM																
		7:45 AM																
		8:00 AM																
		8:15 AM																
		8:30 AM																
		8:45 AM																
		TOTAL																
AM																		
		4:00 PM																
		4:15 PM																
		4:30 PM																
		4:45 PM																
		5:00 PM																
		5:15 PM																
		5:30 PM																
		5:45 PM																
		TOTAL																
PM																		

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

PEDESTRIAN CROSSINGS					
	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
TOTAL	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
TOTAL	0	0	0	0	0

BICYCLE CROSSINGS					
	NS	SS	ES	WS	TOTAL
7:00 AM					0
7:15 AM					0
7:30 AM					0
7:45 AM					0
8:00 AM					0
8:15 AM					0
8:30 AM					0
8:45 AM					0
TOTAL	0	0	0	0	0
4:00 PM					0
4:15 PM					0
4:30 PM					0
4:45 PM					0
5:00 PM					0
5:15 PM					0
5:30 PM					0
5:45 PM					0
TOTAL	0	0	0	0	0

APPENDIX C
LOS Analysis Sheets

Existing Conditions

BLOOMINGTON HOUSING PROJECT - 135614
 EXISTING CONDITIONS
 AM PEAK HOUR

Scenario Report

Scenario: EX-AM
 Command: EX-AM
 Volume: AM
 Geometry: EX
 Impact Fee: Default Impact Fee
 Trip Generation: NONE
 Trip Distribution: NONE
 Paths: Default Path
 Routes: Default Route
 Configuration: EX-AM

BLOOMINGTON HOUSING PROJECT - 135614
 EXISTING CONDITIONS
 AM PEAK HOUR

Impact Analysis Report
 Level of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 4 LOCUST AVE / VALLEY BLVD	LOS Veh	C	LOS Veh	C	+ 0.000 D/V
	B 18.9	0.221	B 18.9	0.221	
# 5 LINDEN AVE / VALLEY BLVD	B 14.1	0.226	B 14.1	0.226	+ 0.000 D/V
# 6 CEDAR AVE / VALLEY BLVD	C 23.3	0.428	C 23.3	0.428	+ 0.000 D/V
# 7 CEDAR AVE / I-10 WB RAMPS	B 19.4	0.779	B 19.4	0.779	+ 0.000 D/V
# 8 CEDAR AVE / I-10 EB RAMPS	C 25.5	0.644	C 25.5	0.644	+ 0.000 D/V

BLOOMINGTON HOUSING PROJECT - 135614
EXISTING CONDITIONS
AM PEAK HOUR

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

Intersection #4 LOCUST AVE / VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.221
Loss Time (sec): 6 Average Delay (sec/veh): 18.9
Optimal Cycle: 18 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1 0 0 0 0 1 0 0 1 1
Volume Module:
Base Vol: 1 3 12 98 5 69 30 303 4 19 340 41
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: 1 3 12 98 5 69 30 303 4 19 340 41
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: 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 Volume: 1 3 12 98 5 69 30 303 4 19 340 41
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1 3 12 98 5 69 30 303 4 19 340 41
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: 1 3 12 98 5 69 30 303 4 19 340 41
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.06 0.19 0.75 0.57 0.03 0.40 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 113 338 1350 1026 52 722 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.01 0.01 0.01 0.10 0.10 0.10 0.02 0.08 0.00 0.01 0.09 0.02
Crit Moves: ****
Green/Cycle: 0.43 0.43 0.43 0.43 0.43 0.43 0.08 0.45 0.45 0.06 0.43 0.43
Volume/Cap: 0.02 0.02 0.02 0.22 0.22 0.22 0.22 0.19 0.00 0.19 0.22 0.05
Delay/Veh: 16.3 16.3 16.3 17.9 17.9 17.9 43.9 16.7 15.3 45.6 18.2 16.8
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: 16.3 16.3 16.3 17.9 17.9 17.9 43.9 16.7 15.3 45.6 18.2 16.8
LOS by Move: B B B B B B D B B D B B
HCM2kAvgQ: 0 0 0 3 3 3 1 3 0 1 3 1
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
EXISTING CONDITIONS
AM PEAK HOUR

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

Intersection #5 LINDEN AVE / VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.226
Loss Time (sec): 6 Average Delay (sec/veh): 14.1
Optimal Cycle: 18 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 1 0 1 1 0 1 1 0
Volume Module:
Base Vol: 5 2 5 148 10 36 6 372 8 3 394 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: 5 2 5 148 10 36 6 372 8 3 394 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: 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 Volume: 5 2 5 148 10 36 6 372 8 3 394 42
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 5 2 5 148 10 36 6 372 8 3 394 42
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: 5 2 5 148 10 36 6 372 8 3 394 42
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.71 0.29 1.00 0.94 0.06 1.00 1.00 1.96 0.04 1.00 1.81 0.19
Final Sat.: 1286 514 1800 1686 114 1800 1700 3524 76 1700 3253 347
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.09 0.09 0.02 0.00 0.11 0.11 0.00 0.12 0.12
Crit Moves: ****
Green/Cycle: 0.39 0.39 0.39 0.39 0.39 0.39 0.02 0.54 0.54 0.01 0.54 0.54
Volume/Cap: 0.01 0.01 0.01 0.23 0.23 0.05 0.23 0.19 0.19 0.19 0.23 0.23
Delay/Veh: 18.8 18.8 18.8 20.7 20.7 19.1 52.9 11.7 11.7 55.3 12.3 12.3
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: 18.8 18.8 18.8 20.7 20.7 19.1 52.9 11.7 11.7 55.3 12.3 12.3
LOS by Move: B B B C C B D B B E B B
HCM2kAvgQ: 0 0 0 3 3 1 0 3 3 0 3 3
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
EXISTING CONDITIONS
AM PEAK HOUR

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

Intersection #6 CEDAR AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.428
Loss Time (sec): 8 Average Delay (sec/veh): 23.3
Optimal Cycle: 28 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: Protected Protected Protected Protected
Rights: Ovl Include Ovl Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 1 1 2 0 2 1 0 2 0 1 1 1 2 0 2 0 1

Volume Module:
Base Vol: 239 598 121 46 1000 35 41 102 499 227 144 19
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: 239 598 121 46 1000 35 41 102 499 227 144 19
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: 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 Volume: 239 598 121 46 1000 35 41 102 499 227 144 19
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 239 598 121 46 1000 35 41 102 499 227 144 19
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: 239 598 121 46 1000 35 41 102 499 227 144 19

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00
Lanes: 2.00 2.00 1.00 2.00 2.90 0.10 2.00 1.00 2.00 2.00 2.00 1.00
Final Sat.: 3200 3600 1800 3200 5217 183 3200 1800 3600 3200 3600 1800

Capacity Analysis Module:
Vol/Sat: 0.07 0.17 0.07 0.01 0.19 0.19 0.01 0.06 0.14 0.07 0.04 0.01
Crit Moves: **** **
Green/Cycle: 0.17 0.57 0.74 0.05 0.45 0.45 0.07 0.13 0.31 0.17 0.23 0.23
Volume/Cap: 0.43 0.29 0.09 0.29 0.43 0.43 0.18 0.43 0.45 0.43 0.18 0.05
Delay/Veh: 37.4 11.0 3.7 46.8 19.0 19.0 44.0 40.1 28.1 38.0 31.3 30.3
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: 37.4 11.0 3.7 46.8 19.0 19.0 44.0 40.1 28.1 38.0 31.3 30.3
LOS by Move: D B A D B B D C D C C
HCM2kAvgQ: 4 5 1 1 7 7 1 3 6 4 2 0

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

BLOOMINGTON HOUSING PROJECT - 135614
EXISTING CONDITIONS
AM PEAK HOUR

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

Intersection #7 CEDAR AVE / I-10 WB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.779
Loss Time (sec): 6 Average Delay (sec/veh): 19.4
Optimal Cycle: 54 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 3 0 1 0 0 0 0 0 0 0 1 0 1

Volume Module:
Base Vol: 234 674 0 0 938 785 0 0 0 143 1 283
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: 234 674 0 0 938 785 0 0 0 143 1 283
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: 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 Volume: 234 674 0 0 938 785 0 0 0 143 1 283
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 234 674 0 0 938 785 0 0 0 143 1 283
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: 234 674 0 0 938 785 0 0 0 143 1 283

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 3.00 1.00 0.00 0.00 0.00 0.50 0.01 1.49
Final Sat.: 1700 3600 0 0 5400 1800 0 0 0 902 6 2692

Capacity Analysis Module:
Vol/Sat: 0.14 0.19 0.00 0.00 0.17 0.44 0.00 0.00 0.00 0.16 0.16 0.11
Crit Moves: **** **
Green/Cycle: 0.18 0.74 0.00 0.00 0.56 0.56 0.00 0.00 0.00 0.20 0.20 0.20
Volume/Cap: 0.78 0.25 0.00 0.00 0.31 0.78 0.00 0.00 0.00 0.78 0.78 0.52
Delay/Veh: 51.6 4.3 0.0 0.0 11.8 21.1 0.0 0.0 0.0 44.7 44.7 36.0
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: 51.6 4.3 0.0 0.0 11.8 21.1 0.0 0.0 0.0 44.7 44.7 36.0
LOS by Move: D A A A B C A A A D D D
HCM2kAvgQ: 8 3 0 0 5 19 0 0 0 10 10 6

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

BLOOMINGTON HOUSING PROJECT - 135614
 EXISTING CONDITIONS
 AM PEAK HOUR

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

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*****
Intersection #8 CEDAR AVE / I-10 EB RAMPS
*****
Cycle (sec):      100          Critical Vol./Cap.(X):    0.644
Loss Time (sec):   6           Average Delay (sec/veh):   25.5
Optimal Cycle:    36           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:          Protected   Protected     Split Phase   Split Phase
Rights:           Include     Include        Include        Include
Min. Green:       0 0 0       0 0 0         0 0 0         0 0 0
Y+R:              4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes:            0 0 3 0 1     1 0 2 0 0     1 0 1! 0 0     0 0 0 0 0
-----|-----|-----|-----|-----|
Volume Module:
Base Vol:         0 600 258   425 651   0 334 3 203   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
Initial Bse:      0 600 258   425 651   0 334 3 203   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
PHF Adj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Volume:       0 600 258   425 651   0 334 3 203   0 0 0 0
Reduct Vol:       0 0 0       0 0 0         0 0 0         0 0 0
Reduced Vol:      0 600 258   425 651   0 334 3 203   0 0 0 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
MLF Adj:          1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
FinalVolume:     0 600 258   425 651   0 334 3 203   0 0 0 0
-----|-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:         1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment:       0.94 1.00 1.00 0.94 1.00 1.00 0.96 1.00 1.00 0.94 1.00 1.00
Lanes:            0.00 3.00 1.00 1.00 2.00 0.00 1.46 0.01 0.53 0.00 0.00 0.00
Final Sat.:       0 5400 1800 1700 3600 0 2508 14 959 0 0 0
-----|-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:          0.00 0.11 0.14 0.25 0.18 0.00 0.13 0.21 0.21 0.00 0.00 0.00
Crit Moves:      **** *
Green/Cycle:      0.00 0.22 0.22 0.39 0.61 0.00 0.33 0.33 0.33 0.00 0.00 0.00
Volume/Cap:       0.00 0.50 0.64 0.64 0.30 0.00 0.40 0.64 0.64 0.00 0.00 0.00
Delay/Veh:         0.0 34.3 38.8 27.1 9.3 0.0 26.2 30.3 30.3 0.0 0.0 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 34.3 38.8 27.1 9.3 0.0 26.2 30.3 30.3 0.0 0.0 0.0
LOS by Move:      A C D C A A C C C A A A
HCM2kAvgQ:        0 6 8 11 5 0 6 11 11 0 0 0
*****
Note: Queue reported is the number of cars per lane.
*****
    
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BLOOMINGTON HOUSING PROJECT - 135614
 EXISTING CONDITIONS
 PM PEAK HOUR

Scenario Report

Scenario: EX-PM
 Command: EX-PM
 Volume: PM
 Geometry: EX
 Impact Fee: Default Impact Fee
 Trip Generation: NONE
 Trip Distribution: NONE
 Paths: Default Path
 Routes: Default Route
 Configuration: EX-PM

BLOOMINGTON HOUSING PROJECT - 135614
 EXISTING CONDITIONS
 PM PEAK HOUR

Impact Analysis Report
 Level of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 4 LOCUST AVE / VALLEY BLVD	LOS Veh	C	LOS Veh	C	+ 0.000 D/V
	B 15.2	0.349	B 15.2	0.349	
# 5 LINDEN AVE / VALLEY BLVD	B 12.7	0.345	B 12.7	0.345	+ 0.000 D/V
# 6 CEDAR AVE / VALLEY BLVD	C 27.5	0.530	C 27.5	0.530	+ 0.000 D/V
# 7 CEDAR AVE / I-10 WB RAMPS	C 22.1	0.662	C 22.1	0.662	+ 0.000 D/V
# 8 CEDAR AVE / I-10 EB RAMPS	C 21.1	0.520	C 21.1	0.520	+ 0.000 D/V

BLOOMINGTON HOUSING PROJECT - 135614
EXISTING CONDITIONS
PM PEAK HOUR

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

Intersection #4 LOCUST AVE / VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.349
Loss Time (sec): 6 Average Delay (sec/veh): 15.2
Optimal Cycle: 21 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1 0 0 0 0 1 0 0 1 0 1
Volume Module:
Base Vol: 10 6 32 78 6 52 141 866 4 21 419 115
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: 10 6 32 78 6 52 141 866 4 21 419 115
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: 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 Volume: 10 6 32 78 6 52 141 866 4 21 419 115
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 10 6 32 78 6 52 141 866 4 21 419 115
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: 10 6 32 78 6 52 141 866 4 21 419 115
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.21 0.12 0.67 0.58 0.04 0.38 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 375 225 1200 1032 79 688 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.03 0.03 0.03 0.08 0.08 0.08 0.08 0.24 0.00 0.01 0.12 0.06
Crit Moves: ****
Green/Cycle: 0.22 0.22 0.22 0.22 0.22 0.22 0.30 0.69 0.69 0.04 0.42 0.42
Volume/Cap: 0.12 0.12 0.12 0.35 0.35 0.35 0.28 0.35 0.00 0.35 0.28 0.15
Delay/Veh: 31.7 31.7 31.7 33.8 33.8 33.8 26.9 6.5 4.9 50.6 19.0 17.9
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: 31.7 31.7 31.7 33.8 33.8 33.8 26.9 6.5 4.9 50.6 19.0 17.9
LOS by Move: C C C C C C C A D B B
HCM2kAvgQ: 1 1 1 4 4 4 3 5 0 1 4 2
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
EXISTING CONDITIONS
PM PEAK HOUR

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

Intersection #5 LINDEN AVE / VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.345
Loss Time (sec): 6 Average Delay (sec/veh): 12.7
Optimal Cycle: 21 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 1 0 1 1 0 1
Volume Module:
Base Vol: 22 22 12 121 15 32 77 853 22 10 494 113
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: 22 22 12 121 15 32 77 853 22 10 494 113
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: 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 Volume: 22 22 12 121 15 32 77 853 22 10 494 113
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 22 22 12 121 15 32 77 853 22 10 494 113
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: 22 22 12 121 15 32 77 853 22 10 494 113
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.50 0.50 1.00 0.89 0.11 1.00 1.00 1.95 0.05 1.00 1.63 0.37
Final Sat.: 900 900 1800 1601 199 1800 1700 3509 91 1700 2930 670
Capacity Analysis Module:
Vol/Sat: 0.02 0.02 0.01 0.08 0.08 0.02 0.05 0.24 0.24 0.01 0.17 0.17
Crit Moves: ****
Green/Cycle: 0.22 0.22 0.22 0.22 0.22 0.22 0.15 0.70 0.70 0.02 0.57 0.57
Volume/Cap: 0.11 0.11 0.03 0.35 0.35 0.08 0.30 0.35 0.35 0.35 0.30 0.30
Delay/Veh: 31.4 31.4 30.7 33.5 33.5 31.1 38.2 5.9 5.9 55.6 11.3 11.3
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: 31.4 31.4 30.7 33.5 33.5 31.1 38.2 5.9 5.9 55.6 11.3 11.3
LOS by Move: C C C C C C D A A E B B
HCM2kAvgQ: 1 1 0 4 4 1 2 5 5 1 5 5
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
EXISTING CONDITIONS
PM PEAK HOUR

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

Intersection #6 CEDAR AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.530
Loss Time (sec): 8 Average Delay (sec/veh): 27.5
Optimal Cycle: 34 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: Protected Protected Protected Protected
Rights: Ov1 Include Ov1 Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 1 1 2 0 2 1 0 2 0 1 1 1 2 0 2 0 1

Volume Module:
Base Vol: 322 662 152 66 779 70 197 394 451 235 274 67
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: 322 662 152 66 779 70 197 394 451 235 274 67
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: 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 Volume: 322 662 152 66 779 70 197 394 451 235 274 67
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 322 662 152 66 779 70 197 394 451 235 274 67
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: 322 662 152 66 779 70 197 394 451 235 274 67

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00
Lanes: 2.00 2.00 1.00 2.00 2.75 0.25 2.00 1.40 1.60 2.00 2.00 1.00
Final Sat.: 3200 3600 1800 3200 4955 445 3200 2518 2882 3200 3600 1800

Capacity Analysis Module:
Vol/Sat: 0.10 0.18 0.08 0.02 0.16 0.16 0.06 0.16 0.16 0.07 0.08 0.04
Crit Moves: **** **** **** ****
Green/Cycle: 0.19 0.44 0.58 0.05 0.30 0.30 0.19 0.30 0.48 0.14 0.24 0.24
Volume/Cap: 0.53 0.42 0.15 0.42 0.53 0.53 0.32 0.53 0.32 0.53 0.32 0.16
Delay/Veh: 37.4 19.5 9.8 48.0 29.7 29.7 34.9 29.8 15.8 41.3 31.5 30.2
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: 37.4 19.5 9.8 48.0 29.7 29.7 34.9 29.8 15.8 41.3 31.5 30.2
LOS by Move: D B A D C C C C B D C C
HCM2kAvgQ: 5 7 2 2 8 8 3 8 5 4 4 2

