

# **TRAFFIC IMPACT ANALYSIS**

**FOR**

## **TUSCANA VILLAGE SPECIFIC PLAN CITY OF ONTARIO, CA**

**Prepared for:  
Applied Planning, Inc.**

**Prepared by:**



**Mountain Pacific, Inc.**  
**Civil/Transportation Engineers**

**P.O. Box 4266 Laguna Beach, CA 92652 (949) 497-8127**  
**[www.mountainpacificusa.com](http://www.mountainpacificusa.com)**

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# EXECUTIVE SUMMARY

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Mountain Pacific, Inc. (MPI) has been retained by Applied Planning, Inc., to perform a traffic impact analysis (TIA) for the proposed Tuscana Village Specific Plan. The purpose of this TIA is to determine the potential adverse traffic impacts associated with the development of this Project; identify, as appropriate, mitigation measures to offset Project-related traffic impacts; and determine site-specific transportation infrastructure needs. The traffic issues related to the proposed land use and development have been evaluated based on specific direction from the City of Ontario, the lead agency for this Project.

Tuscana Village Specific Plan (also referred to as “Project” in this report) will provide for the development on the 44-acre site located in the City of Ontario in San Bernardino County, California. Specifically, the Project will be bounded by State Route 60 (SR-60) on the north, Milliken (also known as Hamner) Avenue on the east and Riverside Drive to the south.

The Project area is comprised of properties which are currently owned by three different entities:

- Katelaris – approximately 20 acres in the northwest quadrant of the intersection of Milliken (Hamner) Avenue – Riverside Drive, of which 8 acres are proposed to be sold to Pelican Homes for residential development;
- Galleano – approximately 16 acres south of SR-60; and
- Riboli – approximately 12 acres west of Milliken (Hamner) Avenue, south of Hartford Street.

The Project proposes the construction of a pedestrian-oriented urban village mixed-use development which would provide commercial, business park (office) and residential land uses on these four properties. At buildout, the Project would allow for development of just less than 948,000 square feet of commercial retail and office land uses and up to 200 residential units (apartments).

The Project will take access from Milliken (Hamner) Avenue and Riverside Drive and is proposed to be developed in two phases of development, as follows.

### *Phase I:*

Phase I will include the development of 200 residential units, along with 9,000 square feet of general retail; 2,250 square feet of fast food restaurants; 11,026 square feet of restaurant-type uses (including an event hall and brewery); 2,000 square feet of office; a 12-pump gas station/car wash and 110,380 square feet of *interim* uses including a 5,000-square foot nursery sales area as well as a seasonal sales/farmer's market area, a multi-function courtyard, and a educational gardens/ growing/petting zoo area on the Katelaris property with a completion date in 2012 (Opening Year (2012)).

In the first phase of development, a new private street, named Street "A", will be constructed to serve the Pelican Homes parcel via a driveway to the west and the interim Katelaris uses via a driveway to the east. Street "A" will have a north-south alignment and will intersect Riverside Drive approximately 600 feet west of Milliken (Hamner) Avenue. The intersection of Riverside Drive – Street "A" will be signalized as part of the initial phase of development. The Katelaris property will also have one right-turn in, right-turn out driveway on Milliken Avenue and one right-turn in, right-turn out driveway on Riverside Drive. The residential property will have one right-turn in, right-turn out driveway on Riverside Drive west of Street "A"

### *Project Buildout:*

Specific Plan Project Buildout, which has an unspecified completion date, is proposed to include:

- The redevelopment of the Katelaris property's interim land uses to allow for the following *additional* land uses: 18,000 square feet of retail; 67,000 square feet of office; and 3,500 square feet of fast food restaurant use;
- Up to 90,101 square feet of general retail and 450,506 square feet of office land uses<sup>1</sup>) on the Galleano property; and
- Up to 48,127 square feet of general retail and 242,821 square feet of office land uses<sup>(1)</sup> on the ) Riboli properties.

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<sup>1</sup> To ensure a conservative analysis of circulation needs, office land uses were assumed in the traffic analysis for portions of the Galleano and Riboli to be developed as business park land uses at 1.0 FAR.

In addition to Street “A”, a new private street, named Street “B”, will be constructed to serve the site by Specific Plan buildout. Street “B” will have an east-west alignment and will intersect Milliken (Hamner) Avenue approximately 800 feet north of Riverside Drive. The intersection of Milliken (Hamner) Avenue – Street “B” will be signalized as part of Specific Plan buildout. The Katelaris development will have one additional driveway on Street “A” and one driveway on Street “B” with its buildout. Driveways to the Riboli and Galleano parcels will be determined through more detailed planning following completion of Phase I of development. An existing public roadway, Hartford Street currently provides access to the San Antonio Winery located west of Milliken (Hamner) Avenue and south of Hartford Street. The need for this street to serve the buildout of the Tuscana Specific Plan will be determined with more detailed planning for development of the Riboli and Galleano parcels in the future. Per discussions with the City of Ontario, this TIA evaluates the circulation needs of the site both with and without Hartford Street at Specific Plan buildout.

## **Analysis**

### **Scope and Methodology**

A series of meetings was held with the City of Ontario and the Applicant and his consultants to establish the scope and parameters for the Traffic Impact Analysis (TIA) for the Project. The City of Ontario confirmed that the TIA prepared for the recently completed General Plan (GP) Update was based on a “high intensity” development scenario for the Project site. When compared to the General Plan Update’s traffic model assumptions, the trip generation of this Project will be lower than the maximum intensity of the land uses proposed by the City of Ontario for this site in the GP TIA. As such, the recommended ultimate General Plan (GP) Update Circulation Element roadway configurations will accommodate this Project and the TIA focuses more specifically on Project site access and operations at nearby intersections serving the site. In addition, because the Project borders the City of Eastvale in Riverside County and proposes a new signalized intersection on Milliken (Hamner) Avenue, discussions were held with the County of Riverside Transportation staff regarding specific requirements for this TIA regarding the location of the new signalized intersection.

A total of ten (10) existing intersections were identified as study intersections during discussions with the City of Ontario and County of Riverside transportation staff. In addition, the new intersection of Riverside Drive – Street “A” is analyzed under With-Project conditions during Opening Year (2012). A discussion of operations of the intersection of Milliken (Hamner) Avenue – Hartford Street, which currently serves as a driveway to the San Antonio Winery, is discussed under Project Buildout conditions only, as it would not be affected by Phase I development.

Traffic operations and Levels of Service (LOS’s) at study intersections were calculated using the Highway Capacity Manual 2000 methodology and standard analysis parameters employed by the City of Ontario.

## **Intersection Level of Service Standards**

The City of Ontario minimum standard for intersection operations is LOS “D” and in this analysis, LOS “D” or better is considered acceptable for operations at study intersections.

## **Existing Traffic Conditions and Levels of Service**

Existing Intersection traffic turning movement counts were collected at the existing study intersections during the morning (am) peak period (7:00 AM to 9:00 AM) and evening (pm) peak period (4:00 PM to 6:00 PM) in August 2009 by Counts Unlimited, Inc., a subconsultant to MPI. All traffic counts were collected while area schools were in session. Traffic counts were classified by passenger vehicles, large 2-axle vehicles, 3-axle vehicles and 4+-axle trucks. The 2-axle, 3-axle and 4+-axle vehicles were converted into passenger car equivalents (pce's) by applying a factor of 1.5, 2.0 and 3.0, respectively.

Level of Service (LOS) analyses of study intersections under Existing conditions indicates that all study intersections operate acceptably (LOS D or better).

## **Project Traffic Volumes**

Traffic related to the Project has been calculated in accordance with the following accepted procedural steps: Project trip generation, Project trip distribution, and Project trip assignment for Phase I of development, and for Project buildout.

Trip generation for the Project land uses was calculated using trip generation rates published in ITE's *Trip Generation*, 8<sup>th</sup> Edition and based on methodology provided in ITE's *Trip Generation Handbook*, Second Edition, June 2004.

Phase I in Opening Year (2012) is estimated to generate approximately 3,718 trips on a daily basis. During the weekday morning (am) peak hour, 248 trips (100 inbound and 148 outbound) will be generated, while 315 trips are expected to be generated during the evening (pm) peak hour (182 inbound and 133 outbound) by Phase I land uses.

Tuscana Village Specific Plan buildout is expected to generate up to 15,435 trips on a on a daily basis, of which 1,371 trips (1,035 inbound and 336 outbound) would be generated during the morning (am) peak hour and 1,602 trips (525 inbound and 1,077 outbound) would be generated during the evening (pm) peak hour.

Trip distribution to a Project site is influenced by 1) the geographic location of both the Project site and the residential and employment opportunities surrounding the site; 2) the roadway network serving the site; 3) existing and future capacity and accessibility of said roadway network; and 4) locations of internal streets and driveways serving the site.



The Project trip distribution was developed using the City of Ontario General Plan Update traffic forecasting model. The model's zone structure was refined to reflect an additional connector to Milliken (Hamner) Avenue<sup>2</sup> and select zone model runs were performed for the morning (am), evening (pm) and daily periods. The Project's regional trip distribution was developed based on these select zone model runs results, and the local trip distribution for each of the parcels was developed based on the regional project distribution *and* the proposed Project roadway network and driveways serving each parcel in Phase I and at Project buildout.

Based upon the trip distribution patterns described above, Phase I Project trips and Project trips at Specific Plan buildout were assigned to the roadway network.

### **Opening Year (2012) No-Project and With-Project Traffic Conditions and Levels of Service**

Opening Year (2012) analysis was conducted under Existing-Plus-Ambient and Cumulative traffic conditions.

The Opening Year (2012) Existing-Plus-Ambient No-Project traffic volumes were determined by applying an ambient traffic growth rate of 2 percent. The Opening Year Existing-Plus-Ambient With-Project traffic volumes were determined by adding Phase I Project traffic to the Opening Year No-Project traffic volumes.

Level of Service (LOS) analyses conducted for the Opening Year (2012) Existing-Plus-Ambient No-Project and Existing-Plus-Ambient With-Project traffic volumes indicate that all study intersections are expected to operate acceptably (LOS D or better) assuming existing and, in the With-Project conditions, Project-proposed infrastructure.

The Opening Year (2012) Cumulative No-Project traffic conditions were developed by adding traffic that would be generated by other approved or anticipated development projects ("related" or "cumulative" projects) in the area to Existing-Plus-Ambient traffic volumes. A list of approved and/or planned projects (cumulative projects) that were anticipated to be complete in Opening Year (2012) was compiled based on information received from City of Ontario and County of Riverside. These projects include commercial, industrial, and residential developments. Cumulative ("related") projects' trip generation (truck trips were converted to passenger car equivalents (pce's)) and trip distribution was obtained from the reports prepared for these developments, as available. Cumulatively these "related" projects are expected to generate 33,139 daily trips, 2,467 morning (am) peak-hour trips and 3,178 evening (pm) peak-hour trips if they were all operational and occupied in Opening Year (2012), as assumed in this analysis.

Opening Year (2012) Cumulative With-Project traffic conditions were developed by adding Phase I Project traffic volumes to Cumulative No-Project traffic volumes.

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<sup>2</sup> The Traffic Analysis Zone (TAZ) for the Project site loads all trips onto Riverside Drive in the City of Ontario traffic forecasting model.

Level of Service (LOS) analyses conducted for the Opening Year (2012) Cumulative No-Project and Cumulative With-Project traffic volumes indicate that all study intersections are expected to operate acceptably (LOS D or better) assuming existing and, under the With-Project conditions, Project-proposed infrastructure.

Queuing analyses were performed along Milliken (Hamner) Avenue adjacent to the site and along Riverside Drive adjacent to the site to recommended storage for left- and right-turn lanes at the new intersections, and to ensure that there will be no back-ups between intersections.

A detailed analysis of on-site circulation and access to the Phase I land uses was conducted based on the site plans provided by the Applicant. A summary of recommendations for on-site circulation and access follows.

### **Opening Year (2012) Recommendations**

1. Construct Milliken (Hamner) Avenue to its half-street General Plan Update-recommended cross-section adjacent to Phase I development.
2. Construct Riverside Drive to its half-street adjacent General Plan Update-recommended cross-section adjacent to Phase I development.
3. Residential Driveway on Riverside Drive:
  - Restrict to right-turn in, right-turn out movements only;
  - Install STOP-sign control at the driveway approach to Riverside Drive;
  - Provide one lane inbound, one lane outbound on the driveway approach to Riverside Drive;
  - A westbound right-turn deceleration lane is not needed because projected right-turn volumes are less than the standard requirement for a separate right-turn lane.
4. Commercial Driveway 2 on Riverside Drive:
  - Restrict to right-turn in, right-turn out movements only;
  - Install STOP-sign control at the driveway approach to Riverside Drive;
  - Provide one lane inbound, one lane outbound on the driveway approach to Riverside Drive;
  - A westbound right-turn deceleration lane is not needed because right-turn volumes are less than the standard requirement for a separate right-turn lane.

5. Commercial Driveway on Milliken (Hamner) Avenue:
  - Locate a minimum of 180 feet north of Riverside Drive;
  - Restrict to right-turn in, right-turn out movements only;
  - Install STOP-sign control at the driveway approach to Milliken (Hamner) Avenue;
  - Provide one lane inbound, one lane outbound on the driveway approach;
  - A southbound right-turn deceleration lane is not needed because projected right-turn volumes are less than the standard requirement for a separate right-turn lane.
6. Construct Street “A” to the ultimate configuration with 40 feet of pavement.
7. Install traffic signals at the intersection of Riverside Drive – Street “A” and provide east-west protected left-turn phasing (southbound approach will have its own phase).
8. Provide for turn-storage at the new intersection of Riverside Drive – Street “A” as follows:
  - Eastbound left-turn lane - 100 feet (min.) storage required;
  - Westbound right-turn deceleration lane is not needed because projected right-turn volumes are less than the standard requirement for a separate right-turn lane.
9. On Street “A”:
  - Provide one lane in each direction between the commercial (Katelaris) driveway and the residential (Pelican Homes) driveway;
  - Provide two lanes southbound (one left-turn lane and one right-turn lane) and one lane northbound on Street “A” at its approach to Riverside Drive;
  - The Project Applicant is proposing a 40-foot roadway with on-street parking on the west side of Street “A”. On-street parking should start 200 feet north of Riverside Drive;
  - Locate first internal driveway approximately 180 feet north of Riverside Drive and install STOP-sign control at the driveway approach to Street “A”;
  - Locate residential driveway approximately 350 feet north of Riverside Drive and install STOP-sign control at the driveway approach to Street “A”.

## **General Plan No-Project and With-Project Traffic Conditions and Levels of Service**

The base General Plan No-Project traffic volumes for this study were obtained from the transportation technical report prepared for the City of Ontario General Plan Update<sup>3</sup>, from traffic reports prepared for the RichHaven and EdenGlen projects and from traffic data provided by Riverside County. The General Plan With-Project traffic volumes were developed by first subtracting the trips generated by the land uses assumed on the Project site in the General Plan Update, and then adding the Project buildout trip assignment.

Level of Service (LOS) analyses of study intersections for the General Plan No-Project and With-Project traffic conditions were performed assuming the General Plan Update-recommended roadway network. All intersection were projected to acceptably based on City of Ontario's target standard LOS D, indicating that the planned General Plan network can accommodate Tuscana Village Specific Plan at buildout.

A detailed analysis of Project Buildout access and on-site circulation cannot be conducted until further site planning for the Riboli and Galleano parcels north of Street "B" occurs. Further traffic analysis would be conducted to evaluate specific access and circulation once these site plans are developed. However, an analysis to determine the ultimate lane configuration needs on Streets "A" and "B" assuming Project buildout traffic volumes was conducted. Two different scenarios for the Project Buildout With-Project buildout conditions were analyzed: One with access at Hartford Street; and one without access at Hartford Street. It was determined that Streets "A" and "B" need to be developed to the same ultimate lane configurations for Project buildout conditions regardless of access at Hartford Street, as follows.

### **General Plan Recommendations**

Based on an analysis of Project traffic volumes at Buildout and discussions with City of Ontario staff, the following recommendations are made:

- 1) Street "A" – The recommended lane configurations for Phase I will accommodate Project Buildout volumes as well.

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<sup>3</sup> Source: *ONTARIO GENERAL PLAN UPDATE, Transportation Technical Report, Revised March 19, 2009, by Kimley-Horn and Associates, Inc.*

- 2) Street “B” – Provide 64 feet of pavement between Street “A” and Milliken (Hamner) Avenue – Street “B” for five travel lanes (two through lanes in each direction and a center left-turn lane) between Street “A” and Milliken (Hamner) Avenue. At the west leg of the intersection of Street “B” – Milliken (Hamner) Avenue, three lanes eastbound and two westbound should be provided. The centerline alignment of Street “B” will be determined following discussions with the City of Eastvale to ensure that the driveway on the east side of the street in Riverside County can also utilize the proposed traffic signal at Milliken (Hamner) Avenue – Street “B”, thus accommodating access to the currently undeveloped parcel north of the existing industrial development. The traffic signal on Milliken (Hamner) Avenue at Street “B” should be designed with protected left-turn phasing in the east-west direction as well as in the north-south direction.
- 3) Provide turn-storage on Milliken (Hamner) Avenue and Riverside Drive at Streets “B” and “A” as follows:
  - Milliken (Hamner) Avenue – Street “B”:
    - Northbound left-turn lane - 140 feet (min.) of storage is required;
    - Southbound right-turn deceleration lane – Right-turn volume warrants separate right-turn lane; however, the outside (4<sup>th</sup>) through lane can be converted to a southbound right-turn only lane with the intersection continuing to operate at acceptable LOS’s. The need for a separate right-turn lane should be decided with further detailed site planning of the Galleano and Riboli parcels.
  - Riverside Drive – Street “A”:
    - Eastbound left-turn lane – 140 feet (min.) of storage is required.
- 4) Further traffic analysis of queuing between Street “B” and SR-60 eastbound ramps should be conducted with detailed site planning of the Riboli and Galleano parcels *and* when the SR-60 interchange is upgraded to its ultimate configuration. Synchronization of traffic signals between Riverside Drive and SR-60 eastbound ramps should be considered to provide the most efficient traffic flows through these intersections.
- 5) Once detailed site planning for Riboli and Galleano parcels is performed, refinements to lane configurations on Street “A” north of Street “B”, and on Street “B” west of Street “A” may be warranted and should be determined through further traffic analysis.

## **Conclusions**

The Tuscana Village Specific Plan can be implemented as proposed with no adverse traffic impacts on the surrounding roadway system. Recommendations for on-site circulation and access should be implemented at respective phases of development to ensure efficient circulation to, from and through the Project site.

# 1.

## **INTRODUCTION**

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Mountain Pacific, Inc. (MPI) has been retained by Applied Planning, Inc., to perform a traffic impact analysis (TIA) for the proposed Tuscana Village Specific Plan.

The purpose of this TIA is to determine the potential adverse traffic impacts associated with the development of this Project; identify, as appropriate, mitigation measures to offset Project-related traffic impacts; and determine site-specific transportation infrastructure needs. The traffic issues related to the proposed land use and development have been evaluated based on specific direction from the City of Ontario, the lead agency for this Project.

The introduction to this report represents an overview of the Project and a brief description of the study area. The analysis methodologies are discussed, as well as discussion of how deficiencies and significant Project impacts are defined and mitigated. Chapter 2 describes the Area Conditions; Chapter 3 provides the projected traffic volumes in Opening Year (2012) and at General Plan Buildout (corresponding to Project buildout as well); Chapter 4 discusses projected traffic conditions in Opening Year (2012) and at Project buildout; Chapter 5 discusses on-site circulation and access; and Chapter 6 provides Findings and Recommendations of this analysis. An Executive Summary is provided at the beginning of this report.

## PROJECT DESCRIPTION

The Tuscana Village Specific Plan (also referred to as “Project” in this report) will provide for the development on the 44-acre site located in the City of Ontario in San Bernardino, California. Specifically, the Project will be bounded by State Route 60 (SR-60) on the north, Milliken (also known as Hamner) Avenue on the east and Riverside Drive to the south. The location of the Project is provided on **Figure 1**.

The Project area is comprised of properties which are currently owned by three different entities:

- Katelaris – approximately 20 acres in the northwest quadrant of the intersection of Milliken (Hamner) Avenue – Riverside Drive, 8 acres of which are proposed to be sold to Pelican Homes for residential development;
- Galleano – approximately 16 acres south of SR-60; and
- Riboli – approximately 12 acres west of Milliken (Hamner) Avenue, south of Hartford Street.

**Figure 2** provides a schematic showing the locations of these properties within the Specific Plan area.

The Project proposes the construction of a pedestrian-oriented urban village mixed-use development which would provide commercial, business park (office) and residential land uses on these four properties. At buildout, the Project would allow for development of just less than 948,000 square feet of commercial retail and office land uses and up to 200 residential units (apartments).

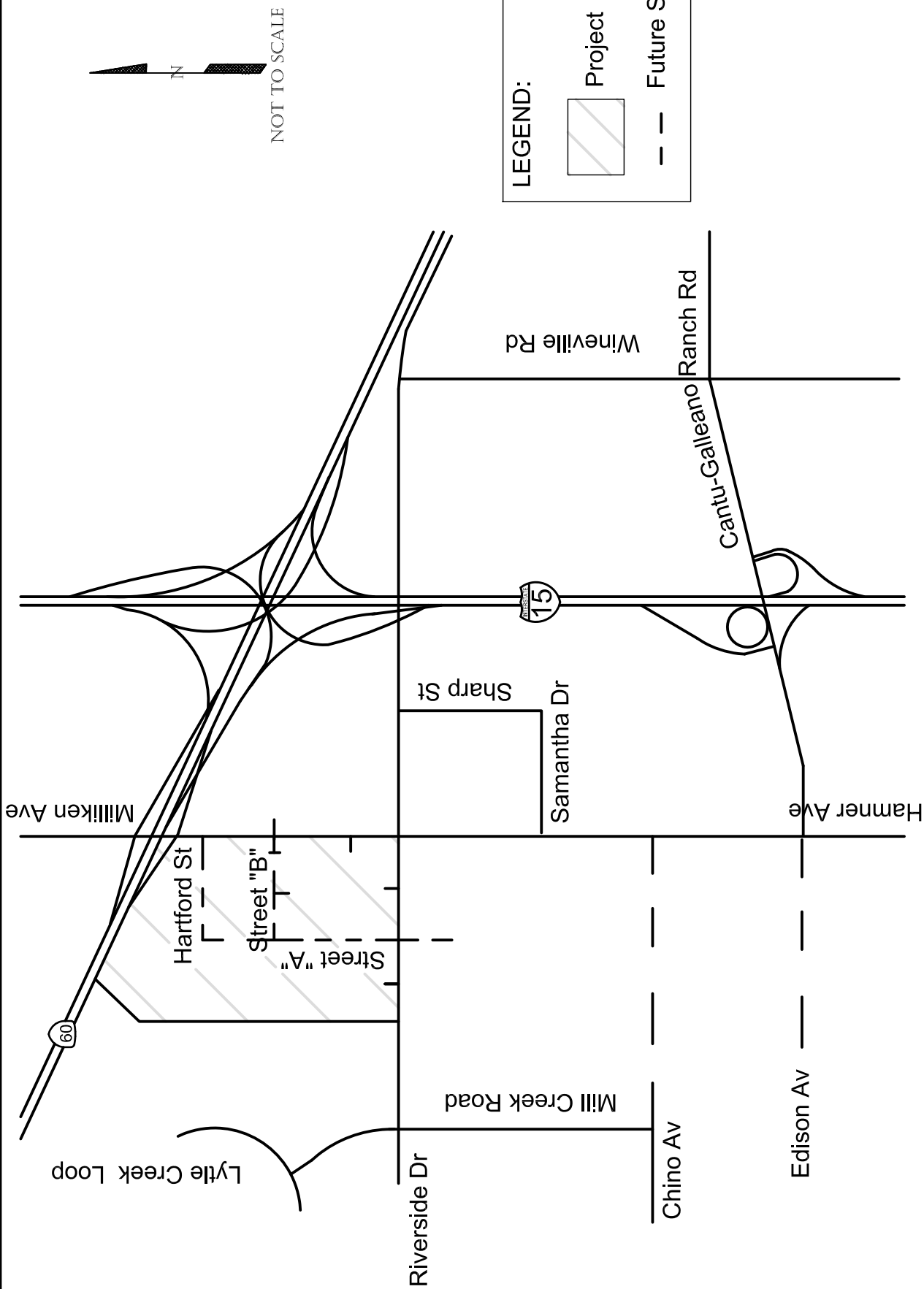
The Project will take access from Milliken (Hamner) Avenue and Riverside Drive. The Project is proposed to be developed in two phases of development, as follows.

### *Phase I (Opening Year):*

Phase I will include the development of 200 residential units, along with 9,000 square feet of general retail; 2,250 square feet of fast-food restaurants; 11,026 square feet of restaurant-type uses (including an event hall and brewery); 2,000 square feet of office; and 110,380 square feet of *interim* uses including a 5,000-square foot nursery sales area as well as a seasonal sales/farmer’s market area, a multi-function courtyard, and an educational gardens/growing/petting zoo area on the Katelaris property, with a completion date in 2012 (Opening Year (2012)).

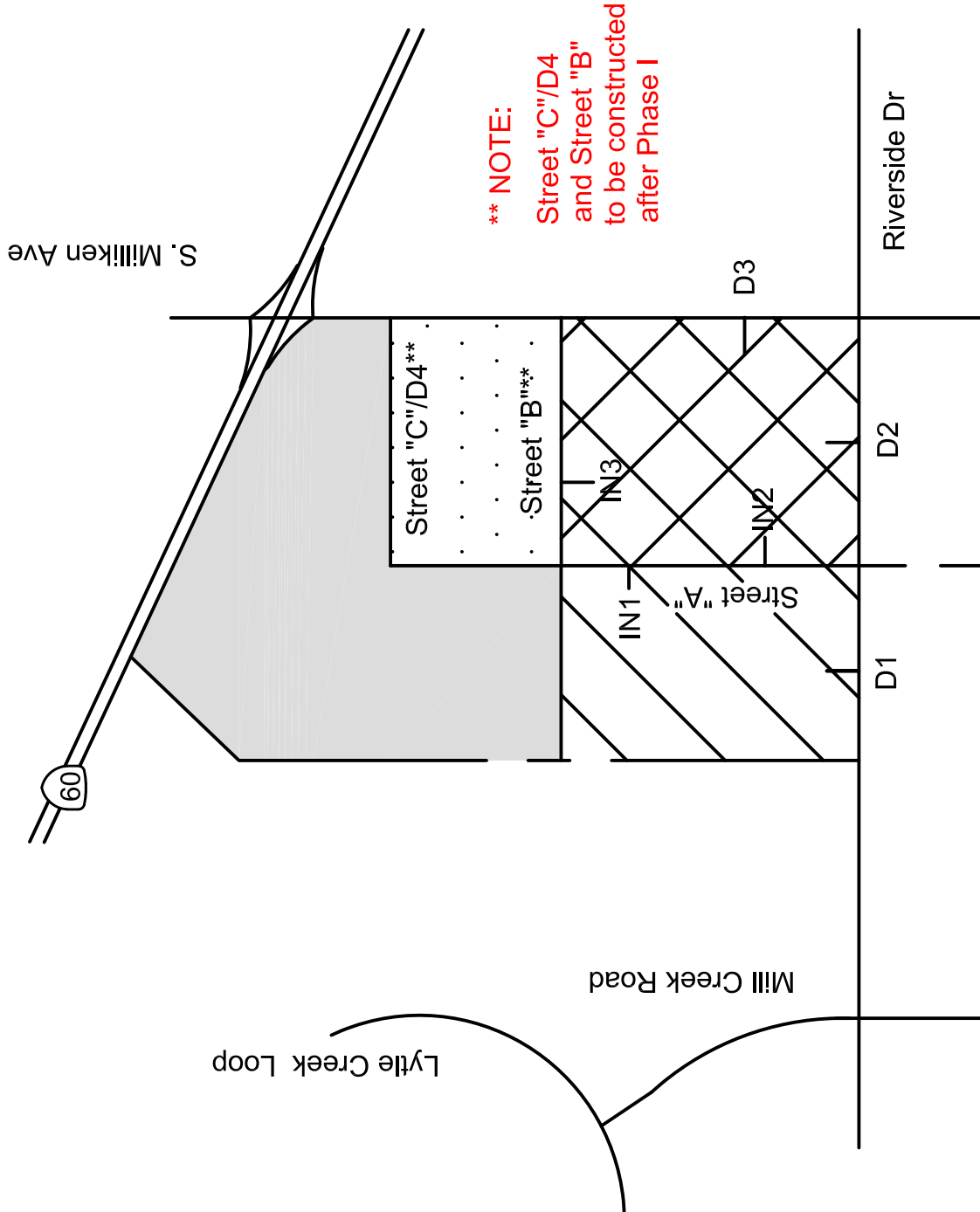
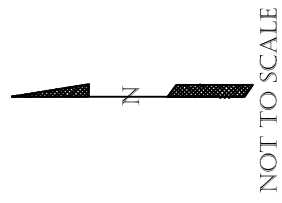
In the first phase of development, a new private street, named Street “A”, will be constructed to serve the Pelican Homes parcel via a driveway to the west and the interim Katelaris uses via a driveway to the east. Street “A” will have a north-south alignment and will intersect Riverside Drive approximately 600 feet west of Milliken (Hamner) Avenue. The intersection of Riverside Drive – Street “A” will be signalized as part of the initial phase of development. The Katelaris property will also have one right-turn in, right-turn out driveway on Milliken Avenue and one right-turn in, right-turn out driveway on Riverside Drive. The residential property will have one right-turn in, right-turn out driveway on Riverside Drive west of Street “A”.



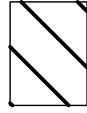


## PROJECT LOCATION

# TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA



**LEGEND:**



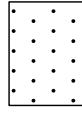
Pelican Homes  
Residential



Katellaris  
Mixed-Commerical



Galleano  
(Buildout Only)



Riboli  
(Buildout Only)

D1 - Driveway 1

IN2 - Internal Driveway 2

**BUILDOUT PROJECT PARCEL LOCATION  
AND ACCESS**

### *Project (Specific Plan) Buildout:*

Specific Plan buildout, which has an unspecified completion date, is proposed to include:

- The redevelopment of the Katelaris property's interim land uses to allow for the following *additional* land uses: 18,000 square feet of retail; 67,000 square feet of office; and 3,500 square feet of fast food restaurant uses;
- Up to a combination of 90,101 square feet of general retail and 450,506 square feet of office land uses<sup>1</sup> on the Galleano property; and
- Up to a combination of 48,127 square feet of general retail and 242,821 square feet of office land uses<sup>1</sup> on the Riboli property.

In addition to Street "A", a new private street, named Street "B", will be constructed to serve the site by Project buildout. Street "B" will have an east-west alignment and will intersect Milliken (Hamner) Avenue approximately 800 feet north of Riverside Drive. The intersection of Milliken (Hamner) Avenue – Street "B" will be signalized as part of Project buildout. The Katelaris development will have one additional driveway on Street "A" and one driveway on Street "B" with buildout development.

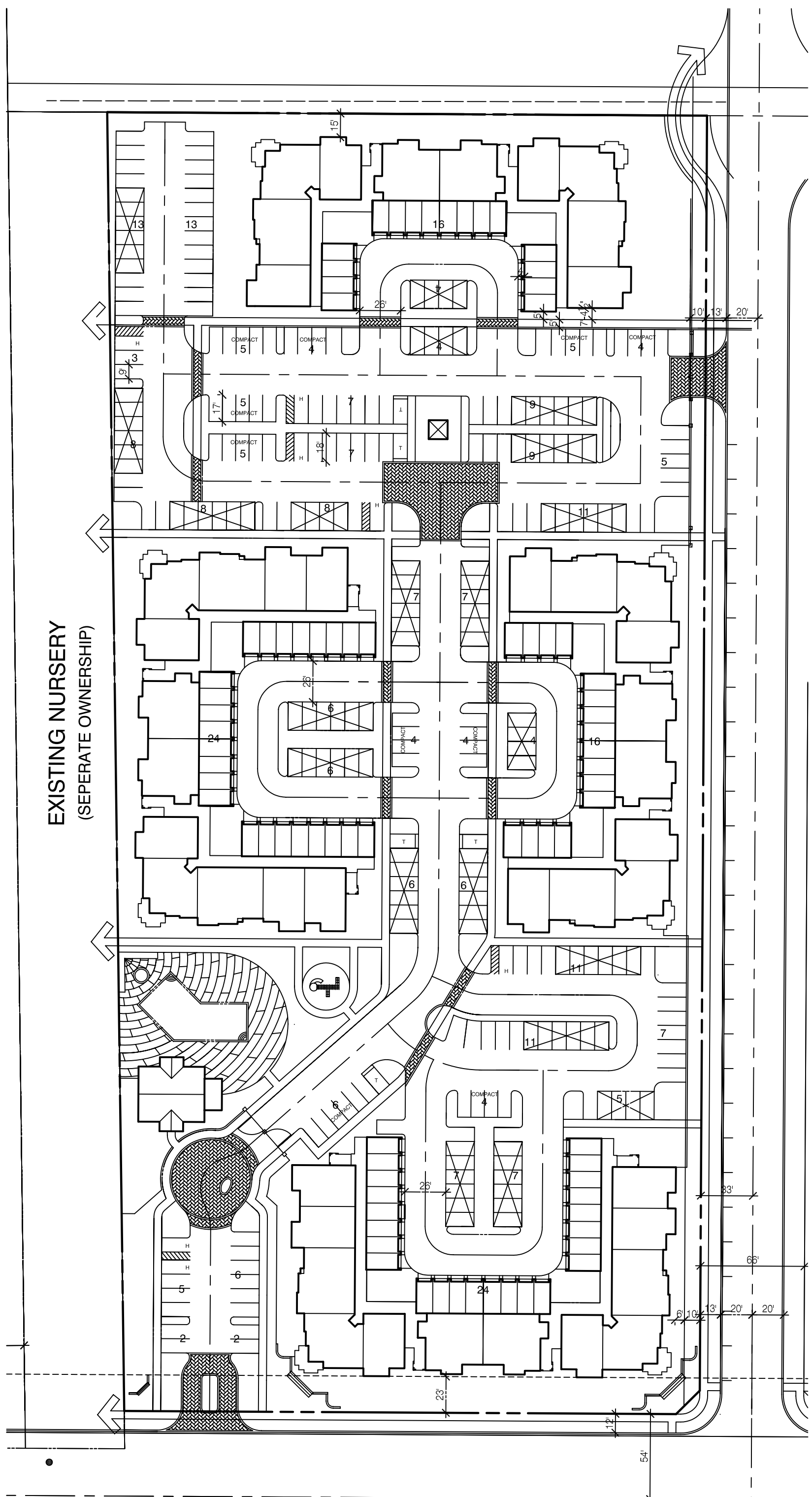
Driveways to the Riboli and Galleano parcels will be determined through more detailed site planning of those properties following completion of Phase I of development. An existing public roadway, Hartford Street, currently provides access to the San Antonio Winery located west of Milliken (Hamner) Avenue and south of Hartford Street. The need for this street to serve the buildout of the Tuscana Specific Plan will be determined with more detailed planning for development of the Riboli and Galleano parcels in the future. Per discussions with the City of Ontario, this TIA evaluates the circulation needs of the site both with and without Hartford Street at Project buildout.

The site plans for the parcels to be developed by Pelican Homes and Phase I (interim land uses) of the Katelaris property are shown on **Figures 3 and 4**. It is assumed that the Pelican Homes and initial Katelaris development will be completed in 2012. A concept plan for the redevelopment of the interim uses on the Katelaris property for buildout analysis is provided in **Appendix A**, though there is no specific date for this further development. No detailed site plans are provided for the Galleano and Riboli parcels.

**Table 1** provides a summary of the land uses assumed for the purposes of this TIA, based on the site plans provided by the Project applicant and the Tuscana Village Specific Plan prepared by Applied Planning, Inc., April 2011.

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<sup>1</sup> To ensure a conservative analysis of circulation needs, office land uses were assumed in the traffic analysis for portions of the Galleano and Riboli to be developed as business park land uses at 1.0 FAR.



NET LAND AREA: (EXCLUDES STREET "A" & "B" PARCELS)	9.49 AC (413,359 SF ±)
USE TABULATIONS: (NOT INCLUDING PAD C - GAS STATION/ C-STORE)	
RETAIL (FARM STORE & SHOPS):	9,000 SF
RESTAURANT (EVENT & BREWERY):	11,026 SF
RESTAURANT (DRIVE-THRU):	2,250 SF
OFFICE:	2,000 SF
NURSERY:	5,000 SF
GROWING AREA/ PETTING ZOO/ SEASONAL SALES/ MULTI-FUNCTION COURTYD:	105,380 SF
TOTAL:	134,656 SF
PARKING TABULATIONS	
RETAIL (1/250):	36 STALLS
RESTAURANT (EVENT & BREWERY) (1/100):	110 STALLS
RESTAURANT (DRIVE-THRU) (1/75):	30 STALLS
OFFICE (1/250):	8 STALLS
NURSERY SALES (1/400)	13 STALLS
GROWING AREA/ PETTING ZOO SEASONAL SALES/ MULTI-FUNCTION (1-2,500):	42 STALLS
TOTAL PARKING REQUIRED:	239 STALLS
PARKING PROVIDED:	286 STALLS

STREETS "A" &amp; "B" (PRIVATE):

[illegible]

**SITE PLAN**  
**SCHEME P**

NWC MILLIKEN & RIVERSIDE  
ONTARIO, CA

PCA PROJECT #08106.01  
21 / MARCH 2011



**Pierce/  
Cooley  
Architects, Inc.**

17280 Red Hill Avenue  
Irvine, CA 92614  
T 949.399.0878  
F 949.399.0889  
www.piercecooley.com

OFFICE: PIERCE/COOLEY ARCHITECTS, INC. 2009

0 20' 40' 80'

SCALE: 1" = 40'

NORTH



**TABLE 1**  
**TUSCANA VILLAGE SPECIFIC PLAN**  
**LAND USES<sup>(1)</sup>**

Parcel	Land Use	Size	Units
<b>PHASE I</b>			
Pelican Homes Parcel	Apartments	200	dus <sup>(2)</sup>
Katelaris Parcel (Interim Plan)	Office	2,000	s.f. <sup>(3)</sup>
	Retail	9,000	s.f.
	Fast-Food with Drive-Thru	2,250	s.f.
	Restaurant (Including Event and Brewery)	11,026	s.f.
	Nursery <sup>(4)</sup>	5,000	s.f.
	Growing Area/Seasonal Sales/Multi-Function Courtyard/Petting Zoo <sup>(4)</sup>	105,380	s.f.
	Car Wash (gas w/convenience store and car wash)	12	fueling positions <sup>(4)</sup>
<b>BUILDOUT (Total)</b>			
Pelican Homes Parcel	Apartments	200	dus <sup>(2)</sup>
Katelaris Parcel (Buildout)	Office	69,000	s.f. <sup>(3)</sup>
	Retail	27,000	s.f.
	Fast-Food with Drive-Thru	5,750	s.f.
	Restaurant (Including Event and Brewery)	11,026	s.f.
	Car Wash (gas w/convenience store and car wash)	12	fueling positions <sup>(5)</sup>
Galleano Parcel	Business Park (Office)	450,506	s.f.
	Retail	90,101	s.f.
Riboli Parcel	Business Park (Office)	242,821	s.f.
	Retail	48,127	s.f.

(1) Source: *Tuscan Village Specific Plan Project*, April 2011, by Applied Planning, Inc.

(2) dus – dwelling units

(3) s.f. – square feet

(4) Interim land use – to be redeveloped after Opening Year

(5) Fueling positions assumed for trip generation; up to 3,500 square feet for convenience store building area

## STUDY SCOPE AND PROCEDURES

A series of meetings was held with the City of Ontario and the Applicant and his consultants to establish the scope and parameters for the Traffic Impact Analysis (TIA) for the Project. The City of Ontario confirmed that the TIA prepared for the recently completed General Plan (GP) Update was based on a “high intensity” development scenario for the Project site. When compared to the General Plan Update’s traffic model assumptions, the trip generation of this Project will be lower than the maximum intensity of the land uses proposed by the City of Ontario for this site in the GP TIA. As such, the recommended ultimate General Plan (GP) Update Circulation Element roadway configurations will accommodate this Project and the TIA focuses more specifically on Project site access and operations at nearby intersections serving the site. In addition, discussions were held with the County of Riverside Transportation staff regarding specific requirements for this TIA and the location of the new signalized intersection at Street “B” – Milliken (Hamner) Avenue<sup>2</sup>.

The Scope of Work was developed based on the aforementioned discussions, the City of Ontario Engineering Department Traffic and Transportation Division’s *Final Traffic and Transportation Guidelines*, April 2009, and County of Riverside Transportation Department *Traffic Impact Analysis Preparation*. **Appendix B** provides the *Scope of Work and Assumptions for: Traffic Impact Analysis for the Tuscana Village Specific Plan*, as approved by the City of Ontario.

To make a thorough evaluation of the proposed development with respect to traffic-related elements, the following analysis steps were undertaken:

**1. Project Initiation**—As indicated earlier, a series of meetings and/or teleconferences were held with the City of Ontario, County of Riverside and the Project Applicant and his consultants to obtain a comprehensive understanding of the Project and requirements for the traffic analysis, including the study area, study intersections, years and periods of analysis, and other relevant information. Research was conducted and, as appropriate, discussions were held with the City of Ontario and County of Riverside to identify development of “related” or cumulative development projects which have been approved or are planned in the study area. In addition, the General Plan Update transportation documents were reviewed and General Plan traffic forecasts and the recommended roadway network for support the General Plan Update were used in this analysis.

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<sup>2</sup> Since these discussions, the east side of Milliken (Hamner) Avenue has become the new City of Eastvale within Riverside County.



2. ***Collection of Data***—The Project description and plan for development was obtained from the Tuscana Village Specific Plan, April 2011 and site plans provided by the Project Applicant. Intersection turning movement traffic counts by classification were collected at ten (10) existing study intersections during the weekday morning (7:00 AM and 9:00 AM) and afternoon (4:00 PM to 6:00 PM) peak periods in August 2009<sup>3</sup> by a subconsultant to MPI.
3. ***Analysis of Existing Conditions***—Intersection level-of-service (LOS) analysis was conducted to determine existing traffic conditions using the 2000 Highway Capacity Manual (HCM) methodology.
4. ***Projection of Project Traffic Volumes***—Estimates of Project-related traffic volumes were made. The estimates were based on trip generation rates in Institute of Transportation Engineers' (ITE) *Trip Generation*, 8<sup>th</sup> Edition, and on the methodology provided in ITE's *Trip Generation Handbook*, 2<sup>nd</sup> Edition. The maximum allowable densities were used to determine total trip generation in Opening Year (2012) for Phase I of development, and at Project buildout.
5. ***Distribution and Assignment of Project Traffic***—The Project distribution was determined based upon: 1) select-zone traffic model runs by the City of Ontario General Plan modeling consultant, Kimley-Horn and Associates, Inc; 2) roadways available for access during each phase of development; and 3) proposed driveway access to/from the site. Project-generated traffic was assigned to the study intersections based on this trip distribution during the morning (am) and evening (pm) peak-hour periods.
6. ***Analysis of Existing-Plus-Ambient (No-Project) Traffic Conditions in Project Opening Year***—Projections of future Existing-plus-Ambient (No-Project) traffic volumes in the Project Opening Year (2012) were made by applying an ambient traffic growth factor of 2 percent per year to existing traffic volumes. Level-of-service analyses were then conducted at study intersections to determine Opening Year (2012) Existing-Plus-Ambient (No-Project) traffic conditions.
7. ***Analysis of Existing-Plus-Ambient Growth-Plus-Project Traffic Conditions in Project Opening Year***—The With-Project traffic volumes for the Opening Year (2012) were developed by adding Project-generated trips to the Opening Year (2012) Existing-Plus-Ambient traffic volumes at study intersections. Level-of-service analyses were then conducted at study intersections to determine the Opening Year (2012) Existing-Plus-Ambient-Plus-Project (With-Project) traffic conditions. Review of the ability for the existing roadway system to accommodate Project traffic was conducted.

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<sup>3</sup> A total of eleven (11) intersections are studied for Opening Year (2012) With-Project traffic conditions, and twelve (12) intersections are studied under the General Plan With-Project traffic conditions.



**8. Analysis of Opening Year (2012) Cumulative (No-Project and With-Project) Traffic Conditions in Project Opening Year**—The Opening Year (2012) Cumulative traffic volumes were determined by first adding traffic generated by “related” or cumulative projects in the area as identified by the City of Ontario and the County of Riverside to the Existing-Plus-Ambient traffic volumes at study intersections. This yielded the Opening Year (2012) Cumulative No-Project (or Existing-Plus-Ambient-Plus-“Related” Projects) traffic volumes. It should be noted that not all of these approved developments will be completed in Opening Year (2012), and hence analyses presented herein assumes “worst-case” conditions. Next, traffic generated by the Project was added to the Opening Year (2012) Cumulative No-Project traffic volumes to estimate Opening Year (2012) Cumulative Background With-Project traffic volumes. Level-of-service analyses were then conducted at study intersections to determine Opening Year (2012) Cumulative traffic conditions under No-Project and With-Project conditions. Review of the ability for the existing roadway system to accommodate both cumulative and Project-related traffic was conducted.

**9. Analysis of Buildout No-Project and With-Project Traffic Conditions**— The No-Project traffic volumes for the No-Project conditions were obtained from the traffic impact analysis prepared for the General Plan Update Draft Environmental Impact Report (DEIR). Based on discussions with the City of Ontario staff, the General Plan Update allows commercial development with Floor Area Ratio (FAR) of 1.0 on the Project site. The proposed Project will be developed with 200 apartments and commercial uses with an average maximum FAR of 0.6. Therefore, the With-Project traffic volumes were determined by replacing the General Plan-land use trip assignments with the Project trip assignments at study intersections. Level-of-service analyses were conducted at study intersections to determine General Plan Buildout traffic conditions under No-Project and With-Project conditions. As indicated earlier, two different scenarios for buildout conditions were analyzed – one with access at Hartford Street and one without access at Hartford Street.

**10. Impact Analysis**— Project-related traffic impacts and necessary improvements for Opening Year (2012) and Project buildout to maintain desired level-of-service and traffic operations were summarized.

**12. On-Site Access**—The public roadway system serving the Project in Opening Year (2012) and under Project buildout conditions was reviewed and improvements to accommodate traffic at major Project gateways is discussed. In addition, the locations and operations of proposed driveways serving Phase I development (the Pelican Homes and Katelaris developments) were evaluated.

**13. Findings and Recommendations**—Recommendations to mitigate any significant Project-related impacts and provide efficient access to/from the Project were formulated based upon the results of the above-mentioned analyses for each phase of development. Any other traffic related issues are also discussed.

## 2.

# AREA TRAFFIC CONDITIONS

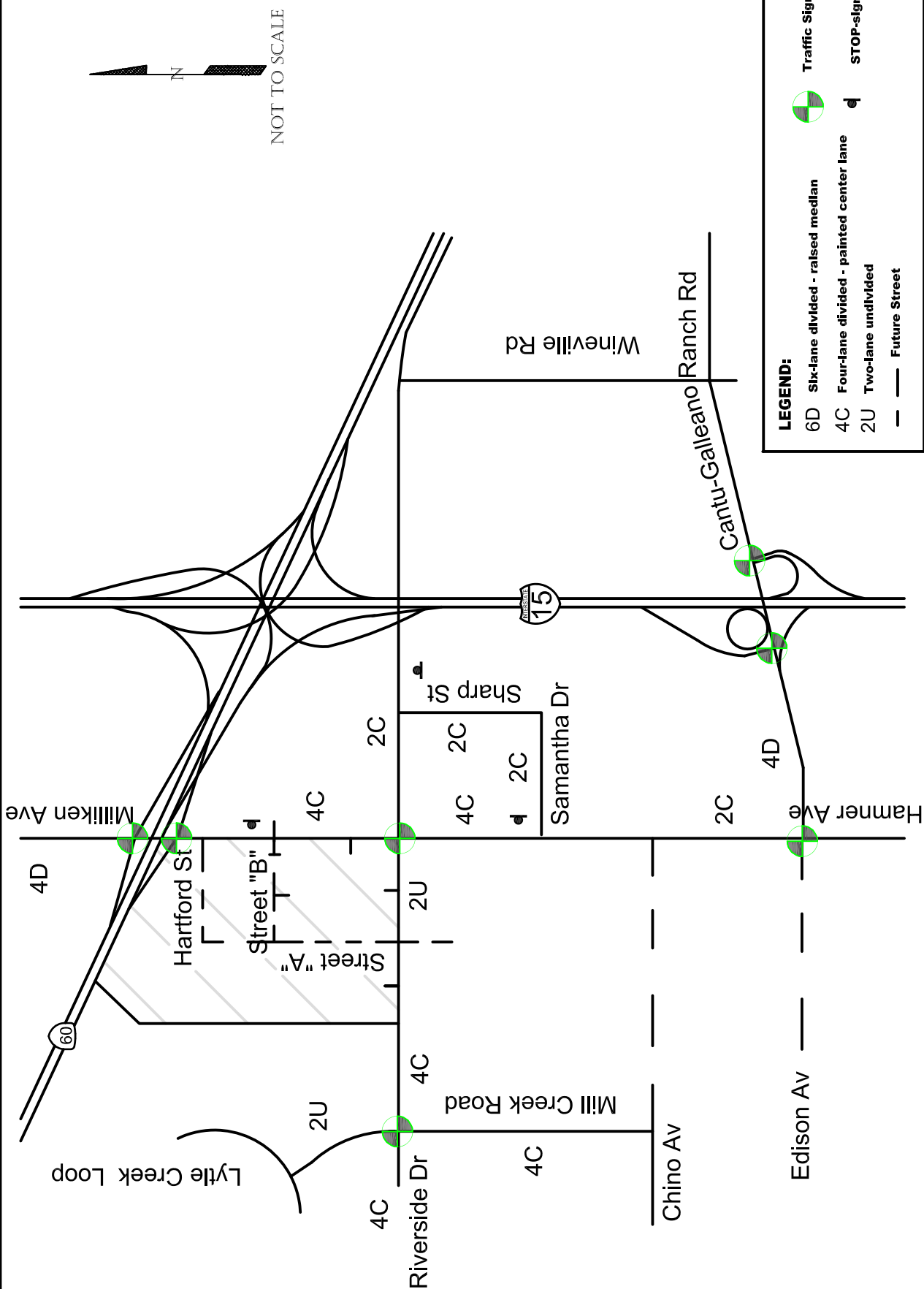
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## ROADWAY SYSTEM

The major factors affecting access to the Project site are the location of the site and the efficiency of the roadway system serving the site. Efficiency of access is a function of travel time, convenience, directness, and available capacity of the routes utilized in accessing the development.

The Tuscana Village Specific Plan will be located in the City of Ontario, and will be bordered by State Route 60 (SR-60) on the north, Milliken (Hamner) Avenue on the east and Riverside Drive to the south.

The existing and planned transportation network is discussed in this section. **Figure 5** shows the number of existing midblock travel lanes on study roadway segments as well as the existing traffic control at each study intersection. The roadway system is further described below.



# EXISTING MIDBLOCK LANE CONFIGURATIONS AND TRAFFIC CONTROL AT STUDY INTERSECTIONS

## Roadway Network

**State Route 60 (SR-60)** is a ten-lane freeway (with eight general purpose and two High Occupancy Vehicle (HOV) lanes) which generally runs in an east-west alignment north of the Project and connects Riverside County with Los Angeles County. SR-60 has local interchanges at Milliken Avenue adjacent to the site, and with Haven Avenue further to the west. To the east, there is a freeway-to-freeway interchange with Interstate 15 (I-15).

**Interstate 15 (I-15)** is an eight-lane freeway which generally runs in a north-south alignment about ½ mile east of the Project. I-15 connects Riverside County with San Bernardino County to the north and San Diego County to the south. As stated above, it interchanges with SR-60 to the east of the Project site. The closest local interchange to the Project on I-15 is at the Cantu/Galleano Ranch Road to the east and south of the Project.

**Milliken Avenue (also known as Hamner Avenue)** is a north-south arterial bordering the Project on the east. It currently has varying curb-to-curb widths of approximately 90 feet north of Riverside Drive and 55 feet south Riverside Drive and a posted speed limit of 40 miles per hour. Milliken (Hamner) Avenue has four travel lanes north of Riverside Drive and two travel lanes south of Riverside Drive and carries approximately 17,700 vehicles per day<sup>4</sup> south of SR-60. Milliken (Hamner) Avenue is on the border of City of Ontario and the City of Eastvale. In the Project area, signalized intersections exist at the ramp intersections with SR-60, and at Riverside Drive and at Cantu-Galleano Ranch Road to the south of Project. The Ontario General Plan Update classifies Milliken (Hamner) Avenue as an 8-lane divided arterial in the Project vicinity.

**Riverside Drive** is an east-west arterial bordering the Project on the south. It has varying curb-to-curb widths throughout the study area and a posted speed limit of 50 miles per hour. Riverside Drive has two to four travel lanes in the Project area and carries approximately 9,300 vehicles per day. In the Project area, signalized intersections exist at Riverside Drive and at Mill Creek Avenue. The Ontario General Plan Update classifies Riverside Drive as a 6-lane standard arterial in the Project vicinity.

**Mill Creek Avenue** is a north-south arterial located west of the project site. It has varying curb-to-curb widths of approximately 40 feet north of Riverside Drive and 65 feet south Riverside Drive and a posted speed limit of 35 miles per hour. Mill Creek Avenue has two travel lanes north of Riverside Drive. The Ontario General Plan Update classifies Mill Creek Avenue south of Riverside Drive as a 4-lane standard arterial, and as a local street north of Riverside Drive.

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<sup>4</sup> Daily traffic volumes obtained from *The Ontario Plan Draft EIR Appendix H – Ontario General Plan Update Transportation Technical Report*, Kimley-Horn and Associates Inc, March 19, 2009, and or estimated based on peak-hour counts collected in 2009.

***Cantu-Galleano Ranch Road*** is an east-west arterial in Riverside County south of the Project. This street provides local access to the I-15 with an interchange at Cantu-Galleano Ranch Road. It has curb-to-curb widths of approximately 80 feet and a posted speed limit of 35 miles per hour.

## **Transit**

Currently, no transit serves the site directly. The closest transit line is Route 81 which runs between Chaffey College and the Civic Center with stops at Ontario Mills, along Haven Avenue and then Riverside Drive 1-mile west of the Project.

## **Non-Vehicular Transportation**

### *Pedestrian Circulation*

Neither Milliken (Hamner) Avenue nor Riverside Drive adjacent to the site is fully improved at this time, and sidewalks do not exist along the Project frontage.

### *Bike Circulation*

Neither Milliken (Hamner) Avenue nor Riverside Drive is fully improved at this time, and specific bike facilities are not provided adjacent to the site. The General Plan Update's proposed Multi-Purpose Trail and Bicycle Corridor Plan designates Have Avenue, one mile to the west, as a bicycle corridor. A multi-purpose trail is proposed along Riverside Drive west of Mill Creek Avenue in the future.

## **Study Intersections**

Based on discussions with the City of Ontario and County of Riverside transportation staff, the following intersections (with their respective jurisdictions noted) were identified for analysis under existing and future traffic conditions (depending on Project development phase):

1. Milliken (Hamner) Avenue – Riverside Drive (City of Ontario, City of Eastvale);
2. Milliken (Hamner) Avenue – existing driveway to industrial property on the east side of the street, which will become Street “B” with Project buildout (City of Ontario, City of Eastvale);
3. Milliken (Hamner) Avenue – SR-60 eastbound ramps (Caltrans, CMP intersection);
4. Milliken (Hamner) Avenue – SR-60 westbound ramps (Caltrans, CMP intersection);
5. Riverside Drive – Mill Creek Avenue (City of Ontario);
6. Riverside Drive – Sharp Street (County of Riverside);
7. Milliken (Hamner) Avenue – Cantu/Galleano Ranch Road (City of Ontario, City of Eastvale);
8. Cantu/Galleano Ranch Road – I-15 southbound ramps (Caltrans, CMP intersection);
9. Cantu/Galleano Ranch Road – I-15 northbound ramps (Caltrans, CMP intersection);
10. Milliken (Hamner) Avenue – Samantha Drive (City of Ontario, City of Eastvale);
11. Riverside Drive – Street “A”, a future intersection with Project Phase I implementation (City of Ontario)

The locations of these eleven intersections are shown on **Figure 6**.

An existing intersection, Milliken (Hamner) Avenue – Hartford Street (identified as Intersection 12 later in this report), just south of the SR-60, currently serves as a driveway to the San Antonio Winery, with minimal traffic during the morning (am) and evening (pm) peak-hour periods. No change in operations or access is proposed with implementation of Phase I of the Project. With Project buildout, the San Antonio Winery could be replaced by the buildout business park or retail land uses. Should Hartford Street continue to operate as a public street or become a private driveway under Project buildout conditions, it would be restricted to right-turn in and out movements only, and is studied as such in this report. In addition, an alternative where Hartford Street is abandoned and no driveway access is allowed at this location under Project buildout conditions is analyzed as well.

Field reconnaissance was conducted to determine the existing intersection lane configurations, traffic control, traffic operations and any unusual issues associated with circulation at these locations and roadway segments serving the area. As stated earlier, **Figure 5** shows existing midblock lane configurations and traffic control. **Figure 7** shows existing lane configurations at each study intersection.

### **Existing Intersection Traffic Volumes**

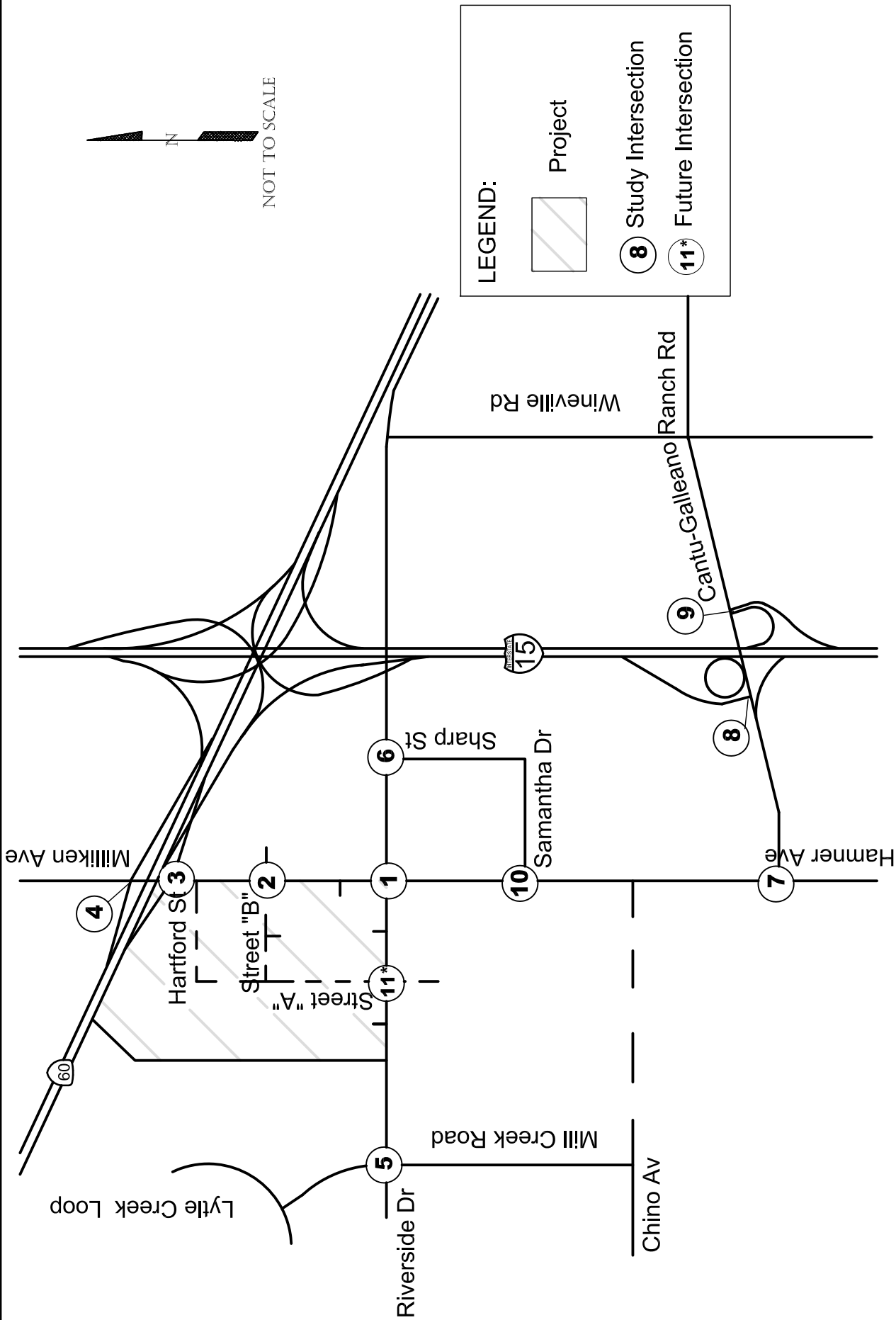
Intersection traffic turning movement counts were collected at the existing study intersections during the morning (am) peak period (7:00 AM to 9:00 AM) and evening (pm) peak period (4:00 PM to 6:00 PM) in August 2009 by Counts Unlimited, Inc., a subconsultant to MPI. All traffic counts were collected while area schools were in session. Traffic count data is provided in **Appendix C**.

Traffic counts were classified by passenger vehicles, large 2-axle vehicles, 3-axle vehicles and 4+-axle trucks. The 2-axle, 3-axle and 4+-axle vehicles were converted into passenger car equivalents (pce's) by applying a factor of 1.5, 2.0 and 3.0, respectively.

**Figure 8** shows the AM and PM peak-hour turning movement counts in passenger-car-equivalents (pce's) at the study intersections.

### **Level of Service Definitions**

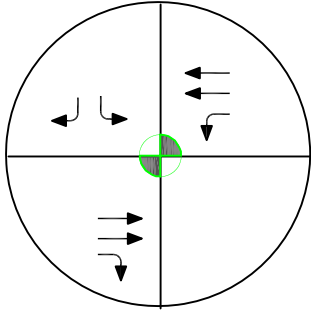
The current technical guide to the evaluation of traffic operations is the 2000 Highway Capacity Manual (HCM) (Transportation Research Board Special Report 209). The HCM defines “Level of Service” as a quantitative measure which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. Level of service (LOS) is a measure of “quality-of-flow.” There are six levels of service, A through F, which relate to traffic congestion from best to worst, respectively.



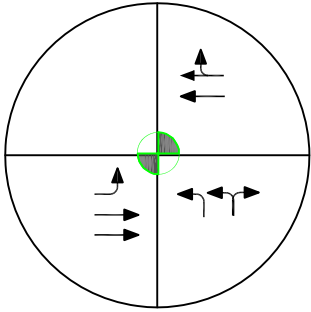
## STUDY INTERSECTION LOCATIONS

### TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA

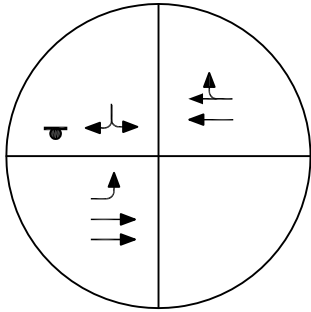
④ Milliken/Hamner Ave -  
SR-60 Westbound Ramps



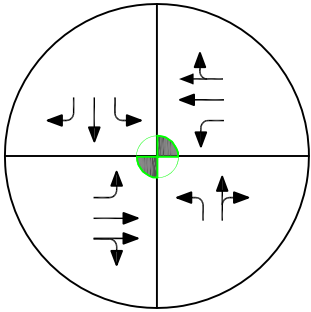
③ Milliken/Hamner Ave -  
SR-60 Eastbound Ramps



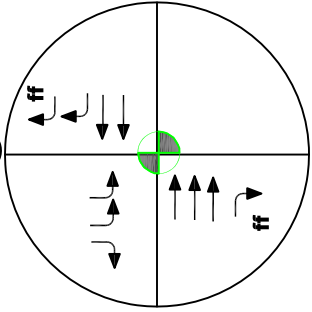
② Milliken/Hamner Ave -  
Industrial Dwy (E)/Street B (fut.)



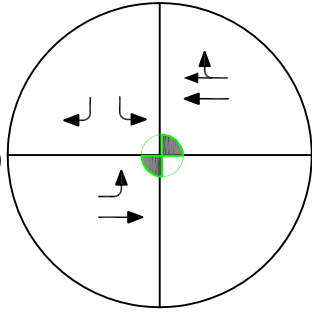
① Milliken/Hamner Ave -  
Riverside Dr



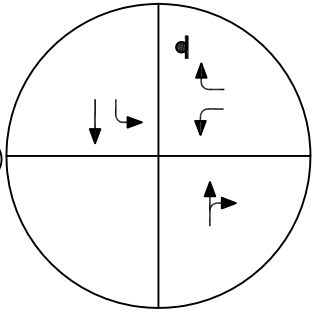
⑧ Cantu-Galleano Ranch Rd -  
I-15 Southbound Ramps



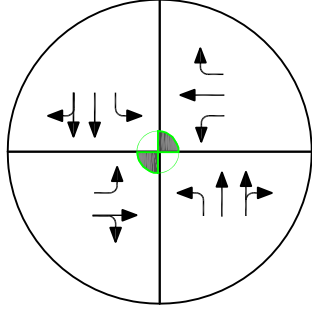
⑦ Milliken/Hamner Ave -  
Cantu-Galleano Ranch Rd



⑥ Riverside Dr -  
Sharp St



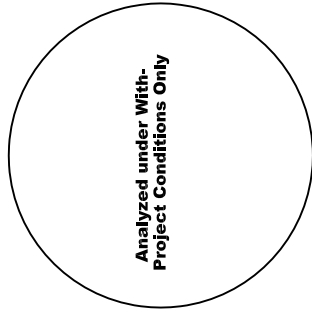
⑤ Riverside Dr -  
Mill Creek Ave



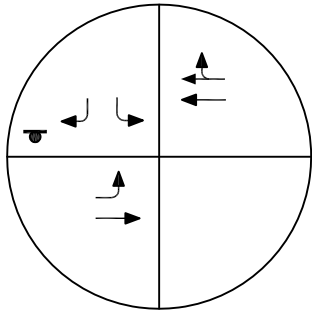
⑫ Milliken/Hamner Ave -  
Hartford St



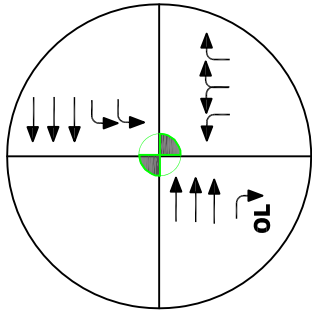
⑪ Riverside Dr -  
Street A (fut.)



⑩ Milliken/Hamner Ave -  
Samantha St



⑨ Cantu-Galleano Ranch Rd -  
I-15 Northbound Ramps



Legend:

- Lane Configurations
- Free-Flow Right-turn
- Right-turn Overlap Phase
- Traffic Signal
- STOP-sign

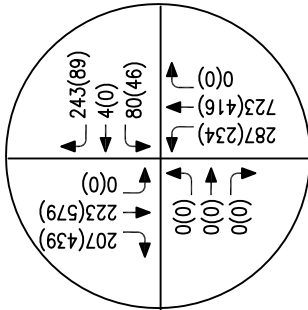
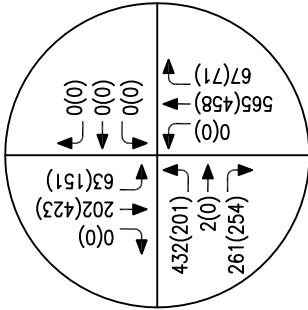
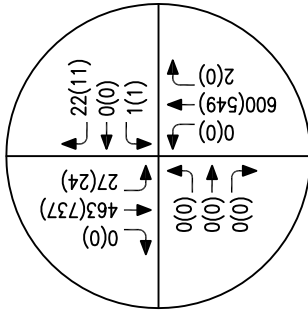
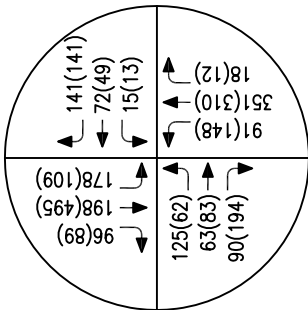


EXISTING INTERSECTION LANE CONFIGURATIONS

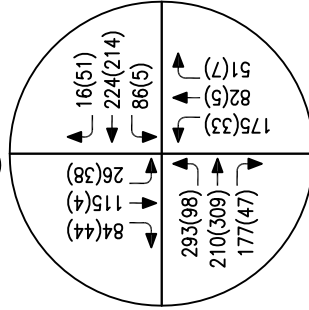
TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA



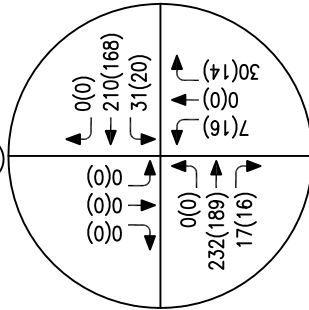
1 Milliken/Hammer Ave - Riverside Dr  
2 Milliken/Hammer Ave - Industrial Dwy (E)/Street B (fut.)  
3 Milliken/Hammer Ave - SR-60 Eastbound Ramps  
4 Milliken/Hammer Ave - SR-60 Westbound Ramps



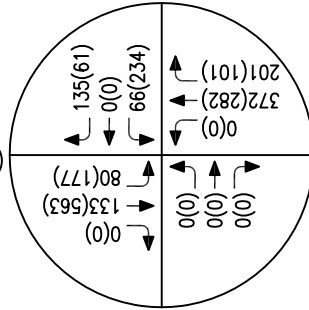
5 Riverside Dr - Mill Creek Ave



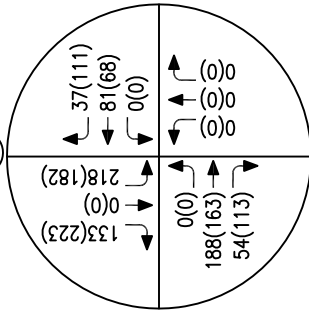
6 Riverside Dr - Sharp St



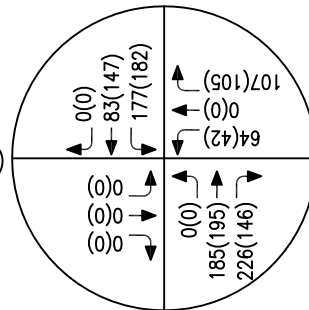
7 Milliken/Hammer Ave - Cantu-Galleano Ranch Rd



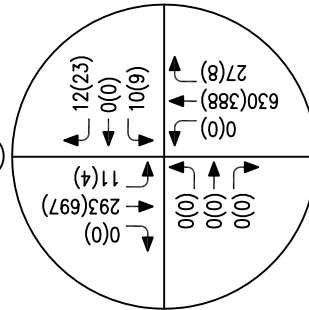
8 Cantu-Galleano Ranch Rd - I-15 Southbound Ramps



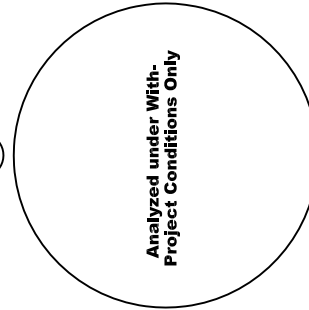
9 Cantu-Galleano Ranch Rd - I-15 Northbound Ramps



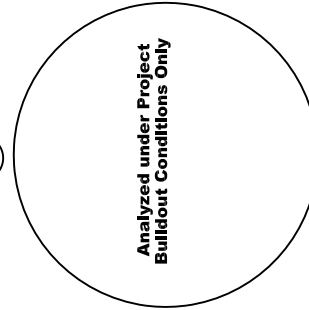
10 Milliken/Hammer Ave - Samantha St



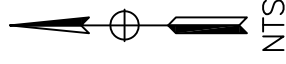
11 Riverside Dr - Street A (fut.)



12 Milliken/Hammer Ave - Hartford St



Legend:  
XX(XX) - AM(PM)  
Peak-Hour  
Traffic Volumes  
(In pce/s)



In general, Level A represents free-flow conditions with no congestion. Conversely, Level F represents severe congestion with stop-and-go conditions. Level F typically is considered to be unsatisfactory. The criteria used to evaluate LOS conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted. **Table 2** shows the definition of LOS for uninterrupted flow (flow unrestrained by the existence of traffic control devices). Uninterrupted flow is generally found only on limited-access facilities (freeways) in urban areas.

**TABLE 2**  
**LEVEL OF SERVICE DEFINITIONS FOR UNINTERRUPTED FLOW**

Level of Service	Definition	Nominal Range of Volume-to-Capacity Ratio
A	Represents free flow. Individual vehicles are virtually unaffected by the presence of others in the traffic stream.	0.00 to 0.60
B	Is in the range of stable flow, but the presence of other vehicles in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.	0.61 to 0.70
C	Is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual vehicles becomes significantly affected by interactions with other vehicles in the traffic stream.	0.71 to 0.80
D	Is a crowded segment of roadway with a large number of vehicles restricting mobility and a stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.	0.81 to 0.90
E	Represents operating conditions at or near the level capacity. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdown in traffic movement.	0.91 to 1.00
F	Is used to define forced or breakdown flow (stop-and-go gridlock). This condition exists when the amount of traffic approaches a point that exceeds the amount that can travel to a destination. Operations within the queues are characterized by stop and go waves, and they are extremely unstable.	Not Meaningful

Source: 2000 *Highway Capacity Manual*

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of control. The LOS is dependent on the quality of flow at the intersections along a roadway. The HCM methodologies express the LOS at an intersection in terms of delay time for the various intersection approaches and for the intersection as a whole. The HCM uses different procedures depending on the type of intersection control. Per discussions with the City of Ontario, the traffic operations and LOS's determined in this study are calculated using the HCM methodology. The TRAFFIX software was employed as the analysis tool in this study, using the 2000 HCM intersection analysis procedures.

Average stopped delay per vehicle was used to determine the LOS at study intersections. The operations module in the HCS was used for the signalized locations. The study area intersections which are currently STOP-sign controlled on the minor street only or have STOP-signs in all directions have been analyzed using the unsignalized intersection and the all-way-STOP-controlled (AWSC) methodologies, respectively of the HCM.

The LOS for intersections is defined in terms of average vehicle delay for the intersection, as shown on **Table 3**.

**TABLE 3**  
**INTERSECTION LEVEL OF SERVICE CRITERIA**

Level of Service	Average Stopped Delay per Vehicle (Seconds)	Average Total Delay per Vehicle (Seconds)
	Signalized	Unsignalized
A	0 to 10.0	0 to 5.0
B	10.01 to 20.00	5.01 to 10.00
C	20.01 to 35.00	10.01 to 20.00
D	35.01 to 55.00	20.01 to 30.00
E	55.01 to 80.00	30.01 to 45.00
F	80.01 and up	45.01 and up

Source: 2000 *Highway Capacity Manual*

## Level of Service Standards

The City of Ontario minimum standard for intersection operations is LOS “D”. The San Bernardino County Congestion Management Program (CMP) minimum standard for intersection operations is LOS “E”. The California Department of Transportation’s (Caltrans’) <sup>5</sup> “endeavors to maintain a target LOS at the transition between LOS C and LOS D....If an existing State Highway is operating at less than the appropriate target LOS, the existing MOE (measure of effectiveness) should be maintained”. Based on general policy along SR-60, target level of service is LOS “D” has been applied to ramp intersections and freeway segments under Caltrans’ jurisdiction. LOS “C” is the desired minimum LOS along all Riverside County-maintained roads and conventional state highways <sup>6</sup>. As an exception, LOS “D” may be allowed in Community Development areas, only at intersections of any combination of Secondary Highways, Major Highways, Urban Expressways, conventional state highways or freeway ramp intersections. (LOS “E” may be allowed in designated community centers to the extent that it would support transit-oriented development and walkable communities.) The City of Eastvale standard is assumed to be the same as that of the County of Riverside.

In this analysis, minimum acceptable intersection operating conditions follow the City of Ontario guidelines for all intersections; in other words, LOS “D” or better is considered acceptable at study intersections.

### Intersection Levels of Service

The analysis of existing intersection LOS was based upon the peak-hour traffic volumes illustrated on **Figure 8** and the existing intersection geometrics exhibited on **Figure 7**. **Table 4** summarizes the existing levels of service at the study intersections during the weekday morning (am) and evening (pm) peak hours. **Appendix D** provides Highway Capacity Manual (HCM) worksheets for all of the LOS analysis.

As shown in **Table 4**, all study intersections operate acceptably based on the respective jurisdiction’s target LOS standard.

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<sup>5</sup> Source: *Caltrans Guide for the Preparation of Traffic Impact Studies*, State of California Department of Transportation, December 2002 (<http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf>).

<sup>6</sup> Source: *Riverside County General Plan RCIP* ([http://www.rctlma.org/genplan/content/gp/chapter04.html#TOC3\\_5](http://www.rctlma.org/genplan/content/gp/chapter04.html#TOC3_5)).

**TABLE 4**  
**EXISTING TRAFFIC CONDITIONS – WEEKDAY MORNING AND EVENING PEAK HOURS**

Intersection		Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay <sup>(1)</sup>	LOS <sup>(2)</sup>	Delay	LOS
1	Milliken (Hamner) Avenue – Riverside Drive	Signal	18.9	B	18.8	B
2	Milliken (Hamner) Avenue – Industrial Driveway (east side of Milliken)/Street “B” in the future <sup>(3)</sup>	TWSC <sup>(4)</sup>	0.4	A	0.3	A
3	Milliken (Hamner) Avenue – SR-60 Eastbound Ramps	Signal	15.7	B	14.4	B
4	Milliken (Hamner) Avenue – SR-60 Westbound Ramps	Signal	13.6	B	10.0	A
5	Riverside Drive – Mill Creek Road	Signal	17.2	B	13.3	B
6	Riverside Drive – Sharp Street	TWSC	1.2	A	1.1	A
7	Milliken (Hamner) Avenue – Cantu-Galleano Ranch Road	Signal	12.2	B	12.8	B
8	Cantu-Galleano Ranch Road – I-15 Southbound Ramps	Signal	9.0	A	9.0	A
9	Cantu-Galleano Ranch Road – I-15 Northbound Ramps	Signal	12.4	B	11.9	B
10	Milliken (Hamner) Avenue – Samantha Drive	TWSC	0.5	A	0.4	A

Notes: (1) Intersection average vehicle delay in seconds.

(2) Intersection Level-of-Service (See Table 3 for Intersection LOS Criteria).

(3) Street “B” to be constructed in the future with development of the Specific Plan Buildout.

(4) Two-Way STOP-sign control. For these intersections, average intersection delay is reported above; “worst-case” (side-street) delay is provided on LOS TRAFFIX worksheets in Appendix D.

### 3.

## **PROJECTED FUTURE TRAFFIC CONDITIONS**

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This chapter describes the future traffic volumes with and without Project implementation, first in Project Opening Year (2012) and then under General Plan Buildout Conditions. The information is provided in the following order:

1. Opening Year (2012) Project Traffic Volumes – Trip Generation, Trip Distribution and Trip Assignment of Phase I land uses.
2. Project Buildout Traffic Volumes – Trip Generation, Trip Distribution and Trip Assignment of Tuscana Village Specific Plan buildout land uses.
3. Opening Year (2012) No-Project Traffic Volume Forecasts at Study Intersections – Traffic volumes in Project Opening Year with ambient traffic growth, also known as Existing-Plus-Ambient traffic volumes.
4. Opening Year (2012) With-Project Traffic Volume Forecasts at Study Intersections – Traffic volumes in Project Opening Year with ambient traffic growth and Project trips, also known as Existing-Plus-Ambient-Plus-Project traffic volumes.
5. Opening Year (2012) Cumulative No-Project Traffic Volume Forecasts at Study Intersections – Traffic volumes in Project Opening Year with ambient traffic growth and traffic from other approved projects (“related” projects) also known as Existing-Plus-Ambient-Plus-Cumulative No-Project Project traffic volumes.
6. Opening Year (2012) Cumulative With-Project Traffic Volume Forecasts at Study Intersections – Traffic volumes in Project Opening Year with ambient traffic growth and traffic from other approved and anticipated projects (“related” projects) as well as Project-generated traffic, also known as Existing-Plus-Ambient-Plus-Cumulative With-Project traffic volumes.

7. General Plan Buildout No-Project Traffic Volume Forecasts at Study Intersections – Traffic volumes projected for General Plan Buildout, assuming currently approved General Plan land uses and access.
8. General Plan Buildout With-Project Traffic Volume Forecasts at Study Intersections – Traffic volumes projected for General Plan Buildout, assuming that the proposed Project is implemented with maximum intensity and Streets “A” and “B” are constructed.

## **PROJECT DESCRIPTION, LOCATION AND ACCESS**

As discussed previously, The Tuscana Village Specific Plan (also referred to as “Project” in this report) will provide for the development on the 44-acre site located in the City of Ontario in San Bernardino County, California. Specifically, the Project will be bounded by State Route 60 (SR-60) on the north, Milliken (Hamner) Avenue on the east and Riverside Drive to the south. The location of the Project is provided on **Figure 1**.

The Project area is comprised of properties which are currently owned by three different entities:

- Katelaris – approximately 20 acres in the northwest quadrant of the intersection of Milliken (Hamner) Avenue – Riverside Drive (east and south of proposed Streets “A” and “B”, respectively), 8 acres of which are proposed to be sold to Pelican Homes for residential development;
- Galleano – approximately 16 acres south of SR-60, west of Milliken (Hamner) Avenue; and
- Riboli – approximately 12 acres west of Milliken (Hamner) Avenue, north of proposed Street “B”.

**Figure 2** provides a schematic showing the locations of these properties within the Specific Plan area.

The Project is proposed to be developed in two phases of development, as follows.

- Phase I, which will include the development of 200 residential units and 27,776 square feet of commercial retail land uses (including office, retail, fast-food and car-wash land uses) along with interim land uses which include a 5,000-square foot nursery sales area and 105,380 square feet of growing area/petting zoo/seasonal sales/multi-function courtyard area on the Katelaris property with a completion date in 2012; and
- Project buildout which will included the balance of the commercial retail land uses on the Katelaris site as well as on the Galleano and Riboli properties with an unspecified completion date and an ultimate square footage of up to 947,831 square feet of development on these three parcels in addition to the 200 residential units.

The Project will take access from Milliken (Hamner) Avenue and Riverside Drive. Two new private streets, named Street “A” and Street “B” will be constructed to serve the site.

Street “A” will have a north-south alignment and will intersect Riverside Drive approximately 600 feet west of Milliken (Hamner) Avenue and will be built with the development of the Pelican Homes parcel and the Katelaris interim development (Phase I of the Project) in Opening Year (2012). The intersection of Riverside Drive – Street “A” will be signalized with Phase I. The Pelican Homes residential development proposes a right-turn in, right-turn out driveway on Riverside Drive and a fully directional driveway on Street “A”. The Katelaris commercial development will have one right-in, right-out driveway on Milliken (Hamner) Avenue, one right-in, right-out driveway on Riverside Drive, and one fully-directional driveway on Street “A” in Phase I of development.

Street “B” will be constructed as development beyond Phase I occurs. It will have an east-west alignment on the north side of the Katelaris parcel and will intersect Milliken (Hamner) Avenue approximately 800 feet north of Riverside Drive. The intersection of Milliken (Hamner) Avenue – Street “B” will be signalized with Project buildout. In addition to Phase I driveways, the Katelaris commercial development proposes a second fully-directional driveway on Street “A” and one fully directional driveway on Street “B” with its buildout.

The site plans for the parcels to be developed by Pelican Homes and Katelaris in Phase I are shown on **Figures 3 and 4**. A concept plan for the buildout of the Katelaris commercial parcel is provided in **Appendix A** of the report. No detailed site plans are provided for the Galleano and Riboli parcels, but the overall scheme of the Specific Plan area at Buildout is provided on **Figure 2**. **Table 1** provides a summary of the land uses assumed for the purposes of this TIA, based on the site plans provided by the Project applicant and as described in the Specific Plan documents being prepared for this Project.

## **OPENING YEAR (2012) TRAFFIC CONDITONS**

### **OPENING YEAR (2012) PROJECT TRAFFIC**

The traffic related to the Project has been calculated in accordance with the following accepted procedural steps:

- Project Generation
- Project Distribution
- Project Assignment

### **Opening Year (2012) Project Trip Generation**

It is expected that Phase I of Tuscana Village Specific Plan will be developed and occupied by Opening Year (2012), with the balance of development occurring subsequently over the next 20 to 25 years.

In Opening Year (2012), 27,776 square feet of the commercial land uses and 200 apartments will be developed on either side of Street “A” north of Riverside Drive, as follows:



- 200 apartments;
- 2,000 square feet of office land uses;
- 9,000 square feet of retail land uses;
- 2,250 square feet of fast-food restaurant (with drive-through) land uses;
- 11,026 square feet of restaurant land uses (including an event hall and brewery); and a
- 12-fuleing position car wash/service station.

In addition, there will be an interim 5,000-square foot Nursery Sales area, and approximately 105,380 square feet of interim agricultural land uses, including a seasonal sales area/farmer's market, growing area/educational gardens and petting zoo and a multi-function courtyard. With the exception of the Nursery Sales area, these interim land uses will not be significant traffic generators during the weekday peak periods.

Trip generation is expressed in vehicle trip ends, defined as one-way vehicular movements, either entering or exiting the generating land use. Trip generation rates and equations for different land uses are typically found in publications by the Institute of Transportation Engineers (ITE) and by local agencies such as San Diego Association of Governments (SANDAG).

Trip generation rates for the Project land uses were obtained from ITE's *Trip Generation*, 8<sup>th</sup> Edition. **Table 5** shows the rates that have been used in this analysis. Some of the trips at a development of this size and composition will come from other land uses within the development – i.e., one vehicular trip will be made to several land uses. This phenomenon is called “internal” trip making. Further, for retail and restaurant land uses, a portion of the traffic comes from “pass-by” trips from adjacent roadways, which are already on the roadway system. ITE, in *Trip Generation Handbook*, Second Edition, June 2004, provides guidelines for estimating both internal and “pass-by” trips and these were used in determining both “pass-by” trip generation for retail-related land uses and “internal” trip making for this Project.

It should be noted that, with the exception of the Nursery Sales area, the balance of the interim land uses will generate a nominal amount of trips during the weekday peak-hour periods. According to the developer, these land uses will be used by schools and public during off-peak periods on a weekday and during the weekends. These land uses will not affect traffic operations on the surrounding roadway system.

**TABLE 5**  
**TUSCANA VILLAGE SPECIFIC PLAN**  
**TRIP GENERATION RATES <sup>(1)</sup>**

SPECIFIC PLAN LAND USE	ITE CODE	UNITS	DAILY RATE	AM PEAK HOUR RATE			PM PEAK HOUR RATE		
				In	Out	Total	In	Out	Total
Apartments <sup>(2)</sup>	220	d.u.'s <sup>(3)</sup>	6.65	0.102	0.408	0.51	0.403	0.217	0.62
Office <sup>(4)</sup>	710	1,000 s.f. <sup>(5)</sup>	11.01	1.364	0.186	1.55	0.253	1.087	1.49
Retail <sup>(6)</sup>	820	1,000 s.f.	42.94	0.610	0.390	1.00	1.828	1.902	3.73
Fast-Food Restaurant with Drive-Thru <sup>(7)</sup>	934	1,000 s.f.	496.12	25.168	24.182	49.35	17.597	16.243	33.84
Car Wash-Gas Station <sup>(8)</sup>	946	fuel. pos's. <sup>(9)</sup>	152.84	6.084	5.846	11.93	7.109	6.831	13.94
Restaurant <sup>(10)</sup>	932	1,000 s.f.	127.15	5.99	5.53	11.52	6.58	4.57	11.15
Nursery Sales <sup>(11)</sup>	817	1,000 s.f.	36.08	0.65	0.66	1.31	1.90	1.90	3.80

Notes:

(1) Trip Generation Rates from ITE *Trip Generation*, 8th Edition, for specific land uses.

(2) ITE *Trip Generation*, 8th Edition, Land Use 220 (Apartments).

(3) Dwelling units.

(4) ITE *Trip Generation*, 8th Edition, Land Use 710 (General Office Building)

(5) Square feet.

(6) ITE *Trip Generation*, 8th Edition, Land Use 820 (Shopping Center)

(7) ITE *Trip Generation*, 8th Edition, Land Use 934 (Fast-food Restaurant with Drive-Through Window)

(8) ITE *Trip Generation*, 8th Edition, Land Use 946 (Gas/Service Station with Convenience Market and Car Wash)

(9) Fueling Positions.

(10) ITE *Trip Generation*, 8th Edition, Land Use 932 (High Turnover (Sit-Down) Restaurant)

(11) ITE *Trip Generation*, 8th Edition, Land Use 817 (Nursery (Garden Center))

**Table 6** shows the Phase I Project trip generation in Opening Year (2012). **Table 7** shows the Specific Plan buildout trip generation assuming the Katelaris, Galleano and Riboli parcels were developed with the maximum proposed density.

**TABLE 6**  
**PHASE I WEEKDAY PROJECT TRIP GENERATION**  
**TUSCANA VILLAGE SPECIFIC PLAN**

LANDUSE	SIZE		DAILY	AM PEAK HOUR			PM PEAK HOUR		
				In	Out	Total	In	Out	Total
Pelican Homes Residential Parcel									
Apartments <sup>(1)</sup>	200	du's	1330	20	82	102	81	43	124
Gross Parcel 1 Trips			1,330	20	82	102	81	43	124
Internal trips - 10 internal capture between residential and office/retail/restaurant land use <sup>(2)</sup>			(133)	(2)	(8)	(10)	(8)	(4)	(12)
Net Parcel 1 Trips			1,197	18	73	92	73	39	112
Katellaris Interim Plan									
In-Line Restaurant <sup>(3)</sup>	6,000	s.f.	763	36	33	69	39	27	67
In-Line Restaurant <sup>(4)</sup>	5,026	s.f.	639	0	0	0	38	19	57
Retail <sup>(5)</sup>	9,000	s.f.	386	5	4	9	16	17	34
Fast food with Drive through <sup>(6)</sup>	2,250	s.f.	1,116	57	54	111	40	37	76
Office <sup>(7)</sup>	2,000	s.f.	22	3	0	3	1	2	3
Gas Station with Conv. Store and Car Wash <sup>(8)</sup>	12	fp's	1,834	73	70	143	85	82	167
Nursery Sales <sup>(9)</sup>	5,000	s.f.	180	3	3	7	10	10	19
Gross Parcel 2 Trips			4,941	177	165	342	228	194	423
Internal trips - 10 internal capture between residential and office/retail/restaurant land use <sup>(2)</sup>			(494)	(18)	(16)	(34)	(23)	(19)	(42)
Pass-by - 33% (daily, am pk) and 43% (pm pk) reduction for High-Turnover (Sit-Down) Restuarant <sup>(1)</sup>			(416)	(11)	(10)	(21)	(30)	(18)	(48)
Pass-by - 24% (daily, am pk) and 34% (pm pk) reduction for Shopping Center <sup>(11)</sup>			(83)	(1)	(1)	(2)	(5)	(5)	(10)
Pass-by - 49% (am pk) and 50% (daily, pm pk) reduction for fast food w/drive-through window <sup>(2)</sup>			(502)	(25)	(24)	(49)	(18)	(16)	(34)
Pass-by - 62% (am pk) and 56% (daily, pm pk) reduction for car wash <sup>(3)</sup>			(924)	(41)	(39)	(80)	(43)	(41)	(84)
Net Parcel 1 Trips			2,521	82	75	156	110	94	204
Gross Phase I Trips			6,271	197	246	444	309	238	547
Phase I Internal trips			(627)	(20)	(25)	(44)	(31)	(24)	(55)
Phase I "Pass-by" Trips			(1,927)	(78)	(74)	(151)	(96)	(81)	(177)
Net New Phase I Trips			3,718	100	148	248	182	133	315

Source:

(1) *ITE Trip Generation*, 8th Edition, Land Use 220 (Apartments)

(2) Based on interaction between residential, office and commercial retail/restaurant land uses in Phase I provided in *ITE Trip Generation Handbook, Second Edition, An ITE Recommended Practice*, June 2004, 10 percent of the trips will be internal to the site.