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

BLOOMINGTON HOUSING PROJECT - 135614
EXISTING CONDITIONS
PM PEAK HOUR

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

Intersection #7 CEDAR AVE / I-10 WB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.662
Loss Time (sec): 6 Average Delay (sec/veh): 22.1
Optimal Cycle: 38 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 3 0 1 0 0 0 0 0 0 0 1 0 1

Volume Module:
Base Vol: 136 682 0 0 1009 490 0 0 0 245 0 482
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: 136 682 0 0 1009 490 0 0 0 245 0 482
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: 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 Volume: 136 682 0 0 1009 490 0 0 0 245 0 482
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 136 682 0 0 1009 490 0 0 0 245 0 482
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: 136 682 0 0 1009 490 0 0 0 245 0 482

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 3.00 1.00 0.00 0.00 0.00 0.50 0.00 1.50
Final Sat.: 1700 3600 0 0 5400 1800 0 0 0 907 0 2693

Capacity Analysis Module:
Vol/Sat: 0.08 0.19 0.00 0.00 0.19 0.27 0.00 0.00 0.00 0.27 0.00 0.18
Crit Moves: **** **** ****
Green/Cycle: 0.12 0.53 0.00 0.00 0.41 0.41 0.00 0.00 0.00 0.41 0.00 0.41
Volume/Cap: 0.66 0.36 0.00 0.00 0.45 0.66 0.00 0.00 0.00 0.66 0.00 0.44
Delay/Veh: 49.8 13.6 0.0 0.0 21.5 26.1 0.0 0.0 0.0 25.5 0.0 21.5
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: 49.8 13.6 0.0 0.0 21.5 26.1 0.0 0.0 0.0 25.5 0.0 21.5
LOS by Move: D B A A C C A A A C A C
HCM2kAvgQ: 4 6 0 0 7 12 0 0 0 13 0 7

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

BLOOMINGTON HOUSING PROJECT - 135614
EXISTING CONDITIONS
PM PEAK HOUR

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

Intersection #8 CEDAR AVE / I-10 EB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.520
Loss Time (sec): 6 Average Delay (sec/veh): 21.1
Optimal Cycle: 28 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 3 0 1 1 0 2 0 0 1 0 1! 0 0 0 0 0 0 0

Volume Module:
Base Vol: 0 498 249 341 910 0 322 0 103 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: 0 498 249 341 910 0 322 0 103 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: 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 Volume: 0 498 249 341 910 0 322 0 103 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 498 249 341 910 0 322 0 103 0 0 0 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: 0 498 249 341 910 0 322 0 103 0 0 0 0

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.96 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 3.00 1.00 1.00 2.00 0.00 1.62 0.00 0.38 0.00 0.00 0.00
Final Sat.: 0 5400 1800 1700 3600 0 2807 0 686 0 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.09 0.14 0.20 0.25 0.00 0.11 0.00 0.15 0.00 0.00 0.00
Crit Moves: **** **
Green/Cycle: 0.00 0.27 0.27 0.39 0.65 0.00 0.29 0.00 0.29 0.00 0.00 0.00
Volume/Cap: 0.00 0.35 0.52 0.52 0.39 0.00 0.40 0.00 0.52 0.00 0.00 0.00
Delay/Veh: 0.0 29.8 32.3 24.4 8.2 0.0 28.8 0.0 30.4 0.0 0.0 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 29.8 32.3 24.4 8.2 0.0 28.8 0.0 30.4 0.0 0.0 0.0
LOS by Move: A C C C A A C A C A A A
HCM2kAvgQ: 0 4 7 8 6 0 5 0 7 0 0 0

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

Forecast Existing Plus Project Conditions

BLOOMINGTON HOUSING PROJECT - 135614
 FORECAST EXISTING PLUS PROJECT CONDITIONS
 AM PEAK HOUR

Scenario: EX+P-AM Scenario Report

Command: EX+P-AM
 Volume: AM
 Geometry: EX
 Impact Fee: Default Impact Fee
 Trip Generation: PROJ-AM
 Trip Distribution: DIST
 Paths: Default Path
 Routes: Default Route
 Configuration: EX+P-AM

BLOOMINGTON HOUSING PROJECT - 135614
 FORECAST EXISTING PLUS PROJECT CONDITIONS
 AM PEAK HOUR

Impact Analysis Report
 Level of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
	LOS	Veh C	LOS	Veh C	
# 1 DWY 1 / VALLEY BLVD	A	0.0 0.000	A	9.5 0.006	+ 9.521 D/V
# 2 MAIN DWY/ VALLEY BLVD	A	0.2 0.121	A	6.1 0.158	+ 5.856 D/V
# 3 DWY 2 / VALLEY BLVD	A	0.0 0.000	A	9.5 0.006	+ 9.541 D/V
# 4 LOCUST AVE / VALLEY BLVD	B	18.9 0.221	B	18.7 0.228	-0.279 D/V
# 5 LINDEN AVE / VALLEY BLVD	B	14.1 0.226	B	14.0 0.232	-0.075 D/V
# 6 CEDAR AVE / VALLEY BLVD	C	23.3 0.428	C	23.7 0.445	+ 0.437 D/V
# 7 CEDAR AVE / I-10 WB RAMPS	B	19.4 0.779	B	19.5 0.789	+ 0.126 D/V
# 8 CEDAR AVE / I-10 EB RAMPS	C	25.5 0.644	C	25.7 0.652	+ 0.152 D/V

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
Intersection #1 DWY 1 / VALLEY BLVD
Average Delay (sec/veh): 0.1 Worst Case Level Of Service: A [9.5]
Approach: North Bound South Bound East Bound West Bound
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1 0 0 2 0 0 0 0 2 0 0
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 337 0 0 410 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 0 0 0 0 0 337 0 0 410 0
Added Vol: 0 0 0 0 0 0 5 0 6 0 0 11 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 5 0 343 0 0 421 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: 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 Volume: 0 0 0 0 0 0 5 0 343 0 0 421 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 5 0 343 0 0 421 0
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxxx 6.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxx xxxxx xxxxx 211 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 801 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 801 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx 0.01 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx 9.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * A * * * * *
ApproachDel: xxxxxxx 9.5 xxxxxxx xxxxxxx
ApproachLOS: * A * *
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
Intersection #2 MAIN DWY/ VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.158
Loss Time (sec): 6 Average Delay (sec/veh): 6.1
Optimal Cycle: 17 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 Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 0 0 1 0 0 1 0 2 0 1 1 0 2 0 1
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 337 0 0 410 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 0 0 0 0 0 337 0 0 410 0
Added Vol: 0 0 0 48 0 5 6 0 0 0 0 5 17
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 48 0 5 6 337 0 0 415 17
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: 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 Volume: 0 0 0 48 0 5 6 337 0 0 415 17
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 48 0 5 6 337 0 0 415 17
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 48 0 5 6 337 0 0 415 17
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 0.00 0.00 0.91 0.00 0.09 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 0 0 0 1630 0 170 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.03 0.00 0.03 0.00 0.09 0.00 0.00 0.12 0.01
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.19 0.00 0.19 0.02 0.75 0.00 0.00 0.73 0.73
Volume/Cap: 0.00 0.00 0.00 0.16 0.00 0.16 0.16 0.12 0.00 0.00 0.16 0.01
Delay/Veh: 0.0 0.0 0.0 34.3 0.0 34.3 49.9 3.4 0.0 0.0 4.1 3.7
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: 0.0 0.0 0.0 34.3 0.0 34.3 49.9 3.4 0.0 0.0 4.1 3.7
LOS by Move: A A A C A C D A A A A A
HCM2kAvqQ: 0 0 0 1 0 1 0 1 0 0 2 0
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

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

Intersection #3 DWY 2 / VALLEY BLVD

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: A[9.5]

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 2 0 0 0 0 2 0 0
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 337 0 0 410 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 0 0 0 0 0 337 0 0 410 0
Added Vol: 0 0 0 0 0 0 5 0 48 0 0 17 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 5 0 385 0 0 427 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: 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 Volume: 0 0 0 0 0 0 5 0 385 0 0 427 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 5 0 385 0 0 427 0
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxxx 6.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxx xxxxx xxxxx 214 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 798 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 798 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx 0.01 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx 9.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * A * * * * *
ApproachDel: xxxxxxx 9.5 xxxxxxx xxxxxxx
ApproachLOS: * A * * *

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

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

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

Intersection #4 LOCUST AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.228
Loss Time (sec): 6 Average Delay (sec/veh): 18.7
Optimal Cycle: 18 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 2 0 1 1 0 2 0 1
Volume Module:
Base Vol: 1 3 12 98 5 69 30 303 4 19 340 41
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: 1 3 12 98 5 69 30 303 4 19 340 41
Added Vol: 0 0 0 0 0 0 1 3 45 0 0 15 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 3 12 98 5 70 33 348 4 19 355 41
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: 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 Volume: 1 3 12 98 5 70 33 348 4 19 355 41
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1 3 12 98 5 70 33 348 4 19 355 41
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: 1 3 12 98 5 70 33 348 4 19 355 41
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.06 0.19 0.75 0.57 0.03 0.40 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 113 338 1350 1020 52 728 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.01 0.01 0.01 0.10 0.10 0.10 0.02 0.10 0.00 0.01 0.10 0.02
Crit Moves: *****
Green/Cycle: 0.42 0.42 0.42 0.42 0.42 0.42 0.09 0.46 0.46 0.05 0.43 0.43
Volume/Cap: 0.02 0.02 0.02 0.23 0.23 0.23 0.23 0.21 0.00 0.21 0.23 0.05
Delay/Veh: 16.9 16.9 16.9 18.6 18.6 18.6 43.5 15.9 14.4 46.4 17.9 16.5
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: 16.9 16.9 16.9 18.6 18.6 18.6 43.5 15.9 14.4 46.4 17.9 16.5
LOS by Move: B B B B B B D B D B B
HCM2kAvgQ: 0 0 0 3 3 3 1 3 0 1 3 1

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

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

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

Intersection #5 LINDEN AVE / VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.232
Loss Time (sec): 6 Average Delay (sec/veh): 14.0
Optimal Cycle: 18 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 0 1 1 0
Volume Module:
Base Vol: 5 2 5 148 10 36 6 372 8 3 394 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: 5 2 5 148 10 36 6 372 8 3 394 42
Added Vol: 0 0 0 0 0 1 3 42 0 0 14 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 5 2 5 148 10 37 9 414 8 3 408 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: 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 Volume: 5 2 5 148 10 37 9 414 8 3 408 42
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 5 2 5 148 10 37 9 414 8 3 408 42
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: 5 2 5 148 10 37 9 414 8 3 408 42
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.71 0.29 1.00 0.94 0.06 1.00 1.00 1.96 0.04 1.00 1.81 0.19
Final Sat.: 1286 514 1800 1686 114 1800 1700 3532 68 1700 3264 336
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.09 0.09 0.02 0.01 0.12 0.12 0.00 0.13 0.13
Crit Moves: ****
Green/Cycle: 0.38 0.38 0.38 0.38 0.38 0.38 0.02 0.55 0.55 0.01 0.54 0.54
Volume/Cap: 0.01 0.01 0.01 0.23 0.23 0.05 0.23 0.21 0.21 0.21 0.23 0.23
Delay/Veh: 19.4 19.4 19.4 21.4 21.4 19.8 51.1 11.4 11.4 56.6 12.2 12.2
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: 19.4 19.4 19.4 21.4 21.4 19.8 51.1 11.4 11.4 56.6 12.2 12.2
LOS by Move: B B B C C B D B E B B
HCM2kAvgQ: 0 0 0 3 3 1 1 3 3 0 4 4

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

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

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

Intersection #6 CEDAR AVE / VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.445
Loss Time (sec): 8 Average Delay (sec/veh): 23.7
Optimal Cycle: 29 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: Protected Protected Protected Protected
Rights: Ovl Include Ovl Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 1 1 2 0 2 1 0 2 0 1 1 1 2 0 2 0 1
Volume Module:
Base Vol: 239 598 121 46 1000 35 41 102 499 227 144 19
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: 239 598 121 46 1000 35 41 102 499 227 144 19
Added Vol: 9 0 0 0 0 4 13 3 26 0 1 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 248 598 121 46 1000 39 54 105 525 227 145 19
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: 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 Volume: 248 598 121 46 1000 39 54 105 525 227 145 19
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 248 598 121 46 1000 39 54 105 525 227 145 19
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: 248 598 121 46 1000 39 54 105 525 227 145 19
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00
Lanes: 2.00 2.00 1.00 2.00 2.89 0.11 2.00 1.00 2.00 2.00 2.00 1.00
Final Sat.: 3200 3600 1800 3200 5197 203 3200 1800 3600 3200 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.08 0.17 0.07 0.01 0.19 0.19 0.02 0.06 0.15 0.07 0.04 0.01
Crit Moves: ****
Green/Cycle: 0.17 0.56 0.72 0.05 0.43 0.43 0.09 0.15 0.33 0.16 0.22 0.22
Volume/Cap: 0.44 0.30 0.09 0.30 0.44 0.44 0.18 0.38 0.44 0.44 0.18 0.05
Delay/Veh: 37.5 11.8 4.3 47.0 20.1 20.1 42.2 38.2 26.7 38.6 31.8 30.7
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: 37.5 11.8 4.3 47.0 20.1 20.1 42.2 38.2 26.7 38.6 31.8 30.7
LOS by Move: D B A D C C D C D C C
HCM2kAvgQ: 4 5 1 1 8 8 1 3 7 4 2 0

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

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 CEDAR AVE / I-10 WB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.789
Loss Time (sec): 6 Average Delay (sec/veh): 19.5
Optimal Cycle: 56 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 3 0 1 0 0 0 0 0 0 0 1 0 1

Volume Module:
Base Vol: 234 674 0 0 938 785 0 0 0 143 1 283
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: 234 674 0 0 938 785 0 0 0 143 1 283
Added Vol: 0 6 0 0 10 16 0 0 0 0 0 3
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 234 680 0 0 948 801 0 0 0 143 1 286
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: 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 Volume: 234 680 0 0 948 801 0 0 0 143 1 286
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 234 680 0 0 948 801 0 0 0 143 1 286
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: 234 680 0 0 948 801 0 0 0 143 1 286

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 3.00 1.00 0.00 0.00 0.00 0.49 0.01 1.50
Final Sat.: 1700 3600 0 0 5400 1800 0 0 0 897 6 2697

Capacity Analysis Module:
Vol/Sat: 0.14 0.19 0.00 0.00 0.18 0.45 0.00 0.00 0.00 0.16 0.16 0.11
Crit Moves: ****
Green/Cycle: 0.17 0.74 0.00 0.00 0.56 0.56 0.00 0.00 0.00 0.20 0.20 0.20
Volume/Cap: 0.79 0.26 0.00 0.00 0.31 0.79 0.00 0.00 0.00 0.79 0.79 0.53
Delay/Veh: 52.8 4.3 0.0 0.0 11.6 21.4 0.0 0.0 0.0 45.5 45.5 36.3
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: 52.8 4.3 0.0 0.0 11.6 21.4 0.0 0.0 0.0 45.5 45.5 36.3
LOS by Move: D A A A B C A A D D D
HCM2kAvgQ: 8 3 0 0 5 20 0 0 0 10 10 6

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

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 CEDAR AVE / I-10 EB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.652
Loss Time (sec): 6 Average Delay (sec/veh): 25.7
Optimal Cycle: 37 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 3 0 1 1 0 2 0 0 1 0 1 0 0 0 0 0 0 0

Volume Module:
Base Vol: 0 600 258 425 651 0 334 3 203 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: 0 600 258 425 651 0 334 3 203 0 0 0
Added Vol: 0 0 0 10 0 0 6 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 600 258 435 651 0 340 3 203 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: 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 Volume: 0 600 258 435 651 0 340 3 203 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 600 258 435 651 0 340 3 203 0 0 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: 0 600 258 435 651 0 340 3 203 0 0 0

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.96 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 3.00 1.00 1.00 2.00 0.00 1.46 0.01 0.53 0.00 0.00 0.00
Final Sat.: 0 5400 1800 1700 3600 0 2517 14 952 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.11 0.14 0.26 0.18 0.00 0.14 0.21 0.21 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.22 0.22 0.39 0.61 0.00 0.33 0.33 0.33 0.00 0.00 0.00
Volume/Cap: 0.00 0.51 0.65 0.65 0.30 0.00 0.41 0.65 0.65 0.00 0.00 0.00
Delay/Veh: 0.0 34.6 39.4 27.1 9.2 0.0 26.4 30.6 30.6 0.0 0.0 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 34.6 39.4 27.1 9.2 0.0 26.4 30.6 30.6 0.0 0.0 0.0
LOS by Move: A C D C A A C C C A A A
HCM2kAvgQ: 0 6 8 11 5 0 6 11 11 0 0 0

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

BLOOMINGTON HOUSING PROJECT - 135614
 FORECAST EXISTING PLUS PROJECT CONDITIONS
 PM PEAK HOUR

Scenario Report

Scenario: EX+P-PM
 Command: EX+P-PM
 Volume: PM
 Geometry: EX
 Impact Fee: Default Impact Fee
 Trip Generation: PROJ-PM
 Trip Distribution: DIST
 Paths: Default Path
 Routes: Default Route
 Configuration: EX+P-PM

BLOOMINGTON HOUSING PROJECT - 135614
 FORECAST EXISTING PLUS PROJECT CONDITIONS
 PM PEAK HOUR

Impact Analysis Report
Level of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
	LOS	Veh C	LOS	Veh C	
# 1 DWY 1 / VALLEY BLVD	A	0.0 0.000	A	9.8 0.004	+ 9.756 D/V
# 2 MAIN DWY/ VALLEY BLVD	A	0.3 0.299	A	3.9 0.329	+ 3.611 D/V
# 3 DWY 2 / VALLEY BLVD	A	0.0 0.000	A	9.9 0.004	+ 9.932 D/V
# 4 LOCUST AVE / VALLEY BLVD	B	15.2 0.349	B	15.0 0.364	-0.220 D/V
# 5 LINDEN AVE / VALLEY BLVD	B	12.7 0.345	B	12.5 0.356	-0.224 D/V
# 6 CEDAR AVE / VALLEY BLVD	C	27.5 0.530	C	27.7 0.550	+ 0.159 D/V
# 7 CEDAR AVE / I-10 WB RAMPS	C	22.1 0.662	C	22.0 0.674	-0.006 D/V
# 8 CEDAR AVE / I-10 EB RAMPS	C	21.1 0.520	C	21.4 0.532	+ 0.324 D/V