(3) *ITE Trip Generation*, 8th Edition, Land Use 932 (High Turnover (Sit-Down) Restaurant)

(4) *ITE Trip Generation*, 8th Edition, Land Use 932 (High Turnover (Sit-Down) Restaurant) for daily and PM peak-hour trip generation. Brewery/wine tasting will not be operational during the AM peak hour.

(5) *ITE Trip Generation*, 8th Edition, Land Use 820 (Shopping Center)

(6) *ITE Trip Generation*, 8th Edition, Land Use 934 (Fast-food Restaurant with Drive-Through Window)

(7) *ITE Trip Generation*, 8th Edition, Land Use 710 (General Office Building)

(8) *ITE Trip Generation*, 8th Edition, Land Use 946 (Gas/Service Station with Convenience Market and Car Wash)

(9) *ITE Trip Generation*, 8th Edition, Land Use 817 (Nursery (Garden Center))

(10) *Trip Generation Handbook, Second Edition, An ITE Recommended Practice*, June 2004, Tables 5.22 (Average Pass-By Trip Percentage for High-Turnover (Sit-Down) Restaurant, Weekday PM Peak Period).

(11) *Trip Generation Handbook, Second Edition, An ITE Recommended Practice*, June 2004, Table 5.6 (Average Pass-By Trip Percentage for Land Use 820, Shopping Center, Weekday PM Peak Period).

(12) *Trip Generation Handbook, Second Edition, An ITE Recommended Practice*, June 2004, Tables 5.23 and 5.24 (Average Pass-By Trip Percentage for Fast-Food Restaurant with Drive-Through Window, Weekday AM and PM Peak Periods, respectively).

(13) *Trip Generation Handbook, Second Edition, An ITE Recommended Practice*, June 2004, Tables 5.29 and 5.30 (Average Pass-By Trip Percentage for Gasoline/Service Station with Convenience Market, Weekday AM and PM Peak Period, respectively).

**TABLE 7**  
**BUILDOUT WEEKDAY PROJECT TRIP GENERATION**  
**TUSCANA VILLAGE SPECIFIC PLAN**

LANDUSE	SIZE		DAILY	AM PEAK HOUR			PM PEAK HOUR		
				In	Out	Total	In	Out	Total
Pelican Homes Residential Parcel									
Apartments <sup>(1)</sup>	200	du/s	1330	20	82	102	81	43	124
Gross Pelican Homes Trips			1,330	20	82	102	81	43	124
Internal trips - 10 internal capture between residential and office/retail/restaurant land uses <sup>(2)</sup>			(133)	(2)	(8)	(10)	(8)	(4)	(12)
Net Pelican Homes Trips			1,197	18	73	92	73	39	112
Katellaris Parcel (Buildout)									
In-Line Restaurant <sup>(3)</sup>	6,000	s.f.	763	36	33	69	39	27	67
In-Line Restaurant <sup>(4)</sup>	5,026	s.f.	639	0	0	0	38	19	57
Retail <sup>(5)</sup>	27,000	s.f.	1,159	16	11	27	49	51	101
Fast food with Drive through <sup>(6)</sup>	5,750	s.f.	2,853	145	139	284	101	93	195
Office <sup>(7)</sup>	69,000	s.f.	760	94	13	107	17	85	103
Gas Station with Conv. Store and Car Wash <sup>(8)</sup>	12	fp's	1,834	73	70	143	85	82	167
Gross Katellaris Parcel (Buildout) Trips			112,776	8,008	364	266	630	330	359
Internal trips - 10 internal capture between residential and office/retail/restaurant land uses <sup>(2)</sup>			(801)	(36)	(27)	(63)	(33)	(36)	(69)
Pass-by - 33% (daily, am pk) and 43% (pm pk) reduction for High-Turnover (Sit-Down) Restuarant <sup>(9)</sup>			(227)	(11)	(10)	(21)	(15)	(11)	(26)
Pass-by - 24% (daily, am pk) and 34% (pm pk) reduction for Shopping Center <sup>(10)</sup>			(250)	(4)	(2)	(6)	(15)	(16)	(31)
Pass-by - 49% (am pk) and 50% (daily, pm pk) reduction for fast food w/drive-through window <sup>(11)</sup>			(1,284)	(64)	(61)	(125)	(46)	(42)	(88)
Pass-by - 62% (am pk) and 56% (daily, pm pk) reduction for car wash <sup>(12)</sup>			(924)	(41)	(39)	(80)	(43)	(41)	(84)
Net Katelari Parcel Buildout Trips			4,522	209	127	336	178	213	392
Galleano Parcel									
Office <sup>(7)</sup>	450,506	s.f.	4,960	614	84	698	114	557	671
Retail <sup>(5)</sup>	90,101	s.f.	3,869	55	35	90	165	171	336
Gross Galleano Parcel Trips			540,607	8,829	669	119	788	279	729
20 percent of trips attracted from other uses <sup>(13)</sup>			(1,766)	(134)	(24)	(158)	(56)	(146)	(201)
Pass-by - 24% (daily, am pk) and 34% (pm pk) reduction for Shopping Center <sup>(10)</sup>			(743)	(11)	(7)	(17)	(45)	(47)	(91)
Net Galleano Parcel Trips			6,320	525	88	613	178	536	714
Riboli Parcel									
Office <sup>(7)</sup>	242,821	s.f.	2,673	331	45	376	62	300	362
Retail <sup>(5)</sup>	48,127	s.f.	2,067	29	19	48	88	92	180
Gross Riboli Parcel Trips			290,948	4,740	361	64	424	149	392
20 percent of trips attracted from other uses <sup>(13)</sup>			(948)	(72)	(13)	(85)	(30)	(78)	(108)
Pass-by - 24% (daily, am pk) and 34% (pm pk) reduction for Shopping Center <sup>(10)</sup>			(397)	(6)	(4)	(9)	(24)	(25)	(49)
Net Riboli Parcel Trips			3,395	283	48	330	96	289	384
Summary:									
			947,831						
GROSS SPECIFIC PLAN BUILDOUT TRIPS			22,907	1,415	530	1,945	839	1,523	2,362
INTERNAL SPECIFIC PLAN BUILDOUT TRIPS			(3,648)	(244)	(71)	(316)	(127)	(264)	(391)
"PASS-BY" SPECIFIC PLAN BUILDOUT TRIPS			(3,825)	(135)	(123)	(258)	(188)	(181)	(369)
NET SPECIFIC PLAN BUILDOUT TRIPS			15,435	1,035	336	1,371	525	1,077	1,602

Source:

(1) *ITE Trip Generation*, 8th Edition, Land Use 220 (Apartments)

(2) Based on interaction between residential, office and commercial retail/restaurant land uses in Pelican Homes and Katellaris parcels as provided in ITE's *Trip Generation Handbook, Second Edition, An ITE Recommended Practice*, June 2004, 10 percent of the trips will be internal to the site.

(3) *ITE Trip Generation*, 8th Edition, Land Use 932 (High Turnover (Sit-Down) Restaurant)

(4) *ITE Trip Generation*, 8th Edition, Land Use 932 (High Turnover (Sit-Down) Restaurant) for daily and PM peak-hour trip generation. Brewery/wine tasting will not be operational during the AM peak hour.

(5) *ITE Trip Generation*, 8th Edition, Land Use 820 (Shopping Center)

(6) *ITE Trip Generation*, 8th Edition, Land Use 934 (Fast-food Restaurant with Drive-Through Window)

(7) *ITE Trip Generation*, 8th Edition, Land Use 710 (General Office Building)

(8) *ITE Trip Generation*, 8th Edition, Land Use 946 (Gas/Service Station with Convenience Market and Car Wash)

(9) *Trip Generation Handbook, Second Edition, An ITE Recommended Practice*, June 2004, Tables 5.22 (Average Pass-By Trip Percentage for High-Turnover (Sit-Down) Restaurant, Weekday PM Peak Period).

(10) *Trip Generation Handbook, Second Edition, An ITE Recommended Practice*, June 2004, Table 5.6 (Average Pass-By Trip Percentage for Land Use 820, Shopping Center, Weekday PM Peak Period).

(11) *Trip Generation Handbook, Second Edition, An ITE Recommended Practice*, June 2004, Tables 5.23 and 5.24 (Average Pass-By Trip Percentage for Fast-Food Restaurant with Drive-Through Window, Weekday AM and PM Peak Periods, respectively).

(12) *Trip Generation Handbook, Second Edition, An ITE Recommended Practice*, June 2004, Tables 5.29 and 5.30 (Average Pass-By Trip Percentage for Gasoline/Service Station with Convenience Market, Weekday AM and PM Peak Period, respectively).

(13) With additional square footage in Galleano and Riboli parcels, interaction between these land uses and other commercial and residential land uses in the Specific Plan increases to 20 percent, as provided in ITE's *Trip Generation Handbook, Second Edition, An ITE Recommended Practice*, June 2004.

## **Phase I Trip Generation**

As shown on Table 6, Phase I in Opening Year (2012) is estimated to generate approximately 3,718 trips on a daily basis. During the weekday morning (am) peak hour, 248 trips (100 inbound and 148 outbound) will be generated, while 315 trips are expected to be generated during the evening (pm) peak hour (182 inbound and 133 outbound) by Phase I land uses.

## **Tuscana Village Specific Plan Trip Generation at Project Buildout**

It is expected that Tuscana Village Specific Plan would generate up to 15,435 trips on a on a daily basis, of which 1,371 trips (1,035 inbound and 336 outbound) would be generated during the morning (am) peak hour and 1,602 trips (525 inbound and 1,077 outbound) would be generated during the evening (pm) peak hour.

## **Project Trip Distribution**

The trip distribution process represents the directional orientation of traffic approaching and departing the site. Trip distribution to a site is influenced by 1) the geographic location of both the Project site and the residential and employment opportunities surrounding the site; 2) the roadway network serving the site; 3) existing and future capacity and accessibility of said roadway network; and 4) locations of internal streets and driveways serving the site.

The Project trip distribution was developed in several steps:

- 1) The zone structure of the City of Ontario traffic forecasting model, developed for the City of Ontario General Plan Update, was refined. The Project is located within Traffic Analysis Zone (TAZ) 191, which has one centroid connector in the model, loading all trips from TAZ 191 onto Riverside Drive. With this Project, traffic will be loaded onto Milliken (Hamner) Avenue via Street “B” as well as onto Riverside Drive via Street “A”. Therefore, the city’s modeling consultant, Kimley-Horn and Associates, Inc. refined the zone structure to add a zone connector to Milliken (Hamner) Avenue;
- 2) A select zone model run was conducted for TAZ 191 for the morning (am), evening (pm) and daily periods with the additional centroid connector to Milliken (Hamner) Avenue;
- 3) The Project’s regional trip distribution was developed based on the morning (am) and evening (pm) select zone model runs results; and
- 4) The local trip distribution for each of the parcels was developed based on the regional project distribution *and* the proposed Project roadway network and driveways serving each parcel in Phase I and at Project buildout.

**Appendix E** provides the select zone run plots provided by Kimley-Horn and Associates for TAZ 191. The trip distribution for the Project for Opening Year (2012) is shown on **Figure 9** for the morning (am) and evening (pm) peak-hour periods<sup>7</sup>, while the Project distribution for the Buildout Year is shown on **Figure 10**.

## **Project Trip Assignment**

Based upon the trip distribution patterns described above, **Figure 11** illustrates the assignment of morning (am) and evening (pm) peak-hour trips for Phase I at study intersections in Project Opening Year (2012). Project assignment of Project morning (am) and evening (pm) peak-hour trips at study intersection at Project buildout are shown on **Figure 12**. Project assignments at driveways at provided in the On-Site Access and Circulation section in **Chapter 5**.

## **OPENING YEAR (2012) EXISTING-PLUS-AMBIENT (NO-PROJECT) TRAFFIC VOLUMES**

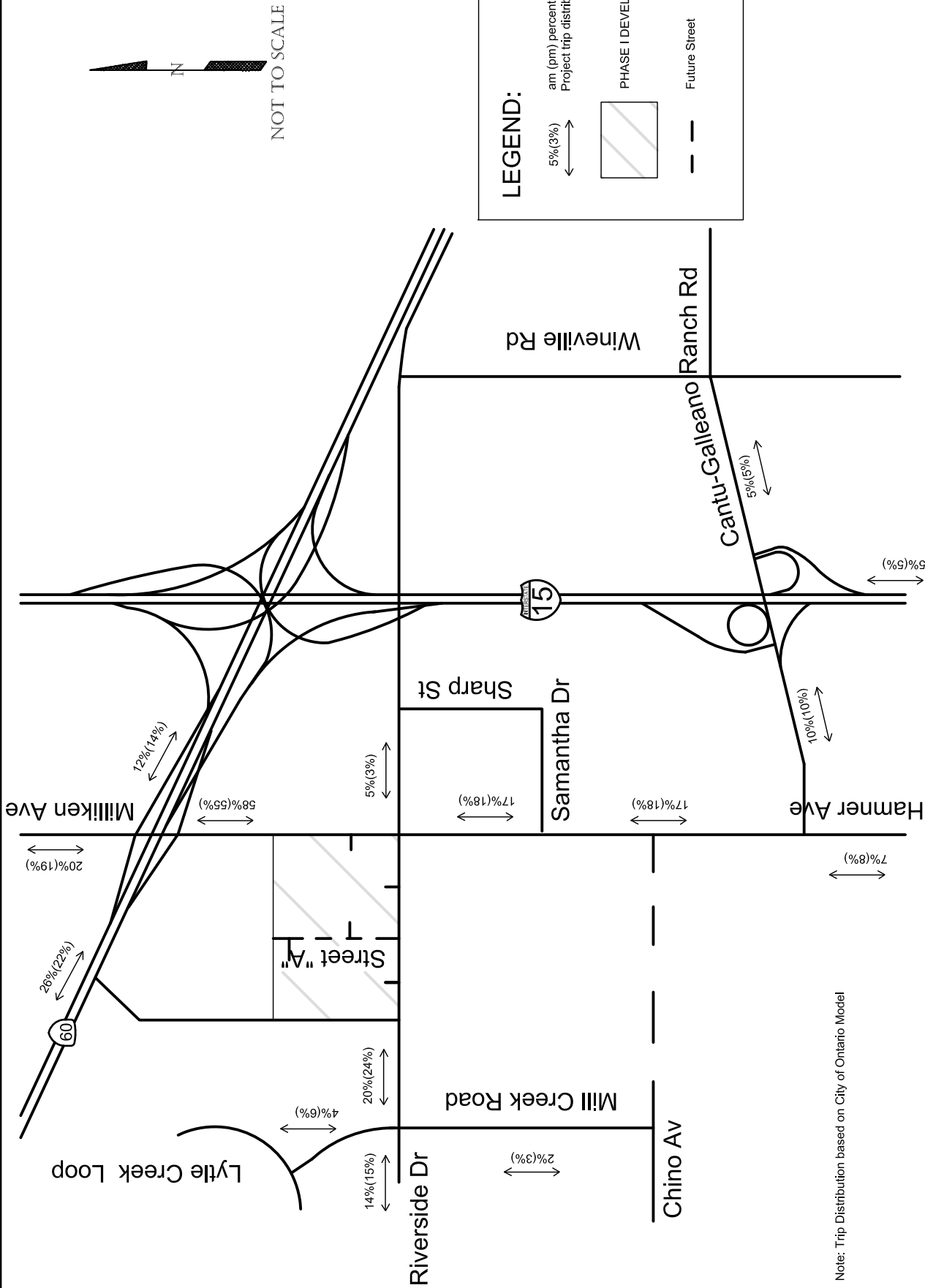
Based upon discussions with the City of Ontario, traffic in the study area has been growing by approximately 2 percent per year. The Opening Year (2012) No-Project traffic volumes were determined by increasing existing (2009) traffic volumes by a factor of 1.0612 to reflect an annual compounded traffic growth rate of 2 percent. **Figure 13** shows the Existing-Plus-Ambient morning (am) and evening (pm) peak-hour traffic volumes at study intersections in passenger car equivalents (pce's) in Opening Year (2012).

## **OPENING YEAR (2012) EXISTING-PLUS-AMBIENT-PLUS-PROJECT (WITH-PROJECT) TRAFFIC VOLUMES**

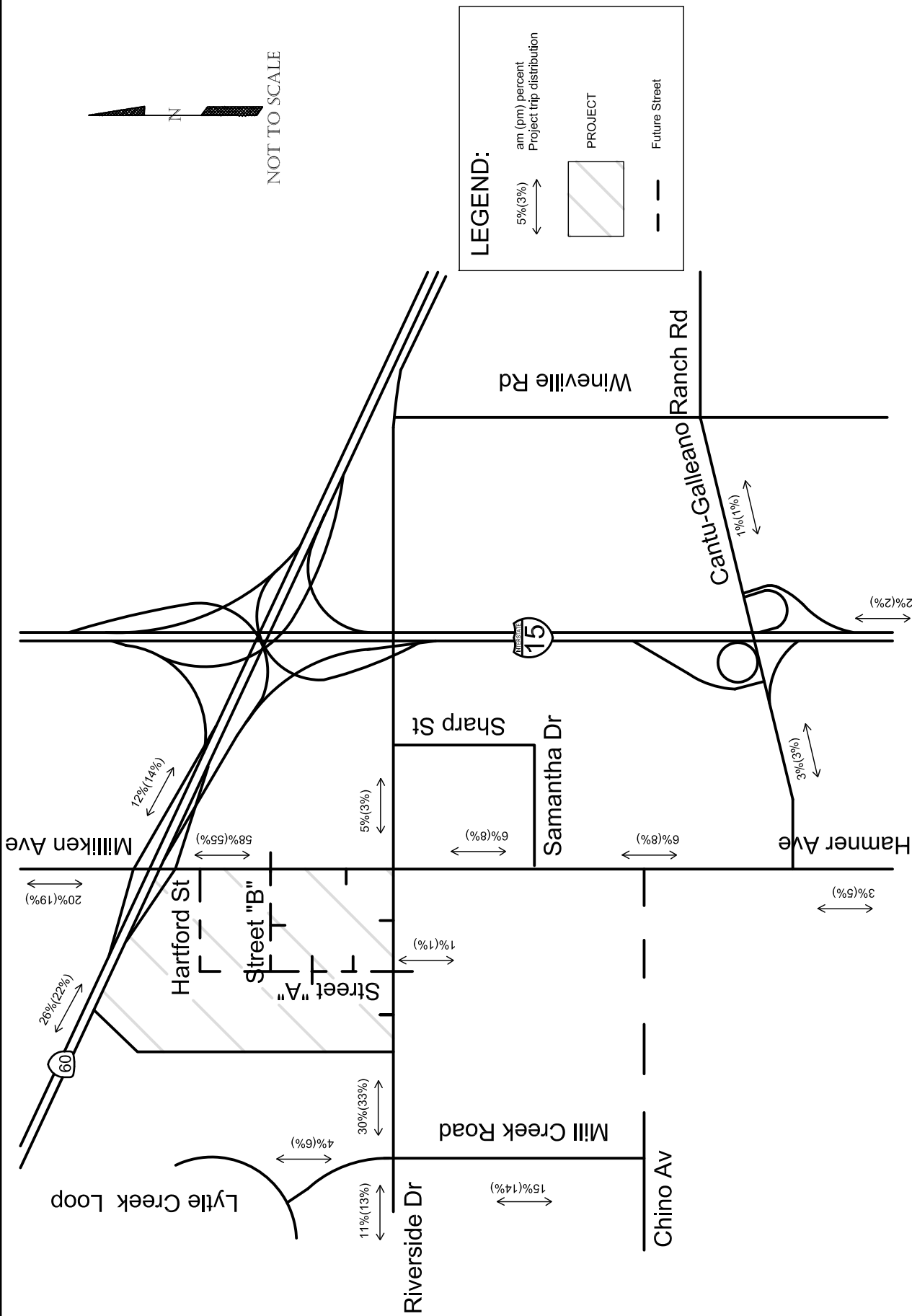
The Opening Year With-Project traffic volumes were determined by adding Project traffic to the Opening Year No-Project traffic volumes. **Figure 14** shows the Existing-Plus-Ambient With-Project peak-hour traffic volumes at study intersections in passenger car equivalents (pce's) in Opening Year (2012).

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<sup>7</sup> Project distribution for the Phase I residential and commercial properties are provided individually in Appendix E to this report.



Note: Trip Distribution based on City of Ontario Model



NOT TO SCALE

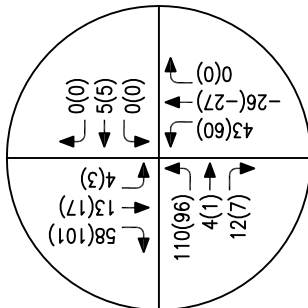
## BUILDOUT YEAR PROJECT TRIP DISTRIBUTION

### TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA

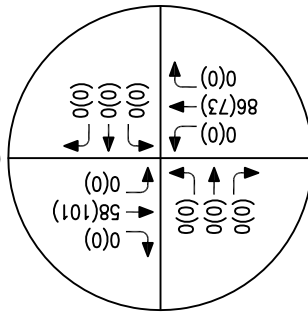
Figure 10



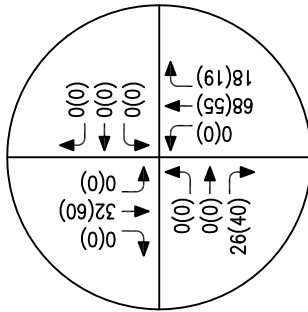
① Milliken/Hammer Ave -  
Riverside Dr



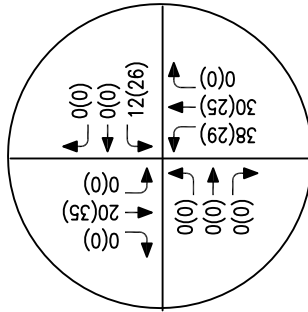
② Milliken/Hammer Ave -  
Industrial Dwy (E)/Street B (fut.)



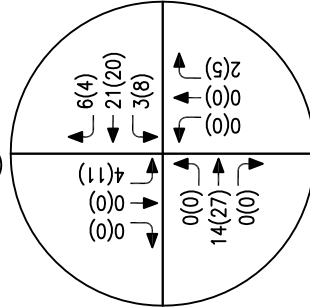
③ Milliken/Hammer Ave -  
SR-60 Eastbound Ramps



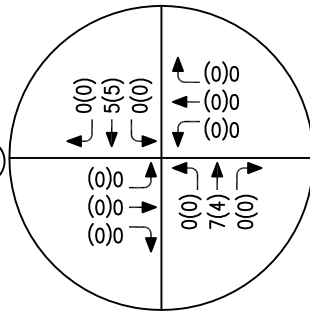
④ Milliken/Hammer Ave -  
SR-60 Westbound Ramps



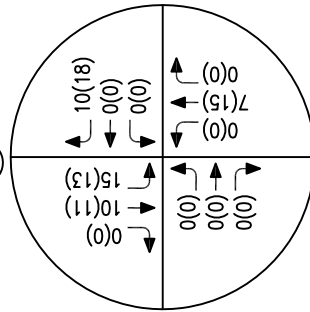
⑤ Riverside Dr -  
Mill Creek Ave



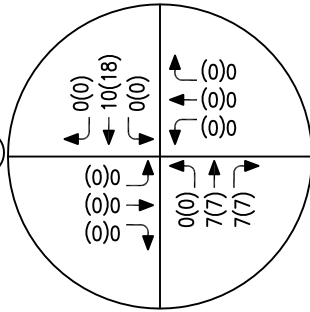
⑥ Riverside Dr -  
Sharp St



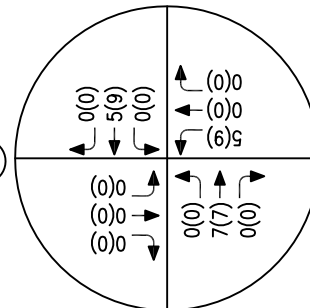
⑦ Milliken/Hammer Ave -  
Cantu-Galleano Ranch Rd



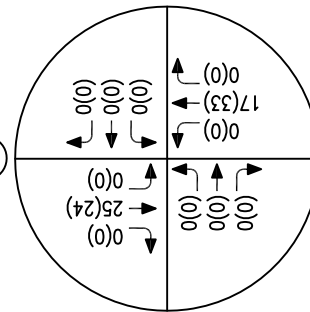
⑧ Cantu-Galleano Ranch Rd -  
I-15 Southbound Ramps



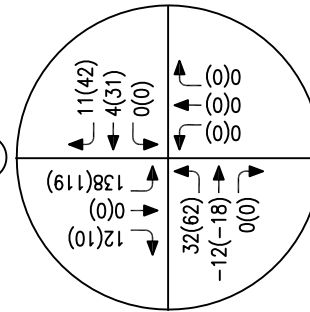
⑨ Cantu-Galleano Ranch Rd -  
I-15 Northbound Ramps



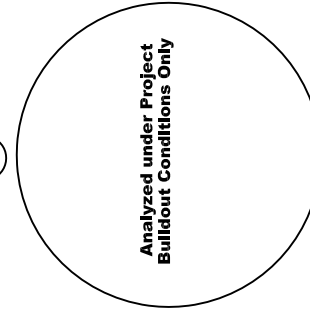
⑩ Milliken/Hammer Ave -  
Samantha St



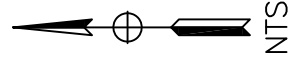
⑪ Riverside Dr -  
Street A (fut.)



⑫ Milliken/Hammer Ave -  
Hartford St



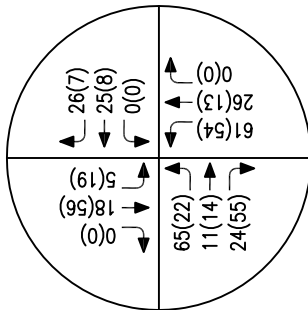
Legend:  
XX(XX) - AM(PM)  
Peak-Hour Traffic  
Volumes (in pce's)  
Includes "pass-by"  
Trips



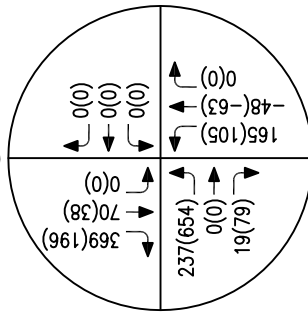
OPENING YEAR (2012) PROJECT  
MORNING (AM) AND EVENING (PM) PEAK-HOUR TRAFFIC VOLUMES

TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA

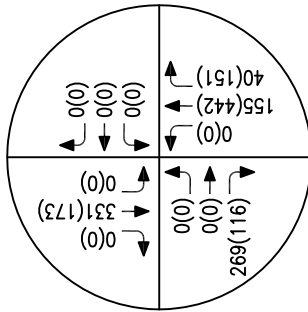
**1** Milliken/Hammer Ave -  
Riverside Dr



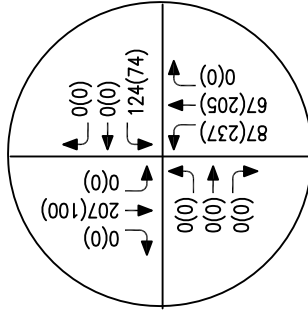
**2** Milliken/Hammer Ave -  
Industrial Dwy (E)/Street B (fut.)



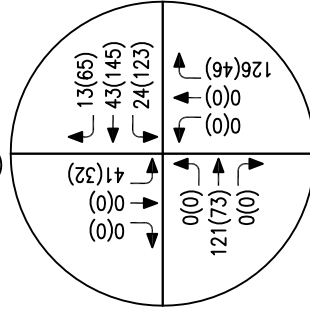
**3** Milliken/Hammer Ave -  
SR-60 Eastbound Ramps



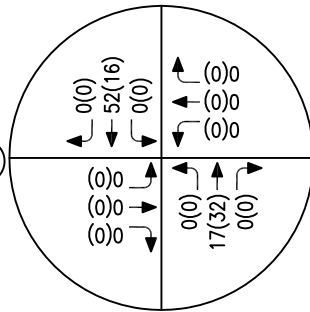
**4** Milliken/Hammer Ave -  
SR-60 Westbound Ramps



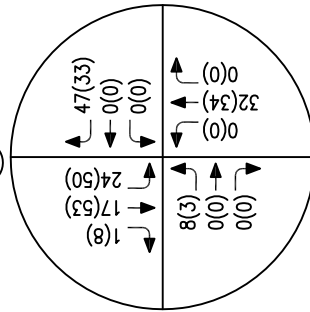
**5** Riverside Dr -  
Mill Creek Ave



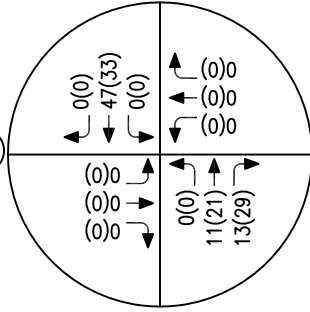
**6** Riverside Dr -  
Sharp St



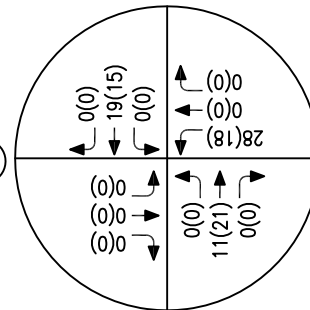
**7** Milliken/Hammer Ave -  
Cantu-Galleano Ranch Rd



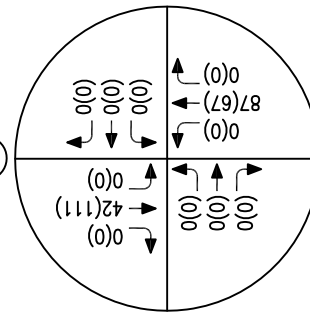
**8** Cantu-Galleano Ranch Rd -  
I-15 Southbound Ramps



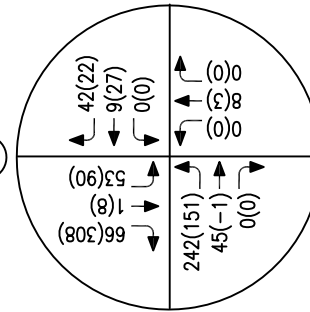
**9** Cantu-Galleano Ranch Rd -  
I-15 Northbound Ramps



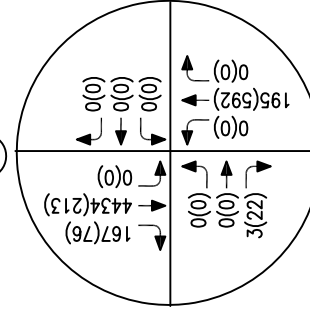
**10** Milliken/Hammer Ave -  
Samantha St



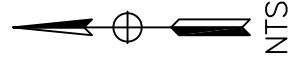
**11** Riverside Dr -  
Street A (fut.)



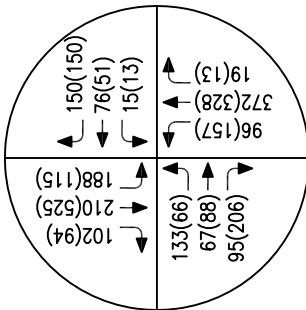
**12** Milliken/Hammer Ave -  
Hartford St



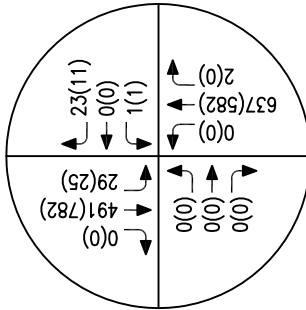
**Legend:**  
**XX(XX)** -  
AM(PM)  
Peak-Hour Traffic  
Volumes (in pce's)  
Includes "pass-by"  
trips



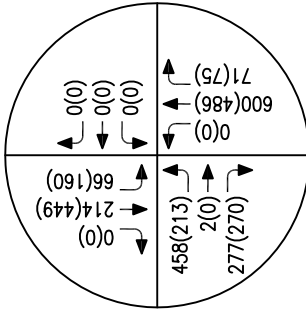
1 Milliken/Hammer Ave -  
Riverside Dr



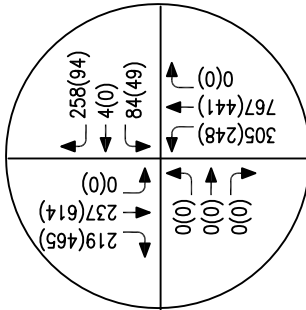
2 Milliken/Hammer Ave -  
Industrial Dwy (E)/Street B (fut.)



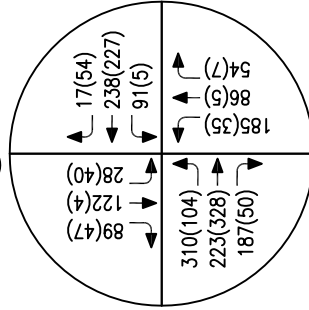
3 Milliken/Hammer Ave -  
SR-60 Eastbound Ramps



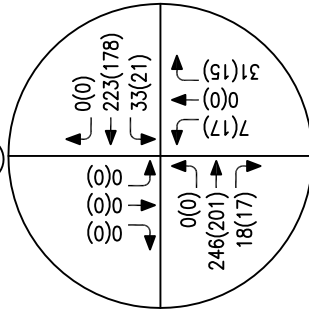
4 Milliken/Hammer Ave -  
SR-60 Westbound Ramps



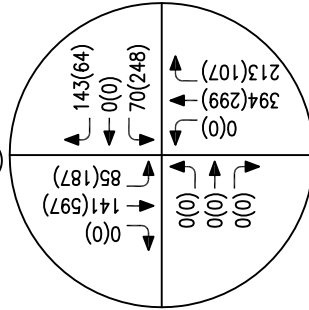
5 Riverside Dr -  
Mill Creek Ave



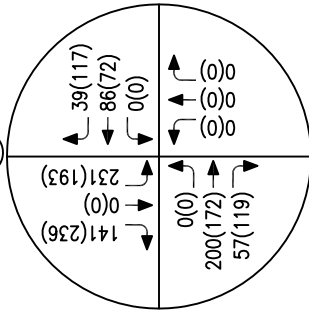
6 Riverside Dr -  
Sharp St



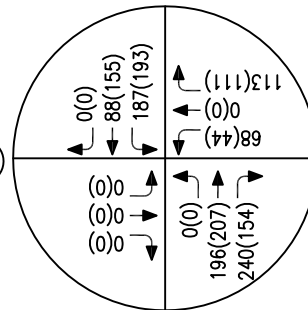
7 Milliken/Hammer Ave -  
Cantu-Galleano Ranch Rd



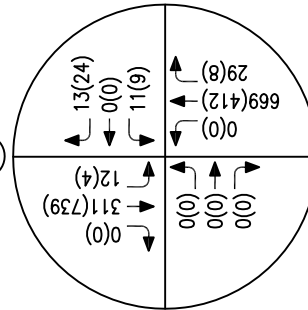
8 Cantu-Galleano Ranch Rd -  
I-15 Southbound Ramps



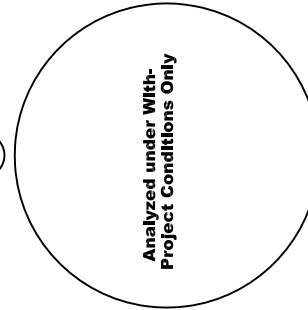
9 Cantu-Galleano Ranch Rd -  
I-15 Northbound Ramps



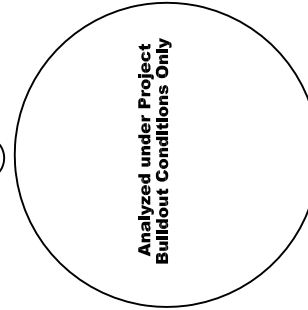
10 Milliken/Hammer Ave -  
Samantha St



11 Riverside Dr -  
Street A (fut.)



12 Milliken/Hammer Ave -  
Hartford St



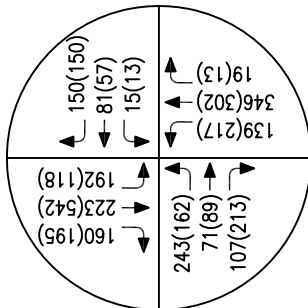
Legend:  
XX(XX) -  
AM(PM)  
Peak-Hour  
Traffic Volumes  
(In pce's)



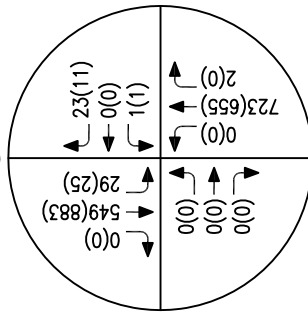
OPENING YEAR (2012) EXISTING-PLUS-AMBIENT (NO-PROJECT)  
MORNING (AM) AND EVENING (PM) PEAK-HOUR TRAFFIC VOLUMES

TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA

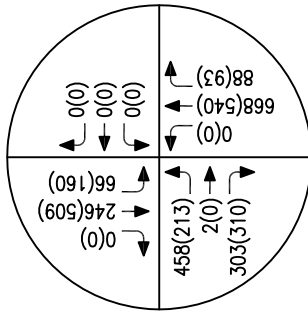
1 Milliken/Hammer Ave -  
Riverside Dr



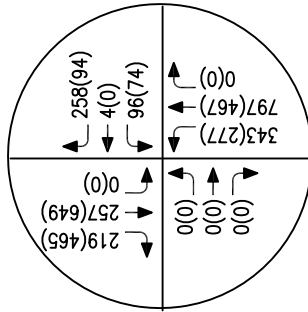
2 Milliken/Hammer Ave -  
Industrial Dwy (E)/Street B (fut.)



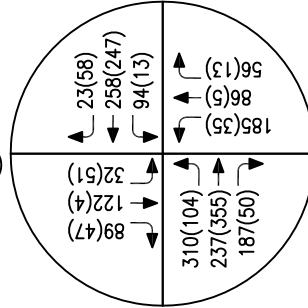
3 Milliken/Hammer Ave -  
SR-60 Eastbound Ramps



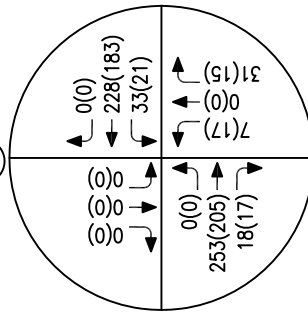
4 Milliken/Hammer Ave -  
SR-60 Westbound Ramps



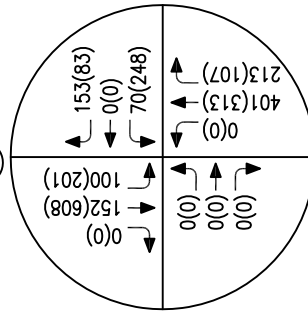
5 Riverside Dr -  
Mill Creek Ave



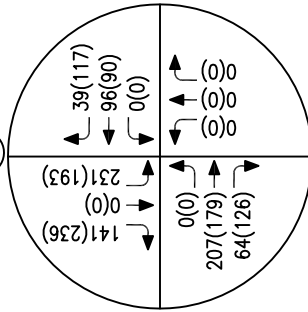
6 Riverside Dr -  
Sharp St



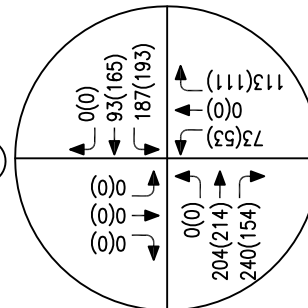
7 Milliken/Hammer Ave -  
Cantu-Galleano Ranch Rd



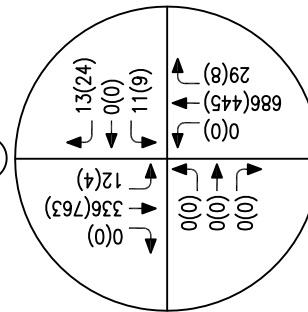
8 Cantu-Galleano Ranch Rd -  
I-15 Southbound Ramps



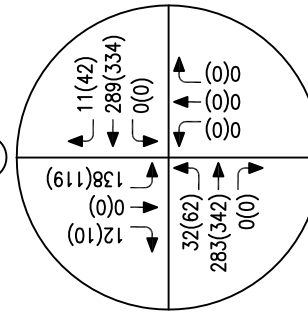
9 Cantu-Galleano Ranch Rd -  
I-15 Northbound Ramps



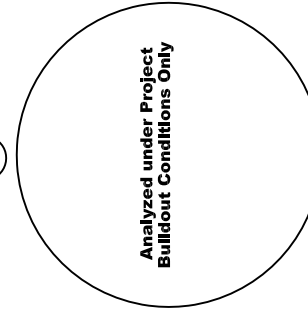
10 Milliken/Hammer Ave -  
Samantha St



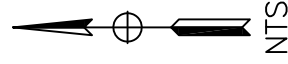
11 Riverside Dr -  
Street A (fut.)



12 Milliken/Hammer Ave -  
Hartford St



Legend:  
XX(XX) -  
AM(PM)  
Peak-Hour Traffic  
Volumes (in pce's)  
Includes "pass-by"  
Trips



OPENING YEAR (2012) EXISTING-PLUS-AMBIENT WITH-PROJECT  
MORNING (AM) AND EVENING (PM) PEAK-HOUR TRAFFIC VOLUMES

TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA

## OPENING YEAR (2012) CUMULATIVE BACKGROUND NO-PROJECT TRAFFIC VOLUMES

### Cumulative (“Related”) Projects Traffic

Cumulative traffic volumes include traffic that would be generated by other approved or anticipated development projects (“related” or “cumulative” projects) in the area.

A list of approved and/or planned projects (cumulative projects) that were anticipated to be complete in Opening Year (2012) was compiled based on information received from City of Ontario and County of Riverside. **Figure 15** shows the location of each cumulative project, with a listing and description of each project provided on **Table 8** by jurisdiction. These projects include commercial, industrial, and residential developments. Cumulative (“related”) projects’ trip generation (truck trips were converted to passenger car equivalents (pce’s)) and trip distribution was obtained from the reports prepared for these developments, as available.

**Table 9** shows the trip generation of all the cumulative projects by jurisdiction. A detailed trip generation for each of the cumulative projects is provided in **Appendix F**<sup>8</sup>. As can be seen, cumulatively these “related” projects are expected to generate 33,139 daily trips, 2,467 morning (am) peak-hour trips and 3,178 evening (pm) peak-hour trips if they were all operational and occupied in Opening Year (2012), as assumed in this analysis.

Trips generated by the cumulative (“related”) projects were assigned to the roadway system in passenger-car-equivalents (pce’s).

### Opening Year (2012) Cumulative No-Project Traffic Volumes

Opening Year (2012) Cumulative No-Project traffic volumes were determined by adding the cumulative (“related”) projects’ traffic volumes to the Existing-Plus-Ambient traffic volumes (see **Figure 13**). **Figure 16** shows the Opening Year(2012) Cumulative No-Project peak-hour traffic volumes at study intersections in passenger car equivalents (pce’s).

## OPENING YEAR (2012) CUMULATIVE WITH-PROJECT TRAFFIC VOLUMES

Opening Year (2012) Cumulative With-Project traffic volumes were determined by adding the Project traffic volumes (see **Figure 11**) to the Cumulative No-Project traffic volumes (see **Figure 16**). **Figure 17** shows the Cumulative With-Project traffic volumes in Project Opening Year (2012) in passenger car equivalents (pce’s) in Opening Year (2012).

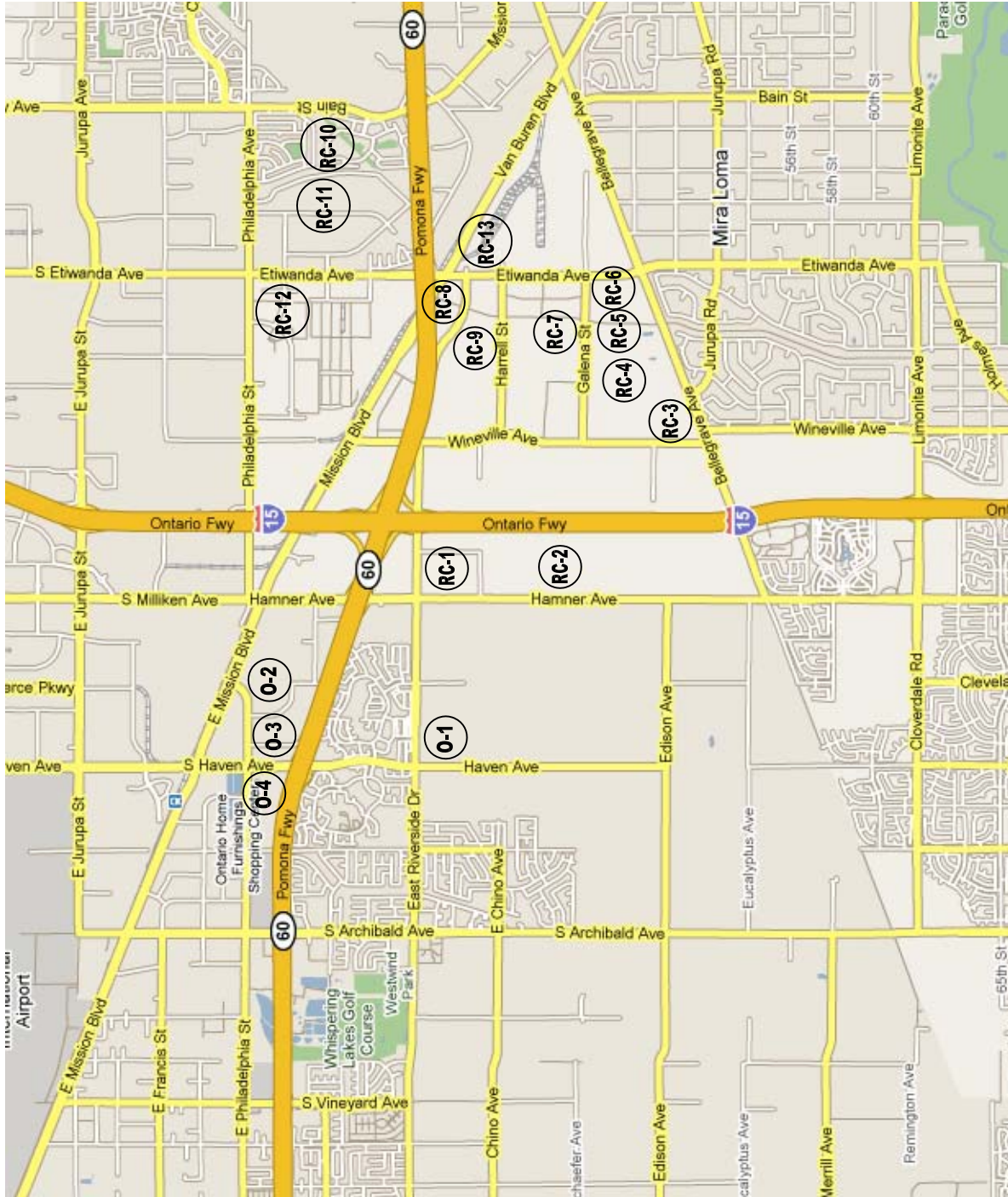
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<sup>8</sup> Cumulative (“related”) projects’ total trip generation is in passenger car equivalent (pce’s).

**TABLE 8  
OPENING YEAR (2012) "RELATED" PROJECTS**

Map Id.	City Case No.	Location of Project	Size	Unit	Land Use
<b>CITY OF ONTARIO</b>					
<b>O-1</b>	<b>Eden Glen Specific Plan</b>	Southwest corner of Milliken Avenue - Riverside Drive	310	units	Single family homes
			274	units	Condominiums/townhomes
<b>O-2</b>	<b>PDET08-003/ PCUP07-036</b>	SCE easement within Haven Gateway Specific Plan, between Ponderosa Avenue and Mission Blvd.	23	acres	RV Storage
<b>O-3</b>	<b>PDEV07-048</b>	Northeast corner of SR-60 and Haven Ave.	122	room	Hotel
			118	room	Hotel
			177,500	s.f.	Commerical retail
<b>O-4</b>	<b>APN:0218-061-45</b>	On the west side of Haven Avenue, north of SR-60	3,000	s.f.	Fast-food Restaurant with Drive-through
<b>COUNTY OF RIVERSIDE/CITY OF EASTVALE</b>					
<b>RC-1</b>	<b>PP23480</b>	Southeast corner of Milliken/Hamner Avenue - Riverside Drive	2,000	s.f	Gas Station with Convenience Store
<b>RC-2</b>	<b>TT34420</b>	Southeast corner Milliken/Hamner Avenue - Cantu-Galleano Ranch Road	116	units	Condominiums
<b>RC-3</b>	<b>TR31778</b>	Northeast corner of Bellegrave Avenue - Wineville Road (Partially occupied)	88	units	Single family homes
<b>RC-4</b>	<b>TR31768</b>	East of Wineville Road, between Cantu-Galleano Ranch Road and Bellegrave Avenue	189	units	Single family homes
<b>RC-5</b>	<b>TR33461</b>	East of Wineville Road, between Cantu-Galleano Ranch Road and Bellegrave Avenue	203	units	Single family homes
<b>RC-6</b>	<b>TR31644</b>	Southwest corner of Cantu-Galleano Ranch Road - Etiwanda Avenue	429	units	Single family homes
<b>RC-7</b>	<b>PP16686</b>	North of Cantu-Galleano, west of channel	945,570	s.f.	Warehouse (Buildings B and C)
<b>RC-8</b>	<b>PP23390</b>	North of Riverside Drive, west of channel	78,323	s.f.	Industrial (2 buildings)
<b>RC-9</b>	<b>PP16379</b>	North of Harrell, between Wineville and channel	236,708	s.f.	Warehouse
<b>RC-10</b>	<b>PP17788</b>	East of Dulles Drive	426,212	s.f.	Warehouse
<b>RC-11</b>	<b>PP14130R1</b>	East of De Forest Circle	126,000	s.f.	Warehouse addition to exist. Building
<b>RC-12</b>	<b>PP22718</b>	North of Inland Avenue, south of Philadelphia, east of Venture, west of Etiwanda	159,800	s.f.	Warehousing
<b>RC-13</b>	<b>CUP03607</b>	East of Etiwanda south of SR-60	12	pump	Gas station with convenience





\*See Table 7 for a List of Cumulative ("Related") Projects

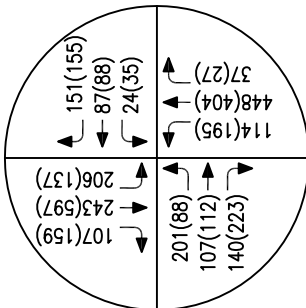
**TABLE 9  
OPENING YEAR (2012)  
CUMULATIVE (“RELATED”) PROJECTS’ TRIP GENERATION<sup>(1)</sup>**

JURISDICTION/ PROJECT	AM PEAK HOUR			PM PEAK HOUR			DAILY
	In	Out	Total	In	Out	Total	
City of Ontario							
Eden Glen (New Model Colony)	79	274	353	293	163	456	4,559
PDET08-003/PCU007-036 (RV Storage)	185	72	257	78	145	222	1,465
PDEV07-048, PCUP07-040, PCUP07-041	153	98	252	289	289	222	6,991
APN:0218-061-45	39	37	76	26	24	51	744
County of Riverside/City of Eastvale							
PP23480	23	23	46	35	35	71	977
TT34420	9	42	51	40	20	60	674
TR31778	17	50	66	56	33	89	842
TR31768	35	106	142	120	71	191	1,809
TR33461	38	114	152	129	76	205	1,943
TR31644	80	241	322	273	160	433	4,106
PP16686	249	66	316	84	253	337	3,747
PP23390	63	9	72	9	67	76	546
PP16379	62	17	79	21	63	84	938
CUP03607	23	23	46	35	35	71	977
PP17788	112	30	142	38	114	152	1,689
PP14130R1	33	9	42	11	34	45	499
PP22718	188	50	389	63	190	254	2,822
TOTAL	1,244	1,223	2,467	1,553	1,624	3,178	33,139

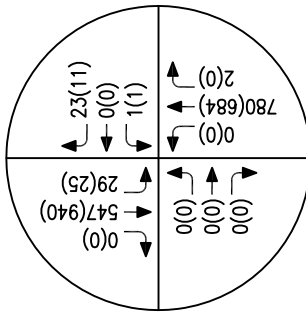
(1) See Appendix F for detailed trip generation of each cumulative (“related”) project.



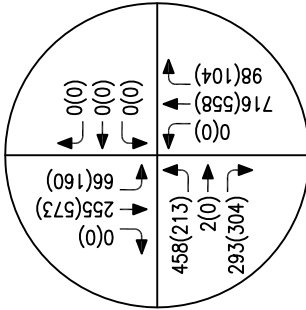
1 Milliken/Hammer Ave -  
Riverside Dr



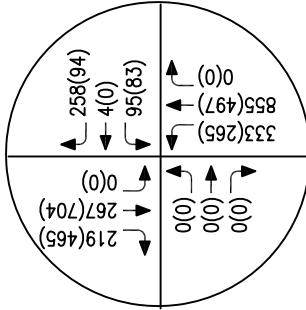
2 Milliken/Hammer Ave -  
Industrial Dwy (E)/Street B (fut.)



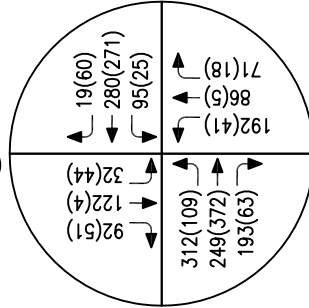
3 Milliken/Hammer Ave -  
SR-60 Eastbound Ramps



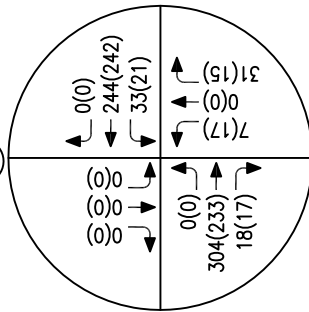
4 Milliken/Hammer Ave -  
SR-60 Westbound Ramps



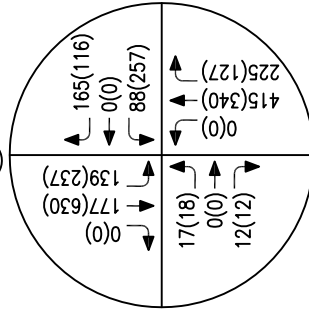
5 Riverside Dr -  
Mill Creek Ave



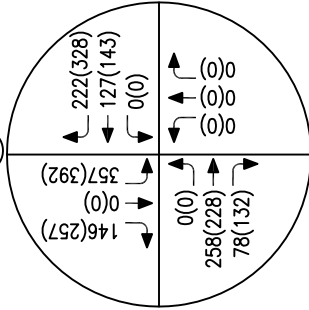
6 Riverside Dr -  
Sharp St



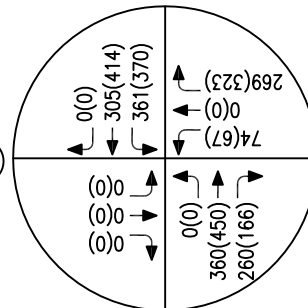
7 Milliken/Hammer Ave -  
Cantu-Galleano Ranch Rd



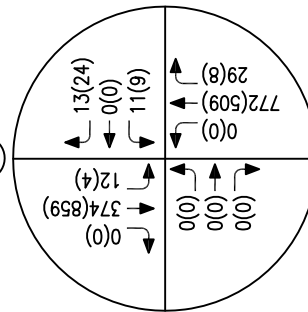
8 Cantu-Galleano Ranch Rd -  
I-15 Southbound Ramps



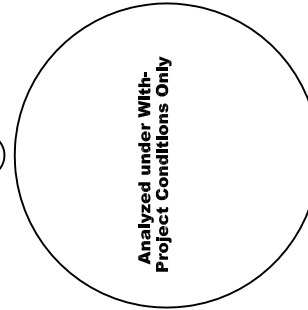
9 Cantu-Galleano Ranch Rd -  
I-15 Northbound Ramps



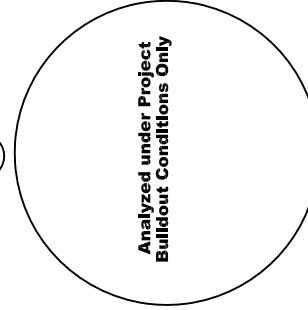
10 Milliken/Hammer Ave -  
Samantha St



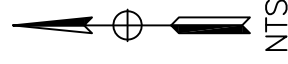
11 Riverside Dr -  
Street A (fut.)



12 Milliken/Hammer Ave -  
Hartford St



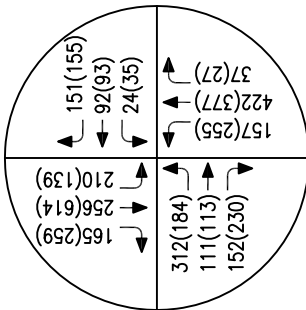
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XX(XX) -  
AM(PM)  
Peak-Hour  
Traffic Volumes  
(In pce/s)



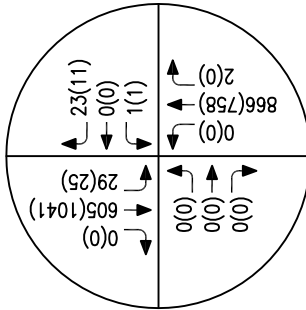
OPENING YEAR (2012) CUMULATIVE NO-PROJECT  
MORNING (AM) AND EVENING (PM) PEAK-HOUR TRAFFIC VOLUMES

TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA

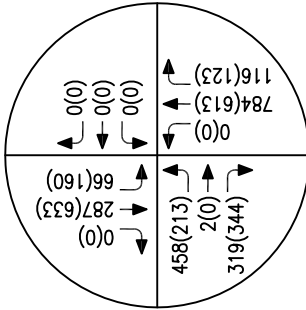
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Riverside Dr



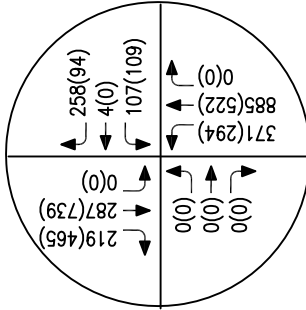
**2** Milliken/Hammer Ave -  
Industrial Dwy (E)/Street B (fut.)



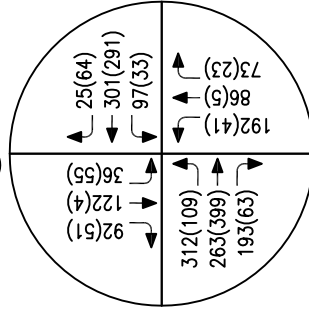
**3** Milliken/Hammer Ave -  
SR-60 Eastbound Ramps



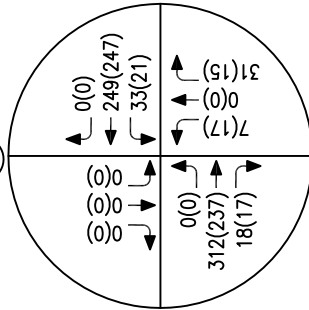
**4** Milliken/Hammer Ave -  
SR-60 Westbound Ramps



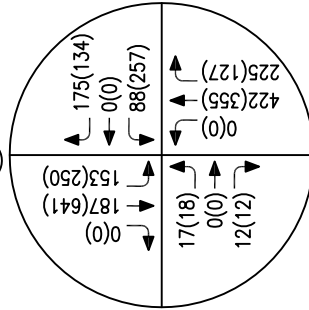
**5** Riverside Dr -  
Mill Creek Ave



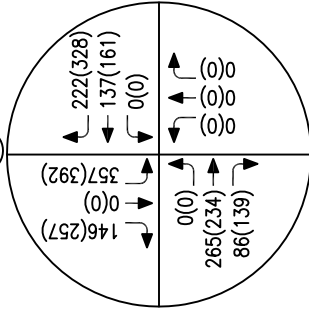
**6** Riverside Dr -  
Sharp St



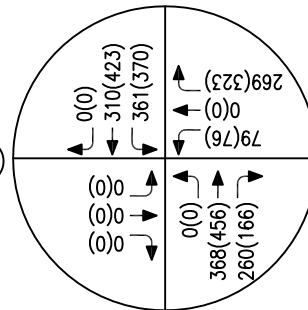
**7** Milliken/Hammer Ave -  
Cantu-Galleano Ranch Rd



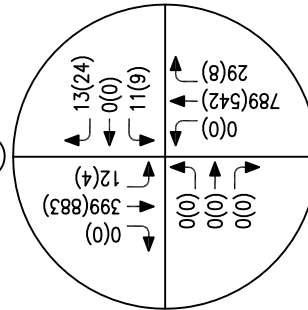
**8** Cantu-Galleano Ranch Rd -  
I-15 Southbound Ramps



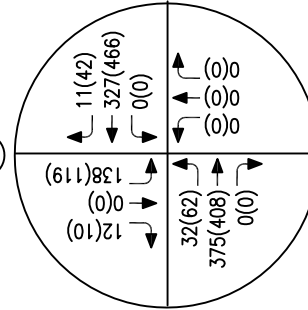
**9** Cantu-Galleano Ranch Rd -  
I-15 Northbound Ramps



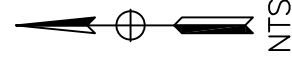
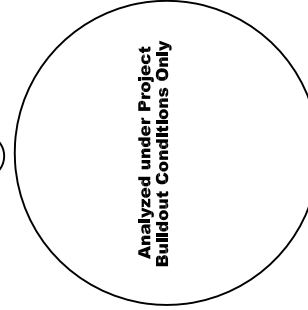
**10** Milliken/Hammer Ave -  
Samantha St



**11** Riverside Dr -  
Street A (fut.)



**12** Milliken/Hammer Ave -  
Hartford St



**Legend:**  
**XX(XX)** -  
AM(PM)  
Peak-Hour Traffic  
Volumes (in pce's)  
Includes "pass-by"  
Trips

Analyzed under Project  
Buildout Conditions Only

**OPENING YEAR (2012) CUMULATIVE WITH-PROJECT  
MORNING (AM) AND EVENING (PM) PEAK-HOUR TRAFFIC VOLUMES**

**TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA**

## GENERAL PLAN BUILDOUT TRAFFIC CONDITONS

The City of Ontario recently completed a General Plan Update. As part of this effort, a traffic impact analysis was prepared by Kimley-Horn and Associates to determine the preferred General Plan Update Circulation Element, with recommendations made for the General Plan Update buildout roadway configurations.

According to the City of Ontario's Planning Department and Kimley-Horn and Associates, the General Plan land uses assumed for Traffic Analysis Zone (TAZ 191) within which the Project will be located have a maximum FAR of 1.0. The adjacent street network in the Circulation Element of the General Plan Update identifies that Milliken (Hamner) Avenue to be built out to an 8-lane divided arterial in the Project vicinity, while Riverside Drive to be built out to a 6-lane standard arterial. Since the proposed Tuscana Village Specific Plan will have a lower maximum intensity of 960,778 square feet of office and retail land uses (with an average FAR of 0.6) along with 200 apartments, with a lower trip generation than that assumed in the General Plan Update traffic impact analysis for this site, the proposed lane configurations assumed in the General Plan Update Circulation Element will be adequate to accommodate Project land uses as well.

The analysis of the Project buildout traffic conditions therefore focuses on the intersections in the immediate vicinity of the Project, including the proposed streets (Streets "A" and "B"), and assuming the maximum development density proposed by the Tuscana Village Specific Plan.

### General Plan No-Project Traffic Volumes

The base General Plan traffic volumes for this study were obtained from the transportation technical report prepared for the City of Ontario General Plan<sup>9</sup> for the following intersections:

- Milliken (Hamner) Avenue – Riverside Drive;
- Milliken (Hamner) Avenue – SR-60 eastbound ramps;
- Milliken (Hamner) Avenue – SR-60 westbound ramps; and
- Riverside Drive – Haven Avenue (though not a study intersection, data was needed for projection of volumes at the intersection of Riverside Drive – Mill Creek Avenue).

The General Plan Update did not include intersection turning movement forecast projections at the following study intersections which serve minor roadways:

- Riverside Drive – Mill Creek Avenue ;
- Riverside Drive – Sharp Street;
- Riverside Drive – Samantha Street;
- Milliken (Hamner) Avenue - Driveway to industrial property on east side of Milliken (Hamner)/Street "B" in the future; and
- Riverside Drive – Street "A"/driveway to EdenGlen commercial to the south in the future.

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<sup>9</sup> Source: *ONTARIO GENERAL PLAN UPDATE, Transportation Technical Report, Revised March 19, 2009, by Kimley-Horn and Associates, Inc.*

The future year General Plan No-Project traffic volume forecasts at those locations which are not explicitly provided in the GP Update technical documents were obtained by reviewing approach volumes at adjacent intersections where GP Update traffic volume forecasts are available, as well as reviewing the side-street traffic volumes generated by the RichHaven and EdenGlen projects within the New Model Colony, as provided in their respective traffic studies, and interpolating based on the traffic forecasts at those intersections.

Riverside County transportation staff provided the Buildout No-Project traffic volumes at the following intersections which were also not included as study intersections in the City of Ontario General Plan Update technical documents:

- Milliken (Hamner) Avenue – Cantu/Galleano Ranch Road;
- I-15 southbound ramps – Cantu-Galleano Ranch Road; and
- I-15 northbound ramps - Cantu/Galleano Ranch Road.

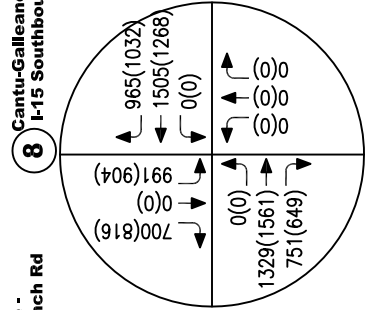
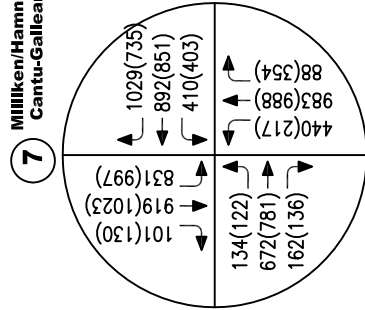
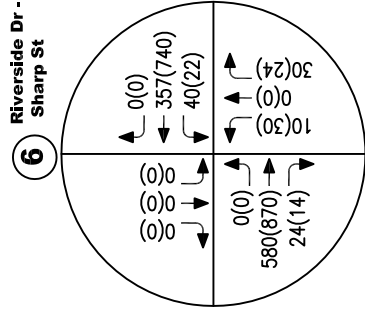
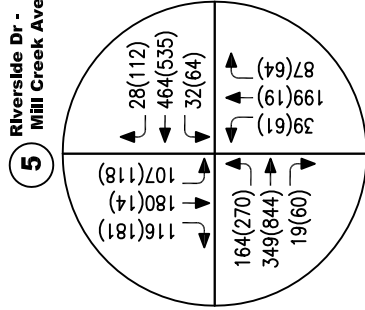
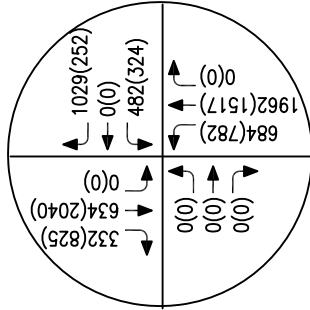
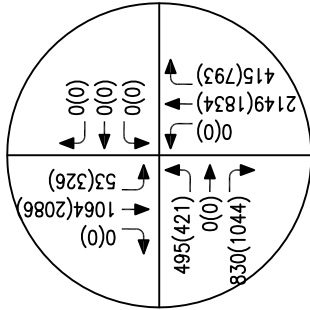
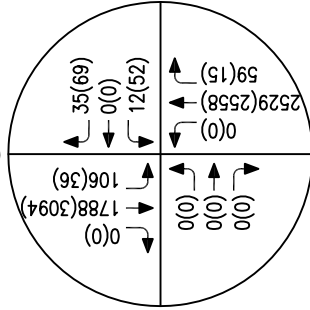
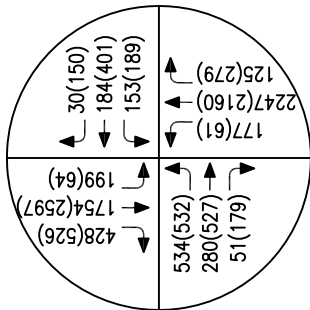
In addition, because the intersection at Milliken (Hamner) Avenue – Street “B” is intended to serve not only the Project, but also the existing industrial development east of Milliken (Hamner) Avenue, Riverside County was contacted to determine what type of development could occur on the undeveloped land between SR-60 and the existing industrial development which would share access at the existing driveway on the east side of Milliken (Hamner) Avenue. Based on direction from Riverside County transportation staff, traffic that could be generated by the 113,000 square feet of business park land uses was assigned to this intersection to evaluate General Plan buildout traffic operations under both No-Project and With-Project traffic conditions.

Baseline forecast traffic volumes obtained from the Ontario General Plan Update transportation technical report, EdenGlen and RichHaven traffic impact studies, and provided by the County of Riverside are provided in **Appendix G** to this report. **Figure 18** shows the General Plan Buildout No-Project morning (am) and evening (pm) traffic volumes used in this analysis.

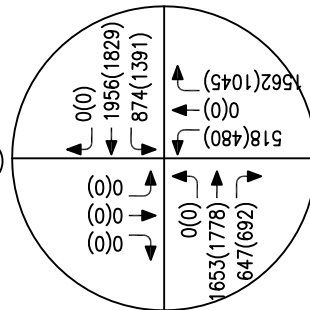
## **General Plan With-Project Traffic Volumes**

As discussed previously, the General Plan Update model assumes only one centroid connector from TAZ 191 onto Riverside Drive. In other words, all traffic generated by the zone within which the Project is located is assumed to access/egress from Riverside Drive in the citywide traffic model. All traffic heading to/from the north, east and south would pass through the intersection of Milliken (Hamner) Avenue – Riverside Drive. Because of the new major access onto Milliken (Hamner) Avenue to/from the site via Street “B” proposed by Tuscana Village Specific Plan, traffic accessing/egressing to/from the north along Milliken (Hamner) Avenue would use this street rather than going through the intersection of Milliken (Hamner) Avenue – Riverside Drive. As discussed previously, the City of Ontario’s modeling consultant performed a select zone model run to determine the trip distribution if two centroid connectors (i.e., Street “A” onto Riverside Drive and Street “B” onto Milliken (Hamner) Avenue) were available at this site. This information was used to determine a reassignment of traffic from Milliken (Hamner) Avenue – Riverside Drive to Milliken (Hamner) Avenue – Street “B” under General Plan Buildout With-Project conditions.

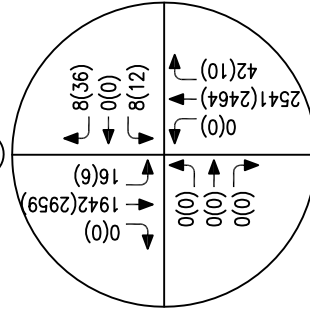
- 1 Milliken/Hammer Ave - Riverside Dr
- 2 Milliken/Hammer Ave - Industrial Dwy (E)/Street B (fut.)
- 3 Milliken/Hammer Ave - SR-60 Eastbound Ramps
- 4 Milliken/Hammer Ave - SR-60 Westbound Ramps
- 5 Riverside Dr - Mill Creek Ave
- 6 Riverside Dr - Sharp St
- 7 Milliken/Hammer Ave - Cantu-Galleano Ranch Rd
- 8 Cantu-Galleano Ranch Rd - I-15 Southbound Ramps
- 9 Cantu-Galleano Ranch Rd - I-15 Northbound Ramps
- 10 Milliken/Hammer Ave - Samanthia St
- 11 Riverside Dr - Street A (fut.)
- 12 Milliken/Hammer Ave - Hartford St



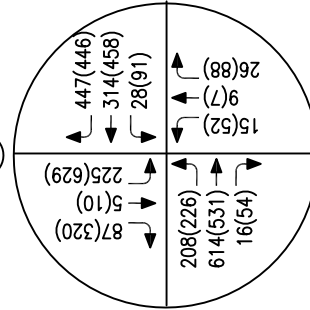
- 9 Cantu-Galleano Ranch Rd - I-15 Northbound Ramps



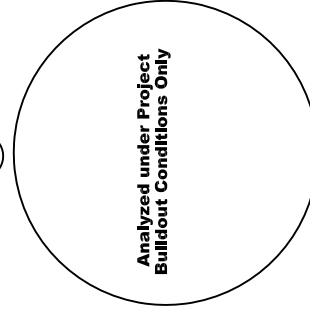
- 10 Milliken/Hammer Ave - Samanthia St



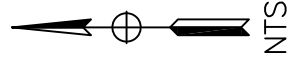
- 11 Riverside Dr - Street A (fut.)



- 12 Milliken/Hammer Ave - Hartford St



Legend:  
 XX(XX) - AM(PM)  
 Peak-Hour  
 Traffic Volumes  
 (In pce/s)



GENERAL PLAN BUILDOUT NO-PROJECT MORNING (AM) AND EVENING (PM) PEAK-HOUR TRAFFIC VOLUMES

Further, even though the ultimate intensity of the Project is less than proposed by the City of Ontario in the General Plan Update process, the traffic analysis data provided for the select zone run in the General Plan Update traffic analysis representing No-Project conditions had a different land use mix and hence a different inbound/outbound split of traffic entering/exiting the site during the morning (am) and evening (pm) peak periods.

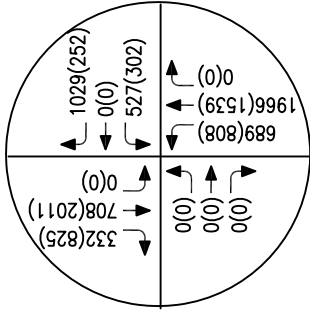
Therefore, to project General Plan Buildout With-Project traffic volumes at the study intersections, the following steps were undertaken:

- Based on the select zone runs provided by the City's modeling consultant and the TAZ 191 morning (am) and evening (pm) trip distribution, an assignment of trips generated by TAZ 191 in the General Plan Update TIA was developed for the morning (am) and evening (pm) peak-hour periods;
- The trips assigned in the General Plan Update TIA were then subtracted from the General Plan No-Project traffic volumes and these trips were then replaced by the Tuscana Village Specific Plan buildout Project trips.

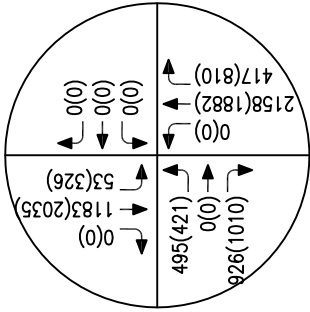
**Figure 19** shows the General Plan Buildout With-Project traffic volumes assuming that the Tuscana Village Specific Plan was developed to its maximum intensity.

Based on discussions with the city, two different scenarios for the buildout With-Project buildout conditions were analyzed: One with access at Hartford Street; and one without access at Hartford Street. The scenario presented in this Chapter assumes that access at Hartford Street is permitted. The results of the alternative scenario are presented in Chapter 5, On-Site Circulation and Access.

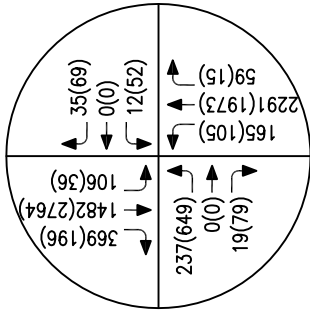
**4** Milliken/Hammer Ave -  
SR-60 Westbound Ramps



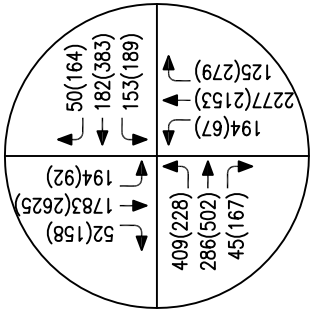
**3** Milliken/Hammer Ave -  
SR-60 Eastbound Ramps



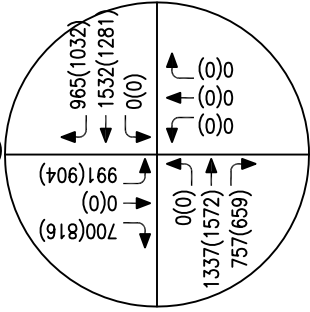
**2** Milliken/Hammer Ave -  
Industrial Dwy (E)/Street B (fut.)



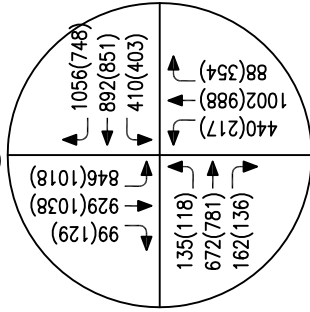
**1** Milliken/Hammer Ave -  
Riverside Dr



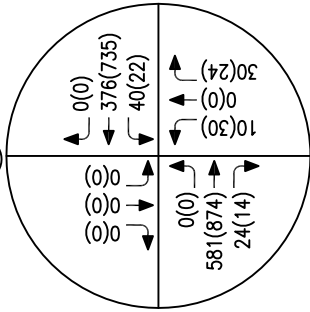
**8** Cantu-Galleano Ranch Rd -  
I-15 Southbound Ramps



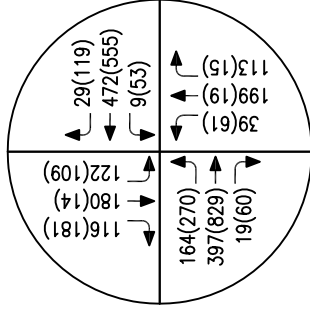
**7** Milliken/Hammer Ave -  
Cantu-Galleano Ranch Rd



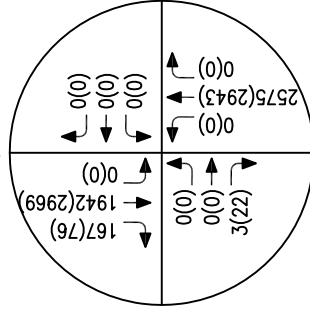
**6** Riverside Dr -  
Sharp St



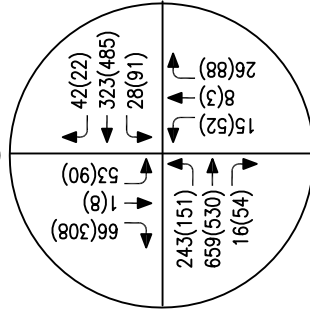
**5** Riverside Dr -  
Mill Creek Ave



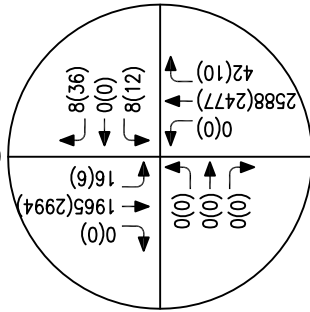
**12** Milliken/Hammer Ave -  
Hartford St



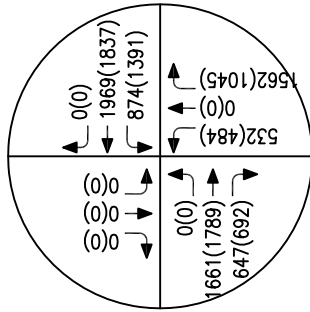
**11** Riverside Dr -  
Street A (fut.)



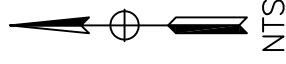
**10** Milliken/Hammer Ave -  
Samantha St



**9** Cantu-Galleano Ranch Rd -  
I-15 Northbound Ramps



**Legend:**  
**XX(XX)** -  
**AM(PM)**  
**Peak-Hour Traffic**  
**Volumes (in pce's)**  
**Includes "pass-by"**  
**Trips**



**GENERAL PLAN BUILDOUT WITH-PROJECT MORNING (AM)  
AND EVENING (PM) PEAK-HOUR TRAFFIC VOLUMES**

**TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA**

## 4.

# TRAFFIC ANALYSIS

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This chapter describes the Level of Service analysis under future conditions and discusses appropriate improvements that may be necessary to off-set any Project-related traffic impacts. Traffic conditions (levels of service (LOS)) are evaluated in the Project Opening Year (2012) for the following conditions:

- Opening Year (2012) Levels of Service under Existing-Plus-Ambient (No-Project) and Existing-Plus-Ambient-Plus-Project (With-Project) traffic conditions with existing and Project-proposed improvements;
- Locations of deficiency and additional improvements necessary to achieve acceptable levels of service under Opening Year (2012) Existing-Plus-Ambient (No-Project) and Existing-Plus-Ambient-Plus-Project (With-Project) traffic conditions;
- Opening Year (2012) Levels of Service under Cumulative No-Project and Cumulative With-Project traffic conditions with existing and Project-proposed improvements;
- Locations of deficiency and additional improvements necessary to achieve acceptable levels of service under Opening Year (2012) Cumulative No-Project and Cumulative With-Project traffic conditions;
- General Plan Buildout Levels of Service under No-Project and With-Project conditions with General Plan Update Circulation Element-recommended roadway system; and
- Locations of deficiency and additional improvements necessary to achieve acceptable levels of service under General Plan Buildout No-Project and General Plan Buildout With-Project traffic conditions.



## OPENING YEAR (2012) TRAFFIC ANALYSIS

Opening Year (2012) Levels of Service were determined for both the No-Project and With-Project scenarios. As discussed in Chapter 2, the Highway Capacity Methodology was employed to determine levels of service. The same specific analysis parameters as were employed for Existing traffic conditions were employed for both the Opening Year (2012) No-Project and With-Project traffic conditions.

Under all Opening Year (2012) With-Project scenarios, Street “A” is built to its ultimate configuration (40-foot pavement width, allowing for one lane inbound (in the northbound direction) and two lanes outbound (in the southbound direction) at its intersection with Riverside Drive). In addition, the Project would improve Milliken (Hamner) Avenue and Riverside Drives to their ultimate half-street configurations adjacent to the Pelican Homes and Katelaris developments. **Figure 20** shows the lane configurations assumed for the Opening Year (2012) With-Project traffic analysis.

## OPENING YEAR (2012) INTERSECTION LEVELS OF SERVICE

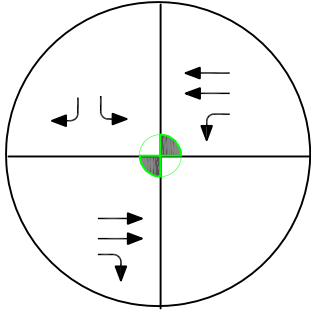
### Opening Year (2012) Existing-Plus-Ambient No-Project and With-Project Intersection Levels of Service with Existing Improvements

The analysis of Opening Year (2012) Existing-Plus-Ambient No-Project intersection LOS was based upon the peak-hour traffic volumes illustrated on **Figure 13** and intersection geometrics exhibited on **Figure 7**. The analysis of Opening Year (2012) With-Project (Existing-Plus-Ambient-Plus-Project) intersection LOS was based upon the peak-hour traffic volumes illustrated on **Figure 14** and the intersection geometrics exhibited on **Figure 20**.

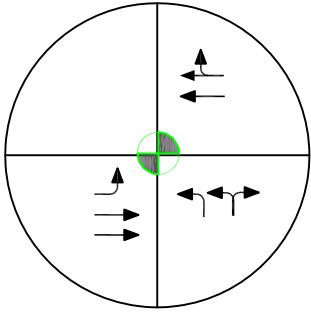
**Table 10** summarizes the Opening Year Existing-Plus-Ambient No-Project and With-Project LOS at the study intersections during the weekday morning (am) peak hour. **Table 11** summarizes the Opening Year Existing-Plus-Ambient No-Project and With-Project LOS at the study intersections during the weekday evening (pm) peak hour. **Appendix D** provides the HCM worksheets for the LOS analysis.

As shown in **Tables 10 and 11**, all intersections continue to operate acceptably based on its jurisdictional LOS standards under the Existing-Plus-Ambient traffic conditions. With the exception of construction of Street “A” to its ultimate configuration and the installation of a traffic signal at the intersection of Riverside Drive – Street “A”, which will be implemented with Phase I development, no additional roadway improvements are needed to accommodate Project traffic.

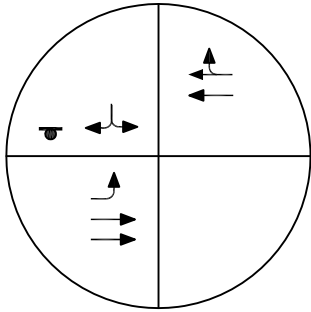
④ Milliken/Hammer Ave -  
SR-60 Westbound Ramps



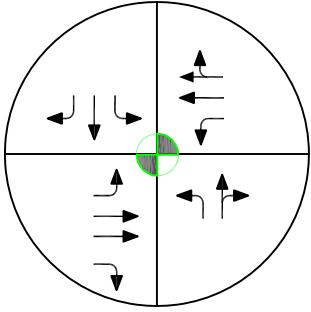
③ Milliken/Hammer Ave -  
SR-60 Eastbound Ramps



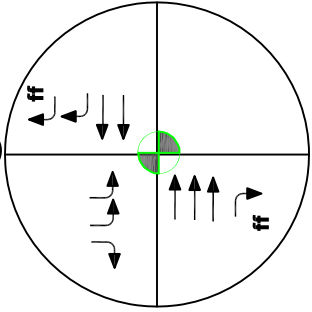
② Milliken/Hammer Ave -  
Industrial Dwy (E)/Street B (fut.)



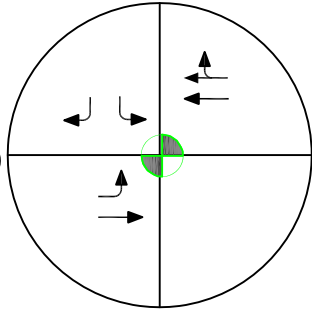
① Milliken/Hammer Ave -  
Riverside Dr



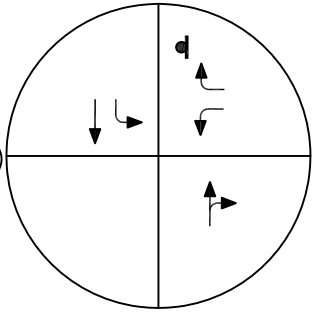
⑧ Cantu-Galleano Ranch Rd -  
I-15 Southbound Ramps



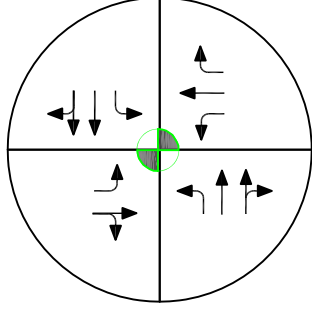
⑦ Milliken/Hammer Ave -  
Cantu-Galleano Ranch Rd



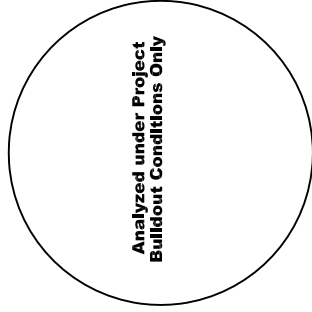
⑥ Riverside Dr -  
Sharp St



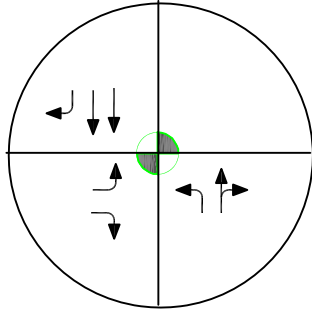
⑤ Riverside Dr -  
Mill Creek Ave



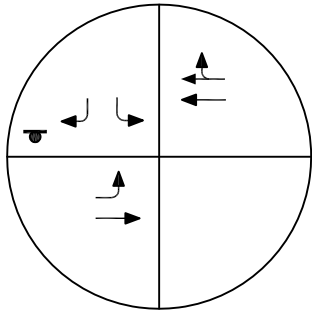
⑫ Milliken/Hammer Ave -  
Hartford St



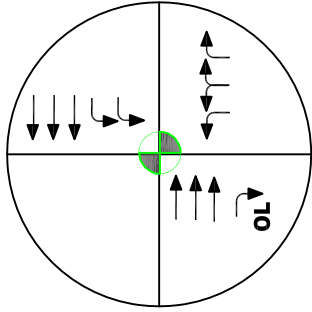
⑪ Riverside Dr -  
Street A (fut.)