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

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

Intersection #1 DWY 1 / VALLEY BLVD

Average Delay (sec/veh): 0.0 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 2 0 0 0 0 2 0 0
Volume Module:
Base Vol: 0 0 0 0 0 0 0 1011 0 0 481 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 0 0 0 0 1011 0 0 481 0
Added Vol: 0 0 0 0 0 0 3 0 21 0 0 12 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 3 0 1032 0 0 493 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: 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 Volume: 0 0 0 0 0 3 0 1032 0 0 493 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 3 0 1032 0 0 493 0
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxxx 6.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxx xxxxx xxxxx 247 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 760 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 760 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx 0.00 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx 9.8 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * A * * * * *
ApproachDel: xxxxxxx 9.8 xxxxxxx xxxxxxx
ApproachLOS: * A * * *

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

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

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

Intersection #2 MAIN DWY/ VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.329
Loss Time (sec): 6 Average Delay (sec/veh): 3.9
Optimal Cycle: 21 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 Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 0 1 0 0 1 0 2 0 1
Volume Module:
Base Vol: 0 0 0 0 0 0 0 1011 0 0 481 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 0 0 0 0 1011 0 0 481 0
Added Vol: 0 0 0 44 0 8 21 0 0 0 3 61
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 44 0 8 21 1011 0 0 484 61
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: 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 Volume: 0 0 0 44 0 8 21 1011 0 0 484 61
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 44 0 8 21 1011 0 0 484 61
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 44 0 8 21 1011 0 0 484 61
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 0.00 0.00 0.85 0.00 0.15 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 0 0 0 1523 0 277 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.03 0.00 0.03 0.01 0.28 0.00 0.00 0.13 0.03
Crit Moves: *****
Green/Cycle: 0.00 0.00 0.00 0.09 0.00 0.09 0.07 0.85 0.00 0.00 0.78 0.78
Volume/Cap: 0.00 0.00 0.00 0.33 0.00 0.33 0.17 0.33 0.00 0.00 0.17 0.04
Delay/Veh: 0.0 0.0 0.0 44.1 0.0 44.1 44.3 1.6 0.0 0.0 2.8 2.5
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 44.1 0.0 44.1 44.3 1.6 0.0 0.0 2.8 2.5
LOS by Move: A A A D A D D A A A A A
HCM2kAvqQ: 0 0 0 2 0 2 1 3 0 0 2 0

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

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
Intersection #3 DWY 2 / VALLEY BLVD
Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[9.9]
Approach: North Bound South Bound East Bound West Bound
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1 0 0 2 0 0 0 0 2 0 0
Volume Module:
Base Vol: 0 0 0 0 0 0 0 1011 0 0 481 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 0 0 0 0 1011 0 0 481 0
Added Vol: 0 0 0 0 0 0 3 0 44 0 0 61 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 3 0 1055 0 0 542 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: 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 Volume: 0 0 0 0 0 0 3 0 1055 0 0 542 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 3 0 1055 0 0 542 0
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxxx 6.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Capacity Module:
Conflict Vol: xxxxx xxxxx xxxxx xxxxx xxxxx 271 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 733 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 733 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx 0.00 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx 9.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * A * * * * *
ApproachDel: xxxxxxx 9.9 xxxxxxx xxxxxxx
ApproachLOS: * A * *
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)
Intersection #4 LOCUST AVE / VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.364
Loss Time (sec): 6 Average Delay (sec/veh): 15.0
Optimal Cycle: 22 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: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 2 0 1 1 0 2 0 1
Volume Module:
Base Vol: 10 6 32 78 6 52 141 866 4 21 419 115
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: 10 6 32 78 6 52 141 866 4 21 419 115
Added Vol: 0 0 0 0 0 4 3 41 0 0 57 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 6 32 78 6 56 144 907 4 21 476 115
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: 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 Volume: 10 6 32 78 6 56 144 907 4 21 476 115
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 10 6 32 78 6 56 144 907 4 21 476 115
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: 10 6 32 78 6 56 144 907 4 21 476 115
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.21 0.12 0.67 0.56 0.04 0.40 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 375 225 1200 1003 77 720 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.03 0.03 0.03 0.08 0.08 0.08 0.08 0.25 0.00 0.01 0.13 0.06
Crit Moves: *****
Green/Cycle: 0.21 0.21 0.21 0.21 0.21 0.21 0.28 0.69 0.69 0.03 0.44 0.44
Volume/Cap: 0.12 0.12 0.12 0.36 0.36 0.36 0.30 0.36 0.00 0.36 0.30 0.14
Delay/Veh: 31.9 31.9 31.9 34.1 34.1 34.1 28.4 6.4 4.7 51.1 18.0 16.7
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: 31.9 31.9 31.9 34.1 34.1 34.1 28.4 6.4 4.7 51.1 18.0 16.7
LOS by Move: C C C C C C A A D B B
HCM2kAvqQ: 1 1 1 4 4 4 4 6 0 1 5 2
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

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

Intersection #5 LINDEN AVE / VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.356
Loss Time (sec): 6 Average Delay (sec/veh): 12.5
Optimal Cycle: 22 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 1 0 1 1 0
Volume Module:
Base Vol: 22 22 12 121 15 32 77 853 22 10 494 113
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: 22 22 12 121 15 32 77 853 22 10 494 113
Added Vol: 0 0 0 0 0 0 4 3 38 0 0 53 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 22 22 12 121 15 36 80 891 22 10 547 113
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: 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 Volume: 22 22 12 121 15 36 80 891 22 10 547 113
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 22 22 12 121 15 36 80 891 22 10 547 113
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: 22 22 12 121 15 36 80 891 22 10 547 113
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.50 0.50 1.00 0.89 0.11 1.00 1.00 1.95 0.05 1.00 1.66 0.34
Final Sat.: 900 900 1800 1601 199 1800 1700 3513 87 1700 2984 616
Capacity Analysis Module:
Vol/Sat: 0.02 0.02 0.01 0.08 0.08 0.02 0.05 0.25 0.25 0.01 0.18 0.18
Crit Moves: ****
Green/Cycle: 0.21 0.21 0.21 0.21 0.21 0.21 0.15 0.71 0.71 0.02 0.58 0.58
Volume/Cap: 0.12 0.12 0.03 0.36 0.36 0.09 0.32 0.36 0.36 0.36 0.32 0.32
Delay/Veh: 32.0 32.0 31.3 34.2 34.2 31.8 38.7 5.7 5.7 56.3 10.9 10.9
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: 32.0 32.0 31.3 34.2 34.2 31.8 38.7 5.7 5.7 56.3 10.9 10.9
LOS by Move: C C C C C D A A E B B
HCM2kAvgQ: 1 1 0 4 4 1 3 5 5 1 5 5

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

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

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

Intersection #6 CEDAR AVE / VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.550
Loss Time (sec): 8 Average Delay (sec/veh): 27.7
Optimal Cycle: 35 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: Protected Protected Protected Protected
Rights: Ovl Include Ovl Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 1 1 2 0 2 1 0 2 0 1 1 1 2 0 2 0 1
Volume Module:
Base Vol: 322 662 152 66 779 70 197 394 451 235 274 67
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: 322 662 152 66 779 70 197 394 451 235 274 67
Added Vol: 33 0 0 0 0 0 16 12 3 24 0 4 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 355 662 152 66 779 86 209 397 475 235 278 67
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: 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 Volume: 355 662 152 66 779 86 209 397 475 235 278 67
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 355 662 152 66 779 86 209 397 475 235 278 67
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: 355 662 152 66 779 86 209 397 475 235 278 67
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00
Lanes: 2.00 2.00 1.00 2.00 2.70 0.30 2.00 1.37 1.63 2.00 2.00 1.00
Final Sat.: 3200 3600 1800 3200 4863 537 3200 2458 2942 3200 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.11 0.18 0.08 0.02 0.16 0.16 0.07 0.16 0.16 0.07 0.08 0.04
Crit Moves: ****
Green/Cycle: 0.20 0.44 0.58 0.05 0.29 0.29 0.20 0.29 0.50 0.13 0.23 0.23
Volume/Cap: 0.55 0.41 0.15 0.41 0.55 0.55 0.33 0.55 0.33 0.55 0.33 0.16
Delay/Veh: 36.9 19.1 9.8 47.9 30.3 30.3 34.9 30.2 15.3 42.0 32.2 30.9
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: 36.9 19.1 9.8 47.9 30.3 30.3 34.9 30.2 15.3 42.0 32.2 30.9
LOS by Move: D B A D C C C B D C C
HCM2kAvgQ: 5 7 2 2 8 8 3 8 5 5 4 2

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

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

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

Intersection #7 CEDAR AVE / I-10 WB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.674
Loss Time (sec): 6 Average Delay (sec/veh): 22.0
Optimal Cycle: 39 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 3 0 1 0 0 0 0 0 0 0 1! 0 1

Volume Module:
Base Vol: 136 682 0 0 1009 490 0 0 0 245 0 482
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: 136 682 0 0 1009 490 0 0 0 245 0 482
Added Vol: 0 21 0 0 9 15 0 0 0 0 0 12
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 136 703 0 0 1018 505 0 0 0 245 0 494
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: 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 Volume: 136 703 0 0 1018 505 0 0 0 245 0 494
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 136 703 0 0 1018 505 0 0 0 245 0 494
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: 136 703 0 0 1018 505 0 0 0 245 0 494

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 3.00 1.00 0.00 0.00 0.00 0.50 0.00 1.50
Final Sat.: 1700 3600 0 0 5400 1800 0 0 0 896 0 2704

Capacity Analysis Module:
Vol/Sat: 0.08 0.20 0.00 0.00 0.19 0.28 0.00 0.00 0.00 0.27 0.00 0.18
Crit Moves: ****
Green/Cycle: 0.12 0.53 0.00 0.00 0.42 0.42 0.00 0.00 0.00 0.41 0.00 0.41
Volume/Cap: 0.67 0.37 0.00 0.00 0.45 0.67 0.00 0.00 0.00 0.67 0.00 0.45
Delay/Veh: 50.9 13.6 0.0 0.0 21.2 26.1 0.0 0.0 0.0 26.0 0.0 21.8
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: 50.9 13.6 0.0 0.0 21.2 26.1 0.0 0.0 0.0 26.0 0.0 21.8
LOS by Move: D B A A C C A A C A C A
HCM2kAvgQ: 4 6 0 0 7 12 0 0 0 13 0 7

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

BLOOMINGTON HOUSING PROJECT - 135614
FORECAST EXISTING PLUS PROJECT CONDITIONS
PM PEAK HOUR

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

Intersection #8 CEDAR AVE / I-10 EB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.532
Loss Time (sec): 6 Average Delay (sec/veh): 21.4
Optimal Cycle: 29 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 3 0 1 1 0 2 0 0 1 0 1! 0 0 0 0 0 0 0

Volume Module:
Base Vol: 0 498 249 341 910 0 322 0 103 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: 0 498 249 341 910 0 322 0 103 0 0 0
Added Vol: 0 0 0 9 0 0 21 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 498 249 350 910 0 343 0 103 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: 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 Volume: 0 498 249 350 910 0 343 0 103 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 498 249 350 910 0 343 0 103 0 0 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: 0 498 249 350 910 0 343 0 103 0 0 0

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.96 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 3.00 1.00 1.00 2.00 0.00 1.63 0.00 0.37 0.00 0.00 0.00
Final Sat.: 0 5400 1800 1700 3600 0 2834 0 660 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.09 0.14 0.21 0.25 0.00 0.12 0.00 0.16 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.26 0.26 0.39 0.65 0.00 0.29 0.00 0.29 0.00 0.00 0.00
Volume/Cap: 0.00 0.35 0.53 0.53 0.39 0.00 0.41 0.00 0.53 0.00 0.00 0.00
Delay/Veh: 0.0 30.3 33.0 24.5 8.5 0.0 28.7 0.0 30.3 0.0 0.0 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 30.3 33.0 24.5 8.5 0.0 28.7 0.0 30.3 0.0 0.0 0.0
LOS by Move: A C C C A C A C A C A A
HCM2kAvgQ: 0 4 7 9 6 0 6 0 8 0 0 0

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

**Forecast Year 2015 With Ambient Traffic Without
Project Conditions**

BLOOMINGTON HOUSING PROJECT - 135614
 FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
 AM PEAK HOUR

Scenario Report

Scenario: 2015+1&NP-AM
 Command: 2015+1&NP-AM
 Volume: AM
 Geometry: EX
 Impact Fee: Default Impact Fee
 Trip Generation: NONE
 Trip Distribution: NONE
 Paths: Default Path
 Routes: Default Route
 Configuration: 2015+1&NP-AM

BLOOMINGTON HOUSING PROJECT - 135614
 FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
 AM PEAK HOUR

Impact Analysis Report
Level of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 4 LOCUST AVE / VALLEY BLVD	LOS Veh	C	LOS Veh	C	+ 0.000 D/V
	B 19.0	0.225	B 19.0	0.225	
# 5 LINDEN AVE / VALLEY BLVD	B 14.1	0.231	B 14.1	0.231	+ 0.000 D/V
# 6 CEDAR AVE / VALLEY BLVD	C 23.5	0.445	C 23.5	0.445	+ 0.000 D/V
# 7 CEDAR AVE / I-10 WB RAMPS	B 19.8	0.795	B 19.8	0.795	+ 0.000 D/V
# 8 CEDAR AVE / I-10 EB RAMPS	C 25.7	0.656	C 25.7	0.656	+ 0.000 D/V

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 LOCUST AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.225
Loss Time (sec): 6 Average Delay (sec/veh): 19.0
Optimal Cycle: 18 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1 0 0 0 0 1 0 2 0 1

Volume Module:

Base Vol: 1 3 12 98 5 69 30 303 4 19 340 41
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 1 3 12 100 5 70 31 309 4 19 347 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: 1 3 12 100 5 70 31 309 4 19 347 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: 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 Volume: 1 3 12 100 5 70 31 309 4 19 347 42
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1 3 12 100 5 70 31 309 4 19 347 42
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: 1 3 12 100 5 70 31 309 4 19 347 42

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.06 0.19 0.75 0.57 0.03 0.40 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 113 338 1350 1026 52 722 1700 3600 1800 1700 3600 1800

Capacity Analysis Module:

Vol/Sat: 0.01 0.01 0.01 0.10 0.10 0.10 0.02 0.09 0.00 0.01 0.10 0.02
Crit Moves: *****
Green/Cycle: 0.43 0.43 0.43 0.43 0.43 0.43 0.08 0.45 0.45 0.06 0.43 0.43
Volume/Cap: 0.02 0.02 0.02 0.23 0.23 0.23 0.23 0.19 0.01 0.19 0.23 0.05
Delay/Veh: 16.3 16.3 16.3 18.0 18.0 18.0 44.0 16.7 15.3 45.7 18.2 16.8
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: 16.3 16.3 16.3 18.0 18.0 18.0 44.0 16.7 15.3 45.7 18.2 16.8
LOS by Move: B B B B B B D B D B B
HCM2kAvgQ: 0 0 0 3 3 3 1 3 0 1 3 1

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

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 LINDEN AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.231
Loss Time (sec): 6 Average Delay (sec/veh): 14.1
Optimal Cycle: 18 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 1 0

Volume Module:

Base Vol: 5 2 5 148 10 36 6 372 8 3 394 42
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 5 2 5 151 10 37 6 379 8 3 402 43
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: 5 2 5 151 10 37 6 379 8 3 402 43
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: 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 Volume: 5 2 5 151 10 37 6 379 8 3 402 43
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 5 2 5 151 10 37 6 379 8 3 402 43
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: 5 2 5 151 10 37 6 379 8 3 402 43

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.71 0.29 1.00 0.94 0.06 1.00 1.00 1.96 0.04 1.00 1.81 0.19
Final Sat.: 1286 514 1800 1686 114 1800 1700 3524 76 1700 3253 347

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.09 0.09 0.02 0.00 0.11 0.11 0.00 0.12 0.12
Crit Moves: *****
Green/Cycle: 0.39 0.39 0.39 0.39 0.39 0.39 0.02 0.54 0.54 0.01 0.54 0.54
Volume/Cap: 0.01 0.01 0.01 0.23 0.23 0.05 0.23 0.20 0.20 0.20 0.23 0.23
Delay/Veh: 18.8 18.8 18.8 20.7 20.7 19.1 53.0 11.8 11.8 55.4 12.3 12.3
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: 18.8 18.8 18.8 20.7 20.7 19.1 53.0 11.8 11.8 55.4 12.3 12.3
LOS by Move: B B B C C B D B E B B
HCM2kAvgQ: 0 0 0 3 3 1 0 3 3 0 4 4

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

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 CEDAR AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.445
Loss Time (sec): 8 Average Delay (sec/veh): 23.5
Optimal Cycle: 29 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: Protected Protected Protected Protected
Rights: Ovl Include Ovl Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 1 1 2 0 2 1 0 2 0 1 1 1 2 0 2 0 1

Volume Module:
Base Vol: 239 598 121 46 1000 35 41 102 499 227 144 19
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 244 610 123 47 1020 36 42 104 509 232 147 19
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: 244 610 123 47 1020 36 42 104 509 232 147 19
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: 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 Volume: 244 610 123 47 1020 36 42 104 509 232 147 19
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 244 610 123 47 1020 36 42 104 509 232 147 19
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: 244 610 123 47 1020 36 42 104 509 232 147 19

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00
Lanes: 2.00 2.00 1.00 2.00 2.90 0.10 2.00 1.00 2.00 2.00 2.00 1.00
Final Sat.: 3200 3600 1800 3200 5217 183 3200 1800 3600 3200 3600 1800