⑩ Milliken/Hammer Ave -  
Samantha St

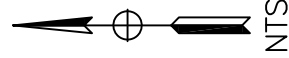


⑨ Cantu-Galleano Ranch Rd -  
I-15 Northbound Ramps



**Legend:**

- Lane Configurations
- Free-Flow Right-turn
- Right-turn Overlap Phase
- Traffic Signal
- STOP-sign



# OPENING YEAR (2012) INTERSECTION LANE CONFIGURATIONS

TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA

**TABLE 10**  
**OPENING YEAR (2012) EXISTING-PLUS-AMBIENT TRAFFIC CONDITIONS WEEKDAY**  
**MORNING PEAK HOUR**

Intersection		Traffic Control	Existing-Plus-Ambient No-Project Conditions		Existing-Plus-Ambient With-Project Conditions <sup>(1)</sup>	
			Delay <sup>(2)</sup>	LOS <sup>(3)</sup>	Delay	LOS
1	Milliken (Hamner) Avenue – Riverside Drive	Signal	19.1	B	19.7	B
2	Milliken (Hamner) Avenue – Industrial Driveway (east side of Milliken)/Street “B” in the future <sup>(4)</sup>	TWSC <sup>(5)</sup>	0.5	A	0.5	A
3	Milliken (Hamner) Avenue – SR-60 Eastbound Ramps	Signal	16.3	B	17.4	B
4	Milliken (Hamner) Avenue – SR-60 Westbound Ramps	Signal	14.0	B	14.2	B
5	Riverside Drive – Mill Creek Road	Signal	17.5	B	17.7	B
6	Riverside Drive – Sharp Street	TWSC	1.2	A	1.2	A
7	Milliken (Hamner) Avenue – Cantu-Galleano Ranch Road	Signal	12.8	B	13.9	B
8	Cantu-Galleano Ranch Road – I-15 Southbound Ramps	Signal	9.0	A	9.1	A
9	Cantu-Galleano Ranch Road – I-15 Northbound Ramps	Signal	12.5	B	12.5	B
10	Milliken (Hamner) Avenue – Samantha Drive	TWSC	0.5	A	0.5	A
11	Riverside Drive – Street “A” (future) <sup>(6)</sup>	Signal <sup>(7)</sup>	-	-	10.6	B

- Notes:
- (1) Levels-of-service reflect half-street improvements adjacent to Phase I development.
  - (2) Intersection average vehicle delay in seconds.
  - (3) Intersection Level-of-Service (See Table 3 for Intersection LOS Criteria).
  - (4) Street “B” to be constructed in the future with development of the Specific Plan buildout (after Opening Year (2012)).
  - (5) Two-Way STOP-sign control. For these intersections, average intersection delay is reported above; “worst-case” (side-street) delay is provided on LOS TRAFFIX worksheets in Appendix D.
  - (6) Only exists under With-Project conditions.
  - (7) Traffic signal under With-Project conditions.

**TABLE 11**  
**OPENING YEAR (2012) EXISTING-PLUS-AMBIENT TRAFFIC CONDITIONS**  
**WEEKDAY EVENING PEAK HOUR**

Intersection		Traffic Control	Existing-Plus-Ambient No-Project Conditions		Existing-Plus-Ambient With-Project Conditions <sup>(1)</sup>	
			Delay <sup>(2)</sup>	LOS <sup>(3)</sup>	Delay	LOS
1	Milliken (Hamner) Avenue – Riverside Drive	Signal	19.2	B	19.8	B
2	Milliken (Hamner) Avenue – Industrial Driveway (east side of Milliken)/Street “B” in the future <sup>(4)</sup>	TWSC <sup>(5)</sup>	0.3	A	0.3	A
3	Milliken (Hamner) Avenue – SR-60 Eastbound Ramps	Signal	14.7	B	15.1	B
4	Milliken (Hamner) Avenue – SR-60 Westbound Ramps	Signal	10.2	B	10.9	B
5	Riverside Drive – Mill Creek Road	Signal	12.7	B	12.3	B
6	Riverside Drive – Sharp Street	TWSC	1.1	A	1.1	A
7	Milliken (Hamner) Avenue – Cantu-Galleano Ranch Road	Signal	13.0	B	13.0	B
8	Cantu-Galleano Ranch Road – I-15 Southbound Ramps	Signal	9.0	A	9.4	A
9	Cantu-Galleano Ranch Road – I-15 Northbound Ramps	Signal	11.9	B	11.9	B
10	Milliken (Hamner) Avenue – Samantha Drive	TWSC	0.4	A	0.4	A
11	Riverside Drive – Street “A” (future) <sup>(6)</sup>	Signal <sup>(7)</sup>	-	-	10.3	B

Notes: (1) Levels-of-service reflect half-street improvements adjacent to Phase I development.  
(2) Intersection average vehicle delay in seconds.  
(3) Intersection Level-of-Service (See Table 3 for Intersection LOS Criteria).  
(4) Street “B” to be constructed in the future with development of the Specific Plan buildout (after Opening Year (2012)).  
(5) Two-Way STOP-sign control. For these intersections, average intersection delay is reported above; “worst-case” (side-street) delay is provided on LOS TRAFFIX worksheets in Appendix D.  
(6) Only exists under Project conditions.  
(7) Traffic signal under With-Project conditions.

### Opening Year (2012) Cumulative Background No-Project and With-Project Intersection Levels of Service

The analysis of Cumulative Background No-Project intersection LOS was based upon the peak-hour traffic volumes illustrated on **Figure 16** and the intersection geometrics exhibited on **Figure 7**.

The analysis of Cumulative Background With-Project (Existing-Plus-Ambient-Plus-“Related” Projects-Plus-Project) intersection LOS was based upon the peak-hour traffic volumes illustrated on **Figure 17** and the intersection geometrics exhibited on **Figure 20**.

**Tables 12 and 13** summarize the Cumulative Background No-Project and With-Project LOS at the study intersections during the weekday morning (am) and evening (pm) peak hours, respectively. **Appendix D** provides the HCM worksheets for the LOS analysis.

**TABLE 12**  
**OPENING YEAR (2012) CUMULATIVE TRAFFIC CONDITIONS**  
**WEEKDAY MORNING PEAK HOUR**

Intersection		Traffic Control	Cumulative Background (No-Project) Conditions		Cumulative Background With-Project Conditions <sup>(1)</sup>	
			Delay <sup>(2)</sup>	LOS <sup>(3)</sup>	Delay	LOS
1	Milliken (Hamner) Avenue – Riverside Drive	Signal	20.3	C	20.8	C
2	Milliken (Hamner) Avenue – Industrial Driveway (east side of Milliken)/Street “B” in the future <sup>(4)</sup>	TWSC <sup>(5)</sup>	0.4	A	0.4	A
3	Milliken (Hamner) Avenue – SR-60 Eastbound Ramps	Signal	17.7	B	19.4	B
4	Milliken (Hamner) Avenue – SR-60 Westbound Ramps	Signal	14.0	B	14.2	B
5	Riverside Drive – Mill Creek Road	Signal	17.9	B	18.0	B
6	Riverside Drive – Sharp Street	TWSC	1.1	A	1.1	A
7	Milliken (Hamner) Avenue – Cantu-Galleano Ranch Road	Signal	19.6	B	19.9	B
8	Cantu-Galleano Ranch Road – I-15 Southbound Ramps	Signal	9.3	A	9.4	A
9	Cantu-Galleano Ranch Road – I-15 Northbound Ramps	Signal	12.9	B	12.9	B
10	Milliken (Hamner) Avenue – Samantha Drive	TWSC	0.5	A	0.5	A
11	Riverside Drive – Street “A” (future) <sup>(6)</sup>	Signal <sup>(7)</sup>	-	-	10.2	B

- Notes: (1) Levels-of-service reflect half-street improvements adjacent to Phase I development.  
(2) Intersection average vehicle delay in seconds.  
(3) Intersection Level-of-Service (See Table 3 for Intersection LOS Criteria).  
(4) Street “B” to be constructed in the future with development of the Specific Plan buildout (after Opening Year (2012)).  
(5) Two-Way STOP-sign control. For these intersections, average intersection delay is reported above; “worst-case” (side-street) delay is provided on LOS TRAFFIX worksheets in Appendix D.  
(6) Only exists under Project conditions.  
(7) Traffic signal under With-Project conditions.

As can be seen from **Tables 12 and 13**, all intersections operate acceptably and no additional improvements other than those implemented with Project Phase I are required to accommodate Project-related and cumulative traffic at study intersections.

**TABLE 13**  
**OPENING YEAR (2012) CUMULATIVE TRAFFIC CONDITIONS**  
**WEEKDAY EVENING PEAK HOUR**

Intersection		Traffic Control	Cumulative Background (No-Project) Conditions		Cumulative Background With-Project Conditions <sup>(1)</sup>	
			Delay <sup>(2)</sup>	LOS <sup>(3)</sup>	Delay	LOS
1	Milliken (Hamner) Avenue – Riverside Drive	Signal	21.4	C	21.9	C
2	Milliken (Hamner) Avenue – Industrial Driveway (east side of Milliken)/Street “B” in the future <sup>(4)</sup>	TWSC <sup>(5)</sup>	0.2	A	0.2	A
3	Milliken (Hamner) Avenue – SR-60 Eastbound Ramps	Signal	14.9	B	15.5	B
4	Milliken (Hamner) Avenue – SR-60 Westbound Ramps	Signal	10.6	B	11.3	B
5	Riverside Drive – Mill Creek Road	Signal	11.5	B	11.8	B
6	Riverside Drive – Sharp Street	TWSC	1.0	A	1.0	A
7	Milliken (Hamner) Avenue – Cantu-Galleano Ranch Road	Signal	25.1	C	26.3	C
8	Cantu-Galleano Ranch Road – I-15 Southbound Ramps	Signal	8.9	A	9.2	A
9	Cantu-Galleano Ranch Road – I-15 Northbound Ramps	Signal	13.0	B	13.0	B
10	Milliken (Hamner) Avenue – Samantha Drive	TWSC	0.4	A	0.4	A
11	Riverside Drive – Street “A” (future) <sup>(6)</sup>	Signal <sup>(7)</sup>	-	-	9.0	A

- Notes:
- (1) Levels-of-service reflect half-street improvements adjacent to Phase I development.
  - (2) Intersection average vehicle delay in seconds.
  - (3) Intersection Level-of-Service (See Table 3 for Intersection LOS Criteria).
  - (4) Street “B” to be constructed in the future with development of the Specific Plan buildout (after Opening Year (2012)).
  - (5) Two-Way STOP-sign control. For these intersections, average intersection delay is reported above; “worst-case” (side-street) delay is provided on LOS TRAFFIX worksheets in Appendix D.
  - (6) Only exists under Project conditions.
  - (7) Traffic signal under With-Project conditions.

## Phase I Queuing Analysis at Project intersections

With development of Phase I of the Project, traffic signals will be installed at Street “A” on Riverside Drive, approximately 600 feet west of Milliken (Hamner) Avenue. A queuing analysis was performed at the following intersections for Opening Year (2012) With-Project Cumulative Conditions to determine recommended storage for left- and right-turn lanes, and to ensure that there will be no back-ups between intersections:

- Milliken (Hamner) Avenue – Riverside Drive (Intersection 1)
- Milliken (Hamner) Avenue – SR-60 Eastbound Ramps (Intersection 3)
- Riverside Drive – Street “A” (Intersection 11)

The recommended storage lengths were determined by calculating the morning (am) and evening (pm)-peak hour 95<sup>th</sup> percentile queues for each approach using the Highway Capacity Manual (HCM) 2000 operations methodology for delays and queues and assuming proposed lane configurations as shown on **Figure 20** for Opening Year (2012).

Existing traffic signal operations was assumed for Intersections 1 and 3. At the new intersection, protected left-turn phasing was assumed on the major street approaches (that is, on Riverside Drive), while the minor street approaches (that is, on Street “A”) would have its own phase since it would be a T-intersection until the development of the property to the south.

The TRAFFIX software (HCM2000 operations module) was used for the storage analysis and provides the results in terms of the number of queued cars per lane by approach. The highest 95<sup>th</sup> percentile queue during either the morning (am) or evening (pm) peak period was used to determine the recommended storage lengths for the northbound, southbound, eastbound and westbound left-turn and right-turn lanes at each aforementioned intersection.

The recommended length of the turn pockets was determined based on the storage required to accommodate the end of the peak 95<sup>th</sup> percentile queue (occurring either in the morning (am) or evening (pm) peak hour), assuming 20 feet of storage per car per lane.

The distance between intersections was then verified to ensure that the traffic queues at one intersection will clear the adjacent intersection.

### *Opening Year (2012) Recommended Storage for Left- and Right-Turn Lanes*

The recommended storage lengths for Opening Year (2011) With-Project traffic conditions at the study intersections providing direct access to the Project are shown on **Table 14**. The existing public roadway street system should be designed with the lane configurations as shown on **Figure 20** and be designed to accommodate the recommended left- and right-turn pockets as recommended on **Table 14** in Opening Year (2012), as follows:

- Riverside Drive – Street “A”:
  - Eastbound left-turn lane - 100 feet (min.) storage is required.

The specific lane configurations for Street “A” in Phase I are provided in Chapter 5.

### *Opening Year (2012) Queuing Analysis*

Based upon the projected 95<sup>th</sup> percentile queues projected along Milliken (Hamner) Avenue at SR-60 eastbound ramps and Milliken (Hamner) Avenue – Riverside Drive, adequate distance exists between intersections such that all queues will clear and there will be no back-up between signalized intersections during either peak-hour period of commuter traffic in Opening Year (2012) assuming Milliken (Hamner) Avenue is constructed to its ultimate half-street adjacent to Phase I development .

Likewise, based upon the projected 95<sup>th</sup> percentile queues projected along Riverside Drive - Milliken (Hamner) Avenue and at Riverside Drive - Street “A”, adequate distance exists between intersections such that all queues will clear and there will be no back-up between intersections during either peak-hour period of commuter traffic in Opening Year (2012) assuming Riverside Drive is constructed to its ultimate half-street adjacent to Phase I development and a traffic signal is installed at Street “A”. The eastbound left-turn pocket on Riverside Drive onto northbound Milliken (Hamner) Avenue is currently approximately 150’. Assuming an existing split-phase traffic signal operation in the east-west direction, this pocket should be extended to provide a minimum of 240’ of storage.



**TABLE 14**  
**OPENING YEAR (2012) CUMULATIVE WITH-PROJECT QUEUING ANALYSIS**

**OPENING YEAR (2012) MAXIMUM QUEUES AT APPROACHES UNDER CUMULATIVE WITH-PROJECT CONDITIONS  
IN EITHER MORNING (AM) OR EVENING (PM) PEAK HOURS**

MOVEMENT	Milliken (Hamner) - Riverside(Int.1)			Milliken - SR-60 Eastbound Ramps (Int.3)			Riverside - Street "A"(Int. 11)		
	Number/ Type of Lane <sup>(1)</sup>	95th% Queue <sup>(2)</sup> (cars)	Storage Length <sup>(3)</sup> (feet)	Number/ Type of Lane <sup>(1)</sup>	95th% Queue <sup>(2)</sup> (cars)	Storage Length <sup>(3)</sup> (feet)	Number/ Type of Lane <sup>(1)</sup>	95th% Queue <sup>(2)</sup> (cars)	Storage Length <sup>(3)</sup> (feet)
Northbound left-turn	1	11	220'	-	-	-	-	-	-
Northbound through	2	11	220'	2	22	440'	-	-	-
Northbound right-turn	-	-	-	-	-	-	-	-	-
Southbound left-turn	1	10	200'	-	-	-	1	4	100'
Southbound through	2	13	260'	2	8	160'	-	-	-
Southbound right-turn	1	10	200'	1	8	160'	1	<1	100'
Westbound left-turn	1	1	100'	-	-	-	-	-	-
Westbound through	1	4	100'	-	-	-	2	5	100'
Westbound right-turn	1	8	160'	-	-	-	1 <sup>(4)</sup>	<1	100'
Eastbound left-turn	1	12	240'	-	-	-	1	3	100'
Eastbound through	1	13	260'	2	24	480'	1	9	180
Eastbound right-turn	-	-	-	-	-	-	-	-	-

Notes:

(1) Number of lanes proposed by Project in Opening Year.

(2) Maximum 95th percentile queue by lane approach.

(3) Calculated at 20 feet per queued car. Minimum storage default at 100 feet for intersection lanes; 20 feet for driveways.

## GENERAL PLAN BUILDOUT TRAFFIC ANALYSIS

General Plan Buildout Levels of Service were determined for both the No-Project and With-Project scenarios. As discussed in Chapter 2, the Highway Capacity Methodology was employed to determine levels of service.

The General Plan Buildout traffic analysis assumes that the transportation system is built to its planned configuration, based on the Circulation Elements of the jurisdictions within which the study intersections are located. Lane configurations and traffic control at study intersections under General Plan Buildout No-Project conditions are shown on **Figure 21**. Lane configurations and traffic control at study intersections under General Plan Buildout With-Project conditions are shown on **Figure 22**.

## GENERAL PLAN BUILDOUT INTERSECTION LEVELS OF SERVICE

### General Plan Buildout No-Project and With-Project Intersection Levels of Service

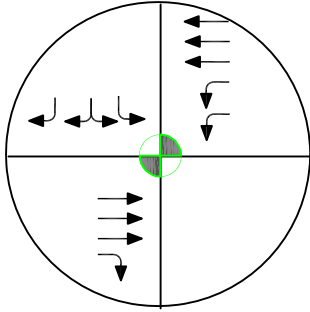
The analysis of General Plan Buildout No-Project intersection LOS was based upon the peak-hour traffic volumes illustrated on **Figure 18** and the planned circulation improvements consistent with the buildout of the circulation elements of the respective jurisdictions within which the study intersections are located, as shown on **Figure 21**.

The analysis of General Plan Buildout With-Project intersection LOS was based upon the peak-hour traffic volumes illustrated on **Figure 19** and the planned circulation improvements consistent with the buildout of the circulation elements of the respective jurisdictions within which the study intersections are located, as shown on **Figure 21**.

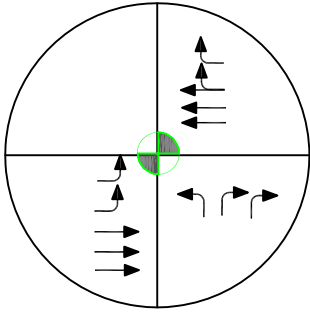
**Table 15** summarizes the General Plan Buildout No-Project and With-Project LOS at the study intersections during the weekday morning (am). **Table 16** summarizes the General Plan No-Project and With-Project LOS at the study intersections during the weekday evening (pm) peak hours. **Appendix D** provides the HCM worksheets for the LOS analysis.

As shown in **Tables 15 and 16**, all intersections continue to operate acceptably based on its jurisdictional LOS standards under the General Plan Buildout traffic conditions.

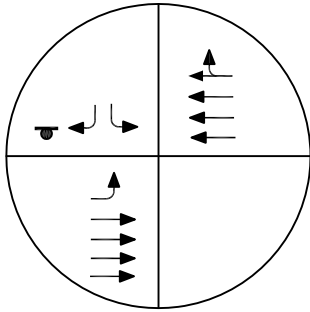
④ Milliken/Hammer Ave -  
SR-60 Westbound Ramps



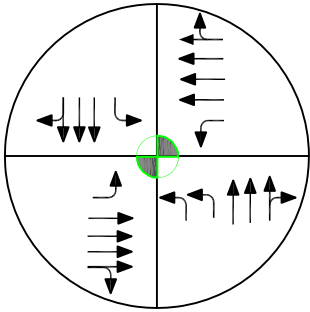
③ Milliken/Hammer Ave -  
SR-60 Eastbound Ramps



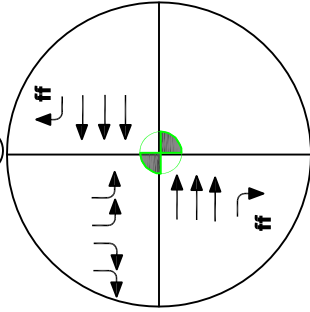
② Milliken/Hammer Ave -  
Industrial Dwy (E)/Street B (fut.)



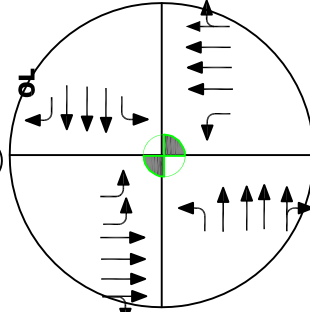
① Milliken/Hammer Ave -  
Riverside Dr



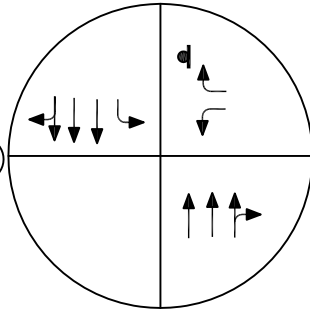
⑧ Cantu-Galleano Ranch Rd -  
I-15 Southbound Ramps



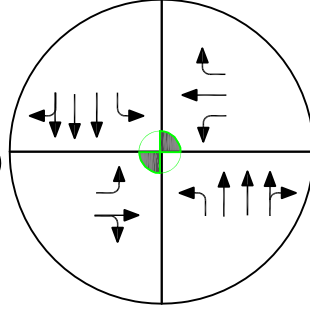
⑦ Milliken/Hammer Ave -  
Cantu-Galleano Ranch Rd



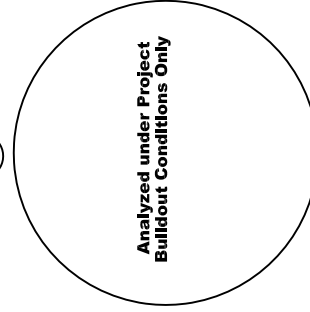
⑥ Riverside Dr -  
Sharp St



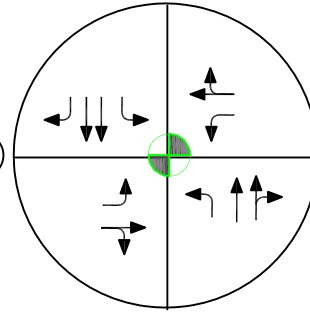
⑤ Riverside Dr -  
Mill Creek Ave



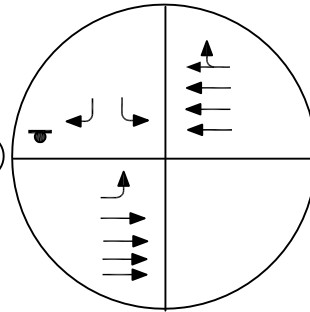
⑫ Milliken/Hammer Ave -  
Hartford St



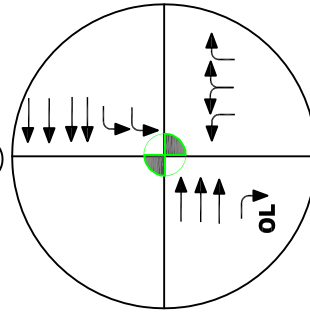
⑪ Riverside Dr -  
Street A (fut.)



⑩ Milliken/Hammer Ave -  
Samantha St



⑨ Cantu-Galleano Ranch Rd -  
I-15 Northbound Ramps



**Legend:**

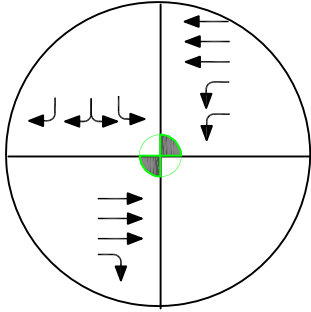
- Lane Configurations
- ff Free-Flow Right-turn
- OL Right-turn Overlap Phase
- Traffic Signal
- STOP-sign



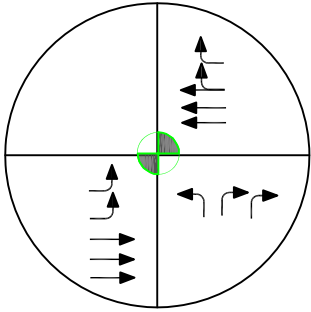
## GENERAL PLAN BUILDOUT NO-PROJECT LANE CONFIGURATIONS

### TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA

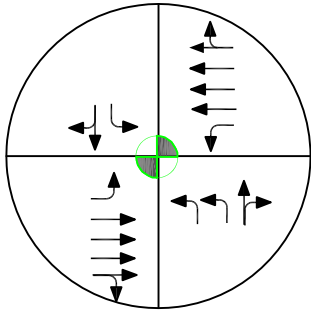
④ Milliken/Hammer Ave -  
SR-60 Westbound Ramps



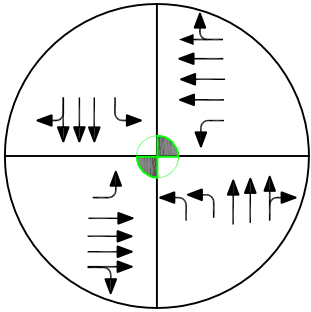
③ Milliken/Hammer Ave -  
SR-60 Eastbound Ramps



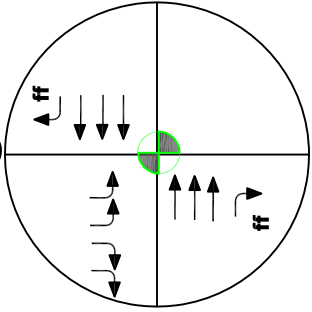
② Milliken/Hammer Ave -  
Industrial Dwy (E)/Street B (fut.)



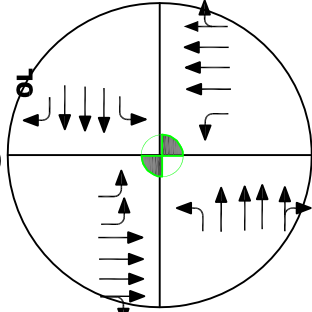
① Milliken/Hammer Ave -  
Riverside Dr



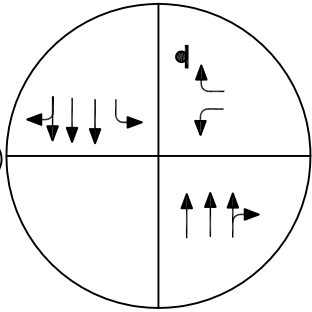
⑧ Cantu-Galleano Ranch Rd -  
I-15 Southbound Ramps



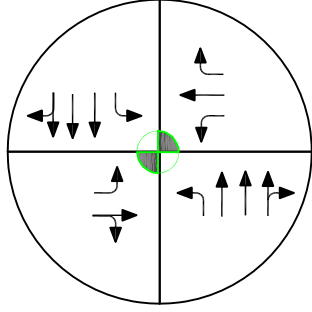
⑦ Milliken/Hammer Ave -  
Cantu-Galleano Ranch Rd



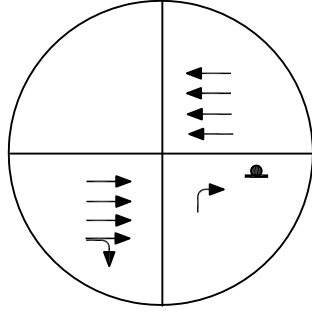
⑥ Riverside Dr -  
Sharp St



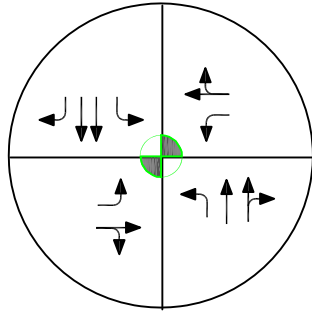
⑤ Riverside Dr -  
Mill Creek Ave



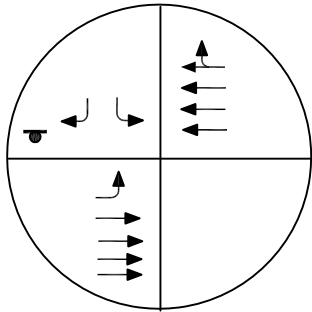
⑫ Milliken/Hammer Ave -  
Hartford St



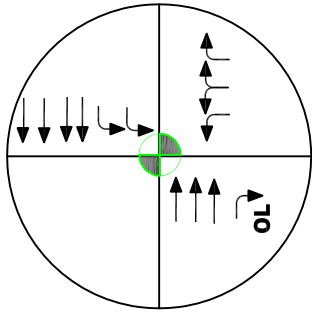
⑪ Riverside Dr -  
Street A (fut.)



⑩ Milliken/Hammer Ave -  
Samantha St

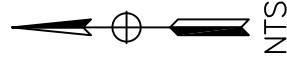


⑨ Cantu-Galleano Ranch Rd -  
I-15 Northbound Ramps



**Legend:**

- Lane Configurations
- Free-Flow Right-turn
- Right-turn Overlap Phase
- Traffic Signal
- STOP-sign



# GENERAL PLAN BUILDOUT WITH-PROJECT LANE CONFIGURATIONS

TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA

**TABLE 15**  
**GENERAL PLAN BUILDOUT TRAFFIC CONDITIONS**  
**WEEKDAY MORNING PEAK HOUR**

Intersection		Traffic Control	General Plan No-Project Conditions		General Plan With-Project Conditions <sup>(1)</sup>	
			Delay <sup>(2)</sup>	LOS <sup>(3)</sup>	Delay	LOS
1	Milliken (Hamner) Avenue – Riverside Drive	Signal	20.2	C	18.3	B
2	Milliken (Hamner) Avenue – Industrial Driveway (east side of Milliken)/Street “B” in the future <sup>(4)</sup>	TWSC <sup>(5)</sup> /Signal <sup>(6)</sup>	8.4	B	13.4	B
3	Milliken (Hamner) Avenue – SR-60 Eastbound Ramps	Signal	19.4	B	21.5	C
4	Milliken (Hamner) Avenue – SR-60 Westbound Ramps	Signal	18.6	B	18.9	B
5	Riverside Drive – Mill Creek Road	Signal	16.1	B	16.1	B
6	Riverside Drive – Sharp Street	TWSC	0.8	A	0.8	A
7	Milliken (Hamner) Avenue – Cantu-Galleano Ranch Road	Signal	43.4	D	46.2	D
8	Cantu-Galleano Ranch Road – I-15 Southbound Ramps	Signal	12.1	B	12.1	B
9	Cantu-Galleano Ranch Road – I-15 Northbound Ramps	Signal	21.7	C	22.6	C
10	Milliken (Hamner) Avenue – Samantha Drive	TWSC	1.5	A	1.6	A
11	Riverside Drive – Street “A” (future)	Signal <sup>(6)</sup>	19.4	B	13.9	B
12	Milliken (Hamner) Avenue – Hartford Street <sup>(7)</sup>	TWSC	-	-	Nom <sup>(8)</sup>	A

- Notes: (1) Levels-of-service improve at some intersections due to additional connection at Milliken (Hamner) Avenue – Street “B”, which is not assumed under General Plan No-Project condition  
(2) Intersection average vehicle delay in seconds.  
(3) Intersection Level-of-Service (See Table 3 for Intersection LOS Criteria).  
(4) Intersection configuration assumes eastbound approach leg under With-Project conditions.  
(5) Two-Way STOP-sign control under No-Project Conditions. For these intersections, average intersection delay is reported above; “worst-case” (side-street) delay is provided on LOS TRAFFIX worksheets in Appendix D.  
(6) Traffic signal under With-Project conditions.  
(7) Only analyzed under With-Project conditions.  
(8) Nominal delay due to very low traffic volume on side street.

**TABLE 16**  
**GENERAL PLAN BUILDOUT TRAFFIC CONDITIONS**  
**WEEKDAY EVENING PEAK HOUR**

Intersection		Traffic Control	General Plan No-Project Conditions		General Plan With-Project Conditions <sup>(1)</sup>	
			Delay <sup>(2)</sup>	LOS <sup>(3)</sup>	Delay	LOS
1	Milliken (Hamner) Avenue – Riverside Drive	Signal	26.3	C	20.7	C
2	Milliken (Hamner) Avenue – Industrial Driveway (east side of Milliken)/Street “B” in the future <sup>(4)</sup>	TWSC <sup>(5)</sup> /Signal <sup>(6)</sup>	53.8*	F*	21.7	C
3	Milliken (Hamner) Avenue – SR-60 Eastbound Ramps	Signal	25.0	C	24.4	C
4	Milliken (Hamner) Avenue – SR-60 Westbound Ramps	Signal	23.5	C	24.3	C
5	Riverside Drive – Mill Creek Road	Signal	14.9	B	14.9	B
6	Riverside Drive – Sharp Street	TWSC	0.8	A	0.8	A
7	Milliken (Hamner) Avenue – Cantu-Galleano Ranch Road	Signal	35.4	D	34.0	C
8	Cantu-Galleano Ranch Road – I-15 Southbound Ramps	Signal	12.2	B	12.2	B
9	Cantu-Galleano Ranch Road – I-15 Northbound Ramps	Signal	45.3	D	46.3	D
10	Milliken (Hamner) Avenue – Samantha Drive	TWSC	2.8	A	2.9	A
11	Riverside Drive – Street “A” (future)	Signal <sup>(6)</sup>	36.9	D	20.4	C
12	Milliken (Hamner) Avenue – Hartford Street <sup>(7)</sup>	TWSC	-	-	0.1	A

Notes: (1) Levels-of-service improve at some intersections due to additional connection at Milliken (Hamner) Avenue – Street “B”, which is not assumed under General Plan No-Project conditions.

(2) Intersection average vehicle delay in seconds.

(3) Intersection Level-of-Service (See Table 3 for Intersection LOS Criteria).

(4) Intersection configuration assumes eastbound approach leg under With-Project conditions.

(5) Two-Way STOP-sign control under No-Project Conditions. For these intersections, average intersection delay is reported above; “worst-case” (side-street) delay is provided on LOS TRAFFIX worksheets in Appendix D.

(6) Traffic signal under With-Project conditions.

(7) Only analyzed under With-Project conditions.

\*Deficient per respective jurisdictions’ LOS standards.

## Buildout Queuing Analysis at Project intersections

A queuing analysis was performed at the following intersections for Buildout With-Project traffic conditions to determine recommended storage for left- and right-turn lanes, and to ensure that there will be no back-ups between intersections:

- Milliken (Hamner) Avenue – Riverside Drive (Intersection 1)
- Milliken (Hamner) Avenue – Street “B”/Industrial Driveway to east property (Intersection 2)
- Milliken (Hamner) Avenue – SR-60 Eastbound Ramps (Intersection 3)
- Riverside Drive – Street “A” (Intersection 11)

The recommended storage lengths were determined by calculating the morning (am) and evening (pm)-peak hour 95<sup>th</sup> percentile queues for each approach using the Highway Capacity Manual (HCM) 2000 operations methodology for delays and queues and assuming proposed lane configurations as shown on **Figure 22** for Buildout With-Project conditions.

Because of the projected left-turn volumes, protected left-turn phases were assumed at all aforementioned intersections. The highest 95<sup>th</sup> percentile queue during either the morning (am) or evening (pm) peak period was used to determine the recommended storage lengths for the northbound, southbound, eastbound and westbound left-turn and right-turn lanes at each aforementioned intersection. As with Opening Year analysis, the recommended length of the turn pockets was determined based on the storage required to accommodate the end of the peak 95<sup>th</sup> percentile queue (occurring either in the morning (am) or evening (pm) peak hour), assuming 20 feet of storage per car per lane.

The distance between intersections was then verified to ensure that the traffic queues at one intersection will clear the adjacent intersection.

### *Project Buildout Recommended Storage for Left- and Right-Turn Lanes*

The recommended storage lengths for Buildout With-Project traffic conditions (assuming access at Hartford Street is allowed<sup>10</sup>) at the study intersections providing direct access to the Project are shown on **Table 17**. The proposed roadway street system should be designed with the lane configurations as shown on **Figure 22** and be designed to accommodate the recommended left- and right-turn pockets as recommended on **Table 17** for Project buildout, as follows:

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<sup>10</sup> An alternative analyzing LOS's and queues at Milliken (Hamner) Avenue – Street “B” without Hartford Street is provided in Chapter 5.

**TABLE 17**  
**GENERAL PLAN WITH-PROJECT QUEUING ANALYSIS**

**MAXIMUM QUEUES AT APPROACHES UNDER GENERAL PLAN WITH-PROJECT CONDITIONS  
IN EITHER MORNING (AM) OR EVENING (PM) PEAK HOURS**

MOVEMENT	Milliken (Hammer) - Riverside (Int.1)			Milliken (Hammer) - Street "B"(Int.1)			Milliken - SR-60 Eastbound Ramps (Int.3)			Riverside - Street "A"(Int. 11)		
	Number/ Type of Lane <sup>(1)</sup>	95th% Queue <sup>(2)</sup> (cars)	Storage Length <sup>(3)</sup> (feet)	Number/ Type of Lane <sup>(1)</sup>	95th% Queue <sup>(2)</sup> (cars)	Storage Length <sup>(3)</sup> (feet)	Number/ Type of Lane <sup>(1)</sup>	95th% Queue <sup>(2)</sup> (cars)	Storage Length <sup>(3)</sup> (feet)	Number/ Type of Lane <sup>(1)</sup>	95th% Queue <sup>(2)</sup> (cars)	Storage Length <sup>(3)</sup> (feet)
Northbound left-turn	1	8	160'	1	7	140'	-	-	-	1	2	40'
Northbound through	4	24	480'	4	19	380'	3	35*	700'	1	3	60'
Northbound right-turn	-	-	-	-	-	-	1	35*	700'	-	-	-
Southbound left-turn	1	11	220'	1	6	120'	2	12*	240'	1	3	100'
Southbound through	4	28	560'	4	34	680'	3	23*	460'	1	11	220'
Southbound right-turn	-	-	-	-	-	-	-	-	-	-	-	-
Westbound left-turn	1	12	240'	1	2	20'	-	-	-	1	4	100'
Westbound through	3	12	240'	1	5	100'	-	-	-	2	10	200'
Westbound right-turn	-	-	-	-	-	-	-	-	-	1 <sup>(4)</sup>	1	100'
Eastbound left-turn	2	11	220'	2	20	400'	1	21*	420'	1	7	140'
Eastbound through	3	14	280'	1	4	100'	-	-	-	3	11	220'
Eastbound right-turn	-	-	-	-	-	-	2	29*	580'	-	-	-

Notes:

(1) Number of lanes proposed by Project in Opening Year.

(2) Maximum 95th percentile queue by lane approach.

(3) Calculated at 20 feet per queued car. Minimum storage default at 100 feet for intersection lanes; 20 feet for driveways.

\*Queue to be minimized when ultimate interchange configuration is designed.

(4) This is a continuous westbound lane from Milliken (Hammer) Avenue which becomes a right-turn lane at Street "A".



- Milliken (Hamner) Avenue – Street “B”:
  - Northbound left-turn lane - 140 feet (min.) of storage is required;
  - Southbound right-turn deceleration lane – Right-turn volume warrants separate right-turn lane; however, the outside (4<sup>th</sup>) through lane can be converted to a southbound right-turn only lane with the intersection continuing to operate at acceptable LOS’s. The need for a separate right-turn lane should be decided with further detailed site planning of the Galleano and Riboli parcels.
- Riverside Drive – Street “A”:
  - Eastbound left-turn lane - 140 feet (min.) of storage is required;
  - Westbound right-turn lane is a continuous westbound lane from Milliken (Hamner) Avenue.

#### *General Plan Buildout Queuing Analysis*

Based upon the projected 95<sup>th</sup> percentile queues projected along Milliken (Hamner) Avenue at SR-60 eastbound ramps, Milliken (Hamner) Avenue – Street “B”, and Milliken (Hamner) Avenue – Riverside Drive, adequate distance exists between Riverside Drive and Street “B” such that all queues will clear and there will be no back-up between intersections during either peak-hour period of commuter traffic under General Plan With-Project Buildout conditions assuming Milliken (Hamner) Avenue is constructed to its General Plan Update-recommended configuration.

There appears to be adequate distance between Street “B” and the SR-60 Eastbound ramps to accommodate queue build-up under assumed lane configurations. The General Plan Update intersection lane configurations at the interchange implicitly assume major interchange reconstruction. The design of these major improvements to accommodate General Plan Update-recommended lanes should reconsider turn lane allocation and/or free-flow loop on-ramps to minimize queue buildup south of the interchange and between the ramps *regardless* of Tuscana Village Specific Plan implementation. The City of Ontario should coordinate with Caltrans to ensure that any SR-60 – Milliken Avenue interchange improvements maximize traffic flows through the area. Further traffic analysis of access and queuing between Street “B” and SR-60 eastbound ramps should be conducted with detailed site planning of the Riboli and Galleano parcels. The Applicant/developer should develop a signal coordination plan for Milliken (Hamner) Avenue from Riverside Drive to the WB 60 ramps at the time the traffic signal is constructed at Milliken Avenue – Street “B”.

## 5. **ON-SITE CIRCULATION AND ACCESS**

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This chapter summarizes the review of the proposed conceptual circulation system within the Tuscana Village Specific Plan Area and provides guidelines to provide access and connectivity between the public and private roadway systems.

### **ROADWAY SYSTEM**

Major access to the Project will be from **Milliken Avenue** (also known as Hamner Avenue in Riverside County) and **Riverside Drive**.

Two new private roadways are proposed to be constructed to serve the Project site. **Street “A”** will intersect Riverside Drive approximately 600 feet west of Milliken (Hamner) Avenue and will be constructed with Phase I of development. **Street “B”** will intersect Milliken (Hamner) Avenue approximately 800 feet north of Riverside Drive and would be constructed with buildout of the Specific Plan.

These roadways (Milliken (Hamner) Avenue, Riverside Drive, Street “A” and Street “B” would be improved by the Project as discussed in this chapter.

## Phasing of Roadway Infrastructure

In Opening Year (2012), only the residential parcel (Pelican Homes) west of Street “A” and the interim commercial land uses on the Katelaris parcel north of Riverside Drive and between Street “A” and Milliken (Hamner) Avenue would be developed. As such, Milliken (Hamner) Avenue and Riverside Drive would be improved to their half-street General Plan Update-recommended designations along the frontage of these two parcels. In addition, Street “A” would be constructed to its ultimate configuration north of Riverside Drive and would terminate in a cul-de-sac in Phase I. When further development to Specific Plan Project buildout occurs, Street “B” would be constructed from Milliken (Hamner) Avenue to Street “A”, which would be extended north into the Riboli and Galleano parcels as development of those parcels occurs warrants. In addition, Milliken (Hamner) Avenue would be widened to its General Plan Update-recommended half-street configuration between SR-60 eastbound ramps and Street “B” when the Riboli and Galleano parcels develop.

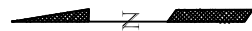
Hartford Street currently provides access to the San Antonio Winery. It is unclear whether access at Hartford Street (or another driveway along Milliken (Hamner) Avenue north of Street “B”) would be warranted under Specific Plan Project buildout conditions until more detailed site planning is conducted for the Riboli and Galleano parcels. Based on discussions with the City of Ontario transportation staff, Project buildout on-site and circulation is discussed herein assuming two scenarios:

- 1) Assuming that Hartford Street (or another driveway north of Street “B”) would provide right-turn-restricted access to/from Milliken (Hamner) Avenue to the Riboli and Galleano parcels; and
- 2) Assuming that no public street or driveway access is provided along Milliken (Hamner) Avenue between SR-60 eastbound ramps and Street “B” - in other words, all access to/from the north along Milliken (Hamner) Avenue to the Riboli and Galleano parcels would occur via Street “B” under Project-buildout conditions.

## Phase I Access and On-Site Circulation Analysis

A detailed analysis of on-site circulation and access to the Phase I land uses was conducted based on the site plans provided by the Applicant (see **Figures 3 and 4**). **Figure 23** shows the Phase I Project morning (am) and evening (pm) peak-hour volumes at two intersections providing direct access to the site as well as at driveways serving both parcels. In addition, to ensure adequate midblock sizing of Street “A”, maximum daily traffic volume projections for Opening Year (2012) for Phase I are shown. Street “A” is projected to carry a maximum of 3,000 Average Daily Traffic (ADT) volume in Phase I.