Capacity Analysis Module:
Vol/Sat: 0.08 0.17 0.07 0.01 0.20 0.20 0.01 0.06 0.14 0.07 0.04 0.01
Crit Moves: ****
Green/Cycle: 0.17 0.56 0.72 0.05 0.44 0.44 0.08 0.15 0.32 0.16 0.23 0.23
Volume/Cap: 0.44 0.30 0.09 0.30 0.44 0.44 0.17 0.39 0.44 0.44 0.17 0.05
Delay/Veh: 37.8 11.6 4.1 47.0 19.7 19.7 43.7 38.8 27.3 38.4 30.7 29.7
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: 37.8 11.6 4.1 47.0 19.7 19.7 43.7 38.8 27.3 38.4 30.7 29.7
LOS by Move: D B A D B B D C D C C
HCM2kAvgQ: 4 5 1 1 8 8 1 3 6 4 2 0

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

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 CEDAR AVE / I-10 WB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.795
Loss Time (sec): 6 Average Delay (sec/veh): 19.8
Optimal Cycle: 57 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 3 0 1 0 0 0 0 0 0 0 1 0 1

Volume Module:
Base Vol: 234 674 0 0 938 785 0 0 0 143 1 283
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 239 688 0 0 957 801 0 0 0 146 1 289
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: 239 688 0 0 957 801 0 0 0 146 1 289
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: 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 Volume: 239 688 0 0 957 801 0 0 0 146 1 289
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 239 688 0 0 957 801 0 0 0 146 1 289
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: 239 688 0 0 957 801 0 0 0 146 1 289

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 3.00 1.00 0.00 0.00 0.00 0.50 0.01 1.49
Final Sat.: 1700 3600 0 0 5400 1800 0 0 0 902 6 2692

Capacity Analysis Module:
Vol/Sat: 0.14 0.19 0.00 0.00 0.18 0.44 0.00 0.00 0.00 0.16 0.16 0.11
Crit Moves: ****
Green/Cycle: 0.18 0.74 0.00 0.00 0.56 0.56 0.00 0.00 0.00 0.20 0.20 0.20
Volume/Cap: 0.79 0.26 0.00 0.00 0.32 0.79 0.00 0.00 0.00 0.79 0.79 0.53
Delay/Veh: 53.0 4.3 0.0 0.0 11.8 21.9 0.0 0.0 0.0 45.7 45.7 36.2
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: 53.0 4.3 0.0 0.0 11.8 21.9 0.0 0.0 0.0 45.7 45.7 36.2
LOS by Move: D A A A B C A A A D D D
HCM2kAvgQ: 8 3 0 0 5 20 0 0 0 11 11 6

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

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 CEDAR AVE / I-10 EB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.656
Loss Time (sec): 6 Average Delay (sec/veh): 25.7
Optimal Cycle: 38 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 3 0 1 1 0 2 0 0 1 0 1! 0 0 0 0 0 0 0 0

Volume Module:
Base Vol: 0 600 258 425 651 0 334 3 203 0 0 0 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 612 263 434 664 0 341 3 207 0 0 0 0
Added Vol: 0 0 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 0 0
Initial Fut: 0 612 263 434 664 0 341 3 207 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 1.00
PHF 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 1.00
PHF Volume: 0 612 263 434 664 0 341 3 207 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 612 263 434 664 0 341 3 207 0 0 0 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 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 1.00
FinalVolume: 0 612 263 434 664 0 341 3 207 0 0 0 0

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.96 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 3.00 1.00 1.00 2.00 0.00 1.46 0.01 0.53 0.00 0.00 0.00
Final Sat.: 0 5400 1800 1700 3600 0 2508 14 959 0 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.11 0.15 0.26 0.18 0.00 0.14 0.22 0.22 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.22 0.22 0.39 0.61 0.00 0.33 0.33 0.33 0.00 0.00 0.00
Volume/Cap: 0.00 0.51 0.66 0.66 0.30 0.00 0.41 0.66 0.66 0.00 0.00 0.00
Delay/Veh: 0.0 34.4 39.3 27.5 9.3 0.0 26.3 30.6 30.6 0.0 0.0 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 34.4 39.3 27.5 9.3 0.0 26.3 30.6 30.6 0.0 0.0 0.0
LOS by Move: A C D C A A C C C A A A
HCM2kAvgQ: 0 6 8 12 5 0 6 11 11 0 0 0 0

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

BLOOMINGTON HOUSING PROJECT - 135614
 FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
 PM PEAK HOUR

Scenario Report
 Scenario: 2015+1&NP-PM

Command: 2015+1&NP-PM
 Volume: PM
 Geometry: EX
 Impact Fee: Default Impact Fee
 Trip Generation: NONE
 Trip Distribution: NONE
 Paths: Default Path
 Routes: Default Route
 Configuration: 2015+1&NP-PM

BLOOMINGTON HOUSING PROJECT - 135614
 FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
 PM PEAK HOUR

Impact Analysis Report
 Level of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 4 LOCUST AVE / VALLEY BLVD	LOS Veh	C	LOS Veh	C	+ 0.000 D/V
	B 15.3	0.356	B 15.3	0.356	
# 5 LINDEN AVE / VALLEY BLVD	B 12.8	0.352	B 12.8	0.352	+ 0.000 D/V
# 6 CEDAR AVE / VALLEY BLVD	C 27.6	0.541	C 27.6	0.541	+ 0.000 D/V
# 7 CEDAR AVE / I-10 WB RAMPS	C 22.3	0.675	C 22.3	0.675	+ 0.000 D/V
# 8 CEDAR AVE / I-10 EB RAMPS	C 21.2	0.531	C 21.2	0.531	+ 0.000 D/V

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 LOCUST AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.356
Loss Time (sec): 6 Average Delay (sec/veh): 15.3
Optimal Cycle: 22 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1 0 0 0 0 1 0 2 0 1

Volume Module:
Base Vol: 10 6 32 78 6 52 141 866 4 21 419 115
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 10 6 33 80 6 53 144 883 4 21 427 117
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: 10 6 33 80 6 53 144 883 4 21 427 117
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: 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 Volume: 10 6 33 80 6 53 144 883 4 21 427 117
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 10 6 33 80 6 53 144 883 4 21 427 117
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: 10 6 33 80 6 53 144 883 4 21 427 117

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.21 0.12 0.67 0.58 0.04 0.38 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 375 225 1200 1032 79 688 1700 3600 1800 1700 3600 1800

Capacity Analysis Module:
Vol/Sat: 0.03 0.03 0.03 0.08 0.08 0.08 0.08 0.25 0.00 0.01 0.12 0.07
Crit Moves: ****
Green/Cycle: 0.22 0.22 0.22 0.22 0.22 0.22 0.30 0.69 0.69 0.04 0.42 0.42
Volume/Cap: 0.13 0.13 0.13 0.36 0.36 0.36 0.28 0.36 0.00 0.36 0.28 0.15
Delay/Veh: 31.7 31.7 31.7 33.8 33.8 33.8 27.0 6.5 4.9 50.7 19.0 17.9
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: 31.7 31.7 31.7 33.8 33.8 33.8 27.0 6.5 4.9 50.7 19.0 17.9
LOS by Move: C C C C C C A A D B B B
HCM2kAvgQ: 1 1 1 4 4 4 3 6 0 1 4 2

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

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 LINDEN AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.352
Loss Time (sec): 6 Average Delay (sec/veh): 12.8
Optimal Cycle: 22 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 1 0

Volume Module:
Base Vol: 22 22 12 121 15 32 77 853 22 10 494 113
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 22 22 12 123 15 33 79 870 22 10 504 115
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: 22 22 12 123 15 33 79 870 22 10 504 115
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: 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 Volume: 22 22 12 123 15 33 79 870 22 10 504 115
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 22 22 12 123 15 33 79 870 22 10 504 115
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: 22 22 12 123 15 33 79 870 22 10 504 115

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.50 0.50 1.00 0.89 0.11 1.00 1.00 1.95 0.05 1.00 1.63 0.37
Final Sat.: 900 900 1800 1601 199 1800 1700 3509 91 1700 2930 670

Capacity Analysis Module:
Vol/Sat: 0.02 0.02 0.01 0.08 0.08 0.02 0.05 0.25 0.25 0.01 0.17 0.17
Crit Moves: ****
Green/Cycle: 0.22 0.22 0.22 0.22 0.22 0.22 0.15 0.70 0.70 0.02 0.57 0.57
Volume/Cap: 0.11 0.11 0.03 0.35 0.35 0.08 0.30 0.35 0.35 0.35 0.30 0.30
Delay/Veh: 31.4 31.4 30.7 33.6 33.6 31.2 38.3 5.9 5.9 55.9 11.3 11.3
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: 31.4 31.4 30.7 33.6 33.6 31.2 38.3 5.9 5.9 55.9 11.3 11.3
LOS by Move: C C C C C D A A E B B B
HCM2kAvgQ: 1 1 0 4 4 1 2 5 5 1 5 5

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

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 CEDAR AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.541
Loss Time (sec): 8 Average Delay (sec/veh): 27.6
Optimal Cycle: 34 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: Protected Protected Protected Protected
Rights: Ov1 Include Ov1 Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 1 1 2 0 2 1 0 2 0 1 1 1 2 0 2 0 1

Volume Module:
Base Vol: 322 662 152 66 779 70 197 394 451 235 274 67
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 328 675 155 67 795 71 201 402 460 240 280 68
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: 328 675 155 67 795 71 201 402 460 240 280 68
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: 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 Volume: 328 675 155 67 795 71 201 402 460 240 280 68
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 328 675 155 67 795 71 201 402 460 240 280 68
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: 328 675 155 67 795 71 201 402 460 240 280 68

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00
Lanes: 2.00 2.00 1.00 2.00 2.75 0.25 2.00 1.40 1.60 2.00 2.00 1.00
Final Sat.: 3200 3600 1800 3200 4955 445 3200 2518 2882 3200 3600 1800

Capacity Analysis Module:
Vol/Sat: 0.10 0.19 0.09 0.02 0.16 0.16 0.06 0.16 0.16 0.07 0.08 0.04
Crit Moves: ****
Green/Cycle: 0.19 0.44 0.58 0.05 0.30 0.30 0.19 0.30 0.48 0.14 0.24 0.24
Volume/Cap: 0.54 0.43 0.15 0.43 0.54 0.54 0.32 0.54 0.33 0.54 0.32 0.16
Delay/Veh: 37.6 19.6 9.9 48.1 29.8 29.8 35.0 29.9 15.9 41.5 31.6 30.2
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: 37.6 19.6 9.9 48.1 29.8 29.8 35.0 29.9 15.9 41.5 31.6 30.2
LOS by Move: D B A D C C B D C C
HCM2kAvgQ: 5 7 2 2 8 8 3 8 5 5 4 2

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

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 CEDAR AVE / I-10 WB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.675
Loss Time (sec): 6 Average Delay (sec/veh): 22.3
Optimal Cycle: 39 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 3 0 1 0 0 0 0 0 0 0 1 0 1

Volume Module:
Base Vol: 136 682 0 0 1009 490 0 0 0 245 0 482
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 139 696 0 0 1029 500 0 0 0 250 0 492
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: 139 696 0 0 1029 500 0 0 0 250 0 492
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: 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 Volume: 139 696 0 0 1029 500 0 0 0 250 0 492
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 139 696 0 0 1029 500 0 0 0 250 0 492
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: 139 696 0 0 1029 500 0 0 0 250 0 492

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 3.00 1.00 0.00 0.00 0.00 0.50 0.00 1.50
Final Sat.: 1700 3600 0 0 5400 1800 0 0 0 907 0 2693

Capacity Analysis Module:
Vol/Sat: 0.08 0.19 0.00 0.00 0.19 0.28 0.00 0.00 0.00 0.28 0.00 0.18
Crit Moves: ****
Green/Cycle: 0.12 0.53 0.00 0.00 0.41 0.41 0.00 0.00 0.00 0.41 0.00 0.41
Volume/Cap: 0.68 0.36 0.00 0.00 0.46 0.68 0.00 0.00 0.00 0.68 0.00 0.45
Delay/Veh: 50.7 13.7 0.0 0.0 21.6 26.5 0.0 0.0 0.0 25.9 0.0 21.6
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: 50.7 13.7 0.0 0.0 21.6 26.5 0.0 0.0 0.0 25.9 0.0 21.6
LOS by Move: D B A A C C A A A C A C
HCM2kAvgQ: 4 6 0 0 7 12 0 0 0 13 0 7

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

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITHOUT PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 CEDAR AVE / I-10 EB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.531
Loss Time (sec): 6 Average Delay (sec/veh): 21.2
Optimal Cycle: 29 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 3 0 1 1 0 2 0 0 1 0 1! 0 0 0 0 0 0 0 0

Volume Module:
Base Vol: 0 498 249 341 910 0 322 0 103 0 0 0 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 508 254 348 928 0 328 0 105 0 0 0 0
Added Vol: 0 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 0
Initial Fut: 0 508 254 348 928 0 328 0 105 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: 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 Volume: 0 508 254 348 928 0 328 0 105 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 508 254 348 928 0 328 0 105 0 0 0 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: 0 508 254 348 928 0 328 0 105 0 0 0 0

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.96 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 3.00 1.00 1.00 2.00 0.00 1.62 0.00 0.38 0.00 0.00 0.00
Final Sat.: 0 5400 1800 1700 3600 0 2807 0 686 0 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.09 0.14 0.20 0.26 0.00 0.12 0.00 0.15 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.27 0.27 0.39 0.65 0.00 0.29 0.00 0.29 0.00 0.00 0.00
Volume/Cap: 0.00 0.35 0.53 0.53 0.40 0.00 0.41 0.00 0.53 0.00 0.00 0.00
Delay/Veh: 0.0 29.9 32.5 24.6 8.3 0.0 28.9 0.0 30.6 0.0 0.0 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 29.9 32.5 24.6 8.3 0.0 28.9 0.0 30.6 0.0 0.0 0.0
LOS by Move: A C C A A C A C A A A
HCM2kAvgQ: 0 4 7 8 7 0 5 0 8 0 0 0

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

**Forecast Year 2015 With Ambient Traffic With
Project Conditions**

BLOOMINGTON HOUSING PROJECT - 135614
 FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
 AM PEAK HOUR

Scenario Report
 Scenario: 2015+1%WP-AM

Command: 2015+1%WP-AM
 Volume: AM
 Geometry: EX
 Impact Fee: Default Impact Fee
 Trip Generation: PROJ-AM
 Trip Distribution: DIST
 Paths: Default Path
 Routes: Default Route
 Configuration: 2015+1%WP-AM

BLOOMINGTON HOUSING PROJECT - 135614
 FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
 AM PEAK HOUR

Impact Analysis Report
 Level of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
	LOS	Veh C	LOS	Veh C	
# 1 DWY 1 / VALLEY BLVD	A	0.0 0.000	A	9.5 0.006	+ 9.549 D/V
# 2 MAIN DWY/ VALLEY BLVD	A	0.2 0.124	A	6.0 0.160	+ 5.758 D/V
# 3 DWY 2 / VALLEY BLVD	A	0.0 0.000	A	9.6 0.006	+ 9.569 D/V
# 4 LOCUST AVE / VALLEY BLVD	B	19.0 0.225	B	18.7 0.232	-0.272 D/V
# 5 LINDEN AVE / VALLEY BLVD	B	14.1 0.231	B	14.0 0.237	-0.072 D/V
# 6 CEDAR AVE / VALLEY BLVD	C	23.5 0.445	C	23.8 0.454	+ 0.308 D/V
# 7 CEDAR AVE / I-10 WB RAMPS	B	19.8 0.795	B	19.9 0.805	+ 0.157 D/V
# 8 CEDAR AVE / I-10 EB RAMPS	C	25.7 0.656	C	25.9 0.665	+ 0.159 D/V

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
AM PEAK HOUR

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

Intersection #1 DWY 1 / VALLEY BLVD
Average Delay (sec/veh): 0.1 Worst Case Level Of Service: A[9.5]
Approach: North Bound South Bound East Bound West Bound
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1 0 0 2 0 0 0 0 2 0 0
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 337 0 0 410 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 0 0 0 0 0 0 0 344 0 0 418 0
Added Vol: 0 0 0 0 0 0 5 0 6 0 0 11 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 5 0 350 0 0 429 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: 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 Volume: 0 0 0 0 0 0 5 0 350 0 0 429 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 5 0 350 0 0 429 0
Critical Gap Module:
Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx 6.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxx xxxxx xxxxx 215 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 796 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 796 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx 0.01 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx 9.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * A * * * * *
ApproachDel: xxxxxxx 9.5 xxxxxxx xxxxxxx
ApproachLOS: * A * *
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
AM PEAK HOUR

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

Intersection #2 MAIN DWY/ VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.160
Loss Time (sec): 6 Average Delay (sec/veh): 6.0
Optimal Cycle: 17 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 Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 0 1 0 0 1 0 2 0 1 1 0 2 0 1
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 337 0 0 410 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 0 0 0 0 0 0 0 344 0 0 418 0
Added Vol: 0 0 0 48 0 5 6 0 0 0 0 5 17
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 48 0 5 6 344 0 0 423 17
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: 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 Volume: 0 0 0 48 0 5 6 344 0 0 423 17
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 48 0 5 6 344 0 0 423 17
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 48 0 5 6 344 0 0 423 17
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 0.00 0.00 0.91 0.00 0.09 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 0 0 0 1630 0 170 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.03 0.00 0.03 0.00 0.10 0.00 0.00 0.12 0.01
Crit Moves: *****
Green/Cycle: 0.00 0.00 0.00 0.18 0.00 0.18 0.02 0.76 0.00 0.00 0.73 0.73
Volume/Cap: 0.00 0.00 0.00 0.16 0.00 0.16 0.16 0.13 0.00 0.00 0.16 0.01
Delay/Veh: 0.0 0.0 0.0 34.5 0.0 34.5 50.0 3.3 0.0 0.0 4.0 3.6
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 34.5 0.0 34.5 50.0 3.3 0.0 0.0 4.0 3.6
LOS by Move: A A A C A C D A A A A A
HCM2kAvqQ: 0 0 0 1 0 1 0 1 0 0 2 0
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
AM PEAK HOUR

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

Intersection #3 DWY 2 / VALLEY BLVD
Average Delay (sec/veh): 0.1 Worst Case Level Of Service: A [9.6]
Approach: North Bound South Bound East Bound West Bound
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1 0 0 2 0 0 0 0 2 0 0
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 337 0 0 410 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 0 0 0 0 0 0 0 344 0 0 418 0
Added Vol: 0 0 0 0 0 0 5 0 48 0 0 17 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 5 0 392 0 0 435 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: 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 Volume: 0 0 0 0 0 0 5 0 392 0 0 435 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 5 0 392 0 0 435 0
Critical Gap Module:
Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx 6.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Capacity Module:
Conflict Vol: xxxxx xxxxx xxxxx xxxxx xxxxx 218 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 793 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 793 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx 0.01 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx 9.6 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * *
ApproachDel: xxxxxxx 9.6 xxxxxxx xxxxxxx
ApproachLOS: * A * *
Note: Queue reported is the number of cars per lane.

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FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
AM PEAK HOUR

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

Intersection #4 LOCUST AVE / VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.232
Loss Time (sec): 6 Average Delay (sec/veh): 18.7
Optimal Cycle: 18 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: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 2 0 1 1 0 2 0 1
Volume Module:
Base Vol: 1 3 12 98 5 69 30 303 4 19 340 41
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 1 3 12 100 5 70 31 309 4 19 347 42
Added Vol: 0 0 0 0 0 0 1 3 45 0 0 15 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 3 12 100 5 71 34 354 4 19 362 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: 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 Volume: 1 3 12 100 5 71 34 354 4 19 362 42
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1 3 12 100 5 71 34 354 4 19 362 42
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: 1 3 12 100 5 71 34 354 4 19 362 42
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.06 0.19 0.75 0.57 0.03 0.40 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 113 338 1350 1020 52 728 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.01 0.01 0.01 0.10 0.10 0.10 0.02 0.10 0.00 0.01 0.10 0.02
Crit Moves: *****
Green/Cycle: 0.42 0.42 0.42 0.42 0.42 0.42 0.09 0.46 0.46 0.05 0.43 0.43
Volume/Cap: 0.02 0.02 0.02 0.23 0.23 0.23 0.23 0.21 0.00 0.21 0.23 0.05
Delay/Veh: 16.9 16.9 16.9 18.7 18.7 18.7 43.5 16.0 14.4 46.4 18.0 16.5
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: 16.9 16.9 16.9 18.7 18.7 18.7 43.5 16.0 14.4 46.4 18.0 16.5
LOS by Move: B B B B B B D B B D B B
HCM2kAvqQ: 0 0 0 3 3 3 1 3 0 1 3 1
Note: Queue reported is the number of cars per lane.

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FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 LINDEN AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.237
Loss Time (sec): 6 Average Delay (sec/veh): 14.0
Optimal Cycle: 19 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 0 1 1 0

Volume Module:

Base Vol: 5 2 5 148 10 36 6 372 8 3 394 42
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 5 2 5 151 10 37 6 379 8 3 402 43
Added Vol: 0 0 0 0 0 1 3 42 0 0 14 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 5 2 5 151 10 38 9 421 8 3 416 43
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: 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 Volume: 5 2 5 151 10 38 9 421 8 3 416 43
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 5 2 5 151 10 38 9 421 8 3 416 43
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: 5 2 5 151 10 38 9 421 8 3 416 43

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.71 0.29 1.00 0.94 0.06 1.00 1.00 1.96 0.04 1.00 1.81 0.19
Final Sat.: 1286 514 1800 1686 114 1800 1700 3532 68 1700 3264 336

Capacity Analysis Module:

Vol/Sat: 0.00 0.00 0.00 0.09 0.09 0.02 0.01 0.12 0.12 0.00 0.13 0.13
Crit Moves: ****
Green/Cycle: 0.38 0.38 0.38 0.38 0.38 0.38 0.02 0.55 0.55 0.01 0.54 0.54
Volume/Cap: 0.01 0.01 0.01 0.24 0.24 0.06 0.24 0.22 0.22 0.22 0.24 0.24
Delay/Veh: 19.4 19.4 19.4 21.4 21.4 19.8 51.2 11.4 11.4 56.8 12.3 12.3
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: 19.4 19.4 19.4 21.4 21.4 19.8 51.2 11.4 11.4 56.8 12.3 12.3
LOS by Move: B B C C B D B E B B
HCM2kAvgQ: 0 0 0 3 3 1 1 3 3 0 4 4

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

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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 CEDAR AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.454
Loss Time (sec): 8 Average Delay (sec/veh): 23.8
Optimal Cycle: 30 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: Protected Protected Protected Protected
Rights: Ovl Include Ovl Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 1 1 2 0 2 1 0 2 0 1 1 1 2 0 2 0 1

Volume Module:

Base Vol: 239 598 121 46 1000 35 41 102 499 227 144 19
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 244 610 123 47 1020 36 42 104 509 232 147 19
Added Vol: 9 0 0 0 0 4 13 3 26 0 1 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 253 610 123 47 1020 40 55 107 535 232 148 19
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: 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 Volume: 253 610 123 47 1020 40 55 107 535 232 148 19
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 253 610 123 47 1020 40 55 107 535 232 148 19
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: 253 610 123 47 1020 40 55 107 535 232 148 19

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00
Lanes: 2.00 2.00 1.00 2.00 2.89 0.11 2.00 1.00 2.00 2.00 2.00 1.00
Final Sat.: 3200 3600 1800 3200 5198 202 3200 1800 3600 3200 3600 1800

Capacity Analysis Module:

Vol/Sat: 0.08 0.17 0.07 0.01 0.20 0.20 0.02 0.06 0.15 0.07 0.04 0.01
Crit Moves: ****
Green/Cycle: 0.17 0.56 0.72 0.05 0.43 0.43 0.09 0.15 0.33 0.16 0.22 0.22
Volume/Cap: 0.45 0.30 0.10 0.30 0.45 0.45 0.19 0.39 0.45 0.45 0.19 0.05
Delay/Veh: 37.6 11.8 4.3 47.1 20.2 20.2 42.2 38.2 26.8 38.7 31.8 30.7
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: 37.6 11.8 4.3 47.1 20.2 20.2 42.2 38.2 26.8 38.7 31.8 30.7
LOS by Move: D B A D C C D D C D C C
HCM2kAvgQ: 4 5 1 1 8 8 1 3 7 4 2 0

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

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FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 CEDAR AVE / I-10 WB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.805
Loss Time (sec): 6 Average Delay (sec/veh): 19.9
Optimal Cycle: 59 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 3 0 1 0 0 0 0 0 0 0 1 0 1

Volume Module:
Base Vol: 234 674 0 0 938 785 0 0 0 143 1 283
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 239 688 0 0 957 801 0 0 0 146 1 289
Added Vol: 0 6 0 0 10 16 0 0 0 0 0 3
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 239 694 0 0 967 817 0 0 0 146 1 292
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: 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 Volume: 239 694 0 0 967 817 0 0 0 146 1 292
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 239 694 0 0 967 817 0 0 0 146 1 292
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: 239 694 0 0 967 817 0 0 0 146 1 292

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 3.00 1.00 0.00 0.00 0.00 0.50 0.01 1.49
Final Sat.: 1700 3600 0 0 5400 1800 0 0 0 897 6 2697

Capacity Analysis Module:
Vol/Sat: 0.14 0.19 0.00 0.00 0.18 0.45 0.00 0.00 0.00 0.16 0.16 0.11
Crit Moves: ****
Green/Cycle: 0.17 0.74 0.00 0.00 0.56 0.56 0.00 0.00 0.00 0.20 0.20 0.20
Volume/Cap: 0.81 0.26 0.00 0.00 0.32 0.81 0.00 0.00 0.00 0.81 0.81 0.54
Delay/Veh: 54.4 4.3 0.0 0.0 11.7 22.2 0.0 0.0 0.0 46.6 46.6 36.4
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: 54.4 4.3 0.0 0.0 11.7 22.2 0.0 0.0 0.0 46.6 46.6 36.4
LOS by Move: D A C A B C A A D D D
HCM2kAvgQ: 8 3 0 0 5 21 0 0 0 11 11 6

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

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 CEDAR AVE / I-10 EB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.665
Loss Time (sec): 6 Average Delay (sec/veh): 25.9
Optimal Cycle: 38 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 3 0 1 1 0 2 0 0 1 0 1 0 0 0 0 0 0 0

Volume Module:
Base Vol: 0 600 258 425 651 0 334 3 203 0 0 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 612 263 434 664 0 341 3 207 0 0 0
Added Vol: 0 0 0 10 0 0 6 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 612 263 444 664 0 347 3 207 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: 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 Volume: 0 612 263 444 664 0 347 3 207 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 612 263 444 664 0 347 3 207 0 0 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: 0 612 263 444 664 0 347 3 207 0 0 0

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.96 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 3.00 1.00 1.00 2.00 0.00 1.46 0.01 0.53 0.00 0.00 0.00
Final Sat.: 0 5400 1800 1700 3600 0 2517 14 952 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.11 0.15 0.26 0.18 0.00 0.14 0.22 0.22 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.22 0.22 0.39 0.61 0.00 0.33 0.33 0.33 0.00 0.00 0.00
Volume/Cap: 0.00 0.52 0.66 0.66 0.30 0.00 0.42 0.66 0.66 0.00 0.00 0.00
Delay/Veh: 0.0 34.7 39.9 27.5 9.3 0.0 26.5 30.9 30.9 0.0 0.0 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 34.7 39.9 27.5 9.3 0.0 26.5 30.9 30.9 0.0 0.0 0.0
LOS by Move: A C D C A C C C A A A
HCM2kAvgQ: 0 6 8 12 5 0 6 11 11 0 0 0

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

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 PM PEAK HOUR

Scenario Report
 Scenario: 2015+1%WP-PM

Command: 2015+1%WP-PM
 Volume: PM
 Geometry: EX
 Impact Fee: Default Impact Fee
 Trip Generation: PROJ-PM
 Trip Distribution: DIST
 Paths: Default Path
 Routes: Default Route
 Configuration: 2015+1%WP-PM

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 PM PEAK HOUR

Impact Analysis Report
 Level of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
	LOS	Veh C	LOS	Veh C	
# 1 DWY 1 / VALLEY BLVD	A	0.0 0.000	A	9.8 0.004	+ 9.791 D/V
# 2 MAIN DWY/ VALLEY BLVD	A	0.3 0.305	A	3.8 0.335	+ 3.550 D/V
# 3 DWY 2 / VALLEY BLVD	A	0.0 0.000	A	10.0 0.004	+ 9.968 D/V
# 4 LOCUST AVE / VALLEY BLVD	B	15.3 0.356	B	15.0 0.371	-0.213 D/V
# 5 LINDEN AVE / VALLEY BLVD	B	12.8 0.352	B	12.5 0.363	-0.218 D/V
# 6 CEDAR AVE / VALLEY BLVD	C	27.6 0.541	C	27.8 0.561	+ 0.164 D/V
# 7 CEDAR AVE / I-10 WB RAMPS	C	22.3 0.675	C	22.3 0.688	+ 0.005 D/V
# 8 CEDAR AVE / I-10 EB RAMPS	C	21.2 0.531	C	21.5 0.543	+ 0.324 D/V

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PM PEAK HOUR

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

Intersection #1 DWY 1 / VALLEY BLVD
Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A[9.8]
Approach: North Bound South Bound East Bound West Bound
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1 0 0 2 0 0 0 0 2 0 0
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 1011 0 0 481 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 0 0 0 0 0 0 0 1031 0 0 491 0
Added Vol: 0 0 0 0 0 0 3 0 21 0 0 12 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 3 0 1052 0 0 503 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: 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 Volume: 0 0 0 0 0 0 3 0 1052 0 0 503 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 3 0 1052 0 0 503 0
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx 6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Capacity Module:
Cnflct Vol: xxxx xxxx xxxxx xxxx xxxx 251 xxxx xxxx xxxxx xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx xxxx xxxx 754 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Move Cap.: xxxx xxxx xxxxx xxxx xxxx 754 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Volume/Cap: xxxx xxxx xxxxx xxxx xxxx 0.00 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxx xxxx xxxxx xxxx xxxx 0.0 xxxx xxxx xxxxx xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx 9.8 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 xxxxx xxxx xxxxx xxxxx 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: * * * * * A * * * * *
ApproachDel: xxxxxx 9.8 xxxxxx xxxxxx
ApproachLOS: * A * *
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
PM PEAK HOUR

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

Intersection #2 MAIN DWY/ VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.335
Loss Time (sec): 6 Average Delay (sec/veh): 3.8
Optimal Cycle: 21 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 Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 0 0 1 0 0 1 0 2 0 1 1 0 2 0 1
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 1011 0 0 481 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 0 0 0 0 0 0 0 1031 0 0 491 0
Added Vol: 0 0 0 0 44 0 8 21 0 0 0 0 3 61
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 44 0 8 21 1031 0 0 494 61
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: 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 Volume: 0 0 0 0 44 0 8 21 1031 0 0 494 61
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 0 44 0 8 21 1031 0 0 494 61
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 0 44 0 8 21 1031 0 0 494 61
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 0.00 0.00 0.85 0.00 0.15 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 0 0 0 1523 0 277 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.03 0.00 0.03 0.01 0.29 0.00 0.00 0.14 0.03
Crit Moves: *****
Green/Cycle: 0.00 0.00 0.00 0.09 0.00 0.09 0.07 0.85 0.00 0.00 0.78 0.78
Volume/Cap: 0.00 0.00 0.00 0.34 0.00 0.34 0.18 0.34 0.00 0.00 0.18 0.04
Delay/Veh: 0.0 0.0 0.0 44.3 0.0 44.3 44.4 1.6 0.0 0.0 2.8 2.4
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 44.3 0.0 44.3 44.4 1.6 0.0 0.0 2.8 2.4
LOS by Move: A A A D A D D A A A A A
HCM2kAvqQ: 0 0 0 2 0 2 1 3 0 0 2 0
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
PM PEAK HOUR

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

Intersection #3 DWY 2 / VALLEY BLVD
Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A [10.0]
Approach: North Bound South Bound East Bound West Bound
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1 0 0 2 0 0 0 0 2 0 0
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 1011 0 0 481 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 0 0 0 0 0 0 0 1031 0 0 491 0
Added Vol: 0 0 0 0 0 0 3 0 44 0 0 61 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 3 0 1075 0 0 552 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: 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 Volume: 0 0 0 0 0 0 3 0 1075 0 0 552 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 3 0 1075 0 0 552 0
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxx 6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Capacity Module:
Cnflct Vol: xxxx xxxx xxxxx xxxx xxxx 276 xxxx xxxx xxxxx xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx xxxx xxxx 728 xxxx xxxx xxxxx xxxx xxxx xxxxx
Move Cap.: xxxx xxxx xxxxx xxxx xxxx 728 xxxx xxxx xxxxx xxxx xxxx xxxxx
Volume/Cap: xxxx xxxx xxxx xxxx xxxx 0.00 xxxx xxxx xxxxx xxxx xxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxx xxxx xxxxx xxxx xxxx 0.0 xxxx xxxx xxxxx xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx 10.0 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 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: * * * * * A * * * * *
ApproachDel: xxxxxx 10.0 xxxxxx xxxxxx
ApproachLOS: * A *
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
PM PEAK HOUR

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

Intersection #4 LOCUST AVE / VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.371
Loss Time (sec): 6 Average Delay (sec/veh): 15.0
Optimal Cycle: 22 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: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 2 0 1 1 0 2 0 1
Volume Module:
Base Vol: 10 6 32 78 6 52 141 866 4 21 419 115
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 10 6 33 80 6 53 144 883 4 21 427 117
Added Vol: 0 0 0 0 0 4 3 41 0 0 57 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 6 33 80 6 57 147 924 4 21 484 117
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: 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 Volume: 10 6 33 80 6 57 147 924 4 21 484 117
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 10 6 33 80 6 57 147 924 4 21 484 117
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: 10 6 33 80 6 57 147 924 4 21 484 117
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.21 0.12 0.67 0.56 0.04 0.40 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 375 225 1200 1003 77 719 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.03 0.03 0.03 0.08 0.08 0.08 0.09 0.26 0.00 0.01 0.13 0.07
Crit Moves: *****
Green/Cycle: 0.21 0.21 0.21 0.21 0.21 0.21 0.28 0.69 0.69 0.03 0.44 0.44
Volume/Cap: 0.13 0.13 0.13 0.37 0.37 0.37 0.30 0.37 0.00 0.37 0.30 0.15
Delay/Veh: 31.9 31.9 31.9 34.2 34.2 34.2 28.4 6.5 4.7 51.2 18.1 16.7
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: 31.9 31.9 31.9 34.2 34.2 34.2 28.4 6.5 4.7 51.2 18.1 16.7
LOS by Move: C C C C C C A A D B B
HCM2kAvqQ: 1 1 1 4 4 4 4 6 0 1 5 2
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 LINDEN AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.363
Loss Time (sec): 6 Average Delay (sec/veh): 12.5
Optimal Cycle: 22 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 1 0 1 1 0

Volume Module:

Base Vol: 22 22 12 121 15 32 77 853 22 10 494 113
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 22 22 12 123 15 33 79 870 22 10 504 115
Added Vol: 0 0 0 0 0 0 4 3 38 0 0 53 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 22 22 12 123 15 37 82 908 22 10 557 115
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: 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 Volume: 22 22 12 123 15 37 82 908 22 10 557 115
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 22 22 12 123 15 37 82 908 22 10 557 115
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: 22 22 12 123 15 37 82 908 22 10 557 115

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.50 0.50 1.00 0.89 0.11 1.00 1.00 1.95 0.05 1.00 1.66 0.34
Final Sat.: 900 900 1800 1601 199 1800 1700 3513 87 1700 2983 617

Capacity Analysis Module:

Vol/Sat: 0.02 0.02 0.01 0.08 0.08 0.02 0.05 0.26 0.26 0.01 0.19 0.19
Crit Moves: ****
Green/Cycle: 0.21 0.21 0.21 0.21 0.21 0.21 0.15 0.71 0.71 0.02 0.58 0.58
Volume/Cap: 0.12 0.12 0.03 0.36 0.36 0.10 0.32 0.36 0.36 0.36 0.32 0.32
Delay/Veh: 32.0 32.0 31.3 34.2 34.2 31.8 38.8 5.7 5.7 56.5 11.0 11.0
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: 32.0 32.0 31.3 34.2 34.2 31.8 38.8 5.7 5.7 56.5 11.0 11.0
LOS by Move: C C C C C D A A E B B
HCM2kAvgQ: 1 1 0 4 4 1 3 6 6 1 5 5