Based on an analysis of these volumes, the following recommendations are made for Phase I development:



NOT TO SCALE

LEGEND:

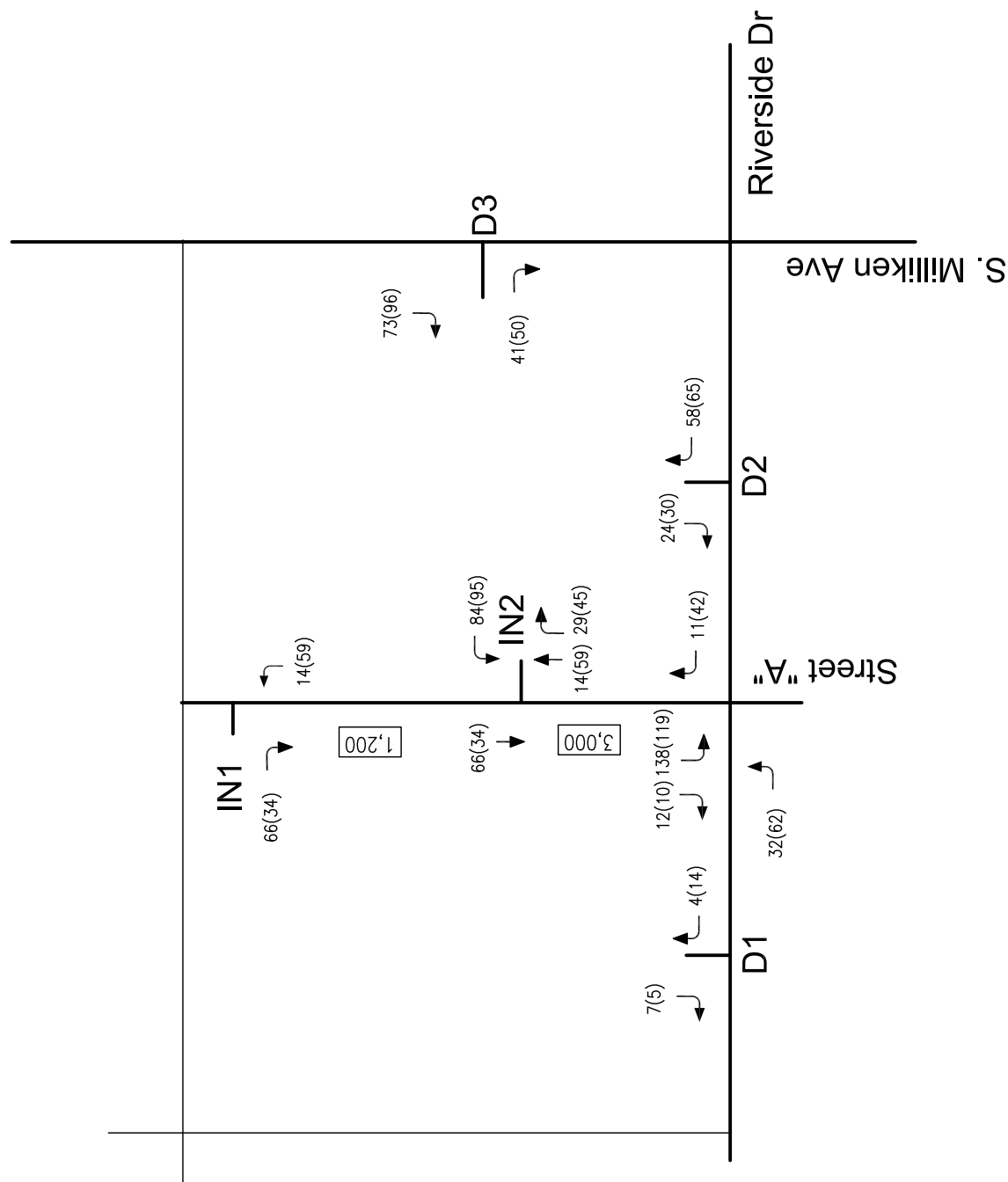
xx(xx) - AM(PM)  
Peak-Hour Volumes\*

3,000 - Average Daily  
Traffic (ADT)\*

\*Volumes include  
"Pass-by" trips

D2 - Driveway 2

IN1 - Internal Driveway 1



PHASE I PROJECT TRAFFIC VOLUMES AT DRIVEWAYS AND  
INTERNAL STREETS

TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA

Figure 23

- **Street “A”:**
  - Provide one lane in each direction north of Internal Driveway 2 (IN2 on Figure 23);
  - Provide two lanes southbound (one left-turn lane and one right-turn lane) and one lane northbound on Street “A” at its approach to Riverside Drive;
  - The Project Applicant is proposing a 40-foot roadway with on-street parking on the west side of the Street “A”. On-street parking should start 200 feet north of Riverside Drive;
  - As discussed previously, protected east-west left-turn phasing is proposed for traffic signal operations at the intersection of Street “A” with Riverside Drive.
- **Internal Driveway 2 (IN2 on Figure 23) on Street “A”:**
  - Locate approximately 180 feet north of Riverside Drive;
  - Install STOP-sign control at the driveway approach to Street “A”;
  - Provide one lane inbound, one lane outbound on the driveway approach to Street “A”.
- **Internal Driveway 1 (IN1 on Figure 23) on Street “A”:**
  - Locate approximately 350 feet north of Street “A”;
  - Install STOP-sign control at the driveway approach to Street “A”;
  - Provide one lane inbound, one lane outbound on the driveway approach to Street “A”.
- **Driveway 1 on Riverside Drive:**
  - Restrict to right-turn in, right-turn out movements only;
  - Install STOP-sign control at the driveway approach to Riverside Drive;
  - Provide one lane inbound, one lane outbound on the driveway approach to Riverside Drive;
  - A westbound right-turn deceleration lane is not needed because projected right-turn volumes are less than the standard requirement for a separate right-turn lane.
- **Driveway 2 on Riverside Drive:**
  - Restrict to right-turn in, right-turn out movements only;
  - Install STOP-sign control at the driveway approach to Riverside Drive;
  - Provide one lane inbound, one lane outbound on the driveway approach to Riverside Drive;
  - A westbound right-turn deceleration lane is not needed because projected right-turn volumes are less than the standard requirement for a separate right-turn lane.
- **Driveway 3 on Milliken (Hamner) Avenue:**
  - Locate a minimum of 180 feet north of Riverside Drive;
  - Restrict to right-turn in, right-turn out movements only;
  - Install STOP-sign control at the driveway approach to Milliken (Hamner) Avenue;
  - Provide one lane inbound, one lane outbound on the driveway approach;
  - A southbound right-turn deceleration lane is not needed because projected right-turn volumes are less than the standard requirement for a separate right-turn lane.

## **Buildout Access and On-Site Circulation Analysis**

A detailed analysis of Project buildout access and on-site circulation cannot be conducted until further site planning for the Riboli and Galleano parcels north of Street “B” occurs. Further traffic analysis would need to be conducted to evaluate specific access and circulation once these site plans are developed.

The following analysis focuses on buildout configuration for Streets “A” and “B” under the following scenarios:

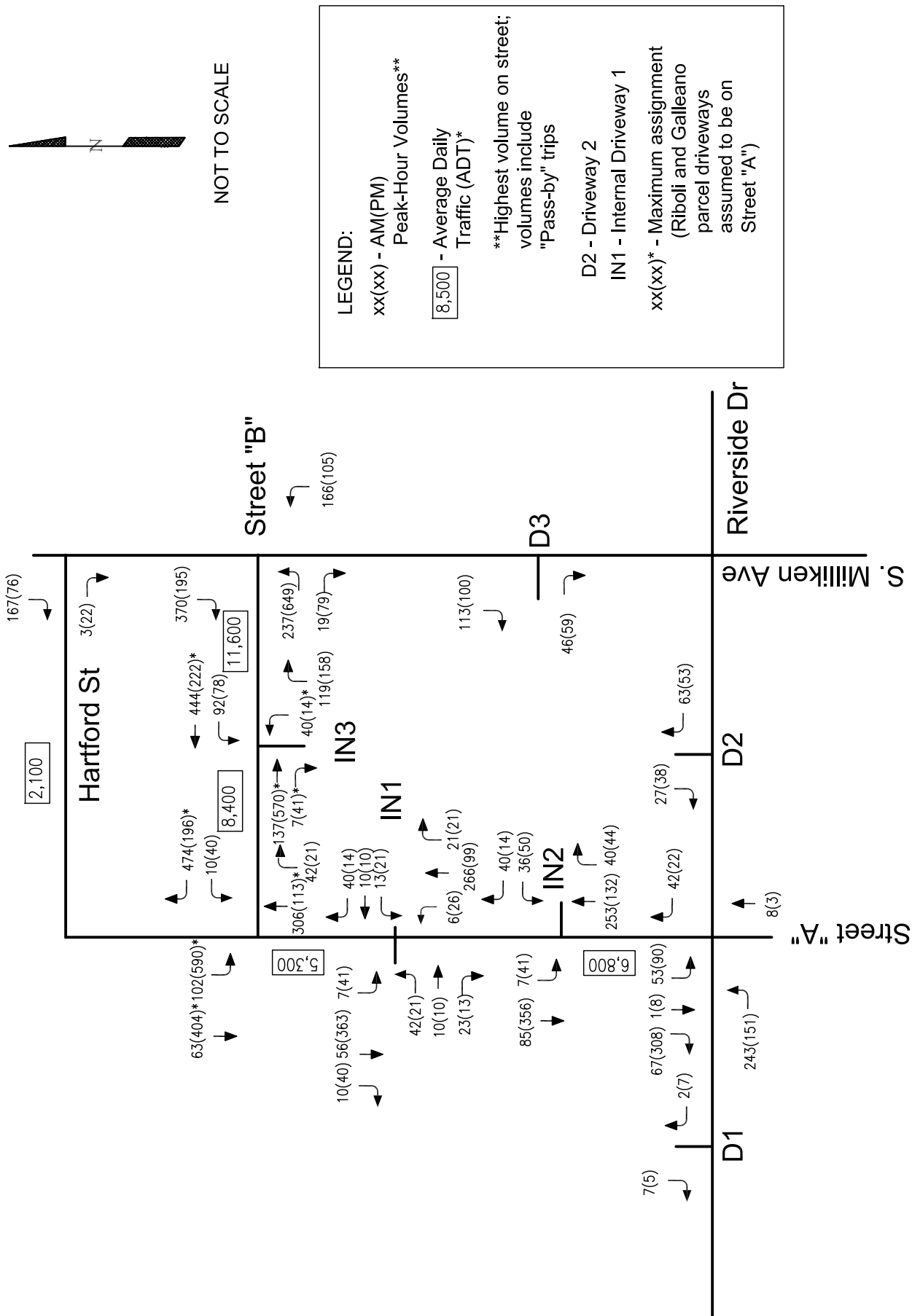
*Alternative 1* - Assuming that Hartford Street (or another driveway north of Street “B”) would provide right-turn restricted access to/from Milliken (Hamner) Avenue to the Riboli and Galleano parcels; and

*Alternative 2* - Assuming that no public street or driveway access is provided along Milliken (Hamner) Avenue between SR-60 eastbound ramps and Street “B” - in other words, all access to/from the north along Milliken (Hamner) Avenue to the Riboli and Galleano parcels would occur via Street “B” under buildout conditions.

### ***Alternative 1***

**Figure 24** shows the buildout morning (am) and evening (pm) peak-hour volumes at two intersections providing direct access to the site as well as at driveways serving the Phase I parcels assuming that Hartford Street (or another driveway between Street “B” and SR-60 eastbound ramps) provides right-turn in, right-turn out only access to the Riboli and Galleano parcels. Under this alternative, the projected maximum ADT volumes are as follows: 6,800 ADT on Street “A”, 11,600 ADT on Street “B”, and 2,100 ADT on Hartford Street.

Based on an analysis of these volumes and discussions with the City of Ontario, the following recommendations are made:



**Street “A”** – The recommended lane configurations for Phase I development will accommodate Project buildout volumes as well.

**Street “B”** – Provide 64 feet of pavement between Street “A” and Milliken (Hamner) Avenue – Street “B” for five travel lanes (two through lanes in each direction and a center left-turn lane) between Street “A” and Milliken (Hamner) Avenue. At the west leg of the intersection of Street “B” – Milliken (Hamner) Avenue, three lanes eastbound and two westbound should be provided. The centerline alignment of Street “B” will be determined following discussions with the City of Eastvale to ensure that the driveway on the east side of the street in Riverside County can also utilize the proposed traffic signal at Milliken (Hamner) Avenue – Street “B”, thus accommodating access to the currently undeveloped parcel north of the existing industrial development. The traffic signal on Milliken (Hamner) Avenue at Street “B” should be designed with protected left-turn phasing in the east-west direction as well as in the north-south direction.

Once further site planning for Riboli and Galleano parcels is performed, refinements to lane configurations on Street “A” north of Street “B” and on Street “B” west of Street “A” may be warranted and should be determined through further circulation analysis.

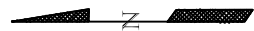
#### *Alternative 2*

**Figure 25** shows the buildout morning (am) and evening (pm) peak-hour volumes at two intersections providing direct access to the site as well as at driveways serving the Phase I parcels assuming that no public or driveway access is provided on Milliken (Hamner) Avenue between Street “B” and SR-60 eastbound ramps. Under this alternative, the projected maximum ADT volumes are as follows: 6,800 ADT on Street “A” and 13,700 ADT on Street “B”.

Based on an analysis of these volumes, no significant changes in lane configurations or intersection operations are projected if all access to Riboli and Galleano parcels from Milliken (Hamner) Avenue would occur via Street “B”. (The intersection of Street “B” – Milliken (Hamner) Avenue is expected to operate at LOS B (delay of 13.3 seconds) during the morning peak hour and LOS C (delay of 22.6 seconds) during the evening peak hour under Alternative 2. TRAFFIX LOS worksheets for Street “B” – Milliken (Hamner) Avenue are provided in **Appendix H**.)

Hartford Street could continue to serve San Antonio Winery until further development occurred on the Riboli and Galleano parcels. As stated earlier, once further site planning for Riboli and Galleano parcels is performed, refinements to lane configurations on Street “A” north of Street “B” and on Street “B” west of Street “A” may be warranted and should be determined through further circulation analysis.





NOT TO SCALE

LEGEND:

xx(xx) - AM(PM)  
Peak-Hour Volumes\*\*

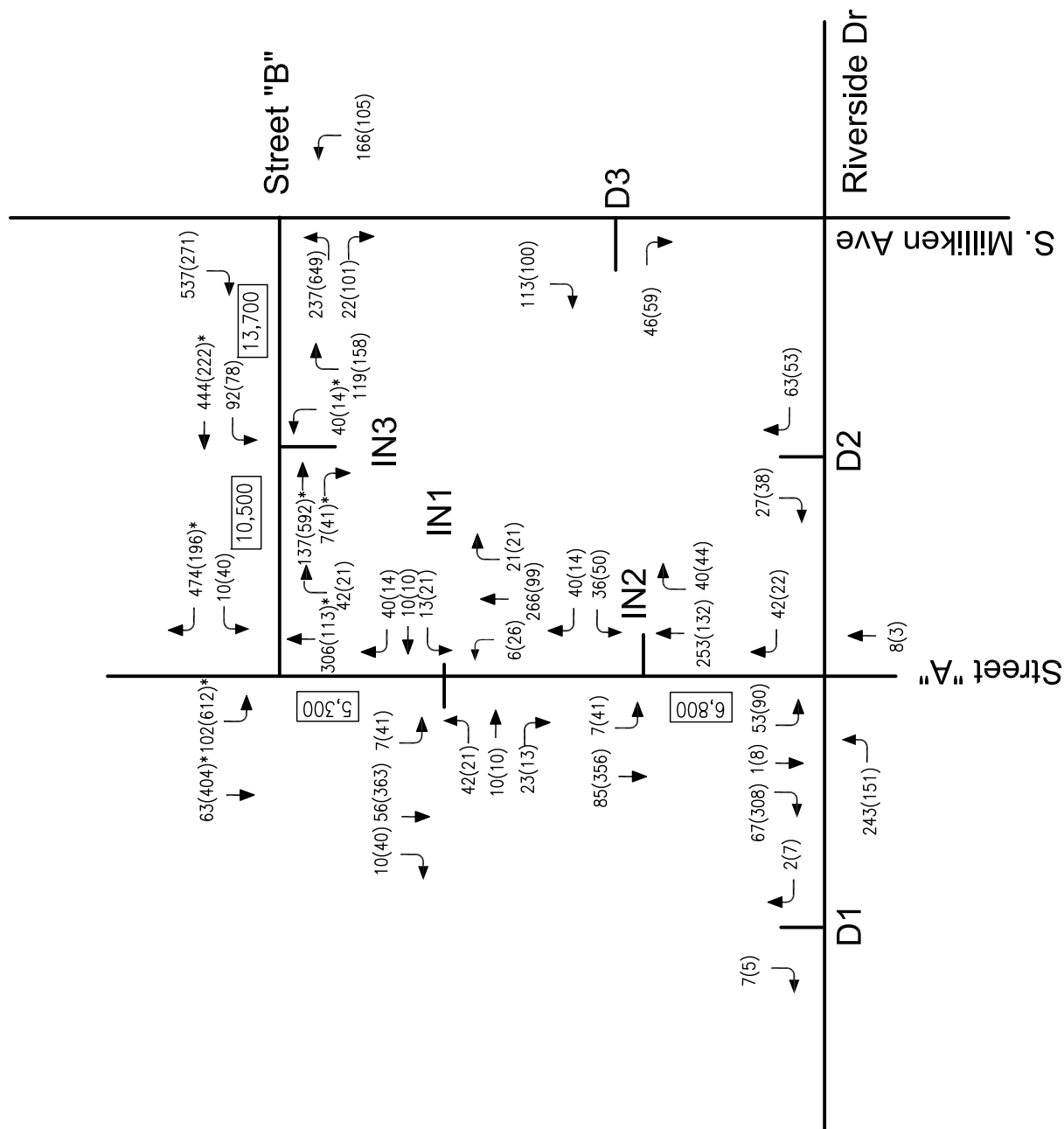
8,500  
- Average Daily  
Traffic (ADT)\*

\*\*Highest volume on street;  
volumes include  
"Pass-by" trips

D2 - Driveway 2

IN1 - Internal Driveway 1

xx(xx)\* - Maximum assignment  
(Riboli and Galleano  
parcel driveways  
assumed to be on  
Street "A")



## **6.**

# **FINDINGS AND RECOMMENDATIONS**

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This chapter summarizes the findings of the traffic analysis and evaluation of the on-site circulation and access for the Tuscana Village Specific Plan.

The Tuscana Village Specific Plan will be developed in two phases – Phase I is anticipated to be complete in 2012 and would include the residential development proposed by Pelican Homes (with 200 apartments) and 27,776 of mixed-commercial development on the Katelaris property (with 2,000 square feet of office, 9,000 square feet of general retail, 11,026 square feet of restaurant, 2,250 square feet of fast food restaurant land uses as well as a 12-fueling pump car-wash/gas station with convenience store of 3,500 square feet ), and 5,000 square feet of interim nursery sales area. The balance of the Katelaris parcel would have interim land uses such as a growing area, petting zoo, seasonal sales and multi-function courtyard which would operate during off-peak or weekend hours.

Specific Plan buildout proposes including a total of 200 apartments on the Pelican Homes parcel; mixed-commercial development on the Katelaris property (with 69,000 square feet of office land uses and 43,776 square feet of general retail (including 27,000 square feet of retail, 11,026 square feet of restaurant, 5,750 square feet of fast food restaurants) and a 12-fueling pump car-wash/gas station with convenience store of 3,500 square feet ); 540,607 square feet of mixed-commercial development (450,506 square feet of business park/office land uses and 90,101 square feet of general retail land uses) on the Galleano parcel; and 290,948 square feet of mixed commercial land uses (242,821 square feet of business park/office land uses and 48,127 square feet of general retail land uses) on the Riboli parcel. Specific Plan Project buildout has an unspecified completion date and further detailed site planning would be conducted with this subsequent phase of development.

Milliken (Hamner) Avenue would be constructed to its ultimate half-street Circulation Element configuration along the Katelaris property and Riverside Drive would be constructed to its ultimate half-street configuration along the Katelaris and Pelican Homes developments as part of Phase I development.

Milliken (Hamner) Avenue would be constructed to its ultimate half-street Circulation Element configuration along the Riboli and Galleano frontage when those parcels develop (following Phase I opening year). The Project will take access from both Milliken (Hamner) Avenue and Riverside Drive.

Two new private streets, named Street “A” and Street “B”, will be constructed to serve the Project site. Street “A” will have a north-south alignment and will intersect Riverside Drive approximately 600 feet west of Milliken (Hamner) Avenue and would be constructed with Phase I of development. In Phase I of development, the Katelaris commercial development will have one right-in, right-out driveway on Milliken (Hamner) Avenue and one right-in, right-out driveway on Riverside Drive, and one fully-directional driveways on Street “A”. The Pelican Homes residential development proposes a right-turn in, right-turn out driveway on Riverside Drive and a fully directional driveway on Street “A”. The intersection of Riverside Drive – Street “A” will be signalized with Phase I of development.

Street “B” would be constructed with Specific Plan development beyond Phase I. Street “B” will have an east-west alignment and will intersect Milliken (Hamner) Avenue approximately 800 feet north of Riverside Drive. The intersection of Milliken (Hamner) Avenue – Street “B” will be signalized as part of the Project. The Katelaris property will have one additional driveway on Street “A” at buildout, and will have one fully directional driveway on Street “B”. Driveways to the Riboli and Galleano parcels will be determined through more detailed planning following completion of Phase I of development.

Ten (10) existing intersections and two (2) new intersections, depending the Project phase, were studied in this analysis to ensure that acceptable traffic operations in the Project vicinity would be maintained with its implementation.

## **FINDINGS**

### **Opening Year (2012) Traffic Conditions**

All study intersections operate acceptably based on City of Ontario minimum standards (LOS D) under the Existing-Plus-Ambient With-Project as well as Cumulative With-Project traffic conditions assuming existing intersection lane geometrics and traffic control and those specifically proposed by the Project in Opening Year (2012). Phase I of development will not adversely affect traffic operations in the area, and no additional off-site improvements are recommended.

A queuing analysis along Milliken (Hamner) Avenue between Riverside Drive and SR-60 indicates that there is adequate distance between the existing and proposed traffic signals to accommodate background and Phase I traffic flows efficiently in Opening Year (2012).

A queuing analysis along Riverside Drive between Milliken (Hamner) Avenue and Street “A” indicates that there is adequate distance between the existing and proposed traffic signals to accommodate background and Phase I traffic flows efficiently in Opening Year (2012).

In Phase I, Street “A” should be developed to its ultimate 40-foot pavement section and driveways should be located as detailed on the Pelican Homes and Katelaris interim site plans.

### **Project Buildout Traffic Conditions**

Project buildout conditions have been evaluated in the context of the City of Ontario General Plan Update. All study intersections are projected to operate acceptably based on City of Ontario minimum standards (LOS D) under the General Plan Buildout conditions assuming the recommended lane configurations in the General Plan Update Transportation Technical Report. The Project at buildout can be accommodated within the planned General Plan roadway system with no adverse impacts on traffic flows and circulation.

A queuing analysis along Milliken (Hamner) Avenue between Riverside Drive and SR-60 shows that there is some potential for back-ups between existing and proposed traffic signals. When the Milliken (Hamner) Avenue and the SR-60 interchange are fully improved to their recommended General Plan Update configurations, which require major reconstruction of the interchange, further review of lane allocations and traffic signal operations at each intersection should be conducted to ensure efficient traffic flows.

A queuing analysis along Riverside Drive between Milliken (Hamner) Avenue and Street “A” shows that there is adequate distance between the existing and proposed traffic signals to accommodate General Plan With-Project traffic flows efficiently.

A detailed analysis of Project buildout access and on-site circulation cannot be conducted until further site planning for the Riboli and Galleano parcels north of Street “B” occurs. Further traffic analysis would need to be conducted to evaluate specific access and circulation once these site plans are developed.

Nevertheless, to ensure the proper sizing of Streets “A” and “B”, an evaluation of Project buildout traffic flows was conducted under the following alternatives: 1) Assuming that Hartford Street (or another driveway north of Street “B”) would provide right-turn restricted access to/from Milliken (Hamner) Avenue to the Riboli and Galleano parcels; and 2) Assuming that no public street or driveway access is provided along Milliken (Hamner) Avenue between SR-60 eastbound ramps and Street “B” (in other words, all access to/from the north along Milliken (Hamner) Avenue to the Riboli and Galleano parcels would occur via Street “B” under Project buildout conditions.)

The analysis of Project buildout traffic volumes indicates that Street “A” built to its ultimate configuration as proposed for Phase I can accommodate Project buildout as well.

Under Project buildout, Street “B” would need to be constructed to provide five travel lanes between Street “A” and Milliken (Hamner) Avenue. At its approach to Milliken (Hamner) Avenue, three eastbound and two westbound should be provided regardless of whether Hartford Street (or another driveway) provides right-turn-only restricted access between SR-60 and Street “B”.

The centerline alignment of Street “B” will be determined following discussions with the City of Eastvale to ensure that the driveway on the east side of the street in Riverside County can also utilize the proposed traffic signal at Milliken (Hamner) Avenue – Street “B” with Specific Plan buildout, thus accommodating access to the currently undeveloped parcel north of the existing industrial development. The traffic signal on Milliken (Hamner) Avenue at Street “B” should be designed with protected left-turn phasing in the east-west direction as well as in the north-south direction.

Once further site planning for Riboli and Galleano parcels is performed, refinements to lane configurations on Street “A” north of Street “B” and on Street “B” west of Street “A” may be warranted and should be determined through further circulation analysis.

**VOLUME 2**  
**TECHNICAL APPENDICES**

**Traffic Impact Analysis for Tuscana Village Specific  
Plan,  
Ontario CA**

**October 2011**

# **Appendix A**

## **CONCEPT SITE PLAN FOR KATELARIS PROPERTY REDEVELOPMENT AT BUILDOUT**

NET LAND AREA:  
(EXCLUDES STREET 'A' & 'B' PARCELS)

9.49 AC (413,359 SF±)

USE TABULATIONS:  
(NOT INCLUDING PAD C - GAS STATION/ C-STORE)

(NOT INCLUDING PAD C- GAS STATION/ C-STORE)

RETAIL :	27,000 SF
RESTAURANT (INCL. EVENT & BREWERY):	11,026 SF
RESTAURANT (DRIVE-THRU):	5,750 SF
OFFICE:	69,000 SF
TOTAL:	112,776 SF

RETAIL (1/250):	108 STALLS
RESTAURANT (1/100):	110 STALLS
RESTAURANT (DRIVE-THRU) (1/75):	77 STALLS
OFFICE (1/250):	276 STALLS
TOTAL PARKING REQUIRED:	571 STALLS

## (PAD C- GAS STATION/ C-STORE)

RETAIL (CONVENIENCE STORE):	3,500 SF
CAR WASH TUNNEL:	900 SF
FUELING CANOPY (12 FUELING POINTS):	3,500 SF
TOTAL:	7,900 SF

RETAIL (1/250):

SEPARATE, LETTERED LOTS WILL BE ESTABLISHED FOR THE FULL-IMPROVEMENT RIGHT OF WAY FOR STREET "A" & STREET "B".

THIS SITE PLAN IS A CONCEPT ONLY AND IS INTENDED TO SHOW POSSIBLE USES FOR THE AREAS INDICATED. OTHER USES MAY INCLUDE RETAIL/ RESTAURANT/ RESIDENTIAL AND/OR MIXED USE DEVELOPMENT. ALTERNATE COMBINATIONS OF USES WILL NOT INCREASE THE TRAFFIC "TRIP CAP" AS SPECIFIED IN THE TRAFFIC IMPACT ANALYSIS.

NOTE: THIS SITE PLAN SHOWS LANDLORDS' PLAN FOR THE CONFIGURATION OF THE SHOPPING CENTER AND, AS OF THE DATE OF THE SITE PLAN, ONLY ITS ONLY A PLAN, AND IT SHALL NOT BE DEEMED TO BE A GUARANTEE OF THE ACCURACY OF THE INFORMATION HEREON. LANDLORDS ARE NOT TO BE RESPONSIBLE FOR THE CONFIGURATION OF THE SHOPPING CENTER, AND LANDLORDS ARE NOT TO BE RESPONSIBLE FOR THE CONFIGURATION OF THE SHOPPING CENTER, AND LANDLORDS ARE NOT TO BE RESPONSIBLE FOR THE CONFIGURATION OF THE SHOPPING CENTER.

# SITE PLAN SCHEME P1

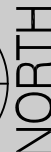
NWC MILLIKEN & RIVERSIDE  
ONTARIO, CA



**Pierce/Cooley Architects, Inc.**  
17280 Red Hill Avenue  
Irvine, CA 92614  
V 949.399.0878  
F 949.399.0889  
[www.piercecooley.com](http://www.piercecooley.com)

17341 SANTIAGO CANYON RD  
SILVERADO, CA 92676  
PHONE

ONTARIO, CALIFORNIA



SCALE: 1" = 40'

## APPENDIX A - CONCEPT SITE PLAN FOR BUILDOUT



# **Appendix B**

**SCOPE OF WORK AND ASSUMPTIONS FOR:  
TRAFFIC IMPACT ANALYSIS FOR THE  
TUSCANA VILLAGE SPECIFIC PLAN,  
As approved by the City of Ontario on August 7, 2009.**

## **SCOPE OF WORK AND ASSUMPTIONS FOR: TRAFFIC IMPACT ANALYSIS for the TUSCANA VILLAGE SPECIFIC PLAN**

**The following documents the requirements and methodology of the Traffic Impact Analysis (TIA) to be prepared for the Tuscana Village Specific Plan (Project), as approved by the City of Ontario, in conjunction with discussions with the County of Riverside:**

The Tuscana Village Specific Plan (hereinafter referred to as “Project”) will be developed in two phases – the residential and commercial portions in the northwest quadrant of the intersection of Milliken Avenue – Riverside Drive will be the first phase of development; while the ultimate (buildout) will include the development of the Galleano and Riboli parcels in the southwest quadrant of SR-60 – Milliken Avenue.

The TIA will analyze two phases of development:

- Project Opening Year (to be provided by developer), which would include Phase I development;
- Buildout Year, which would correspond to City of Ontario General Plan buildout.

The following tasks will be completed by MPI:

### **Task 1 - Site Reconnaissance**

The physical characteristics of the site's surrounding roadway network will be surveyed to verify existing roadway cross sections, intersection configurations, access constraints and opportunities, and traffic signal operation.

### **Task 2 - Data Collection**

The information summarized below will be collected by Mountain Pacific, Inc. (MPI):

- I. The Tuscana Village Specific Plan (also referred to as “Project”) proposed development square footage by land use will be obtained from the Project developer by Project phase.
- II. The Opening Year for Phase I (residential and commercial parcel) projected Opening Year (when the residential and commercial parcels south of Street “B” will be complete) will be obtained from Project developer. The year of ultimate development of the Galleano and Riboli parcels will be assumed to correspond with the City of Ontario General Plan Buildout year of analysis.

III. The following will be obtained for information/reference/use in the analysis:

- Transportation information from Edenglen and Richhaven Specific Plans;
- Traffic impact documentation from the General Plan Update from the City of Ontario website as of Notice to Proceed date;
- Buildout forecast traffic volumes at the I-15 – Cantu/Galleano interchange and Hamner – Cantu intersection will be obtained from the County of Riverside;
- A list of development projects (“related” projects) that need to be considered in Phase I Opening Year will be obtained from the City of Ontario and County of Riverside;
- The use of an ambient traffic growth rate of 2 percent per year will be used through Phase I Opening Year will be confirmed with the City of Ontario.

IV. Weekday morning (7:00 A.M. to 9:00 A.M.) and evening (4:00 P.M. to 6:00 P.M.) peak period intersection turning movement counts by classification will be collected at the following existing study intersections, identified through discussions with the City of Ontario and County of Riverside:

- Milliken (Hamner) – Riverside;
- Milliken – SR-60 eastbound ramps;
- Milliken – SR-60 westbound ramps;
- Riverside – Mill Creek;
- Riverside – Sharp;
- Hamner – Cantu;
- Cantu/Galleano – I-15 southbound ramps;
- Cantu/Galleano – I-15 northbound ramps;
- Driveway to industrial property on east side of Milliken (Hamner)

In addition, the following intersections will be analyzed under with the Project conditions:

- Milliken – Street “B” (future);
- Riverside – Street “A” (future);
- Milliken – Hartford (Street “C”)

The traffic count collection will be conducted by Counts Unlimited, Inc., a subconsultant to MPI, as part of this scope of work.

- V. Based on most recent discussions between the Project developer's Specific Plan consultant (Applied Planning) and City of Ontario planning staff, the currently proposed general plan land uses for the Traffic Analysis Zone is approximately 1,300,000 square feet of retail and office land uses. The citywide model has loaded this network with a centroid connector to Riverside Drive only. To determine the trip distribution for this zone under No-Project (GP buildout) and With-Project (Tuscana Village Specific Plan) conditions assuming a connector on Milliken Avenue, as currently proposed, a select zone run will need to be conducted by the City of Ontario's modeling consultant (Kimley-Horn) with an additional centroid connector to Milliken Avenue. MPI will coordinate between Pelican Homes and Kimley-Horn, the city's modeling consultant, to obtain the necessary forecast data for the effort.

Based on discussion with the planning staff, the following are some tasks that would be required from Kimley-Horn under a separate contract between Pelican Homes and Kimley-Horn:

- Select zone run (AM, PM and Daily) with the new access to Milliken Avenue;

### **Task 3 - Existing Traffic Conditions**

Based upon traffic counts collected in Task 2, level-of-service (LOS) analyses will be performed at nine (9) study intersections for the weekday morning and evening peak hours utilizing the Highway Capacity Manual (HCM) methodology.

### **Task 4 – Project Traffic Generation**

The volume of vehicular traffic approaching and departing the proposed Project on a typical weekday during the morning and evening peak hours and on a 24-hour basis will be estimated using the Institute of Transportation Engineers' (ITE) *Trip Generation*, 8<sup>th</sup> Edition for the first phase of development and for buildout.

### **Task 5 - Project Traffic Distribution and Assignment**

The directions of approach to and departure from the Project site will be based upon the select zone runs to be performed by Kimley-Horn under separate agreement with Pelican Homes. The local trip distribution for the Project will be modified to reflect proposed access (availability of Streets "A" and "B") and Project driveways for the Phase I Opening and Buildout Years.

The estimated traffic volumes generated by the Project on a weekday during the morning and evening peak hours will be assigned to the access points and the roadway network serving the site based on the approved trip distribution for Phase I Opening and Buildout Years.

**Task 6 – Cumulative Background No-Project Traffic Conditions – Phase I Opening Year**

Future Cumulative Background (No Project) traffic volumes for the Project area will be determined by first applying a growth factor to existing traffic volumes to account for regional traffic growth in the area and, second, adding traffic generated by “related” projects identified by the City of Ontario and County of Riverside which are proposed to be completed by Phase I Opening Year.

Information relating to traffic generation and trip distribution for these “related” projects will be obtained from the City of Ontario and Riverside County. Based upon this trip generation and trip distribution data, trips from “related” projects will be assigned to the study intersections for Phase I Opening Year.

Level-of-service (LOS) analyses for Phase I Opening Year will be performed at up the study intersections identified above for the weekday morning and evening peak hours utilizing the Highway Capacity Manual (HCM) methodology for the Cumulative No-Project conditions.

**Task 7 – Cumulative Background With-Project Traffic Conditions – Phase I Opening Year**

Phase I Project traffic volumes will be added to Cumulative Background traffic volumes to determine Cumulative Background-Plus-Project traffic conditions. Level-of-service (LOS) analyses will be performed at the study intersections for the weekday morning and evening peak hours utilizing the Highway Capacity Manual (HCM) methodology for the Cumulative With-Project Phase I Opening Year traffic conditions. The HCM operations module will also be used to determine storage requirements for left- and right-turn lanes at intersections adjacent to the site under Opening Year With-Project traffic conditions based on design queues during the morning and evening peak periods.

**Task 8 – General Plan Buildout Traffic Forecasts for No-Project and With-Project Conditions**

Intersection turning movement forecasts will be obtained directly from the City’s Traffic Impact Analysis (TIA) report for the General Plan Update at the following locations (no new modeling will be performed, since the GP High Intensity Scenario in the GP Update TIA report has approximately 1,300,000 s.f. of office and retail land use in TAZ 191):

- Milliken (Hamner) – Riverside (these will be modified, manually, to reflect the new connection to Milliken Avenue);
- Milliken – SR-60 eastbound ramps;
- Milliken – SR-60 westbound ramps; and
- Riverside – Haven (though not a study intersection, this data is needed for interpolation, as described below).

Riverside County has agreed to provide the Buildout No-Project traffic volumes at the following intersections which are not included in the GP Update:

- Cantu/Galleano – I-15 southbound ramps;
- Cantu/Galleano – I-15 northbound ramps; and
- Hamner - Cantu.

No current General Plan forecast projections are available at the following study intersections:

- Riverside – Mill Creek;
- Riverside – Sharp;
- Driveway to industrial property on east side of Milliken (Hamner); and
- The new intersection on Riverside Drive.

Assuming the newly proposed land uses are 1,300,000 s.f. office and commercial/retail, the proposed Project will generate significantly fewer trips than the No Project conditions. Therefore, the future year General Plan No-Project traffic volume forecasts at those locations which are not in the GP Update will be obtained by looking at approach volumes at adjacent intersections where GP traffic volume forecasts are available, and interpolating based on the traffic growth at those intersections.

The With-Project conditions at study intersections away from the site will then be determined by negative assignment of the difference in trips between the No-Project- and Project-proposed land uses in the site TAZ. The With-Project traffic conditions at study intersections serving the site and at the other Project driveways will be determined by site-specific assignments.

Based on discussions with the city, two different scenarios for the buildout With-Project conditions be provided: One with access at Hartford Street (Street “C” in our on-site circulation analysis); and one without access at Hartford Street.

**Task 9 – Buildout No-Project and With-Project Traffic Conditions (Level-of-Service (LOS) Analysis)**

Level-of-service (LOS) analyses will be performed at the study intersections for the weekday morning and evening peak hours utilizing the Highway Capacity Manual (HCM) methodology for the General Plan No-Project and General Plan With-Project Buildout traffic conditions. The HCM operations module will also be used to determine storage requirements for left- and right-turn lanes as intersections adjacent to the site under Buildout With-Project traffic conditions based on design queues during the morning and evening peak periods.

**Task 10 – On-Site Circulation and Access Assessment**

Access and on-site circulation will be reviewed and additional modifications to access and on-site circulation for Phase I of the Project will be recommended, if appropriate.

**Task 11 - Recommended Mitigation Measures**

Based upon the results of Task 6 through 10, physical and/or operational off-site improvements required to mitigate any potentially adverse impacts due to Project traffic will be identified. Mitigation measures may include: traffic signal modifications, restriping to provide additional turn or through lanes, roadway widening to provide additional turn or through lanes, turn restrictions, on-street parking restrictions, access modifications, etc. Based upon field reviews, the feasibility of implementing each improvement will be noted, including comments on the need to remove parking, acquire right-of-way, and/or physically impact existing facilities. Phasing of improvements based on the Project developer's phasing of land uses within the Project will be provided.

**Task 12 - Traffic Impact Analysis Report**

The results of the aforementioned traffic analysis will be documented in a traffic impact study report prepared in accordance with the format outlined in the Riverside County *Traffic Impact Guidelines* and practice within the City of Ontario.

# **Appendix C**

## **COUNTS**



City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIAM  
Site Code : 9222066  
Start Date : 8/18/2009  
Page No : 1

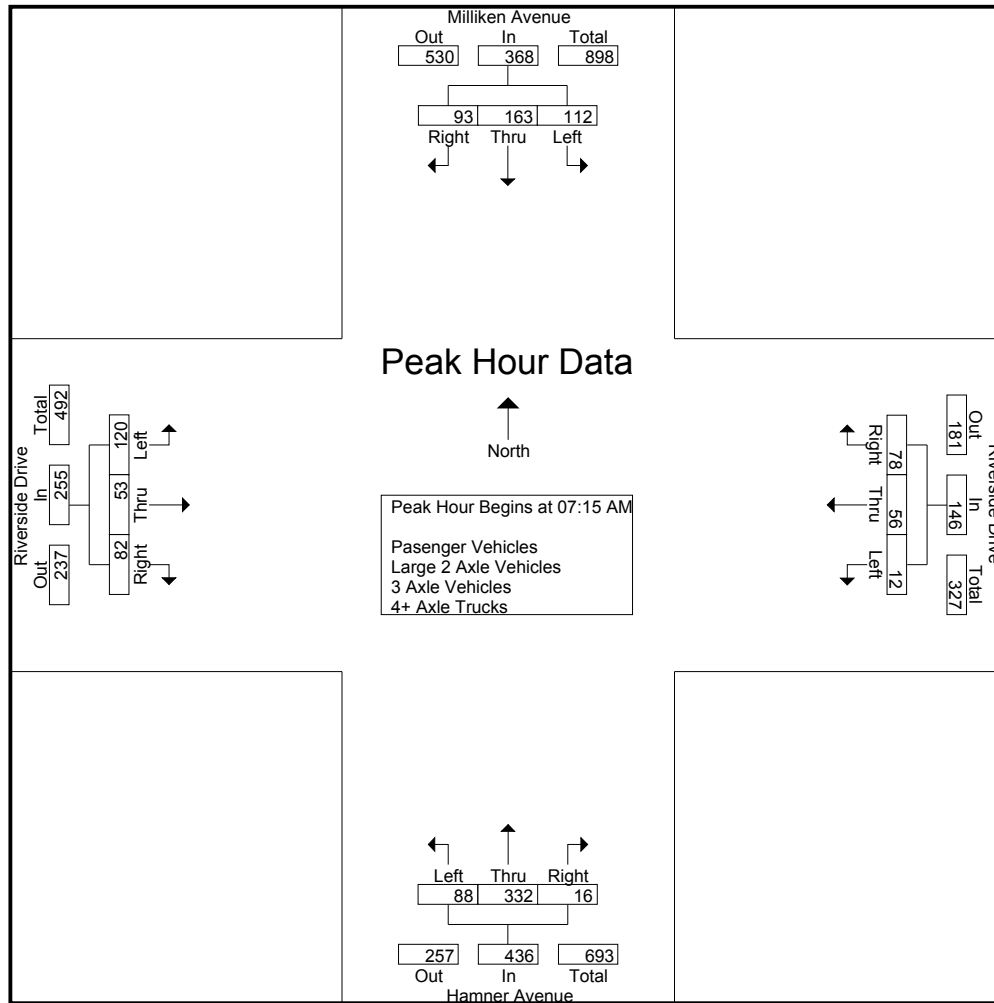
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	26	22	28	76	4	14	20	38	23	56	1	80	17	8	7	32	226
07:15 AM	28	36	71	135	2	19	20	41	30	69	2	101	39	10	21	70	347
07:30 AM	34	35	11	80	3	15	24	42	16	83	4	103	36	25	21	82	307
07:45 AM	28	53	6	87	4	10	17	31	23	95	8	126	33	14	23	70	314
Total	116	146	116	378	13	58	81	152	92	303	15	410	125	57	72	254	1194
08:00 AM	22	39	5	66	3	12	17	32	19	85	2	106	12	4	17	33	237
08:15 AM	12	39	10	61	3	10	18	31	15	77	4	96	12	17	18	47	235
08:30 AM	17	42	8	67	2	7	11	20	20	65	2	87	6	15	21	42	216
08:45 AM	21	39	9	69	4	8	15	27	17	58	3	78	6	11	10	27	201
Total	72	159	32	263	12	37	61	110	71	285	11	367	36	47	66	149	889
Grand Total	188	305	148	641	25	95	142	262	163	588	26	777	161	104	138	403	2083
Apprch %	29.3	47.6	23.1		9.5	36.3	54.2		21	75.7	3.3		40	25.8	34.2		
Total %	9	14.6	7.1	30.8	1.2	4.6	6.8	12.6	7.8	28.2	1.2	37.3	7.7	5	6.6	19.3	
Passenger Vehicles	120	256	140	516	19	79	67	165	155	558	24	737	153	94	130	377	1795
% Passenger Vehicles	63.8	83.9	94.6	80.5	76	83.2	47.2	63	95.1	94.9	92.3	94.9	95	90.4	94.2	93.5	86.2
Large 2 Axle Vehicles	8	16	7	31	3	3	9	15	5	14	0	19	4	0	3	7	72
% Large 2 Axle Vehicles	4.3	5.2	4.7	4.8	12	3.2	6.3	5.7	3.1	2.4	0	2.4	2.5	0	2.2	1.7	3.5
3 Axle Vehicles	5	7	1	13	0	1	4	5	1	4	0	5	0	0	4	4	27
% 3 Axle Vehicles	2.7	2.3	0.7	2	0	1.1	2.8	1.9	0.6	0.7	0	0.6	0	0	2.9	1	1.3
4+ Axle Trucks	55	26	0	81	3	12	62	77	2	12	2	16	4	10	1	15	189
% 4+ Axle Trucks	29.3	8.5	0	12.6	12	12.6	43.7	29.4	1.2	2	7.7	2.1	2.5	9.6	0.7	3.7	9.1

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	28	36	<b>71</b>	<b>135</b>	2	<b>19</b>	20	41	<b>30</b>	69	2	101	<b>39</b>	10	21	70	<b>347</b>
07:30 AM	<b>34</b>	35	11	80	3	15	<b>24</b>	<b>42</b>	16	83	4	103	36	<b>25</b>	21	<b>82</b>	307
07:45 AM	28	<b>53</b>	6	87	<b>4</b>	10	17	31	23	<b>95</b>	<b>8</b>	<b>126</b>	33	14	<b>23</b>	70	314
08:00 AM	22	39	5	66	3	12	17	32	19	85	2	106	12	4	17	33	237
Total Volume	112	163	93	368	12	56	78	146	88	332	16	436	120	53	82	255	1205
% App. Total	30.4	44.3	25.3		8.2	38.4	53.4		20.2	76.1	3.7		47.1	20.8	32.2		
PHF	.824	.769	.327	.681	.750	.737	.813	.869	.733	.874	.500	.865	.769	.530	.891	.777	.868

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIAM  
Site Code : 9222066  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	07:00 AM				07:15 AM				07:30 AM				07:45 AM			
+0 mins.	26	22	28	76	4	14	20	38	30	69	2	101	39	10	21	70
+15 mins.	28	36	71	135	2	19	20	41	16	83	4	103	36	25	21	82
+30 mins.	34	35	11	80	3	15	24	42	23	95	8	126	33	14	23	70
+45 mins.	28	53	6	87	4	10	17	31	19	85	2	106	12	4	17	33
Total Volume	116	146	116	378	13	58	81	152	88	332	16	436	120	53	82	255
% App. Total	30.7	38.6	30.7		8.6	38.2	53.3		20.2	76.1	3.7		47.1	20.8	32.2	
PHF	.853	.689	.408	.700	.813	.763	.844	.905	.733	.874	.500	.865	.769	.530	.891	.777

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIAM  
Site Code : 9222066  
Start Date : 8/18/2009  
Page No : 1