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

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 CEDAR AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.561
Loss Time (sec): 8 Average Delay (sec/veh): 27.8
Optimal Cycle: 36 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: Protected Protected Protected Protected
Rights: Ovl Include Ovl Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 1 1 2 0 2 1 0 2 0 1 1 1 2 0 2 0 1

Volume Module:

Base Vol: 322 662 152 66 779 70 197 394 451 235 274 67
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 328 675 155 67 795 71 201 402 460 240 280 68
Added Vol: 33 0 0 0 0 0 16 12 3 24 0 4 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 361 675 155 67 795 87 213 405 484 240 284 68
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: 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 Volume: 361 675 155 67 795 87 213 405 484 240 284 68
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 361 675 155 67 795 87 213 405 484 240 284 68
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: 361 675 155 67 795 87 213 405 484 240 284 68

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00
Lanes: 2.00 2.00 1.00 2.00 2.70 0.30 2.00 1.37 1.63 2.00 2.00 1.00
Final Sat.: 3200 3600 1800 3200 4865 535 3200 2460 2940 3200 3600 1800

Capacity Analysis Module:

Vol/Sat: 0.11 0.19 0.09 0.02 0.16 0.16 0.07 0.16 0.16 0.07 0.08 0.04
Crit Moves: ****
Green/Cycle: 0.20 0.44 0.58 0.05 0.29 0.29 0.20 0.29 0.50 0.13 0.23 0.23
Volume/Cap: 0.56 0.42 0.15 0.42 0.56 0.56 0.34 0.56 0.33 0.56 0.34 0.16
Delay/Veh: 37.1 19.2 9.8 47.9 30.5 30.5 35.0 30.3 15.3 42.3 32.3 30.9
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: 37.1 19.2 9.8 47.9 30.5 30.5 35.0 30.3 15.3 42.3 32.3 30.9
LOS by Move: D B A D C C C B D C C
HCM2kAvgQ: 6 7 2 2 8 8 3 8 5 5 4 2

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

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 CEDAR AVE / I-10 WB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.688
Loss Time (sec): 6 Average Delay (sec/veh): 22.3
Optimal Cycle: 41 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 3 0 1 0 0 0 0 0 0 0 1 0 1

Volume Module:

Base Vol: 136 682 0 0 1009 490 0 0 0 245 0 482
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 139 696 0 0 1029 500 0 0 0 250 0 492
Added Vol: 0 21 0 0 9 15 0 0 0 0 0 12
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 139 717 0 0 1038 515 0 0 0 250 0 504
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: 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 Volume: 139 717 0 0 1038 515 0 0 0 250 0 504
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 139 717 0 0 1038 515 0 0 0 250 0 504
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: 139 717 0 0 1038 515 0 0 0 250 0 504

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 3.00 1.00 0.00 0.00 0.00 0.50 0.00 1.50
Final Sat.: 1700 3600 0 0 5400 1800 0 0 0 897 0 2703

Capacity Analysis Module:

Vol/Sat: 0.08 0.20 0.00 0.00 0.19 0.29 0.00 0.00 0.00 0.28 0.00 0.19
Crit Moves: ****
Green/Cycle: 0.12 0.53 0.00 0.00 0.42 0.42 0.00 0.00 0.00 0.41 0.00 0.41
Volume/Cap: 0.69 0.37 0.00 0.00 0.46 0.69 0.00 0.00 0.00 0.69 0.00 0.46
Delay/Veh: 51.9 13.6 0.0 0.0 21.3 26.6 0.0 0.0 0.0 26.4 0.0 21.9
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: 51.9 13.6 0.0 0.0 21.3 26.6 0.0 0.0 0.0 26.4 0.0 21.9
LOS by Move: D B A A C C A A C A C A
HCM2kAvgQ: 4 6 0 0 7 13 0 0 0 14 0 8

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

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH WITH PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 CEDAR AVE / I-10 EB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.543
Loss Time (sec): 6 Average Delay (sec/veh): 21.5
Optimal Cycle: 29 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 3 0 1 1 0 2 0 0 1 0 1 0 0 0 0 0 0 0

Volume Module:

Base Vol: 0 498 249 341 910 0 322 0 103 0 0 0 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 508 254 348 928 0 328 0 105 0 0 0 0
Added Vol: 0 0 0 9 0 0 21 0 0 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 508 254 357 928 0 349 0 105 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: 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 Volume: 0 508 254 357 928 0 349 0 105 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 508 254 357 928 0 349 0 105 0 0 0 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: 0 508 254 357 928 0 349 0 105 0 0 0 0

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.96 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 3.00 1.00 1.00 2.00 0.00 1.63 0.00 0.37 0.00 0.00 0.00
Final Sat.: 0 5400 1800 1700 3600 0 2833 0 660 0 0 0 0

Capacity Analysis Module:

Vol/Sat: 0.00 0.09 0.14 0.21 0.26 0.00 0.12 0.00 0.16 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.26 0.26 0.39 0.65 0.00 0.29 0.00 0.29 0.00 0.00 0.00
Volume/Cap: 0.00 0.36 0.54 0.54 0.40 0.00 0.42 0.00 0.54 0.00 0.00 0.00
Delay/Veh: 0.0 30.4 33.2 24.7 8.5 0.0 28.8 0.0 30.4 0.0 0.0 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 30.4 33.2 24.7 8.5 0.0 28.8 0.0 30.4 0.0 0.0 0.0
LOS by Move: A C C C A A C A C A A A
HCM2kAvgQ: 0 4 7 9 7 0 6 0 8 0 0 0 0

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

**Forecast Year 2015 With Ambient & Cumulative
Traffic Without Project Conditions**

BLOOMINGTON HOUSING PROJECT - 135614
 FY 2015 W/ AMBIENT GROWTH & CUML PROJECTS WITHOUT PROJECT CONDITIONS
 AM PEAK HOUR

Scenario Report
 Scenario: 2015+1%+CUML-NP-AM

Command: 2015+1%+CUML-NP-AM
 Volume: AM
 Geometry: EX
 Impact Fee: Default Impact Fee
 Trip Generation: CUML-AM
 Trip Distribution: DIST
 Paths: Default Path
 Routes: Default Route
 Configuration: 2015+1%+CUML-NP-AM

BLOOMINGTON HOUSING PROJECT - 135614
 FY 2015 W/ AMBIENT GROWTH & CUML PROJECTS WITHOUT PROJECT CONDITIONS
 AM PEAK HOUR

Impact Analysis Report
 Level of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 4 LOCUST AVE / VALLEY BLVD	LOS Veh	C	LOS Veh	C	
	B 19.0	0.225	B 19.0	0.249	+ 0.044 D/V
# 5 LINDEN AVE / VALLEY BLVD	B 14.1	0.231	B 13.7	0.247	-0.427 D/V
# 6 CEDAR AVE / VALLEY BLVD	C 23.5	0.445	C 23.8	0.465	+ 0.306 D/V
# 7 CEDAR AVE / I-10 WB RAMPS	B 19.8	0.795	C 21.9	0.837	+ 2.166 D/V
# 8 CEDAR AVE / I-10 EB RAMPS	C 25.7	0.656	C 26.8	0.705	+ 1.066 D/V

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH & CUML PROJECTS WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH & CUML PROJECTS WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 LOCUST AVE / VALLEY BLVD

Intersection #5 LINDEN AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.249
Loss Time (sec): 6 Average Delay (sec/veh): 19.0
Optimal Cycle: 19 Level Of Service: B

Cycle (sec): 100 Critical Vol./Cap.(X): 0.247
Loss Time (sec): 6 Average Delay (sec/veh): 13.7
Optimal Cycle: 19 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

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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1 0 0 0 0 1 0 2 0 1

Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 1 0 1

Volume Module:
Base Vol: 1 3 12 98 5 69 30 303 4 19 340 41
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 1 3 12 100 5 70 31 309 4 19 347 42
Added Vol: 0 0 0 13 0 5 4 32 0 0 37 15
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 3 12 113 5 75 35 341 4 19 384 57
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: 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 Volume: 1 3 12 113 5 75 35 341 4 19 384 57
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1 3 12 113 5 75 35 341 4 19 384 57
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: 1 3 12 113 5 75 35 341 4 19 384 57

Volume Module:
Base Vol: 5 2 5 148 10 36 6 372 8 3 394 42
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 5 2 5 151 10 37 6 379 8 3 402 43
Added Vol: 0 0 0 0 0 5 4 41 0 0 47 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 5 2 5 151 10 42 10 420 8 3 449 43
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: 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 Volume: 5 2 5 151 10 42 10 420 8 3 449 43
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 5 2 5 151 10 42 10 420 8 3 449 43
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: 5 2 5 151 10 42 10 420 8 3 449 43

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.06 0.19 0.75 0.58 0.03 0.39 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 113 338 1350 1051 47 701 1700 3600 1800 1700 3600 1800

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.71 0.29 1.00 0.94 0.06 1.00 1.00 1.96 0.04 1.00 1.83 0.17
Final Sat.: 1286 514 1800 1686 114 1800 1700 3531 69 1700 3286 314

Capacity Analysis Module:
Vol/Sat: 0.01 0.01 0.01 0.11 0.11 0.11 0.02 0.09 0.00 0.01 0.11 0.03
Crit Moves: ****
Green/Cycle: 0.43 0.43 0.43 0.43 0.43 0.43 0.08 0.45 0.45 0.05 0.43 0.43
Volume/Cap: 0.02 0.02 0.02 0.25 0.25 0.25 0.25 0.21 0.00 0.21 0.25 0.07
Delay/Veh: 16.4 16.4 16.4 18.3 18.3 18.3 44.0 16.5 14.9 46.3 18.4 17.0
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: 16.4 16.4 16.4 18.3 18.3 18.3 44.0 16.5 14.9 46.3 18.4 17.0
LOS by Move: B B B B B B D B B D B B
HCM2kAvgQ: 0 0 0 4 4 4 1 3 0 1 4 1

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.09 0.09 0.02 0.01 0.12 0.12 0.00 0.14 0.14
Crit Moves: ****
Green/Cycle: 0.36 0.36 0.36 0.36 0.36 0.36 0.02 0.57 0.57 0.01 0.55 0.55
Volume/Cap: 0.01 0.01 0.01 0.25 0.25 0.06 0.25 0.21 0.21 0.21 0.25 0.25
Delay/Veh: 20.4 20.4 20.4 22.5 22.5 20.8 51.0 10.6 10.6 56.3 11.6 11.6
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: 20.4 20.4 20.4 22.5 22.5 20.8 51.0 10.6 10.6 56.3 11.6 11.6
LOS by Move: C C C C C D B B E B B
HCM2kAvgQ: 0 0 0 3 3 1 1 3 3 0 4 4

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

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BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH & CUML PROJECTS WITHOUT PROJECT CONDITIONS
AM PEAK HOUR

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Level Of Service Computation Report

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2000 HCM Operations Method (Future Volume Alternative)

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 CEDAR AVE / VALLEY BLVD

Intersection #7 CEDAR AVE / I-10 WB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.465
Loss Time (sec): 8 Average Delay (sec/veh): 23.8
Optimal Cycle: 30 Level Of Service: C

Cycle (sec): 100 Critical Vol./Cap.(X): 0.837
Loss Time (sec): 6 Average Delay (sec/veh): 21.9
Optimal Cycle: 67 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

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Ov1 Include Ov1 Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 1 1 2 0 2 1 0 2 0 1 1 1 2 0 2 0 1

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 3 0 1 0 0 0 0 0 0 0 0 1 0 1

Volume Module:
Base Vol: 239 598 121 46 1000 35 41 102 499 227 144 19
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 244 610 123 47 1020 36 42 104 509 232 147 19
Added Vol: 11 23 8 8 41 19 13 17 10 5 17 5
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 255 633 131 55 1061 55 55 121 519 237 164 24
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: 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 Volume: 255 633 131 55 1061 55 55 121 519 237 164 24
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 255 633 131 55 1061 55 55 121 519 237 164 24
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: 255 633 131 55 1061 55 55 121 519 237 164 24

Volume Module:
Base Vol: 234 674 0 0 938 785 0 0 0 143 1 283
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 239 688 0 0 957 801 0 0 0 146 1 289
Added Vol: 29 39 0 0 50 6 0 0 0 33 0 3
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 268 727 0 0 1007 807 0 0 0 179 1 292
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: 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 Volume: 268 727 0 0 1007 807 0 0 0 179 1 292
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 268 727 0 0 1007 807 0 0 0 179 1 292
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: 268 727 0 0 1007 807 0 0 0 179 1 292

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00
Lanes: 2.00 2.00 1.00 2.00 2.85 0.15 2.00 1.00 2.00 2.00 2.00 1.00
Final Sat.: 3200 3600 1800 3200 5135 265 3200 1800 3600 3200 3600 1800

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 3.00 1.00 0.00 0.00 0.00 0.55 0.01 1.44
Final Sat.: 1700 3600 0 0 5400 1800 0 0 0 988 6 2606

Capacity Analysis Module:
Vol/Sat: 0.08 0.18 0.07 0.02 0.21 0.21 0.02 0.07 0.14 0.07 0.05 0.01
Crit Moves: ****
Green/Cycle: 0.17 0.56 0.72 0.05 0.44 0.44 0.08 0.14 0.32 0.16 0.22 0.22
Volume/Cap: 0.46 0.31 0.10 0.31 0.46 0.46 0.21 0.46 0.46 0.46 0.21 0.06
Delay/Veh: 37.9 11.7 4.2 46.5 19.6 19.6 43.2 39.5 27.6 38.8 31.9 30.8
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: 37.9 11.7 4.2 46.5 19.6 19.6 43.2 39.5 27.6 38.8 31.9 30.8
LOS by Move: D B A D B B D C D C C
HCM2kAvgQ: 4 5 1 1 8 8 1 4 7 4 2 1

Capacity Analysis Module:
Vol/Sat: 0.16 0.20 0.00 0.00 0.19 0.45 0.00 0.00 0.00 0.18 0.18 0.11
Crit Moves: ****
Green/Cycle: 0.19 0.72 0.00 0.00 0.54 0.54 0.00 0.00 0.00 0.22 0.22 0.22
Volume/Cap: 0.84 0.28 0.00 0.00 0.35 0.84 0.00 0.00 0.00 0.84 0.84 0.52
Delay/Veh: 56.4 4.8 0.0 0.0 13.3 26.0 0.0 0.0 0.0 48.1 48.1 35.1
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: 56.4 4.8 0.0 0.0 13.3 26.0 0.0 0.0 0.0 48.1 48.1 35.1
LOS by Move: E A A A B C A A A D D D
HCM2kAvgQ: 9 4 0 0 6 22 0 0 0 12 12 6

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

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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 CEDAR AVE / I-10 EB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.705
Loss Time (sec): 6 Average Delay (sec/veh): 26.8
Optimal Cycle: 43 Level Of Service: C

Table with columns for Approach (North Bound, South Bound, East Bound, West Bound) and Movement (L, T, R). Rows include Control, Rights, Min. Green, Y+R, and Lanes.

Volume Module table with columns for Base Vol, Growth Adj, Initial Bse, Added Vol, PasserByVol, Initial Fut, User Adj, PHF Adj, PHF Volume, Reduct Vol, Reduced Vol, PCE Adj, MLF Adj, and Final Volume.

Saturation Flow Module table with columns for Sat/Lane, Adjustment, Lanes, and Final Sat.

Capacity Analysis Module table with columns for Vol/Sat, Crit Moves, Green/Cycle, Volume/Cap, Delay/Veh, User DelAdj, AdjDel/Veh, LOS by Move, and HCM2kAvgQ.

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

BLOOMINGTON HOUSING PROJECT - 135614
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 PM PEAK HOUR

Scenario Report
 Scenario: 2015+1%+CUML-NP-PM

Command: 2015+1%+CUML-NP-PM
 Volume: PM
 Geometry: EX
 Impact Fee: Default Impact Fee
 Trip Generation: CUML-PM
 Trip Distribution: DIST
 Paths: Default Path
 Routes: Default Route
 Configuration: 2015+1%+CUML-NP-PM

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 PM PEAK HOUR

Impact Analysis Report
 Level of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 4 LOCUST AVE / VALLEY BLVD	LOS Veh	C	LOS Veh	C	
	B 15.3	0.356	B 15.6	0.376	+ 0.380 D/V
# 5 LINDEN AVE / VALLEY BLVD	B 12.8	0.352	B 12.6	0.365	-0.185 D/V
# 6 CEDAR AVE / VALLEY BLVD	C 27.6	0.541	C 27.9	0.561	+ 0.261 D/V
# 7 CEDAR AVE / I-10 WB RAMPS	C 22.3	0.675	C 24.2	0.732	+ 1.954 D/V
# 8 CEDAR AVE / I-10 EB RAMPS	C 21.2	0.531	C 22.1	0.578	+ 0.908 D/V

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Intersection #4 LOCUST AVE / VALLEY BLVD

Intersection #5 LINDEN AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.376
Loss Time (sec): 6 Average Delay (sec/veh): 15.6
Optimal Cycle: 22 Level Of Service: B

Cycle (sec): 100 Critical Vol./Cap.(X): 0.365
Loss Time (sec): 6 Average Delay (sec/veh): 12.6
Optimal Cycle: 22 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

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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1 0 0 0 0 1 0 0 1 0 1

Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 1 0

Volume Module:
Base Vol: 10 6 32 78 6 52 141 866 4 21 419 115
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 10 6 33 80 6 53 144 883 4 21 427 117
Added Vol: 0 0 0 11 0 4 4 35 0 0 32 11
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 6 33 91 6 57 148 918 4 21 459 128
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: 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 Volume: 10 6 33 91 6 57 148 918 4 21 459 128
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 10 6 33 91 6 57 148 918 4 21 459 128
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: 10 6 33 91 6 57 148 918 4 21 459 128

Volume Module:
Base Vol: 22 22 12 121 15 32 77 853 22 10 494 113
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 22 22 12 123 15 33 79 870 22 10 504 115
Added Vol: 0 0 0 0 0 4 4 42 0 0 40 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 22 22 12 123 15 37 83 912 22 10 544 115
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: 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 Volume: 22 22 12 123 15 37 83 912 22 10 544 115
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 22 22 12 123 15 37 83 912 22 10 544 115
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: 22 22 12 123 15 37 83 912 22 10 544 115

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.21 0.12 0.67 0.59 0.04 0.37 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 375 225 1200 1060 72 668 1700 3600 1800 1700 3600 1800

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.50 0.50 1.00 0.89 0.11 1.00 1.00 1.95 0.05 1.00 1.65 0.35
Final Sat.: 900 900 1800 1601 199 1800 1700 3514 86 1700 2970 630

Capacity Analysis Module:
Vol/Sat: 0.03 0.03 0.03 0.09 0.09 0.09 0.09 0.26 0.00 0.01 0.13 0.07
Crit Moves: *****
Green/Cycle: 0.23 0.23 0.23 0.23 0.23 0.23 0.29 0.68 0.68 0.03 0.42 0.42
Volume/Cap: 0.12 0.12 0.12 0.38 0.38 0.38 0.30 0.38 0.00 0.38 0.30 0.17
Delay/Veh: 30.8 30.8 30.8 33.2 33.2 33.2 28.0 7.0 5.2 51.4 19.1 18.0
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: 30.8 30.8 30.8 33.2 33.2 33.2 28.0 7.0 5.2 51.4 19.1 18.0
LOS by Move: C C C C C C C A A D B B B
HCM2kAvgQ: 1 1 1 4 4 4 4 6 0 1 5 2

Capacity Analysis Module:
Vol/Sat: 0.02 0.02 0.01 0.08 0.08 0.02 0.05 0.26 0.26 0.01 0.18 0.18
Crit Moves: *****
Green/Cycle: 0.21 0.21 0.21 0.21 0.21 0.21 0.15 0.71 0.71 0.02 0.58 0.58
Volume/Cap: 0.12 0.12 0.03 0.36 0.36 0.10 0.32 0.36 0.36 0.36 0.32 0.32
Delay/Veh: 32.0 32.0 31.3 34.3 34.3 31.8 38.4 5.7 5.7 56.6 11.1 11.1
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: 32.0 32.0 31.3 34.3 34.3 31.8 38.4 5.7 5.7 56.6 11.1 11.1
LOS by Move: C C C C C C D A A E B B B
HCM2kAvgQ: 1 1 0 4 4 1 3 6 6 1 5 5

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

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Level of Service Computation Report

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2000 HCM Operations Method (Future Volume Alternative)

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Intersection #6 CEDAR AVE / VALLEY BLVD

Intersection #7 CEDAR AVE / I-10 WB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.561
Loss Time (sec): 8 Average Delay (sec/veh): 27.9
Optimal Cycle: 36 Level of Service: C

Cycle (sec): 100 Critical Vol./Cap.(X): 0.732
Loss Time (sec): 6 Average Delay (sec/veh): 24.2
Optimal Cycle: 46 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

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R

Control: Protected Protected Protected Protected
Rights: Ov1 Include Ov1 Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 1 1 2 0 2 1 0 2 0 1 1 1 2 0 2 0 1

Control: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 3 0 1 0 0 0 0 0 0 0 1 0 1

Volume Module:
Base Vol: 322 662 152 66 779 70 197 394 451 235 274 67
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 328 675 155 67 795 71 201 402 460 240 280 68
Added Vol: 11 45 6 6 31 13 16 15 11 7 16 7
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 339 720 161 73 826 84 217 417 471 247 296 75
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: 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 Volume: 339 720 161 73 826 84 217 417 471 247 296 75
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 339 720 161 73 826 84 217 417 471 247 296 75
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: 339 720 161 73 826 84 217 417 471 247 296 75

Volume Module:
Base Vol: 136 682 0 0 1009 490 0 0 0 245 0 482
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 139 696 0 0 1029 500 0 0 0 250 0 492
Added Vol: 60 58 0 0 43 6 0 0 0 24 0 4
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 199 754 0 0 1072 506 0 0 0 274 0 496
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: 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 Volume: 199 754 0 0 1072 506 0 0 0 274 0 496
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 199 754 0 0 1072 506 0 0 0 274 0 496
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: 199 754 0 0 1072 506 0 0 0 274 0 496

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00
Lanes: 2.00 2.00 1.00 2.00 2.72 0.28 2.00 1.41 1.59 2.00 2.00 1.00
Final Sat.: 3200 3600 1800 3200 4899 501 3200 2535 2865 3200 3600 1800

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 3.00 1.00 0.00 0.00 0.00 0.52 0.00 1.48
Final Sat.: 1700 3600 0 0 5400 1800 0 0 0 945 0 2655

Capacity Analysis Module:
Vol/Sat: 0.11 0.20 0.09 0.02 0.17 0.17 0.07 0.16 0.16 0.08 0.08 0.04
Crit Moves: ****
Green/Cycle: 0.19 0.44 0.58 0.05 0.30 0.30 0.19 0.29 0.48 0.14 0.24 0.24
Volume/Cap: 0.56 0.46 0.16 0.46 0.56 0.56 0.35 0.56 0.34 0.56 0.35 0.18
Delay/Veh: 38.0 19.8 9.9 48.2 29.9 29.9 35.1 30.4 16.1 42.0 32.1 30.7
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: 38.0 19.8 9.9 48.2 29.9 29.9 35.1 30.4 16.1 42.0 32.1 30.7
LOS by Move: D B A D C C B D C C
HCM2kAvgQ: 5 8 2 2 8 8 3 8 6 5 4 2

Capacity Analysis Module:
Vol/Sat: 0.12 0.21 0.00 0.00 0.20 0.28 0.00 0.00 0.00 0.29 0.00 0.19
Crit Moves: ****
Green/Cycle: 0.16 0.54 0.00 0.00 0.38 0.38 0.00 0.00 0.00 0.40 0.00 0.40
Volume/Cap: 0.73 0.38 0.00 0.00 0.52 0.73 0.00 0.00 0.00 0.73 0.00 0.47
Delay/Veh: 49.7 13.3 0.0 0.0 23.9 30.4 0.0 0.0 0.0 28.3 0.0 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: 49.7 13.3 0.0 0.0 23.9 30.4 0.0 0.0 0.0 28.3 0.0 22.6
LOS by Move: D B A A C C A A A C A C
HCM2kAvgQ: 6 6 0 0 8 13 0 0 0 15 0 8

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

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

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH & CUMUL PROJECTS WITHOUT PROJECT CONDITIONS
PM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 CEDAR AVE / I-10 EB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.578
Loss Time (sec): 6 Average Delay (sec/veh): 22.1
Optimal Cycle: 32 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 3 0 1 1 0 2 0 0 1 0 1! 0 0 0 0 0 0 0 0

Volume Module:
Base Vol: 0 498 249 341 910 0 322 0 103 0 0 0 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 508 254 348 928 0 328 0 105 0 0 0 0
Added Vol: 0 111 35 3 63 0 7 0 37 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 619 289 351 991 0 335 0 142 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: 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 Volume: 0 619 289 351 991 0 335 0 142 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 619 289 351 991 0 335 0 142 0 0 0 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: 0 619 289 351 991 0 335 0 142 0 0 0 0

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.96 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 3.00 1.00 1.00 2.00 0.00 1.55 0.00 0.45 0.00 0.00 0.00
Final Sat.: 0 5400 1800 1700 3600 0 2682 0 807 0 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.11 0.16 0.21 0.28 0.00 0.13 0.00 0.18 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.28 0.28 0.36 0.64 0.00 0.30 0.00 0.30 0.00 0.00 0.00
Volume/Cap: 0.00 0.41 0.58 0.58 0.43 0.00 0.41 0.00 0.58 0.00 0.00 0.00
Delay/Veh: 0.0 29.6 32.7 27.4 9.3 0.0 27.9 0.0 30.4 0.0 0.0 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 29.6 32.7 27.4 9.3 0.0 27.9 0.0 30.4 0.0 0.0 0.0
LOS by Move: A C C A A A C A C A A A
HCM2kAvgQ: 0 5 8 9 7 0 6 0 9 0 0 0

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

**Forecast Year 2015 With Ambient & Cumulative
Traffic With Project Conditions**

BLOOMINGTON HOUSING PROJECT - 135614
 FY 2015 W/ AMBIENT GROWTH & CUML PROJECTS WITH PROJECT CONDITIONS
 AM PEAK HOUR

Scenario Report
 Scenario: 2015+1%+CUML-WP-AM

Command: 2015+1%+CUML-WP-AM
 Volume: AM
 Geometry: EX
 Impact Fee: Default Impact Fee
 Trip Generation: PROJ+CUML-AM
 Trip Distribution: DIST
 Paths: Default Path
 Routes: Default Route
 Configuration: 2015+1%+CUML-WP-AM

BLOOMINGTON HOUSING PROJECT - 135614
 FY 2015 W/ AMBIENT GROWTH & CUML PROJECTS WITH PROJECT CONDITIONS
 AM PEAK HOUR

Impact Analysis Report
 Level of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
	LOS	Veh C	LOS	Veh C	
# 1 DWY 1 / VALLEY BLVD	A	0.0 0.000	A	9.7 0.006	+ 9.693 D/V
# 2 MAIN DWY/ VALLEY BLVD	A	0.2 0.124	A	5.5 0.173	+ 5.297 D/V
# 3 DWY 2 / VALLEY BLVD	A	0.0 0.000	A	9.7 0.007	+ 9.713 D/V
# 4 LOCUST AVE / VALLEY BLVD	B	19.0 0.225	B	18.8 0.257	-0.172 D/V
# 5 LINDEN AVE / VALLEY BLVD	B	14.1 0.231	B	13.6 0.253	-0.495 D/V
# 6 CEDAR AVE / VALLEY BLVD	C	23.5 0.445	C	24.0 0.471	+ 0.569 D/V
# 7 CEDAR AVE / I-10 WB RAMPS	B	19.8 0.795	C	22.2 0.847	+ 2.448 D/V
# 8 CEDAR AVE / I-10 EB RAMPS	C	25.7 0.656	C	27.0 0.713	+ 1.247 D/V

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH & CUML PROJECTS WITH PROJECT CONDITIONS
AM PEAK HOUR

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

Intersection #1 DWY 1 / VALLEY BLVD
Average Delay (sec/veh): 0.1 Worst Case Level Of Service: A [9.7]
Approach: North Bound South Bound East Bound West Bound
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1 0 0 2 0 0 0 0 2 0 0
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 337 0 0 410 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 0 0 0 0 0 0 0 344 0 0 418 0
Added Vol: 0 0 0 0 0 0 5 0 42 0 0 53 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 5 0 386 0 0 471 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: 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 Volume: 0 0 0 0 0 0 5 0 386 0 0 471 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 5 0 386 0 0 471 0
Critical Gap Module:
Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx 6.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Capacity Module:
Conflict Vol: xxxxx xxxxx xxxxx xxxxx xxxxx 236 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 772 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 772 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx 0.01 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx 9.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * *
ApproachDel: xxxxxxx 9.7 xxxxxxx xxxxxxx
ApproachLOS: * A * *
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH & CUML PROJECTS WITH PROJECT CONDITIONS
AM PEAK HOUR

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

Intersection #2 MAIN DWY/ VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.173
Loss Time (sec): 6 Average Delay (sec/veh): 5.5
Optimal Cycle: 17 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 Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 0 1 0 0 1 0 2 0 1 1 0 2 0 1
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 337 0 0 410 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 0 0 0 0 0 0 0 344 0 0 418 0
Added Vol: 0 0 0 48 0 5 6 36 0 0 48 17
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 48 0 5 6 380 0 0 466 17
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: 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 Volume: 0 0 0 48 0 5 6 380 0 0 466 17
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 48 0 5 6 380 0 0 466 17
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 48 0 5 6 380 0 0 466 17
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 0.00 0.00 0.91 0.00 0.09 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 0 0 0 1630 0 170 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.03 0.00 0.03 0.00 0.11 0.00 0.00 0.13 0.01
Crit Moves: ****
Green/Cycle: 0.00 0.00 0.00 0.17 0.00 0.17 0.02 0.77 0.00 0.00 0.75 0.75
Volume/Cap: 0.00 0.00 0.00 0.17 0.00 0.17 0.17 0.14 0.00 0.00 0.17 0.01
Delay/Veh: 0.0 0.0 0.0 35.7 0.0 35.7 50.5 3.0 0.0 0.0 3.6 3.2
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 35.7 0.0 35.7 50.5 3.0 0.0 0.0 3.6 3.2
LOS by Move: A A A D A D D A A A A A
HCM2kAvqQ: 0 0 0 1 0 1 0 2 0 0 2 0
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH & CUML PROJECTS WITH PROJECT CONDITIONS
AM PEAK HOUR

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

Intersection #3 DWY 2 / VALLEY BLVD
Average Delay (sec/veh): 0.1 Worst Case Level Of Service: A [9.7]
Approach: North Bound South Bound East Bound West Bound
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1 0 0 2 0 0 0 0 2 0 0
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 337 0 0 410 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 0 0 0 0 0 0 0 344 0 0 418 0
Added Vol: 0 0 0 0 0 0 5 0 84 0 0 59 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 5 0 428 0 0 477 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: 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 Volume: 0 0 0 0 0 0 5 0 428 0 0 477 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 5 0 428 0 0 477 0
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx xxxxx xxxxx 6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:xxxxx xxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Capacity Module:
Cnflct Vol: xxxx xxxx xxxxx xxxx xxxxx 239 xxxx xxxx xxxxx xxxx xxxx xxxxx
Potent Cap.: xxxx xxxx xxxxx xxxx xxxxx 769 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Move Cap.: xxxx xxxx xxxxx xxxx xxxxx 769 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Volume/Cap: xxxx xxxx xxxxx xxxx xxxxx 0.01 xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxx xxxx xxxxx xxxx xxxxx 0.0 xxxxx xxxx xxxxx xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxxx 9.7 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 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * *
ApproachDel: xxxxxxx 9.7 xxxxxxx xxxxxxx
ApproachLOS: * A * *
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH & CUML PROJECTS WITH PROJECT CONDITIONS
AM PEAK HOUR

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

Intersection #4 LOCUST AVE / VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.257
Loss Time (sec): 6 Average Delay (sec/veh): 18.8
Optimal Cycle: 19 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: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 2 0 1 1 0 2 0 1
Volume Module:
Base Vol: 1 3 12 98 5 69 30 303 4 19 340 41
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 1 3 12 100 5 70 31 309 4 19 347 42
Added Vol: 0 0 0 13 0 7 7 77 0 0 53 15
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 1 3 12 113 5 77 38 386 4 19 400 57
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: 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 Volume: 1 3 12 113 5 77 38 386 4 19 400 57
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 1 3 12 113 5 77 38 386 4 19 400 57
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: 1 3 12 113 5 77 38 386 4 19 400 57
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.06 0.19 0.75 0.58 0.03 0.39 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 113 338 1350 1040 47 713 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.01 0.01 0.01 0.11 0.11 0.11 0.02 0.11 0.00 0.01 0.11 0.03
Crit Moves: *****
Green/Cycle: 0.42 0.42 0.42 0.42 0.42 0.42 0.09 0.47 0.47 0.05 0.43 0.43
Volume/Cap: 0.02 0.02 0.02 0.26 0.26 0.26 0.26 0.23 0.00 0.23 0.26 0.07
Delay/Veh: 16.9 16.9 16.9 18.9 18.9 18.9 43.6 15.9 14.2 47.1 18.2 16.7
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: 16.9 16.9 16.9 18.9 18.9 18.9 43.6 15.9 14.2 47.1 18.2 16.7
LOS by Move: B B B B B B D B D B B
HCM2kAvqQ: 0 0 0 4 4 4 1 3 0 1 4 1
Note: Queue reported is the number of cars per lane.