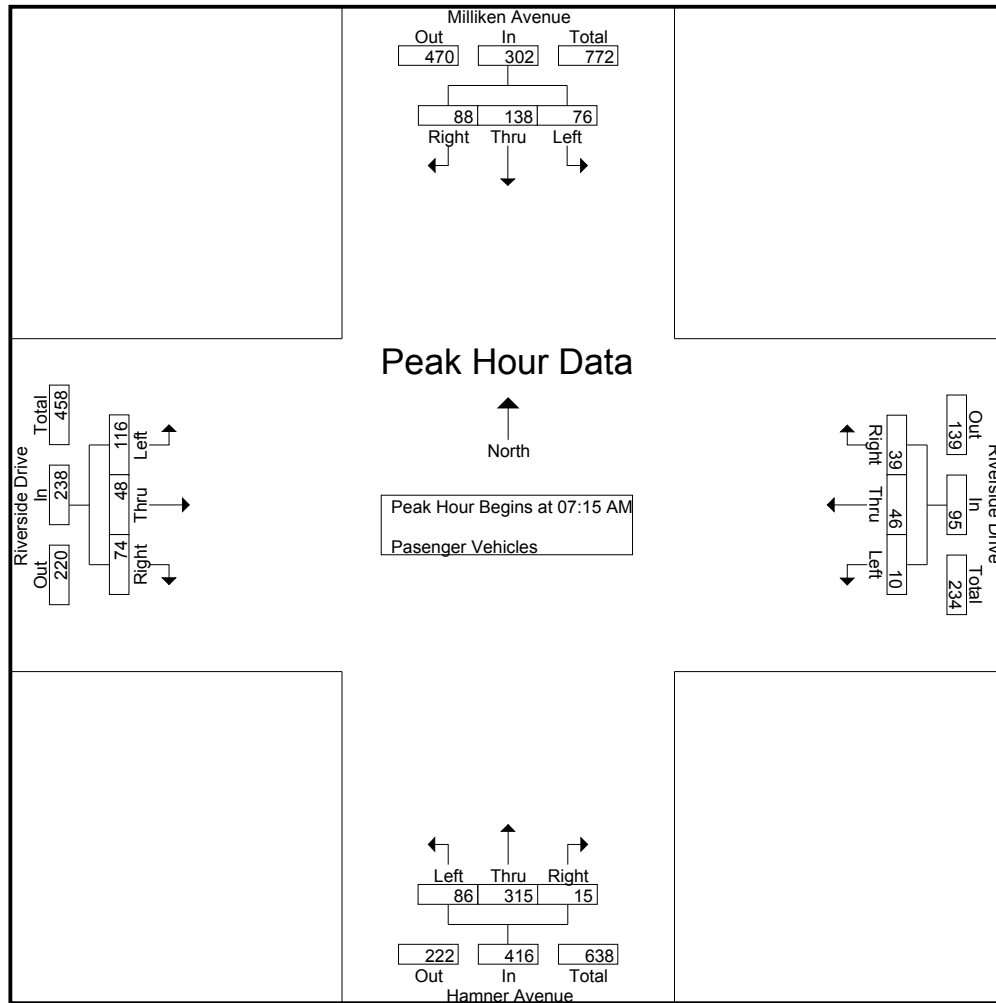
Groups Printed- Passenger Vehicles

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	16	17	28	61	4	12	13	29	20	55	0	75	16	8	7	31	196
07:15 AM	15	27	69	111	1	16	15	32	30	69	2	101	39	10	20	69	313
07:30 AM	22	30	10	62	3	14	11	28	15	78	4	97	35	22	20	77	264
07:45 AM	27	48	5	80	4	9	8	21	22	87	7	116	31	14	21	66	283
Total	80	122	112	314	12	51	47	110	87	289	13	389	121	54	68	243	1056
08:00 AM	12	33	4	49	2	7	5	14	19	81	2	102	11	2	13	26	191
08:15 AM	3	32	9	44	2	7	9	18	15	72	4	91	12	15	18	45	198
08:30 AM	11	37	7	55	0	6	4	10	18	59	2	79	5	14	21	40	184
08:45 AM	14	32	8	54	3	8	2	13	16	57	3	76	4	9	10	23	166
Total	40	134	28	202	7	28	20	55	68	269	11	348	32	40	62	134	739
Grand Total	120	256	140	516	19	79	67	165	155	558	24	737	153	94	130	377	1795
Apprch %	23.3	49.6	27.1		11.5	47.9	40.6		21	75.7	3.3		40.6	24.9	34.5		
Total %	6.7	14.3	7.8	28.7	1.1	4.4	3.7	9.2	8.6	31.1	1.3	41.1	8.5	5.2	7.2	21	

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	15	27	<b>69</b>	<b>111</b>	1	<b>16</b>	<b>15</b>	<b>32</b>	<b>30</b>	69	2	101	<b>39</b>	10	20	69	<b>313</b>
07:30 AM	22	30	10	62	3	14	11	28	15	78	4	97	35	<b>22</b>	20	<b>77</b>	264
07:45 AM	<b>27</b>	<b>48</b>	5	80	<b>4</b>	9	8	21	22	<b>87</b>	<b>7</b>	<b>116</b>	31	14	<b>21</b>	66	283
08:00 AM	12	33	4	49	2	7	5	14	19	81	2	102	11	2	13	26	191
Total Volume	76	138	88	302	10	46	39	95	86	315	15	416	116	48	74	238	1051
% App. Total	25.2	45.7	29.1		10.5	48.4	41.1		20.7	75.7	3.6		48.7	20.2	31.1		
PHF	.704	.719	.319	.680	.625	.719	.650	.742	.717	.905	.536	.897	.744	.545	.881	.773	.839

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIAM  
Site Code : 9222066  
Start Date : 8/18/2009  
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**Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	15	27	<b>69</b>	<b>111</b>	1	<b>16</b>	<b>15</b>	<b>32</b>	<b>30</b>	69	2	101	<b>39</b>	10	20	69
+15 mins.	22	30	10	62	3	14	11	28	15	78	4	97	35	<b>22</b>	20	<b>77</b>
+30 mins.	<b>27</b>	<b>48</b>	5	80	<b>4</b>	9	8	21	22	<b>87</b>	<b>7</b>	<b>116</b>	31	14	<b>21</b>	66
+45 mins.	12	33	4	49	2	7	5	14	19	81	2	102	11	2	13	26
Total Volume	76	138	88	302	10	46	39	95	86	315	15	416	116	48	74	238
% App. Total	25.2	45.7	29.1		10.5	48.4	41.1		20.7	75.7	3.6		48.7	20.2	31.1	
PHF	.704	.719	.319	.680	.625	.719	.650	.742	.717	.905	.536	.897	.744	.545	.881	.773

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIAM  
Site Code : 9222066  
Start Date : 8/18/2009  
Page No : 1

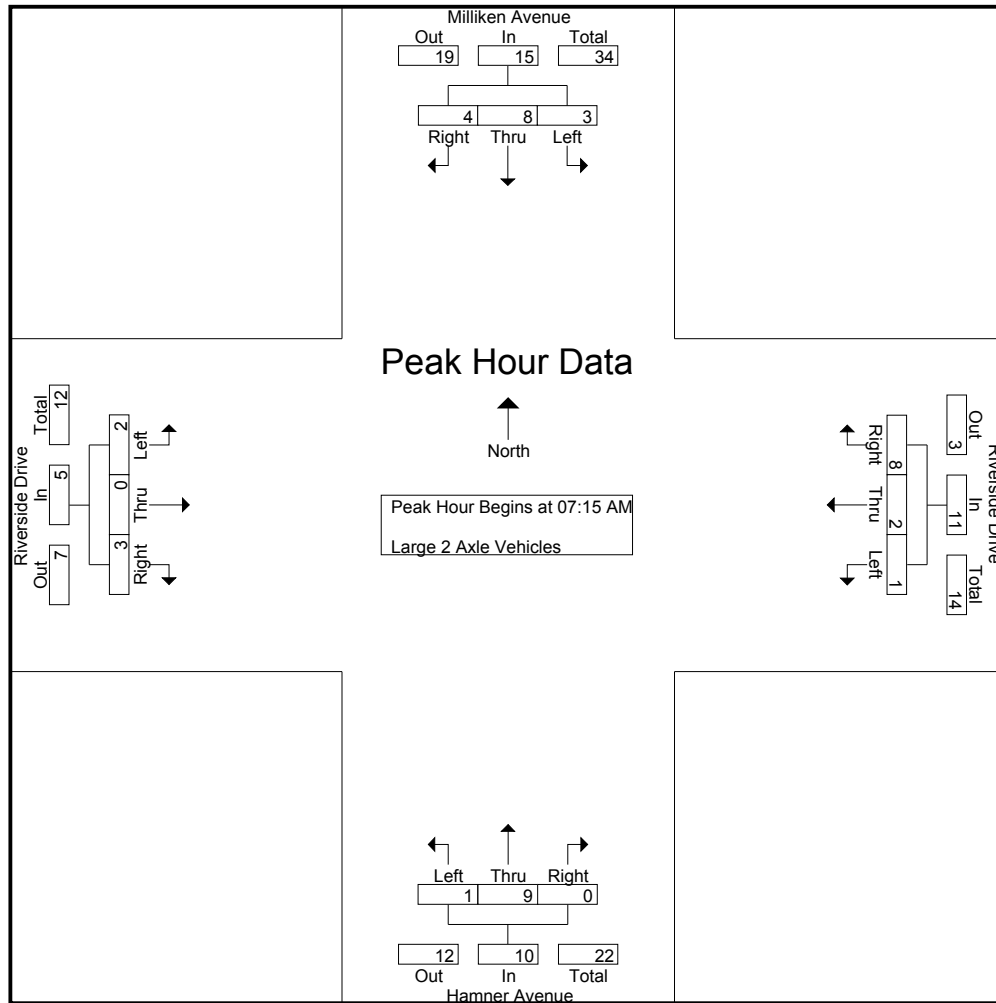
Groups Printed- Large 2 Axle Vehicles

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	2	0	4	0	0	0	0	1	1	0	2	0	0	0	0	6
07:15 AM	2	3	1	6	0	0	1	1	0	0	0	0	0	0	0	0	7
07:30 AM	1	2	1	4	0	0	2	2	1	2	0	3	1	0	1	2	11
07:45 AM	0	2	1	3	0	0	3	3	0	5	0	5	1	0	0	1	12
Total	5	9	3	17	0	0	6	6	2	8	0	10	2	0	1	3	36
08:00 AM	0	1	1	2	1	2	2	5	0	2	0	2	0	0	2	2	11
08:15 AM	2	1	1	4	1	1	1	3	0	1	0	1	0	0	0	0	8
08:30 AM	1	2	1	4	1	0	0	1	2	2	0	4	0	0	0	0	9
08:45 AM	0	3	1	4	0	0	0	0	1	1	0	2	2	0	0	2	8
Total	3	7	4	14	3	3	3	9	3	6	0	9	2	0	2	4	36
Grand Total	8	16	7	31	3	3	9	15	5	14	0	19	4	0	3	7	72
Apprch %	25.8	51.6	22.6		20	20	60		26.3	73.7	0		57.1	0	42.9		
Total %	11.1	22.2	9.7	43.1	4.2	4.2	12.5	20.8	6.9	19.4	0	26.4	5.6	0	4.2	9.7	

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	2	3	1	6	0	0	1	1	0	0	0	0	0	0	0	0	7
07:30 AM	1	2	1	4	0	0	2	2	1	2	0	3	1	0	1	2	11
07:45 AM	0	2	1	3	0	0	3	3	0	5	0	5	1	0	0	1	12
08:00 AM	0	1	1	2	1	2	2	5	0	2	0	2	0	0	2	2	11
Total Volume	3	8	4	15	1	2	8	11	1	9	0	10	2	0	3	5	41
% App. Total	20	53.3	26.7		9.1	18.2	72.7		10	90	0		40	0	60		
PHF	.375	.667	1.000	.625	.250	.250	.667	.550	.250	.450	.000	.500	.500	.000	.375	.625	.854

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIAM  
Site Code : 9222066  
Start Date : 8/18/2009  
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	2	3	1	6	0	0	1	1	0	0	0	0	0	0	0	0
+15 mins.	1	2	1	4	0	0	2	2	1	2	0	3	1	0	1	2
+30 mins.	0	2	1	3	0	0	3	3	0	5	0	5	1	0	0	1
+45 mins.	0	1	1	2	1	2	2	5	0	2	0	2	0	0	2	2
Total Volume	3	8	4	15	1	2	8	11	1	9	0	10	2	0	3	5
% App. Total	20	53.3	26.7		9.1	18.2	72.7		10	90	0		40	0	60	
PHF	.375	.667	1.000	.625	.250	.250	.667	.550	.250	.450	.000	.500	.500	.000	.375	.625

Counts Unlimited Inc.  
25286 Jaclyn Avenue  
Moreno Valley, CA 92557  
(951) 485-7934

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIAM  
Site Code : 9222066  
Start Date : 8/18/2009  
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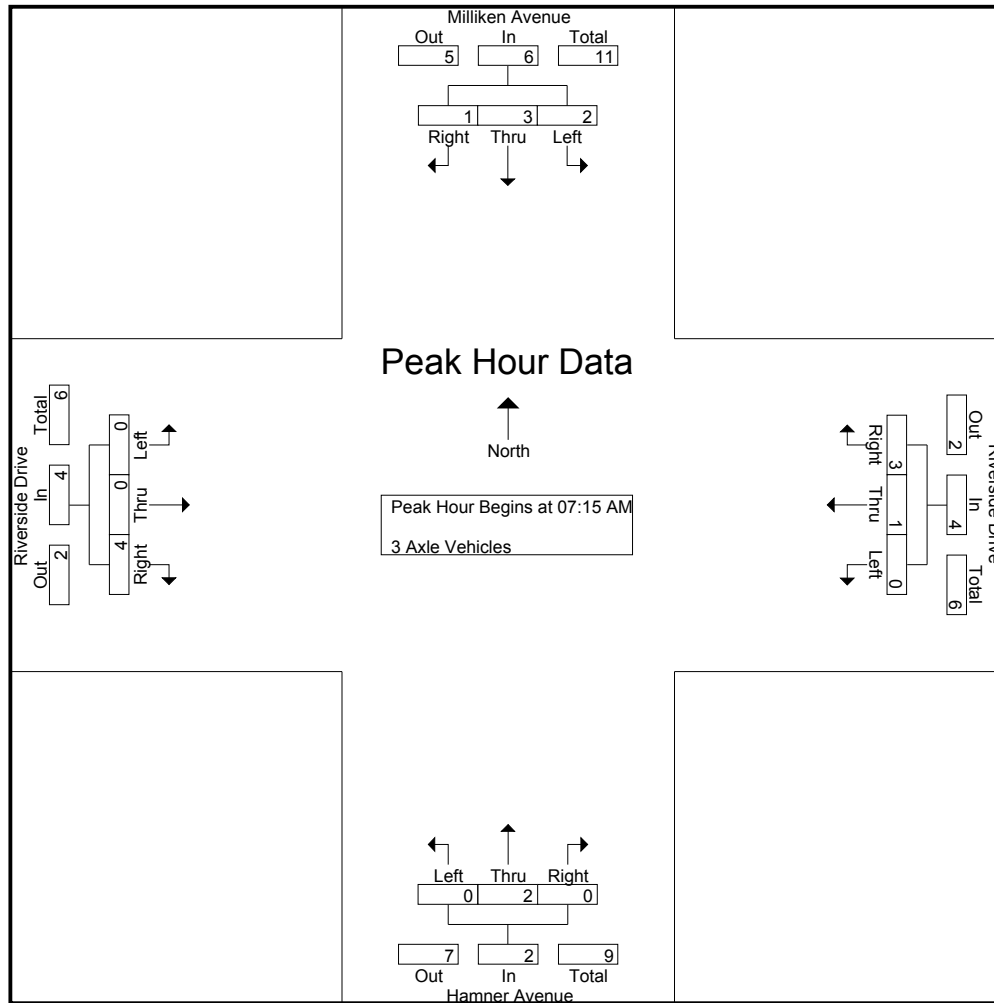
Groups Printed- 3 Axle Vehicles

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
07:15 AM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	1	1	3
07:30 AM	2	0	0	2	0	1	1	2	0	1	0	1	0	0	0	0	5
07:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2	3
Total	2	2	1	5	0	1	2	3	1	1	0	2	0	0	3	3	13
08:00 AM	0	2	0	2	0	0	1	1	0	1	0	1	0	0	1	1	5
08:15 AM	1	1	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:30 AM	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
08:45 AM	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
Total	3	5	0	8	0	0	2	2	0	3	0	3	0	0	1	1	14
Grand Total	5	7	1	13	0	1	4	5	1	4	0	5	0	0	4	4	27
Apprch %	38.5	53.8	7.7		0	20	80		20	80	0		0	0	100		
Total %	18.5	25.9	3.7	48.1	0	3.7	14.8	18.5	3.7	14.8	0	18.5	0	0	14.8	14.8	

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	1	1	3
07:30 AM	2	0	0	2	0	1	1	2	0	1	0	1	0	0	0	0	5
07:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2	3
08:00 AM	0	2	0	2	0	0	1	1	0	1	0	1	0	0	1	1	5
Total Volume	2	3	1	6	0	1	3	4	0	2	0	2	0	0	4	4	16
% App. Total	33.3	50	16.7		0	25	75		0	100	0		0	0	100		
PHF	.250	.375	.250	.750	.000	.250	.750	.500	.000	.500	.000	.500	.000	.000	.500	.500	.800

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIAM  
Site Code : 9222066  
Start Date : 8/18/2009  
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	1	1	2	0	0	0	0	0	0	0	0	0	0	1	1
+15 mins.	2	0	0	2	0	1	1	2	0	1	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	2
+45 mins.	0	2	0	2	0	0	1	1	0	1	0	1	0	0	1	1
Total Volume	2	3	1	6	0	1	3	4	0	2	0	2	0	0	4	4
% App. Total	33.3	50	16.7		0	25	75		0	100	0		0	0	100	
PHF	.250	.375	.250	.750	.000	.250	.750	.500	.000	.500	.000	.500	.000	.000	.500	.500



City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIAM  
Site Code : 9222066  
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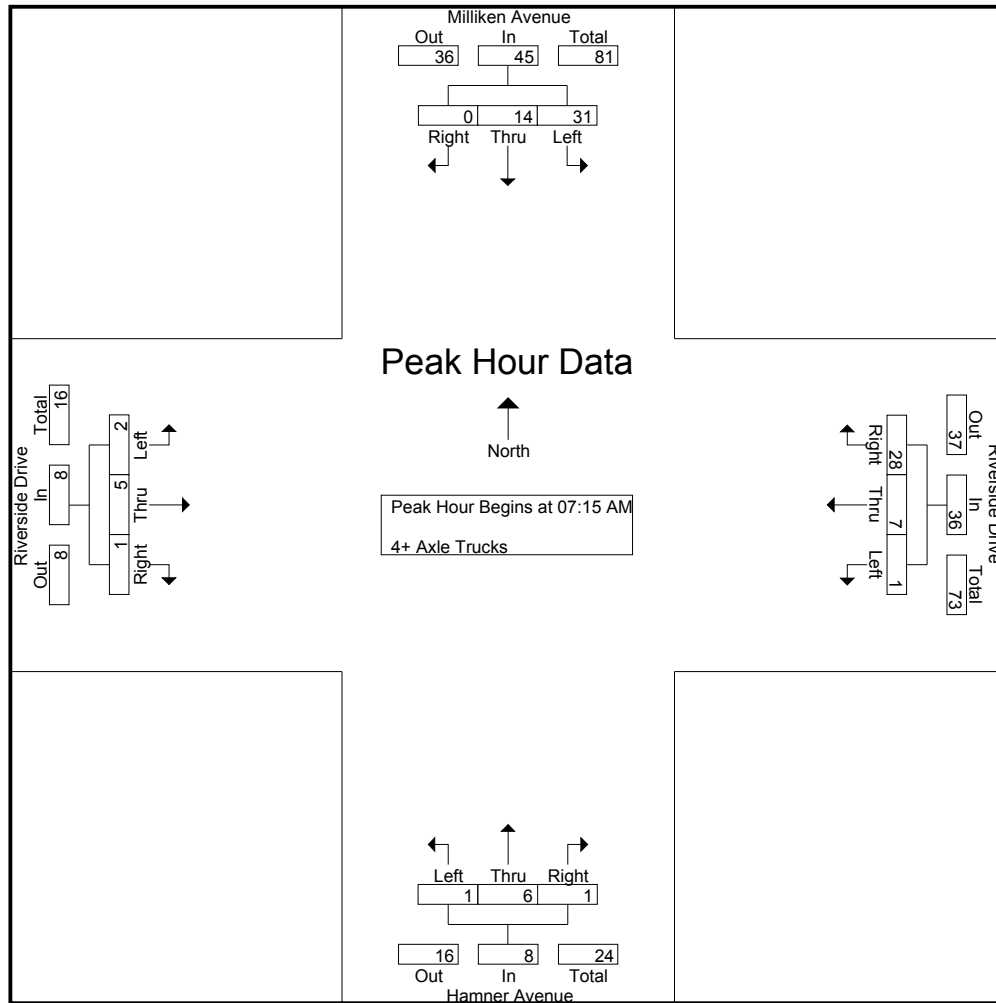
Groups Printed- 4+ Axle Trucks

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	8	2	0	10	0	2	7	9	1	0	1	2	1	0	0	1	22
07:15 AM	11	5	0	16	1	3	4	8	0	0	0	0	0	0	0	0	24
07:30 AM	9	3	0	12	0	0	10	10	0	2	0	2	0	3	0	3	27
07:45 AM	1	3	0	4	0	1	5	6	1	3	1	5	1	0	0	1	16
Total	29	13	0	42	1	6	26	33	2	5	2	9	2	3	0	5	89
08:00 AM	10	3	0	13	0	3	9	12	0	1	0	1	1	2	1	4	30
08:15 AM	6	5	0	11	0	2	8	10	0	2	0	2	0	2	0	2	25
08:30 AM	3	2	0	5	1	1	7	9	0	4	0	4	1	1	0	2	20
08:45 AM	7	3	0	10	1	0	12	13	0	0	0	0	0	2	0	2	25
Total	26	13	0	39	2	6	36	44	0	7	0	7	2	7	1	10	100
Grand Total	55	26	0	81	3	12	62	77	2	12	2	16	4	10	1	15	189
Apprch %	67.9	32.1	0		3.9	15.6	80.5		12.5	75	12.5		26.7	66.7	6.7		
Total %	29.1	13.8	0	42.9	1.6	6.3	32.8	40.7	1.1	6.3	1.1	8.5	2.1	5.3	0.5	7.9	

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	11	5	0	16	1	3	4	8	0	0	0	0	0	0	0	0	24
07:30 AM	9	3	0	12	0	0	10	10	0	2	0	2	0	3	0	3	27
07:45 AM	1	3	0	4	0	1	5	6	1	3	1	5	1	0	0	1	16
08:00 AM	10	3	0	13	0	3	9	12	0	1	0	1	1	2	1	4	30
Total Volume	31	14	0	45	1	7	28	36	1	6	1	8	2	5	1	8	97
% App. Total	68.9	31.1	0		2.8	19.4	77.8		12.5	75	12.5		25	62.5	12.5		
PHF	.705	.700	.000	.703	.250	.583	.700	.750	.250	.500	.250	.400	.500	.417	.250	.500	.808

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIAM  
Site Code : 9222066  
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	<b>11</b>	<b>5</b>	0	<b>16</b>	<b>1</b>	<b>3</b>	4	8	0	0	0	0	0	0	0	0
+15 mins.	9	3	0	12	0	0	<b>10</b>	10	0	2	0	2	0	<b>3</b>	0	3
+30 mins.	1	3	0	4	0	1	5	6	<b>1</b>	<b>3</b>	<b>1</b>	<b>5</b>	<b>1</b>	0	0	1
+45 mins.	10	3	0	13	0	3	9	<b>12</b>	0	1	0	1	1	2	<b>1</b>	<b>4</b>
Total Volume	31	14	0	45	1	7	28	36	1	6	1	8	2	5	1	8
% App. Total	68.9	31.1	0		2.8	19.4	77.8		12.5	75	12.5		25	62.5	12.5	
PHF	.705	.700	.000	.703	.250	.583	.700	.750	.250	.500	.250	.400	.500	.417	.250	.500

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIPM  
Site Code : 9222066  
Start Date : 8/18/2009  
Page No : 1

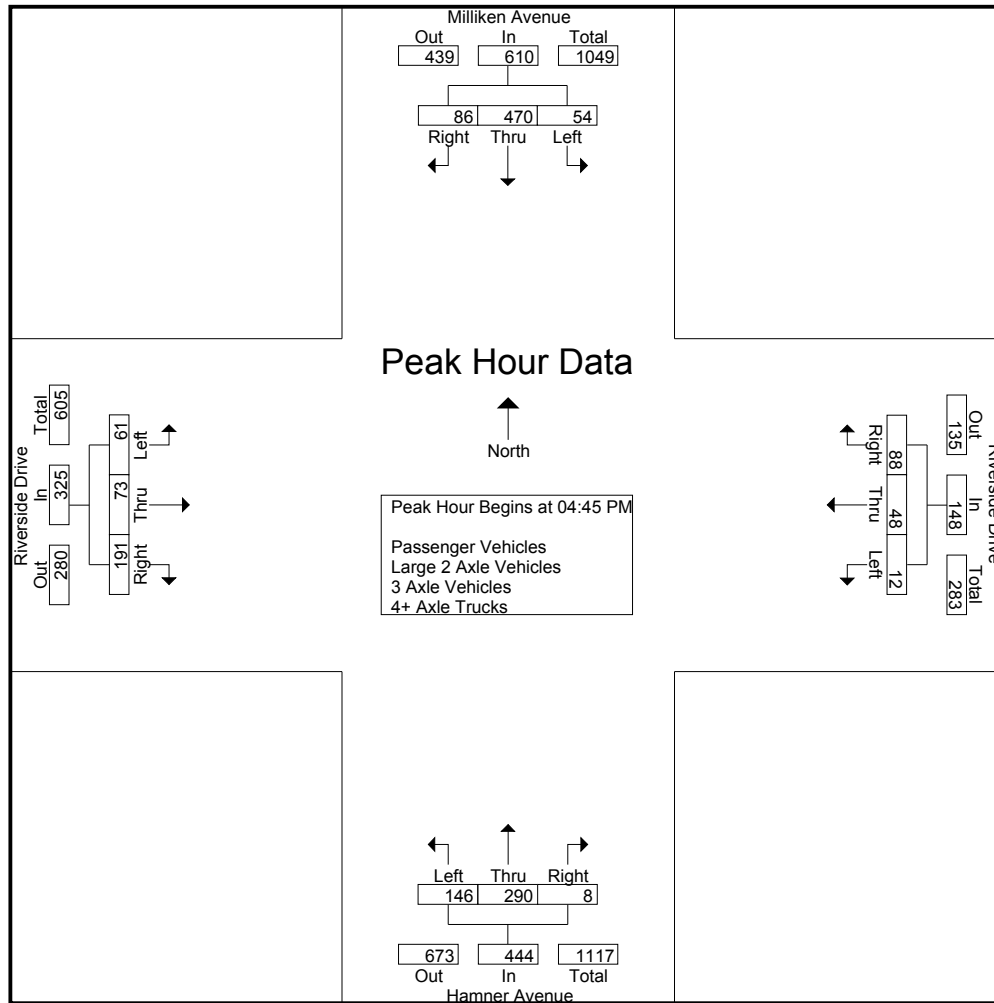
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	25	84	14	123	4	5	20	29	23	50	3	76	8	15	28	51	279
04:15 PM	11	92	15	118	3	9	20	32	26	47	2	75	18	19	28	65	290
04:30 PM	12	115	19	146	8	15	34	57	34	55	4	93	13	26	36	75	371
04:45 PM	15	106	19	140	3	14	21	38	36	62	1	99	19	21	38	78	355
Total	63	397	67	527	18	43	95	156	119	214	10	343	58	81	130	269	1295
05:00 PM	8	121	25	154	3	14	27	44	29	91	3	123	10	15	51	76	397
05:15 PM	21	111	20	152	5	10	26	41	49	54	3	106	14	20	54	88	387
05:30 PM	10	132	22	164	1	10	14	25	32	83	1	116	18	17	48	83	388
05:45 PM	16	91	22	129	2	8	19	29	28	46	2	76	14	13	50	77	311
Total	55	455	89	599	11	42	86	139	138	274	9	421	56	65	203	324	1483
Grand Total	118	852	156	1126	29	85	181	295	257	488	19	764	114	146	333	593	2778
Apprch %	10.5	75.7	13.9		9.8	28.8	61.4		33.6	63.9	2.5		19.2	24.6	56.2		
Total %	4.2	30.7	5.6	40.5	1	3.1	6.5	10.6	9.3	17.6	0.7	27.5	4.1	5.3	12	21.3	
Passenger Vehicles	46	817	153	1016	25	83	130	238	253	456	13	722	110	134	328	572	2548
% Passenger Vehicles	39	95.9	98.1	90.2	86.2	97.6	71.8	80.7	98.4	93.4	68.4	94.5	96.5	91.8	98.5	96.5	91.7
Large 2 Axle Vehicles	7	15	2	24	2	1	1	4	3	15	0	18	4	4	2	10	56
% Large 2 Axle Vehicles	5.9	1.8	1.3	2.1	6.9	1.2	0.6	1.4	1.2	3.1	0	2.4	3.5	2.7	0.6	1.7	2
3 Axle Vehicles	8	3	0	11	1	1	6	8	0	1	0	1	0	2	1	3	23
% 3 Axle Vehicles	6.8	0.4	0	1	3.4	1.2	3.3	2.7	0	0.2	0	0.1	0	1.4	0.3	0.5	0.8
4+ Axle Trucks	57	17	1	75	1	0	44	45	1	16	6	23	0	6	2	8	151
% 4+ Axle Trucks	48.3	2	0.6	6.7	3.4	0	24.3	15.3	0.4	3.3	31.6	3	0	4.1	0.6	1.3	5.4

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	15	106	19	140	3	<b>14</b>	21	38	36	62	1	99	<b>19</b>	<b>21</b>	38	78	355
05:00 PM	8	121	<b>25</b>	154	3	14	<b>27</b>	<b>44</b>	29	<b>91</b>	<b>3</b>	<b>123</b>	10	15	51	76	<b>397</b>
05:15 PM	<b>21</b>	111	20	152	<b>5</b>	10	26	41	<b>49</b>	54	3	106	14	20	<b>54</b>	<b>88</b>	387
05:30 PM	10	<b>132</b>	22	<b>164</b>	1	10	14	25	32	83	1	116	18	17	48	83	388
Total Volume	54	470	86	610	12	48	88	148	146	290	8	444	61	73	191	325	1527
% App. Total	8.9	77	14.1		8.1	32.4	59.5		32.9	65.3	1.8		18.8	22.5	58.8		
PHF	.643	.890	.860	.930	.600	.857	.815	.841	.745	.797	.667	.902	.803	.869	.884	.923	.962

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

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**Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	04:45 PM				04:30 PM				04:45 PM				04:45 PM			
+0 mins.	15	106	19	140	<b>8</b>	<b>15</b>	<b>34</b>	<b>57</b>	36	62	1	99	<b>19</b>	<b>21</b>	38	78
+15 mins.	8	121	<b>25</b>	154	3	14	21	38	29	<b>91</b>	<b>3</b>	<b>123</b>	10	15	51	76
+30 mins.	<b>21</b>	111	20	152	3	14	27	44	<b>49</b>	54	3	106	14	20	<b>54</b>	<b>88</b>
+45 mins.	10	<b>132</b>	22	<b>164</b>	5	10	26	41	32	83	1	116	18	17	48	83
Total Volume	54	470	86	610	19	53	108	180	146	290	8	444	61	73	191	325
% App. Total	8.9	77	14.1		10.6	29.4	60		32.9	65.3	1.8		18.8	22.5	58.8	
PHF	.643	.890	.860	.930	.594	.883	.794	.789	.745	.797	.667	.902	.803	.869	.884	.923

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIPM  
Site Code : 9222066  
Start Date : 8/18/2009  
Page No : 1

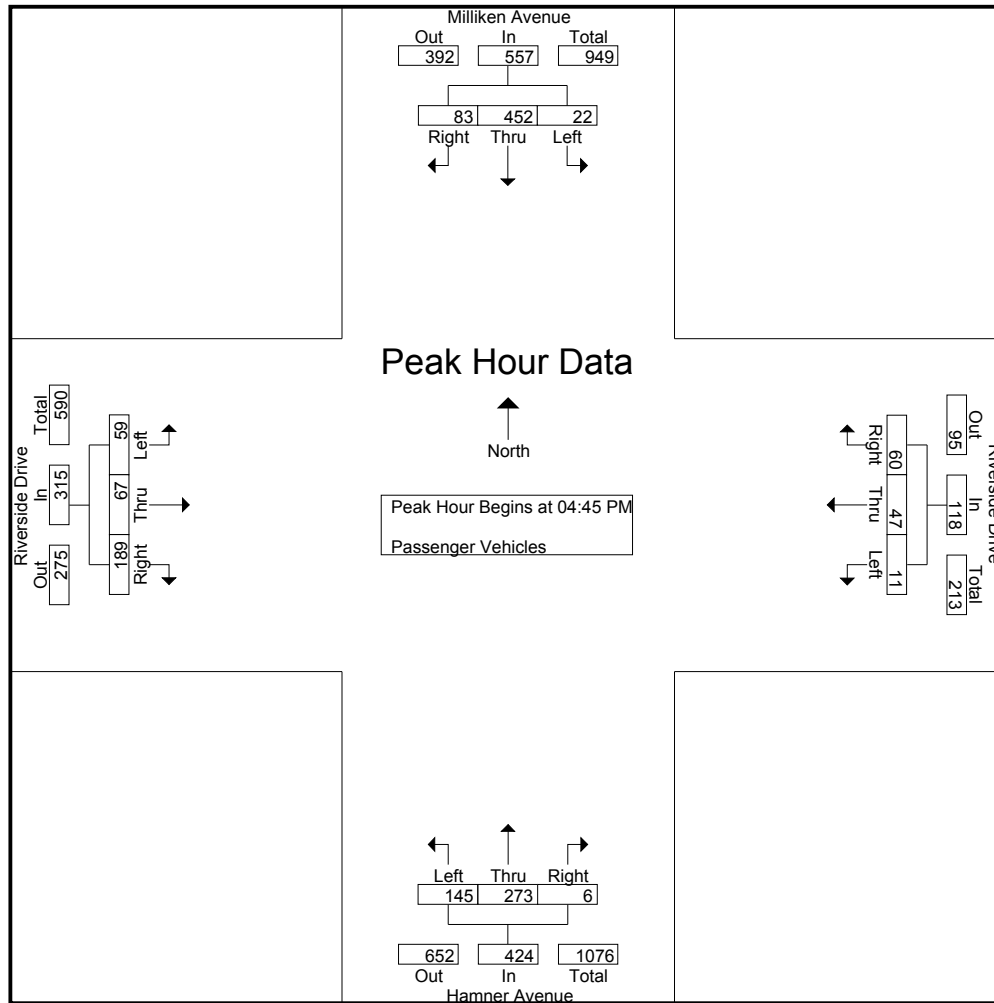
Groups Printed- Passenger Vehicles

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	11	80	14	105	3	5	15	23	23	45	3	71	8	14	27	49	248
04:15 PM	4	88	15	107	3	9	14	26	26	43	0	69	17	16	28	61	263
04:30 PM	7	107	19	133	7	14	30	51	31	51	3	85	12	24	35	71	340
04:45 PM	5	103	18	126	2	14	17	33	36	57	0	93	18	17	37	72	324
Total	27	378	66	471	15	42	76	133	116	196	6	318	55	71	127	253	1175
05:00 PM	4	115	24	143	3	13	18	34	29	87	3	119	10	14	51	75	371
05:15 PM	9	108	20	137	5	10	16	31	49	49	3	101	14	19	54	87	356
05:30 PM	4	126	21	151	1	10	9	20	31	80	0	111	17	17	47	81	363
05:45 PM	2	90	22	114	1	8	11	20	28	44	1	73	14	13	49	76	283
Total	19	439	87	545	10	41	54	105	137	260	7	404	55	63	201	319	1373
Grand Total	46	817	153	1016	25	83	130	238	253	456	13	722	110	134	328	572	2548
Apprch %	4.5	80.4	15.1		10.5	34.9	54.6		35	63.2	1.8		19.2	23.4	57.3		
Total %	1.8	32.1	6	39.9	1	3.3	5.1	9.3	9.9	17.9	0.5	28.3	4.3	5.3	12.9	22.4	

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	5	103	18	126	2	<b>14</b>	17	33	36	57	0	93	<b>18</b>	17	37	72	324
05:00 PM	4	115	<b>24</b>	143	3	13	<b>18</b>	<b>34</b>	29	<b>87</b>	<b>3</b>	<b>119</b>	10	14	51	75	<b>371</b>
05:15 PM	<b>9</b>	108	20	137	<b>5</b>	10	16	31	<b>49</b>	49	3	101	14	<b>19</b>	<b>54</b>	<b>87</b>	356
05:30 PM	4	<b>126</b>	21	<b>151</b>	1	10	9	20	31	80	0	111	17	17	47	81	363
Total Volume	22	452	83	557	11	47	60	118	145	273	6	424	59	67	189	315	1414
% App. Total	3.9	81.1	14.9		9.3	39.8	50.8		34.2	64.4	1.4		18.7	21.3	60		
PHF	.611	.897	.865	.922	.550	.839	.833	.868	.740	.784	.500	.891	.819	.882	.875	.905	.953

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	5	103	18	126	2	<b>14</b>	17	33	36	57	0	93	<b>18</b>	17	37	72
+15 mins.	4	115	<b>24</b>	143	3	13	<b>18</b>	<b>34</b>	29	<b>87</b>	<b>3</b>	<b>119</b>	10	14	51	75
+30 mins.	<b>9</b>	108	20	137	<b>5</b>	10	16	31	<b>49</b>	49	3	101	14	<b>19</b>	<b>54</b>	<b>87</b>
+45 mins.	4	<b>126</b>	21	<b>151</b>	1	10	9	20	31	80	0	111	17	17	47	81
Total Volume	22	452	83	557	11	47	60	118	145	273	6	424	59	67	189	315
% App. Total	3.9	81.1	14.9		9.3	39.8	50.8		34.2	64.4	1.4		18.7	21.3	60	
PHF	.611	.897	.865	.922	.550	.839	.833	.868	.740	.784	.500	.891	.819	.882	.875	.905

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIPM  
Site Code : 9222066  
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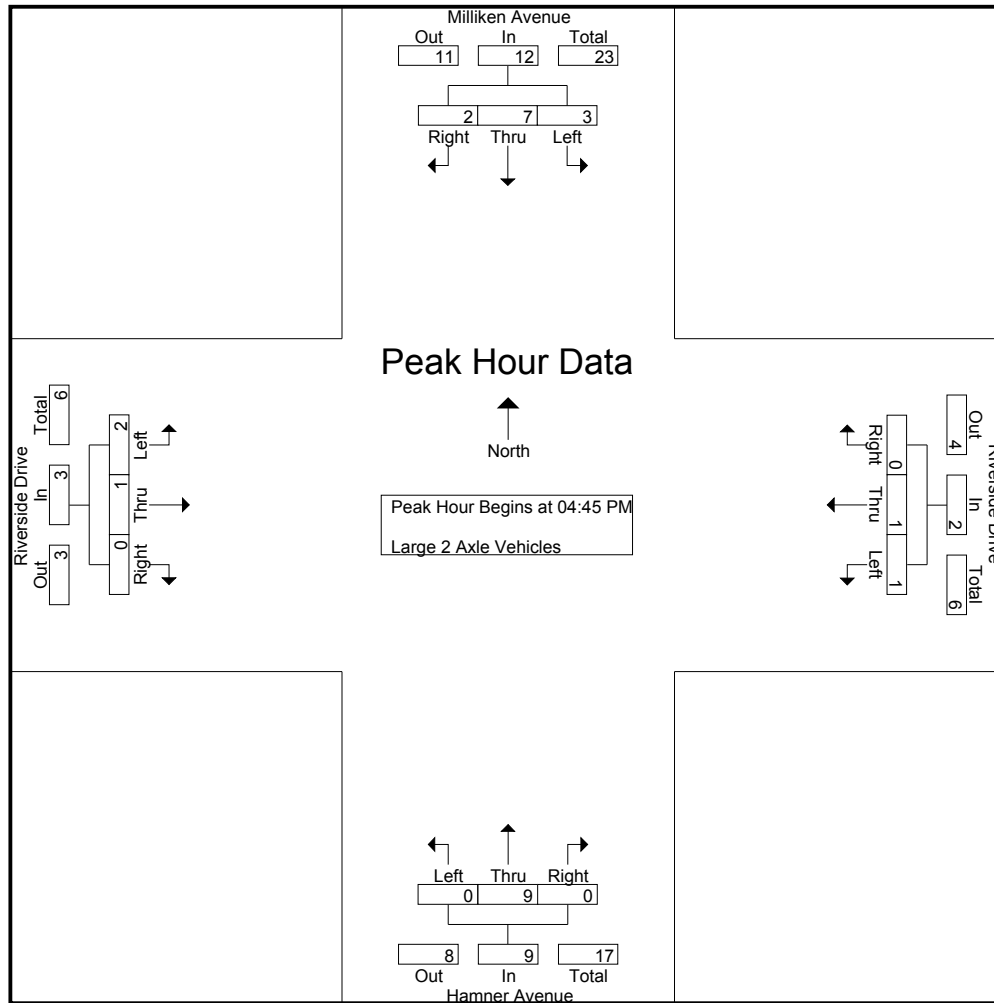
Groups Printed- Large 2 Axle Vehicles

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	2	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
04:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	1	1	0	2	5
04:30 PM	0	5	0	5	1	0	0	1	3	2	0	5	1	2	1	4	15
04:45 PM	1	2	0	3	1	0	0	1	0	3	0	3	1	1	0	2	9
Total	3	10	0	13	2	0	0	2	3	9	0	12	3	4	1	8	35
05:00 PM	0	3	1	4	0	1	0	1	0	3	0	3	0	0	0	0	8
05:15 PM	2	1	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
05:30 PM	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0	1	3
05:45 PM	2	0	0	2	0	0	1	1	0	0	0	0	0	0	1	1	4
Total	4	5	2	11	0	1	1	2	0	6	0	6	1	0	1	2	21
Grand Total	7	15	2	24	2	1	1	4	3	15	0	18	4	4	2	10	56
Apprch %	29.2	62.5	8.3		50	25	25		16.7	83.3	0		40	40	20		
Total %	12.5	26.8	3.6	42.9	3.6	1.8	1.8	7.1	5.4	26.8	0	32.1	7.1	7.1	3.6	17.9	

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	2	0	3	1	0	0	1	0	3	0	3	1	1	0	2	9
05:00 PM	0	3	1	4	0	1	0	1	0	3	0	3	0	0	0	0	8
05:15 PM	2	1	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
05:30 PM	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0	1	3
Total Volume	3	7	2	12	1	1	0	2	0	9	0	9	2	1	0	3	26
% App. Total	25	58.3	16.7		50	50	0		0	100	0		66.7	33.3	0		
PHF	.375	.583	.500	.750	.250	.250	.000	.500	.000	.750	.000	.750	.500	.250	.000	.375	.722

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIPM  
Site Code : 9222066  
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**Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	1	2	0	3	1	0	0	1	0	3	0	3	1	1	0	2
+15 mins.	0	3	1	4	0	1	0	1	0	3	0	3	0	0	0	0
+30 mins.	2	1	0	3	0	0	0	0	0	3	0	3	0	0	0	0
+45 mins.	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0	1
Total Volume	3	7	2	12	1	1	0	2	0	9	0	9	2	1	0	3
% App. Total	25	58.3	16.7		50	50	0		0	100	0		66.7	33.3	0	
PHF	.375	.583	.500	.750	.250	.250	.000	.500	.000	.750	.000	.750	.500	.250	.000	.375



City of Ontario  
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File Name : ONTMIRIPM  
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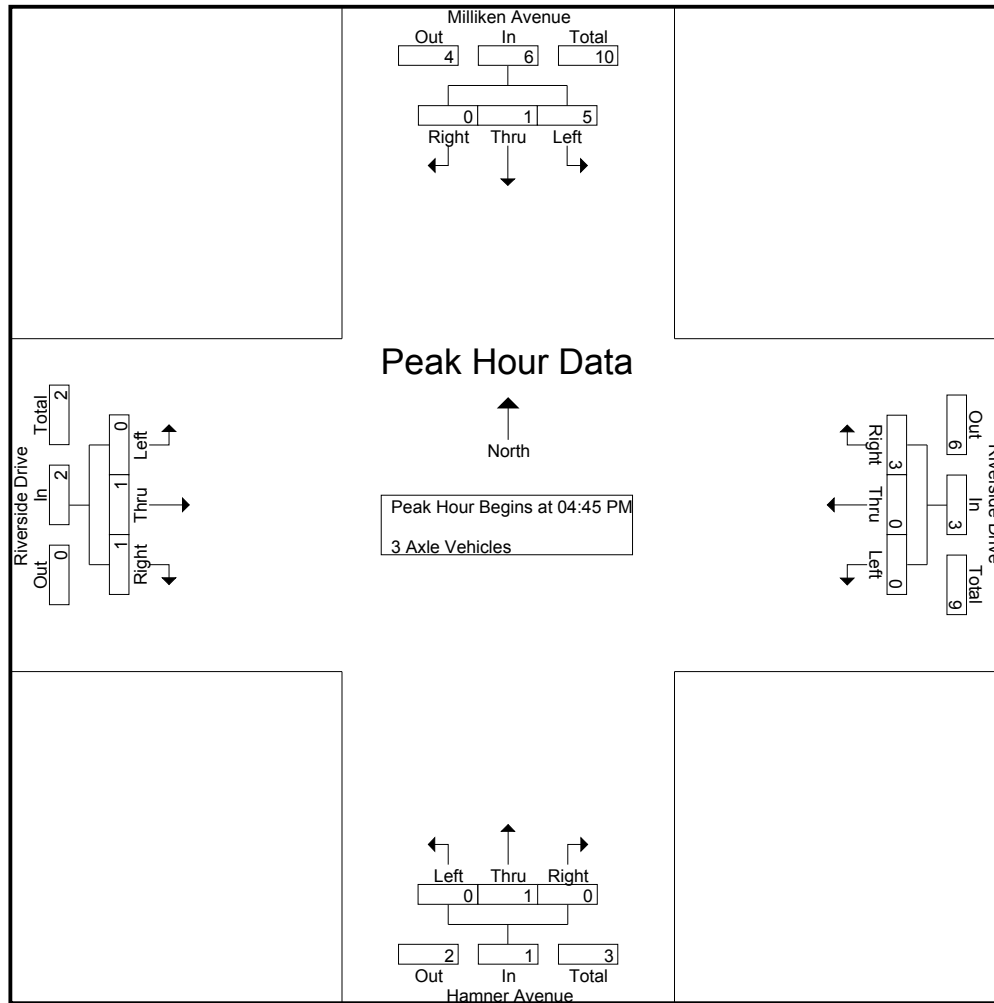
Groups Printed- 3 Axle Vehicles