BLOOMINGTON HOUSING PROJECT - 135614
FY 2015 W/ AMBIENT GROWTH & CUMM PROJECTS WITH PROJECT CONDITIONS
AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 LINDEN AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.253
Loss Time (sec): 6 Average Delay (sec/veh): 13.6
Optimal Cycle: 19 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 0 1 1 0

Volume Module:
Base Vol: 5 2 5 148 10 36 6 372 8 3 394 42
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 5 2 5 151 10 37 6 379 8 3 402 43
Added Vol: 0 0 0 0 0 7 7 82 0 0 61 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 5 2 5 151 10 44 13 461 8 3 463 43
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: 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 Volume: 5 2 5 151 10 44 13 461 8 3 463 43
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 5 2 5 151 10 44 13 461 8 3 463 43
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: 5 2 5 151 10 44 13 461 8 3 463 43

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.71 0.29 1.00 0.94 0.06 1.00 1.00 1.97 0.03 1.00 1.83 0.17
Final Sat.: 1286 514 1800 1686 114 1800 1700 3537 63 1700 3295 305

Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.09 0.09 0.02 0.01 0.13 0.13 0.00 0.14 0.14
Crit Moves: ****
Green/Cycle: 0.35 0.35 0.35 0.35 0.35 0.35 0.03 0.58 0.58 0.01 0.56 0.56
Volume/Cap: 0.01 0.01 0.01 0.25 0.25 0.07 0.25 0.23 0.23 0.23 0.25 0.25
Delay/Veh: 21.0 21.0 20.9 23.1 23.1 21.4 49.9 10.3 10.3 57.6 11.6 11.6
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: 21.0 21.0 20.9 23.1 23.1 21.4 49.9 10.3 10.3 57.6 11.6 11.6
LOS by Move: C C C C C D B B D C D C C
HCM2kAvgQ: 0 0 0 4 4 1 1 3 3 0 4 4

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

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AM PEAK HOUR

Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 CEDAR AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.471
Loss Time (sec): 8 Average Delay (sec/veh): 24.0
Optimal Cycle: 30 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: Protected Protected Protected Protected
Rights: Ovl Include Ovl Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 1 1 2 0 2 1 0 2 0 1 1 1 2 0 2 0 1

Volume Module:
Base Vol: 239 598 121 46 1000 35 41 102 499 227 144 19
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 244 610 123 47 1020 36 42 104 509 232 147 19
Added Vol: 20 23 8 8 41 23 26 21 36 5 18 5
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 264 633 131 55 1061 59 68 125 545 237 165 24
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: 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 Volume: 264 633 131 55 1061 59 68 125 545 237 165 24
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 264 633 131 55 1061 59 68 125 545 237 165 24
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: 264 633 131 55 1061 59 68 125 545 237 165 24

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00
Lanes: 2.00 2.00 1.00 2.00 2.84 0.16 2.00 1.00 2.00 2.00 2.00 1.00
Final Sat.: 3200 3600 1800 3200 5117 283 3200 1800 3600 3200 3600 1800

Capacity Analysis Module:
Vol/Sat: 0.08 0.18 0.07 0.02 0.21 0.21 0.02 0.07 0.15 0.07 0.05 0.01
Crit Moves: ****
Green/Cycle: 0.18 0.56 0.72 0.05 0.44 0.44 0.10 0.15 0.32 0.16 0.21 0.21
Volume/Cap: 0.47 0.31 0.10 0.31 0.47 0.47 0.22 0.47 0.47 0.47 0.22 0.07
Delay/Veh: 37.7 11.8 4.3 46.5 19.9 19.9 42.1 39.3 27.3 39.1 33.0 31.9
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: 37.7 11.8 4.3 46.5 19.9 19.9 42.1 39.3 27.3 39.1 33.0 31.9
LOS by Move: D B A D B B D D C D C C
HCM2kAvgQ: 4 5 1 1 8 8 1 4 7 4 2 1

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

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 CEDAR AVE / I-10 WB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.847
Loss Time (sec): 6 Average Delay (sec/veh): 22.2
Optimal Cycle: 71 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 1 0 2 0 0 0 0 3 0 1 0 0 0 0 0 0 0 1 0 1

Volume Module:
Base Vol: 234 674 0 0 938 785 0 0 0 143 1 283
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 239 688 0 0 957 801 0 0 0 146 1 289
Added Vol: 29 44 0 0 60 22 0 0 0 33 0 7
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 268 732 0 0 1017 823 0 0 0 179 1 296
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: 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 Volume: 268 732 0 0 1017 823 0 0 0 179 1 296
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 268 732 0 0 1017 823 0 0 0 179 1 296
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: 268 732 0 0 1017 823 0 0 0 179 1 296

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00 1.00 1.00 1.00
Lanes: 1.00 2.00 0.00 0.00 3.00 1.00 0.00 0.00 0.00 0.54 0.01 1.45
Final Sat.: 1700 3600 0 0 5400 1800 0 0 0 982 6 2612

Capacity Analysis Module:
Vol/Sat: 0.16 0.20 0.00 0.00 0.19 0.46 0.00 0.00 0.00 0.18 0.18 0.11
Crit Moves: ****
Green/Cycle: 0.19 0.73 0.00 0.00 0.54 0.54 0.00 0.00 0.00 0.21 0.21 0.21
Volume/Cap: 0.85 0.28 0.00 0.00 0.35 0.85 0.00 0.00 0.00 0.85 0.85 0.53
Delay/Veh: 58.1 4.8 0.0 0.0 13.1 26.6 0.0 0.0 0.0 49.2 49.2 35.3
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: 58.1 4.8 0.0 0.0 13.1 26.6 0.0 0.0 0.0 49.2 49.2 35.3
LOS by Move: E A A A B C A A D D D
HCM2kAvgQ: 9 4 0 0 6 22 0 0 0 12 12 6

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

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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 CEDAR AVE / I-10 EB RAMPS

Cycle (sec): 100 Critical Vol./Cap.(X): 0.713
Loss Time (sec): 6 Average Delay (sec/veh): 27.0
Optimal Cycle: 44 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: Protected Protected Split Phase Split Phase
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 3 0 1 1 0 2 0 0 1 0 1 0 0 0 0 0 0 0

Volume Module:
Base Vol: 0 600 258 425 651 0 334 3 203 0 0 0 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 612 263 434 664 0 341 3 207 0 0 0 0
Added Vol: 0 62 18 13 80 0 12 0 57 0 0 0 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 674 281 447 744 0 353 3 264 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: 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 Volume: 0 674 281 447 744 0 353 3 264 0 0 0 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 674 281 447 744 0 353 3 264 0 0 0 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: 0 674 281 447 744 0 353 3 264 0 0 0 0

Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 0.94 1.00 1.00 0.95 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 3.00 1.00 1.00 2.00 0.00 1.41 0.01 0.58 0.00 0.00 0.00
Final Sat.: 0 5400 1800 1700 3600 0 2414 12 1050 0 0 0 0

Capacity Analysis Module:
Vol/Sat: 0.00 0.12 0.16 0.26 0.21 0.00 0.15 0.25 0.25 0.00 0.00 0.00
Crit Moves: ****
Green/Cycle: 0.00 0.22 0.22 0.37 0.59 0.00 0.35 0.35 0.35 0.00 0.00 0.00
Volume/Cap: 0.00 0.57 0.71 0.71 0.35 0.00 0.41 0.71 0.71 0.00 0.00 0.00
Delay/Veh: 0.0 35.5 42.2 30.9 10.8 0.0 24.7 30.8 30.8 0.0 0.0 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 35.5 42.2 30.9 10.8 0.0 24.7 30.8 30.8 0.0 0.0 0.0
LOS by Move: A D D C B A C C C A A A
HCM2kAvgQ: 0 7 9 13 6 0 6 13 13 0 0 0 0

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

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Scenario Report
 Scenario: 2015+1%+CUML-WP-PM

Command: 2015+1%+CUML-WP-PM
 Volume: PM
 Geometry: EX
 Impact Fee: Default Impact Fee
 Trip Generation: PROJ+CUML-PM
 Trip Distribution: DIST
 Paths: Default Path
 Routes: Default Route
 Configuration: 2015+1%+CUML-WP-PM

BLOOMINGTON HOUSING PROJECT - 135614
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 PM PEAK HOUR

Impact Analysis Report
 Level of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
	LOS	Veh C	LOS	Veh C	
# 1 DWY 1 / VALLEY BLVD	A	0.0 0.000	A	9.9 0.004	+ 9.920 D/V
# 2 MAIN DWY/ VALLEY BLVD	A	0.3 0.305	A	3.7 0.347	+ 3.425 D/V
# 3 DWY 2 / VALLEY BLVD	A	0.0 0.000	B	10.1 0.004	+10.102 D/V
# 4 LOCUST AVE / VALLEY BLVD	B	15.3 0.356	B	15.4 0.390	+ 0.176 D/V
# 5 LINDEN AVE / VALLEY BLVD	B	12.8 0.352	B	12.4 0.376	-0.383 D/V
# 6 CEDAR AVE / VALLEY BLVD	C	27.6 0.541	C	28.1 0.581	+ 0.437 D/V
# 7 CEDAR AVE / I-10 WB RAMPS	C	22.3 0.675	C	24.2 0.744	+ 1.991 D/V
# 8 CEDAR AVE / I-10 EB RAMPS	C	21.2 0.531	C	22.4 0.589	+ 1.220 D/V

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 DWY 1 / VALLEY BLVD
Average Delay (sec/veh): 0.0 Worst Case Level Of Service: A [9.9]
Approach: North Bound South Bound East Bound West Bound
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1 0 0 2 0 0 0 0 2 0 0
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 1011 0 0 481 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 0 0 0 0 0 0 0 1031 0 0 491 0
Added Vol: 0 0 0 0 0 0 3 0 60 0 0 48 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 3 0 1091 0 0 539 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: 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 Volume: 0 0 0 0 0 0 3 0 1091 0 0 539 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 3 0 1091 0 0 539 0
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxxx xxxxx xxxxx 6.9 xxxxxx xxxx xxxxx xxxxxx xxxx xxxxxx
FollowUpTim:xxxxx xxxx xxxxxx xxxxxx xxxxx 3.3 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx
Capacity Module:
Conflict Vol: xxxxx xxxxx xxxxxx xxxxx xxxxx 269 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
Potent Cap.: xxxxx xxxxx xxxxxx xxxxx xxxxx 735 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
Move Cap.: xxxxx xxxxx xxxxxx xxxxx xxxxx 735 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx 0.00 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
Control Del:xxxxxx xxxxx xxxxxx xxxxxx xxxxx 9.9 xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx
LOS by Move: * * * * * A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
SharedQueue:xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
Shrd ConDel:xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx
Shared LOS: * * * * * * * * * *
ApproachDel: xxxxxxx 9.9 xxxxxxx xxxxxxx
ApproachLOS: * A * *
Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 MAIN DWY/ VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.347
Loss Time (sec): 6 Average Delay (sec/veh): 3.7
Optimal Cycle: 21 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 Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 0 0 0 0 1 0 0 1 0 2 0 1 1 0 2 0 1
Volume Module:
Base Vol: 0 0 0 0 0 0 0 0 1011 0 0 481 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 0 0 0 0 0 0 0 1031 0 0 491 0
Added Vol: 0 0 0 0 44 0 8 21 39 0 0 39 61
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 44 0 8 21 1070 0 0 530 61
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: 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 Volume: 0 0 0 0 44 0 8 21 1070 0 0 530 61
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 0 0 0 0 44 0 8 21 1070 0 0 530 61
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 0 44 0 8 21 1070 0 0 530 61
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.94 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.00 0.00 0.00 0.85 0.00 0.15 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 0 0 0 1523 0 277 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.00 0.00 0.00 0.03 0.00 0.03 0.01 0.30 0.00 0.00 0.15 0.03
Crit Moves: *****
Green/Cycle: 0.00 0.00 0.00 0.08 0.00 0.08 0.07 0.86 0.00 0.00 0.79 0.79
Volume/Cap: 0.00 0.00 0.00 0.35 0.00 0.35 0.19 0.35 0.00 0.00 0.19 0.04
Delay/Veh: 0.0 0.0 0.0 44.7 0.0 44.7 44.9 1.5 0.0 0.0 2.6 2.3
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 44.7 0.0 44.7 44.9 1.5 0.0 0.0 2.6 2.3
LOS by Move: A A A D A D D A A A A A
HCM2kAvqQ: 0 0 0 2 0 2 1 4 0 0 2 0
Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report

2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 DWY 2 / VALLEY BLVD
Average Delay (sec/veh): 0.0 Worst Case Level Of Service: B[10.1]
Approach: North Bound South Bound East Bound West Bound
Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
Rights: Include Include Include Include
Lanes: 0 0 0 0 0 0 0 1 0 0 2 0 0 0 0 2 0 0
Volume Module:
Base Vol: 0 0 0 0 0 0 0 1011 0 0 481 0
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 0 0 0 0 0 0 0 1031 0 0 491 0
Added Vol: 0 0 0 0 0 0 3 0 84 0 0 97 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 0 0 0 0 0 0 3 0 1115 0 0 588 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: 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 Volume: 0 0 0 0 0 0 3 0 1115 0 0 588 0
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
FinalVolume: 0 0 0 0 0 0 3 0 1115 0 0 588 0
Critical Gap Module:
Critical Gp:xxxxx xxxxx xxxxx xxxxx xxxxx 6.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
FollowUpTim:xxxxx xxxxx xxxxx xxxxx xxxxx 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Capacity Module:
Conflict Vol: xxxxx xxxxx xxxxx xxxxx xxxxx 294 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Potent Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 709 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Move Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx 709 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Volume/Cap: xxxxx xxxxx xxxxx xxxxx xxxxx 0.00 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx 10.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: * * * * * B * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: * * * * * * * * * * *
ApproachDel: xxxxxxx 10.1 xxxxxxx xxxxxxx
ApproachLOS: * B * *
Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report

2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 LOCUST AVE / VALLEY BLVD
Cycle (sec): 100 Critical Vol./Cap.(X): 0.390
Loss Time (sec): 6 Average Delay (sec/veh): 15.4
Optimal Cycle: 23 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: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 0 1! 0 0 0 0 1! 0 0 1 0 2 0 1 1 0 2 0 1
Volume Module:
Base Vol: 10 6 32 78 6 52 141 866 4 21 419 115
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 10 6 33 80 6 53 144 883 4 21 427 117
Added Vol: 0 0 0 11 0 8 7 76 0 0 89 11
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 10 6 33 91 6 61 151 959 4 21 516 128
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: 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 Volume: 10 6 33 91 6 61 151 959 4 21 516 128
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 10 6 33 91 6 61 151 959 4 21 516 128
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: 10 6 33 91 6 61 151 959 4 21 516 128
Saturation Flow Module:
Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.21 0.12 0.67 0.57 0.04 0.39 1.00 2.00 1.00 1.00 2.00 1.00
Final Sat.: 375 225 1200 1034 70 697 1700 3600 1800 1700 3600 1800
Capacity Analysis Module:
Vol/Sat: 0.03 0.03 0.03 0.09 0.09 0.09 0.09 0.27 0.00 0.01 0.14 0.07
Crit Moves: *****
Green/Cycle: 0.22 0.22 0.22 0.22 0.22 0.22 0.27 0.68 0.68 0.03 0.44 0.44
Volume/Cap: 0.12 0.12 0.12 0.39 0.39 0.39 0.32 0.39 0.00 0.39 0.32 0.16
Delay/Veh: 31.0 31.0 31.0 33.6 33.6 33.6 29.4 6.9 5.0 52.0 18.3 16.9
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: 31.0 31.0 31.0 33.6 33.6 33.6 29.4 6.9 5.0 52.0 18.3 16.9
LOS by Move: C C C C C C A A D B B
HCM2kAvqQ: 1 1 1 4 4 4 4 6 0 1 5 2
Note: Queue reported is the number of cars per lane.

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 LINDEN AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.376
Loss Time (sec): 6 Average Delay (sec/veh): 12.4
Optimal Cycle: 22 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: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 0 1 0 0 1 0 1 0 0 1 1 0 1 1 0 1 1 0

Volume Module:

Base Vol: 22 22 12 121 15 32 77 853 22 10 494 113
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 22 22 12 123 15 33 79 870 22 10 504 115
Added Vol: 0 0 0 0 0 0 8 7 80 0 0 93 0
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 22 22 12 123 15 41 86 950 22 10 597 115
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: 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 Volume: 22 22 12 123 15 41 86 950 22 10 597 115
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 22 22 12 123 15 41 86 950 22 10 597 115
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: 22 22 12 123 15 41 86 950 22 10 597 115

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 0.94 1.00 1.00 0.94 1.00 1.00
Lanes: 0.50 0.50 1.00 0.89 0.11 1.00 1.00 1.95 0.05 1.00 1.68 0.32
Final Sat.: 900 900 1800 1601 199 1800 1700 3517 83 1700 3017 583

Capacity Analysis Module:

Vol/Sat: 0.02 0.02 0.01 0.08 0.08 0.02 0.05 0.27 0.27 0.01 0.20 0.20
Crit Moves: ****
Green/Cycle: 0.21 0.21 0.21 0.21 0.21 0.21 0.15 0.72 0.72 0.02 0.59 0.59
Volume/Cap: 0.12 0.12 0.03 0.38 0.38 0.11 0.34 0.38 0.38 0.38 0.34 0.34
Delay/Veh: 32.5 32.5 31.8 34.9 34.9 32.5 38.9 5.5 5.5 57.2 10.8 10.8
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: 32.5 32.5 31.8 34.9 34.9 32.5 38.9 5.5 5.5 57.2 10.8 10.8
LOS by Move: C C C C C D A A E B B
HCM2kAvgQ: 1 1 0 4 4 1 3 6 6 1 6 6

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

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2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 CEDAR AVE / VALLEY BLVD

Cycle (sec): 100 Critical Vol./Cap.(X): 0.581
Loss Time (sec): 8 Average Delay (sec/veh): 28.1
Optimal Cycle: 37 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: Protected Protected Protected Protected
Rights: Owl Include Owl Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
Y+R: 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0
Lanes: 2 0 1 1 1 2 0 2 1 0 2 0 1 1 1 2 0 2 0 1

Volume Module:

Base Vol: 322 662 152 66 779 70 197 394 451 235 274 67
Growth Adj: 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02 1.02
Initial Bse: 328 675 155 67 795 71 201 402 460 240 280 68
Added Vol: 44 45 6 6 31 30 28 18 34 7 20 7
PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
Initial Fut: 372 720 161 73 826 101 229 420 494 247 300 75
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: 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 Volume: 372 720 161 73 826 101 229 420 494 247 300 75
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
Reduced Vol: 372 720 161 73 826 101 229 420 494 247 300 75
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: 372 720 161 73 826 101 229 420 494 247 300 75

Saturation Flow Module:

Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
Adjustment: 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00 0.89 1.00 1.00
Lanes: 2.00 2.00 1.00 2.00 2.67 0.33 2.00 1.38 1.62 2.00 2.00 1.00
Final Sat.: 3200 3600 1800 3200 4809 591 3200 2481 2919 3200 3600 1800

Capacity Analysis Module:

Vol/Sat: 0.12 0.20 0.09 0.02 0.17 0.17 0.07 0.17 0.17 0.08 0.08 0.04
Crit Moves: ****
Green/Cycle: 0.20 0.44 0.58 0.05 0.30 0.30 0.20 0.29 0.49 0.13 0.23 0.23
Volume/Cap: 0.58 0.45 0.15 0.45 0.58 0.58 0.36 0.58 0.34 0.58 0.36 0.18
Delay/Veh: 37.5 19.4 9.8 48.1 30.5 30.5 35.2 30.8 15.6 42.8 32.8 31.3
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: 37.5 19.4 9.8 48.1 30.5 30.5 35.2 30.8 15.6 42.8 32.8 31.3
LOS by Move: D B A D C C D C B D C C
HCM2kAvgQ: 6 7 2 2 9 9 4 9 6 5 4 2

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

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2000 HCM Operations Method (Future Volume Alternative)

Table with 10 columns for intersection #7 CEDAR AVE / I-10 WB RAMPS. Includes Cycle (sec): 100, Loss Time (sec): 6, Optimal Cycle: 48, and various traffic volume and delay metrics.

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

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2000 HCM Operations Method (Future Volume Alternative)

Table with 10 columns for intersection #8 CEDAR AVE / I-10 EB RAMPS. Includes Cycle (sec): 100, Loss Time (sec): 6, Optimal Cycle: 32, and various traffic volume and delay metrics.

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