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	0	0	3	1	0	0	1	0	0	0	0	0	0	0	0	4
04:15 PM	0	1	0	1	0	0	3	3	0	0	0	0	0	1	0	1	5
04:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	2	0	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
Total	5	2	0	7	1	1	4	6	0	0	0	0	0	1	0	1	14
05:00 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
05:15 PM	2	0	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	1	1	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	3	1	0	4	0	0	2	2	0	1	0	1	0	1	1	2	9
Grand Total	8	3	0	11	1	1	6	8	0	1	0	1	0	2	1	3	23
Apprch %	72.7	27.3	0		12.5	12.5	75		0	100	0		0	66.7	33.3		
Total %	34.8	13	0	47.8	4.3	4.3	26.1	34.8	0	4.3	0	4.3	0	8.7	4.3	13	

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	2	0	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
05:00 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
05:15 PM	2	0	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	1	1	3
Total Volume	5	1	0	6	0	0	3	3	0	1	0	1	0	1	1	2	12
% App. Total	83.3	16.7	0		0	0	100		0	100	0		0	50	50		
PHF	.625	.250	.000	.750	.000	.000	.375	.375	.000	.250	.000	.250	.000	.250	.250	.500	1.000

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIPM  
Site Code : 9222066  
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**Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	2	0	0	2	0	0	1	1	0	0	0	0	0	0	0	0
+15 mins.	1	1	0	2	0	0	0	0	0	0	0	0	0	1	0	1
+30 mins.	2	0	0	2	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	2	2	0	0	0	0	0	0	1	1
Total Volume	5	1	0	6	0	0	3	3	0	1	0	1	0	1	1	2
% App. Total	83.3	16.7	0		0	0	100		0	100	0		0	50	50	
PHF	.625	.250	.000	.750	.000	.000	.375	.375	.000	.250	.000	.250	.000	.250	.250	.500

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIPM  
Site Code : 9222066  
Start Date : 8/18/2009  
Page No : 1

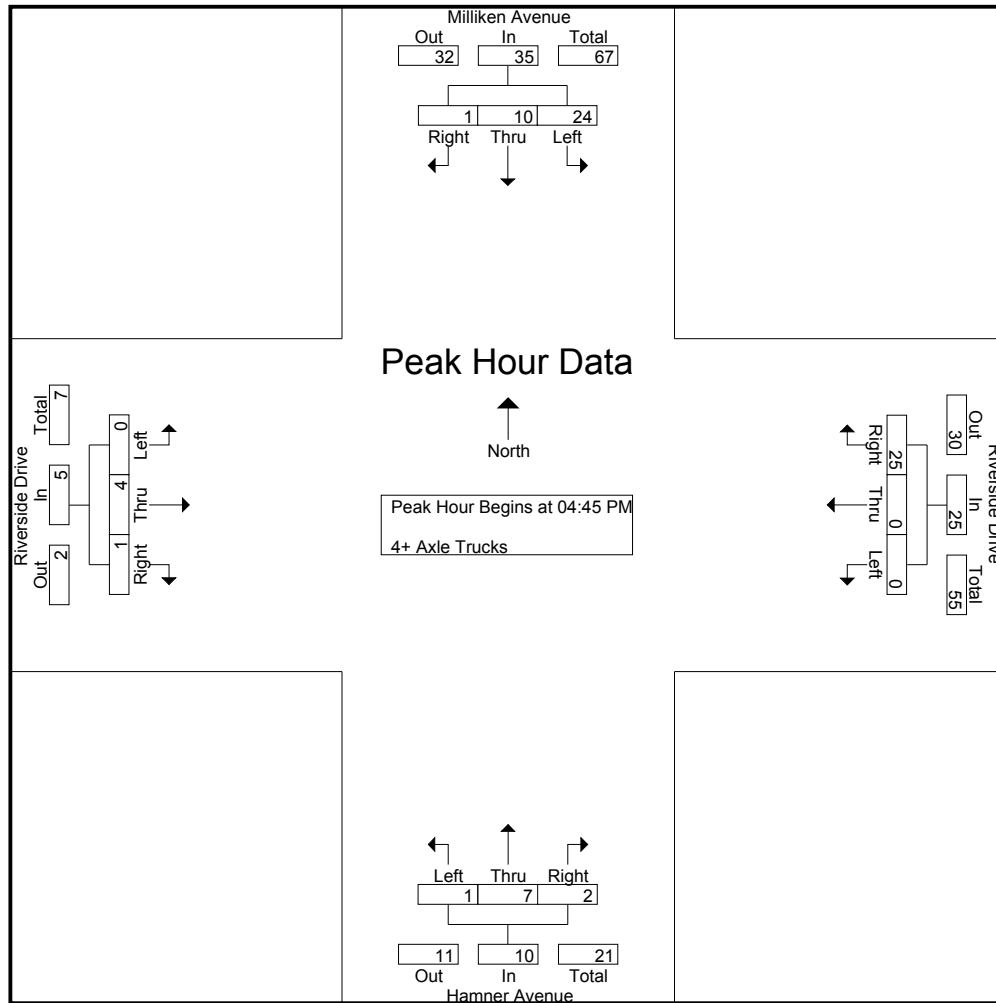
Groups Printed- 4+ Axle Trucks

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	9	2	0	11	0	0	5	5	0	3	0	3	0	1	1	2	21
04:15 PM	7	2	0	9	0	0	3	3	0	2	2	4	0	1	0	1	17
04:30 PM	5	2	0	7	0	0	4	4	0	2	1	3	0	0	0	0	14
04:45 PM	7	1	1	9	0	0	3	3	0	2	1	3	0	3	1	4	19
Total	28	7	1	36	0	0	15	15	0	9	4	13	0	5	2	7	71
05:00 PM	3	2	0	5	0	0	9	9	0	1	0	1	0	0	0	0	15
05:15 PM	8	2	0	10	0	0	10	10	0	1	0	1	0	1	0	1	22
05:30 PM	6	5	0	11	0	0	3	3	1	3	1	5	0	0	0	0	19
05:45 PM	12	1	0	13	1	0	7	8	0	2	1	3	0	0	0	0	24
Total	29	10	0	39	1	0	29	30	1	7	2	10	0	1	0	1	80
Grand Total	57	17	1	75	1	0	44	45	1	16	6	23	0	6	2	8	151
Apprch %	76	22.7	1.3		2.2	0	97.8		4.3	69.6	26.1		0	75	25		
Total %	37.7	11.3	0.7	49.7	0.7	0	29.1	29.8	0.7	10.6	4	15.2	0	4	1.3	5.3	

	Milliken Avenue Southbound				Riverside Drive Westbound				Hamner Avenue Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	7	1	1	9	0	0	3	3	0	2	1	3	0	3	1	4	19
05:00 PM	3	2	0	5	0	0	9	9	0	1	0	1	0	0	0	0	15
05:15 PM	8	2	0	10	0	0	10	10	0	1	0	1	0	1	0	1	22
05:30 PM	6	5	0	11	0	0	3	3	1	3	1	5	0	0	0	0	19
Total Volume	24	10	1	35	0	0	25	25	1	7	2	10	0	4	1	5	75
% App. Total	68.6	28.6	2.9		0	0	100		10	70	20		0	80	20		
PHF	.750	.500	.250	.795	.000	.000	.625	.625	.250	.583	.500	.500	.000	.333	.250	.313	.852

City of Ontario  
N/S: Milliken Avenue/Hamner Avenue  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMIRIPM  
Site Code : 9222066  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	7	1	1	9	0	0	3	3	0	2	1	3	0	3	1	4
+15 mins.	3	2	0	5	0	0	9	9	0	1	0	1	0	0	0	0
+30 mins.	8	2	0	10	0	0	10	10	0	1	0	1	0	1	0	1
+45 mins.	6	5	0	11	0	0	3	3	1	3	1	5	0	0	0	0
Total Volume	24	10	1	35	0	0	25	25	1	7	2	10	0	4	1	5
% App. Total	68.6	28.6	2.9		0	0	100		10	70	20		0	80	20	
PHF	.750	.500	.250	.795	.000	.000	.625	.625	.250	.583	.500	.500	.000	.333	.250	.313

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWAM  
Site Code : 9220137  
Start Date : 8/18/2009  
Page No : 1

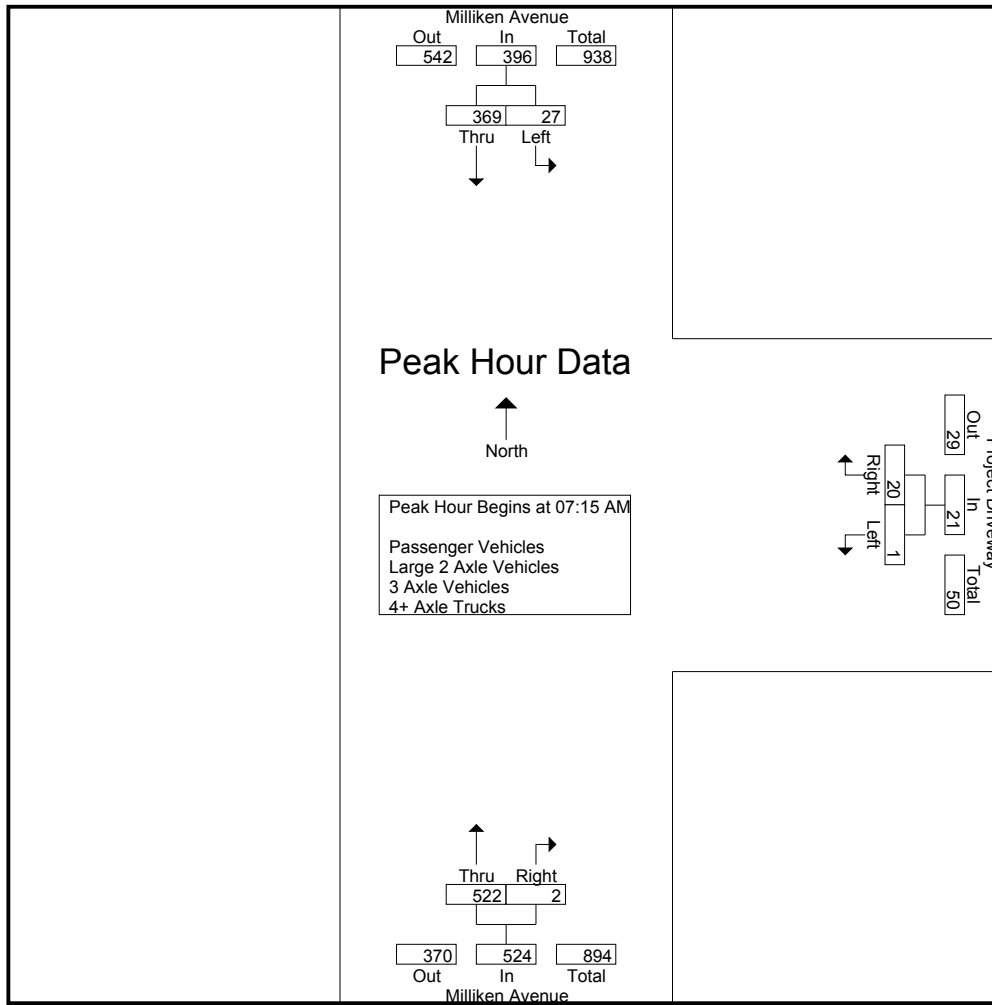
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	10	70	80	0	8	8	84	0	84	172
07:15 AM	6	137	143	1	7	8	130	0	130	281
07:30 AM	4	75	79	0	7	7	133	0	133	219
07:45 AM	6	84	90	0	3	3	144	0	144	237
Total	26	366	392	1	25	26	491	0	491	909
08:00 AM	11	73	84	0	3	3	115	2	117	204
08:15 AM	5	62	67	0	2	2	93	1	94	163
08:30 AM	8	65	73	0	5	5	86	0	86	164
08:45 AM	4	69	73	0	3	3	85	0	85	161
Total	28	269	297	0	13	13	379	3	382	692
Grand Total	54	635	689	1	38	39	870	3	873	1601
Apprch %	7.8	92.2		2.6	97.4		99.7	0.3		
Total %	3.4	39.7	43	0.1	2.4	2.4	54.3	0.2	54.5	
Passenger Vehicles	52	529	581	1	31	32	774	3	777	1390
% Passenger Vehicles	96.3	83.3	84.3	100	81.6	82.1	89	100	89	86.8
Large 2 Axle Vehicles	1	21	22	0	7	7	14	0	14	43
% Large 2 Axle Vehicles	1.9	3.3	3.2	0	18.4	17.9	1.6	0	1.6	2.7
3 Axle Vehicles	0	12	12	0	0	0	9	0	9	21
% 3 Axle Vehicles	0	1.9	1.7	0	0	0	1	0	1	1.3
4+ Axle Trucks	1	73	74	0	0	0	73	0	73	147
% 4+ Axle Trucks	1.9	11.5	10.7	0	0	0	8.4	0	8.4	9.2

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	6	<b>137</b>	<b>143</b>	<b>1</b>	<b>7</b>	<b>8</b>	130	0	130	<b>281</b>
07:30 AM	4	75	79	0	7	7	133	0	133	219
07:45 AM	6	84	90	0	3	3	<b>144</b>	0	<b>144</b>	237
08:00 AM	<b>11</b>	73	84	0	3	3	115	<b>2</b>	117	204
Total Volume	27	369	396	1	20	21	522	2	524	941
% App. Total	6.8	93.2		4.8	95.2		99.6	0.4		
PHF	.614	.673	.692	.250	.714	.656	.906	.250	.910	.837

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWAM  
Site Code : 9220137  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	6	137	143	1	7	8	130	0	130
+15 mins.	4	75	79	0	7	7	133	0	133
+30 mins.	6	84	90	0	3	3	144	0	144
+45 mins.	11	73	84	0	3	3	115	2	117
Total Volume	27	369	396	1	20	21	522	2	524
% App. Total	6.8	93.2		4.8	95.2		99.6	0.4	
PHF	.614	.673	.692	.250	.714	.656	.906	.250	.910

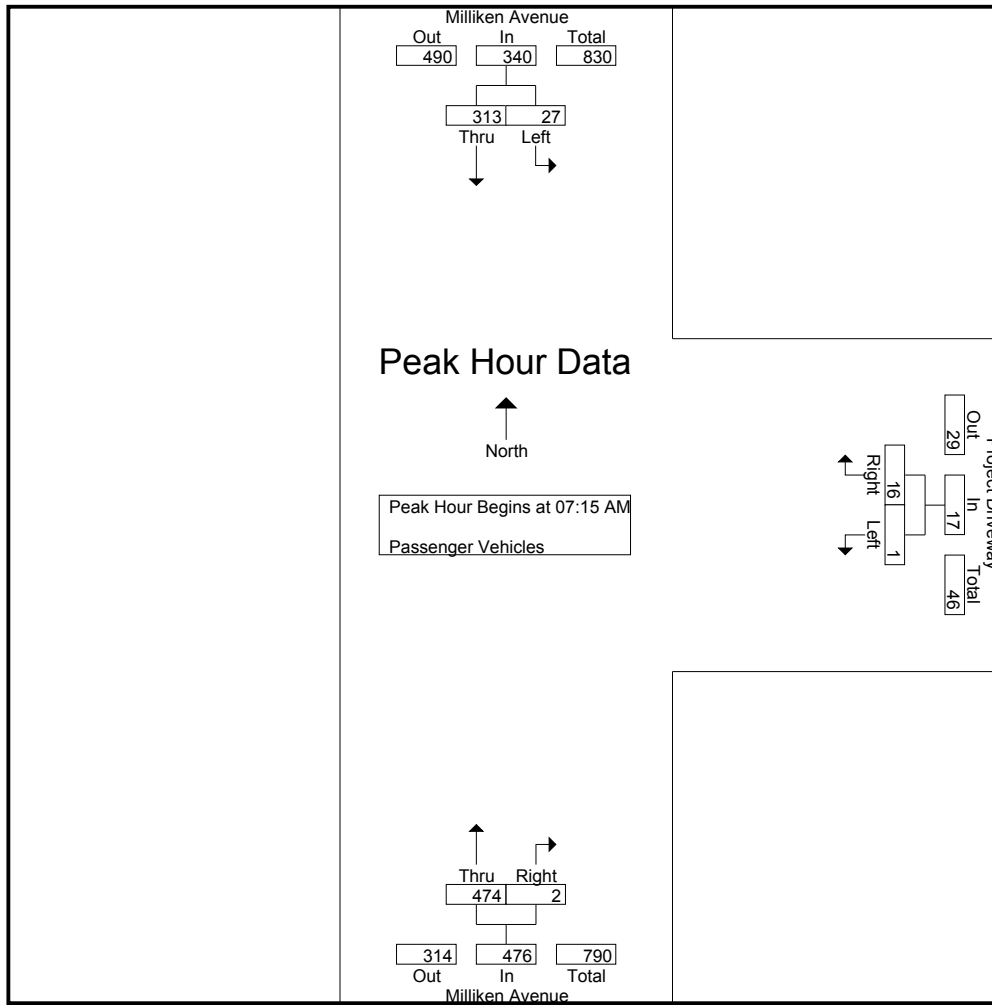
City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWAM  
Site Code : 9220137  
Start Date : 8/18/2009  
Page No : 1

Groups Printed- Passenger Vehicles

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	10	59	69	0	8	8	76	0	76	153
07:15 AM	6	117	123	1	7	8	125	0	125	256
07:30 AM	4	59	63	0	6	6	119	0	119	188
07:45 AM	6	78	84	0	3	3	131	0	131	218
Total	26	313	339	1	24	25	451	0	451	815
08:00 AM	11	59	70	0	0	0	99	2	101	171
08:15 AM	4	47	51	0	1	1	79	1	80	132
08:30 AM	8	54	62	0	4	4	73	0	73	139
08:45 AM	3	56	59	0	2	2	72	0	72	133
Total	26	216	242	0	7	7	323	3	326	575
Grand Total	52	529	581	1	31	32	774	3	777	1390
Apprch %	9	91		3.1	96.9		99.6	0.4		
Total %	3.7	38.1	41.8	0.1	2.2	2.3	55.7	0.2	55.9	

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	6	<b>117</b>	<b>123</b>	<b>1</b>	<b>7</b>	<b>8</b>	125	0	125	<b>256</b>
07:30 AM	4	59	63	0	6	6	119	0	119	188
07:45 AM	6	78	84	0	3	3	<b>131</b>	0	<b>131</b>	218
08:00 AM	<b>11</b>	59	70	0	0	0	99	<b>2</b>	101	171
Total Volume	27	313	340	1	16	17	474	2	476	833
% App. Total	7.9	92.1		5.9	94.1		99.6	0.4		
PHF	.614	.669	.691	.250	.571	.531	.905	.250	.908	.813



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	6	<b>117</b>	<b>123</b>	<b>1</b>	<b>7</b>	<b>8</b>	125	0	125
+15 mins.	4	59	63	0	6	6	119	0	119
+30 mins.	6	78	84	0	3	3	<b>131</b>	0	<b>131</b>
+45 mins.	<b>11</b>	59	70	0	0	0	99	<b>2</b>	101
Total Volume	27	313	340	1	16	17	474	2	476
% App. Total	7.9	92.1		5.9	94.1		99.6	0.4	
PHF	.614	.669	.691	.250	.571	.531	.905	.250	.908



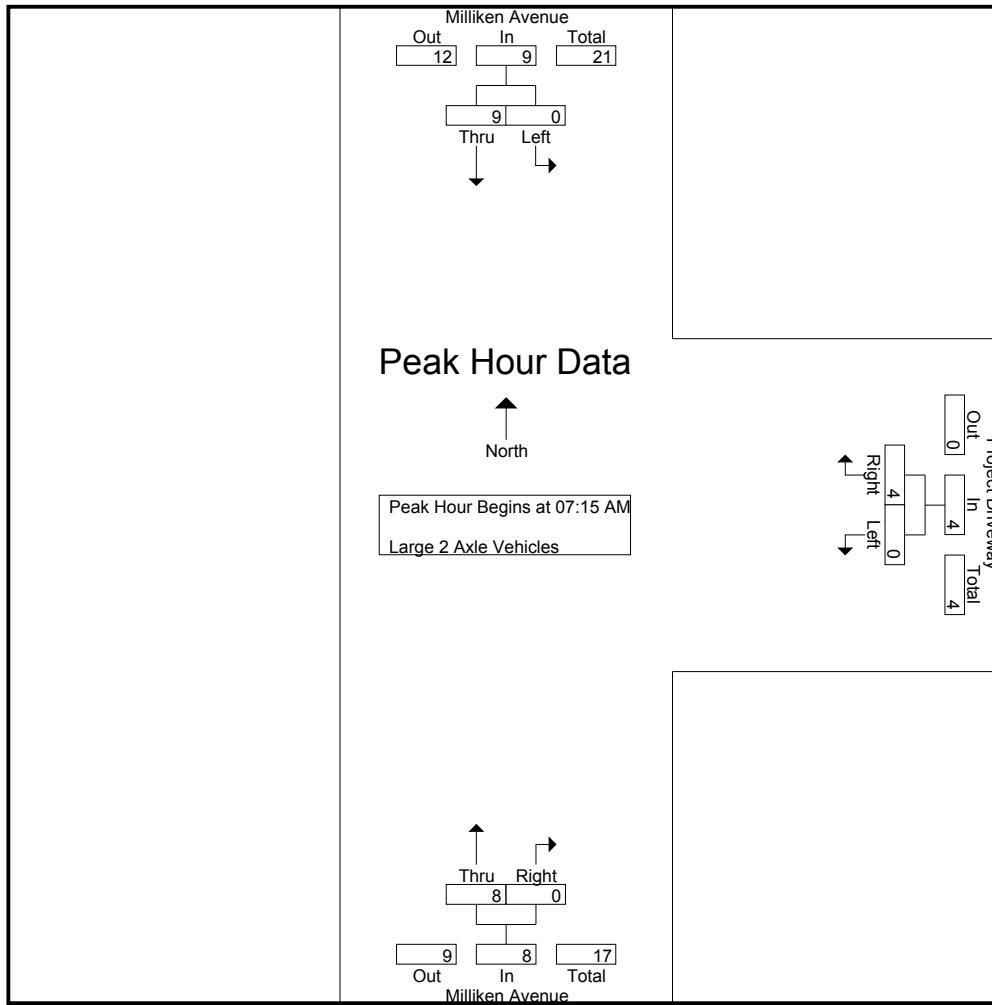
City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWAM  
Site Code : 9220137  
Start Date : 8/18/2009  
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	1	0	1	2
07:15 AM	0	2	2	0	0	0	1	0	1	3
07:30 AM	0	3	3	0	1	1	1	0	1	5
07:45 AM	0	2	2	0	0	0	4	0	4	6
Total	0	8	8	0	1	1	7	0	7	16
08:00 AM	0	2	2	0	3	3	2	0	2	7
08:15 AM	1	4	5	0	1	1	3	0	3	9
08:30 AM	0	5	5	0	1	1	2	0	2	8
08:45 AM	0	2	2	0	1	1	0	0	0	3
Total	1	13	14	0	6	6	7	0	7	27
Grand Total	1	21	22	0	7	7	14	0	14	43
Apprch %	4.5	95.5		0	100		100	0		
Total %	2.3	48.8	51.2	0	16.3	16.3	32.6	0	32.6	

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	2	2	0	0	0	1	0	1	3
07:30 AM	0	3	3	0	1	1	1	0	1	5
07:45 AM	0	2	2	0	0	0	4	0	4	6
08:00 AM	0	2	2	0	3	3	2	0	2	7
Total Volume	0	9	9	0	4	4	8	0	8	21
% App. Total	0	100		0	100		100	0		
PHF	.000	.750	.750	.000	.333	.333	.500	.000	.500	.750



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	2	2	0	0	0	1	0	1
+15 mins.	0	3	3	0	1	1	1	0	1
+30 mins.	0	2	2	0	0	0	4	0	4
+45 mins.	0	2	2	0	3	3	2	0	2
Total Volume	0	9	9	0	4	4	8	0	8
% App. Total	0	100		0	100		100	0	
PHF	.000	.750	.750	.000	.333	.333	.500	.000	.500

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWAM  
Site Code : 9220137  
Start Date : 8/18/2009  
Page No : 1

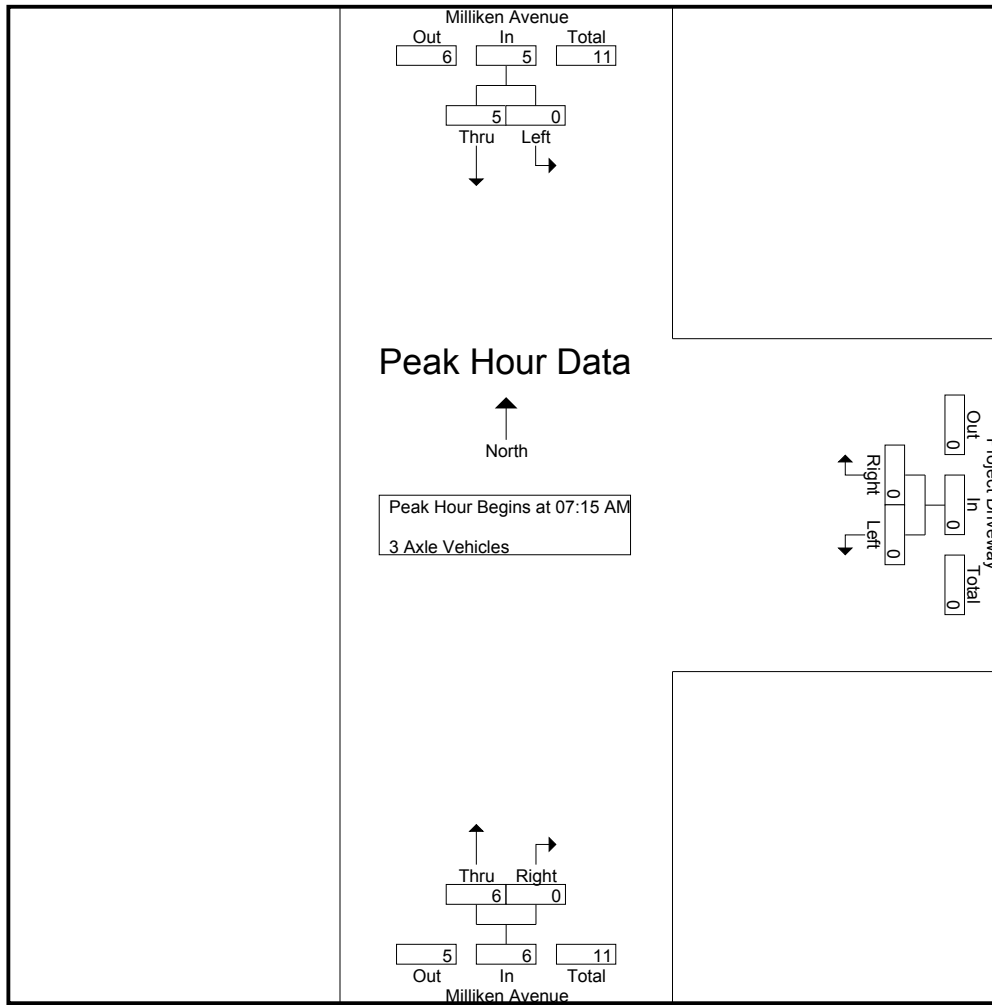
Groups Printed- 3 Axle Vehicles

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	2	0	0	0	0	0	0	2
07:15 AM	0	2	2	0	0	0	0	0	0	2
07:30 AM	0	2	2	0	0	0	2	0	2	4
07:45 AM	0	0	0	0	0	0	1	0	1	1
Total	0	6	6	0	0	0	3	0	3	9
08:00 AM	0	1	1	0	0	0	3	0	3	4
08:15 AM	0	2	2	0	0	0	1	0	1	3
08:30 AM	0	2	2	0	0	0	1	0	1	3
08:45 AM	0	1	1	0	0	0	1	0	1	2
Total	0	6	6	0	0	0	6	0	6	12
Grand Total	0	12	12	0	0	0	9	0	9	21
Apprch %	0	100		0	0		100	0		
Total %	0	57.1	57.1	0	0	0	42.9	0	42.9	

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	2	2	0	0	0	0	0	0	2
07:30 AM	0	2	2	0	0	0	2	0	2	4
07:45 AM	0	0	0	0	0	0	1	0	1	1
08:00 AM	0	1	1	0	0	0	3	0	3	4
Total Volume	0	5	5	0	0	0	6	0	6	11
% App. Total	0	100		0	0		100	0		
PHF	.000	.625	.625	.000	.000	.000	.500	.000	.500	.688

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWAM  
Site Code : 9220137  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	2	2	0	0	0	0	0	0
+15 mins.	0	2	2	0	0	0	2	0	2
+30 mins.	0	0	0	0	0	0	1	0	1
+45 mins.	0	1	1	0	0	0	3	0	3
Total Volume	0	5	5	0	0	0	6	0	6
% App. Total	0	100		0	0		100	0	
PHF	.000	.625	.625	.000	.000	.000	.500	.000	.500

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWAM  
Site Code : 9220137  
Start Date : 8/18/2009  
Page No : 1

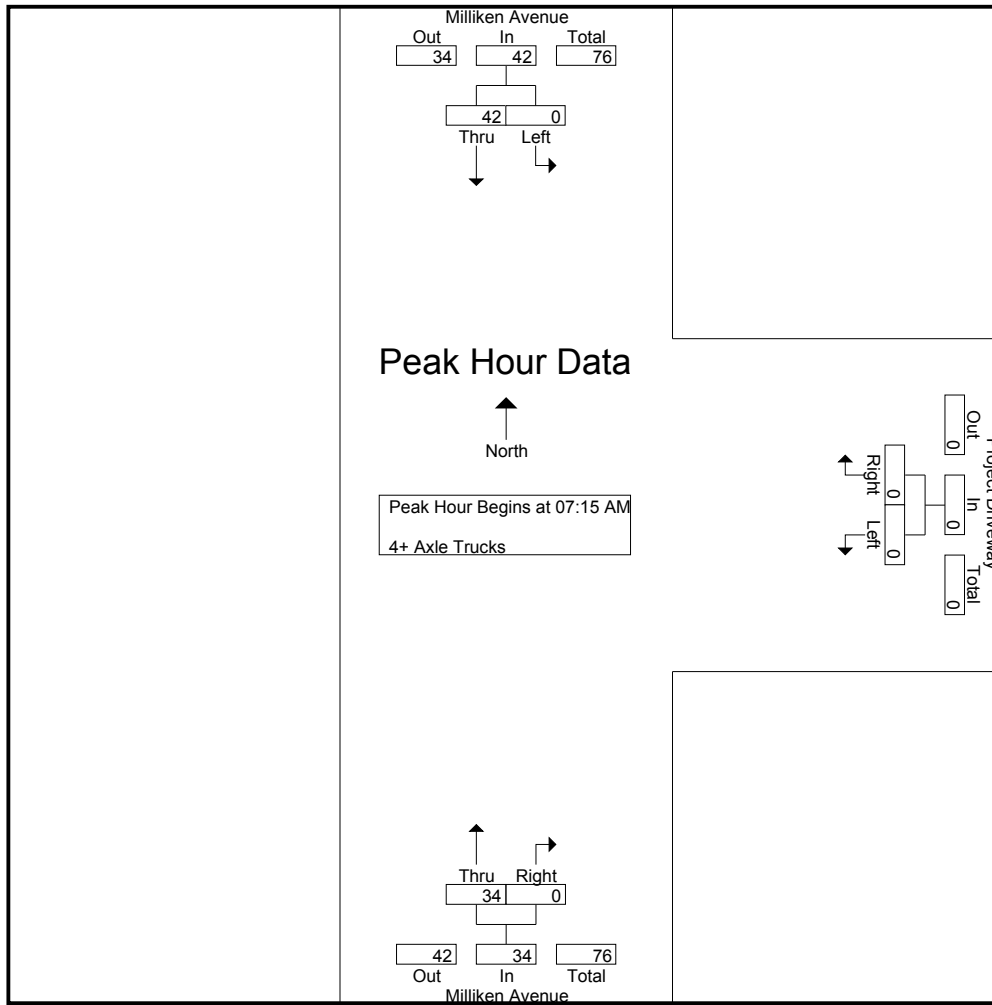
Groups Printed- 4+ Axle Trucks

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	8	8	0	0	0	7	0	7	15
07:15 AM	0	16	16	0	0	0	4	0	4	20
07:30 AM	0	11	11	0	0	0	11	0	11	22
07:45 AM	0	4	4	0	0	0	8	0	8	12
Total	0	39	39	0	0	0	30	0	30	69
08:00 AM	0	11	11	0	0	0	11	0	11	22
08:15 AM	0	9	9	0	0	0	10	0	10	19
08:30 AM	0	4	4	0	0	0	10	0	10	14
08:45 AM	1	10	11	0	0	0	12	0	12	23
Total	1	34	35	0	0	0	43	0	43	78
Grand Total	1	73	74	0	0	0	73	0	73	147
Apprch %	1.4	98.6		0	0		100	0		
Total %	0.7	49.7	50.3	0	0	0	49.7	0	49.7	

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	<b>16</b>	<b>16</b>	0	0	0	4	0	4	20
07:30 AM	0	11	11	0	0	0	<b>11</b>	0	<b>11</b>	<b>22</b>
07:45 AM	0	4	4	0	0	0	8	0	8	12
08:00 AM	0	11	11	0	0	0	11	0	11	22
Total Volume	0	42	42	0	0	0	34	0	34	76
% App. Total	0	100		0	0		100	0		
PHF	.000	.656	.656	.000	.000	.000	.773	.000	.773	.864

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWAM  
Site Code : 9220137  
Start Date : 8/18/2009  
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	<b>16</b>	<b>16</b>	0	0	0	4	0	4
+15 mins.	0	11	11	0	0	0	<b>11</b>	0	<b>11</b>
+30 mins.	0	4	4	0	0	0	8	0	8
+45 mins.	0	11	11	0	0	0	11	0	11
Total Volume	0	42	42	0	0	0	34	0	34
% App. Total	0	100		0	0		100	0	
PHF	.000	.656	.656	.000	.000	.000	.773	.000	.773

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWPM  
Site Code : 9222137  
Start Date : 8/18/2009  
Page No : 1

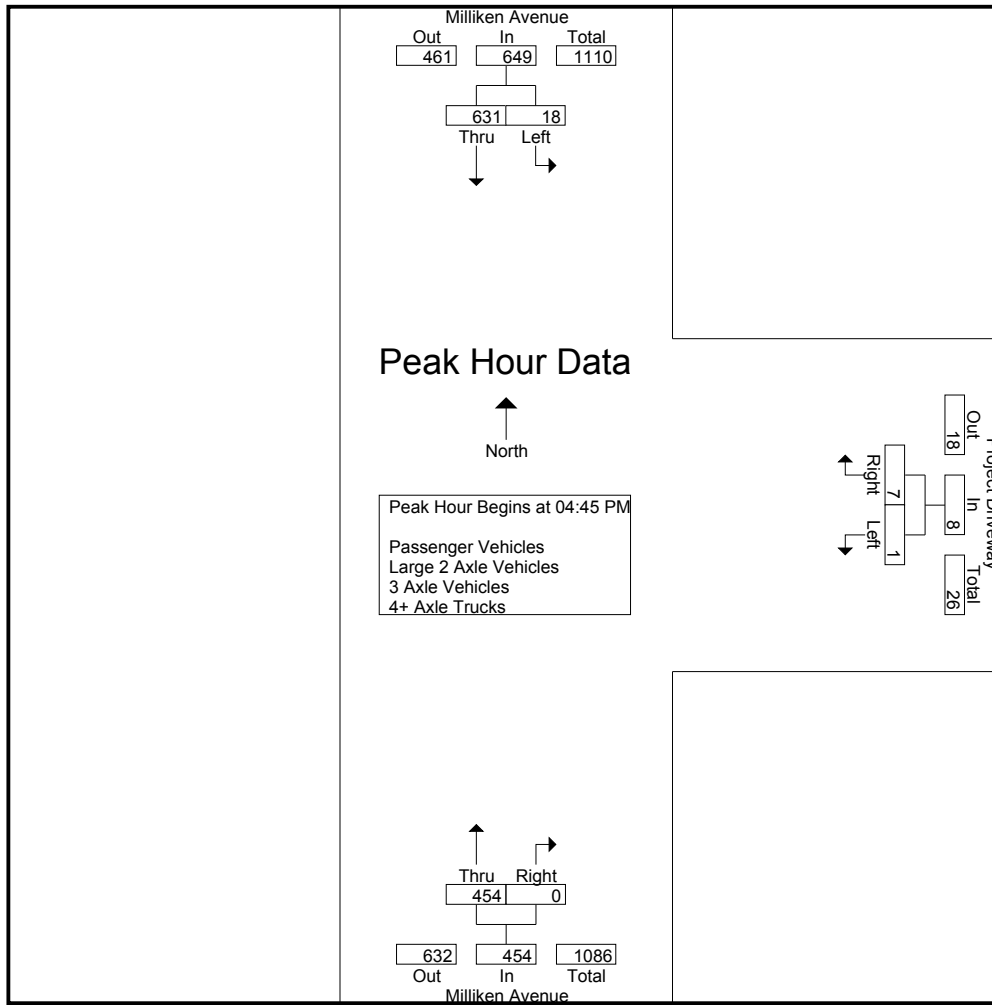
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	3	127	130	0	8	8	91	0	91	229
04:15 PM	10	128	138	0	6	6	85	0	85	229
04:30 PM	6	149	155	0	6	6	101	0	101	262
04:45 PM	9	147	156	0	1	1	96	0	96	253
Total	28	551	579	0	21	21	373	0	373	973
05:00 PM	2	154	156	0	1	1	144	0	144	301
05:15 PM	2	162	164	0	3	3	99	0	99	266
05:30 PM	5	168	173	1	2	3	115	0	115	291
05:45 PM	6	139	145	0	7	7	91	0	91	243
Total	15	623	638	1	13	14	449	0	449	1101
Grand Total	43	1174	1217	1	34	35	822	0	822	2074
Apprch %	3.5	96.5		2.9	97.1		100	0		
Total %	2.1	56.6	58.7	0	1.6	1.7	39.6	0	39.6	
Passenger Vehicles	32	1009	1041	1	25	26	689	0	689	1756
% Passenger Vehicles	74.4	85.9	85.5	100	73.5	74.3	83.8	0	83.8	84.7
Large 2 Axle Vehicles	1	21	22	0	1	1	15	0	15	38
% Large 2 Axle Vehicles	2.3	1.8	1.8	0	2.9	2.9	1.8	0	1.8	1.8
3 Axle Vehicles	5	72	77	0	4	4	59	0	59	140
% 3 Axle Vehicles	11.6	6.1	6.3	0	11.8	11.4	7.2	0	7.2	6.8
4+ Axle Trucks	5	72	77	0	4	4	59	0	59	140
% 4+ Axle Trucks	11.6	6.1	6.3	0	11.8	11.4	7.2	0	7.2	6.8

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	9	147	156	0	1	1	96	0	96	253
05:00 PM	2	154	156	0	1	1	<b>144</b>	0	<b>144</b>	<b>301</b>
05:15 PM	2	162	164	0	3	3	99	0	99	266
05:30 PM	5	<b>168</b>	<b>173</b>	<b>1</b>	2	3	115	0	115	291
Total Volume	18	631	649	1	7	8	454	0	454	1111
% App. Total	2.8	97.2		12.5	87.5		100	0		
PHF	.500	.939	.938	.250	.583	.667	.788	.000	.788	.923

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWPM  
Site Code : 9222137  
Start Date : 8/18/2009  
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# Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:00 PM			04:45 PM		
+0 mins.	9	147	156	0	8	8	96	0	96
+15 mins.	2	154	156	0	6	6	144	0	144
+30 mins.	2	162	164	0	6	6	99	0	99
+45 mins.	5	168	173	0	1	1	115	0	115
Total Volume	18	631	649	0	21	21	454	0	454
% App. Total	2.8	97.2		0	100		100	0	
PHF	.500	.939	.938	.000	.656	.656	.788	.000	.788



City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWPM  
Site Code : 9222137  
Start Date : 8/18/2009  
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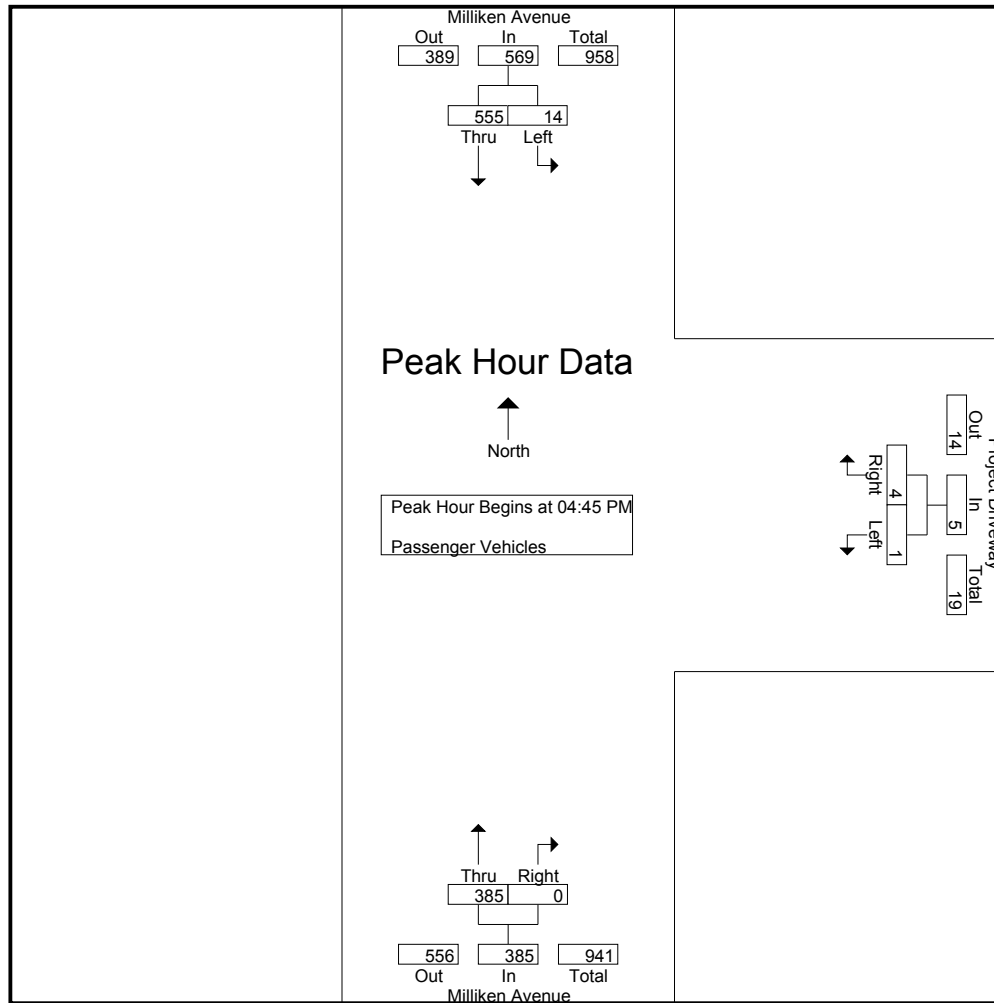
Groups Printed- Passenger Vehicles

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	3	103	106	0	6	6	73	0	73	185
04:15 PM	9	107	116	0	6	6	74	0	74	196
04:30 PM	2	131	133	0	4	4	85	0	85	222
04:45 PM	7	125	132	0	0	0	85	0	85	217
Total	21	466	487	0	16	16	317	0	317	820
05:00 PM	2	144	146	0	1	1	119	0	119	266
05:15 PM	2	141	143	0	1	1	81	0	81	225
05:30 PM	3	145	148	1	2	3	100	0	100	251
05:45 PM	4	113	117	0	5	5	72	0	72	194
Total	11	543	554	1	9	10	372	0	372	936
Grand Total	32	1009	1041	1	25	26	689	0	689	1756
Apprch %	3.1	96.9		3.8	96.2		100	0		
Total %	1.8	57.5	59.3	0.1	1.4	1.5	39.2	0	39.2	

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	<b>7</b>	125	132	0	0	0	85	0	85	217
05:00 PM	2	144	146	0	1	1	<b>119</b>	0	<b>119</b>	<b>266</b>
05:15 PM	2	141	143	0	1	1	81	0	81	225
05:30 PM	3	<b>145</b>	<b>148</b>	<b>1</b>	<b>2</b>	<b>3</b>	100	0	100	251
Total Volume	14	555	569	1	4	5	385	0	385	959
% App. Total	2.5	97.5		20	80		100	0		
PHF	.500	.957	.961	.250	.500	.417	.809	.000	.809	.901

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWPM  
Site Code : 9222137  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	7	125	132	0	0	0	85	0	85
+15 mins.	2	144	146	0	1	1	119	0	119
+30 mins.	2	141	143	0	1	1	81	0	81
+45 mins.	3	145	148	1	2	3	100	0	100
Total Volume	14	555	569	1	4	5	385	0	385
% App. Total	2.5	97.5		20	80		100	0	
PHF	.500	.957	.961	.250	.500	.417	.809	.000	.809

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWPM  
Site Code : 9222137  
Start Date : 8/18/2009  
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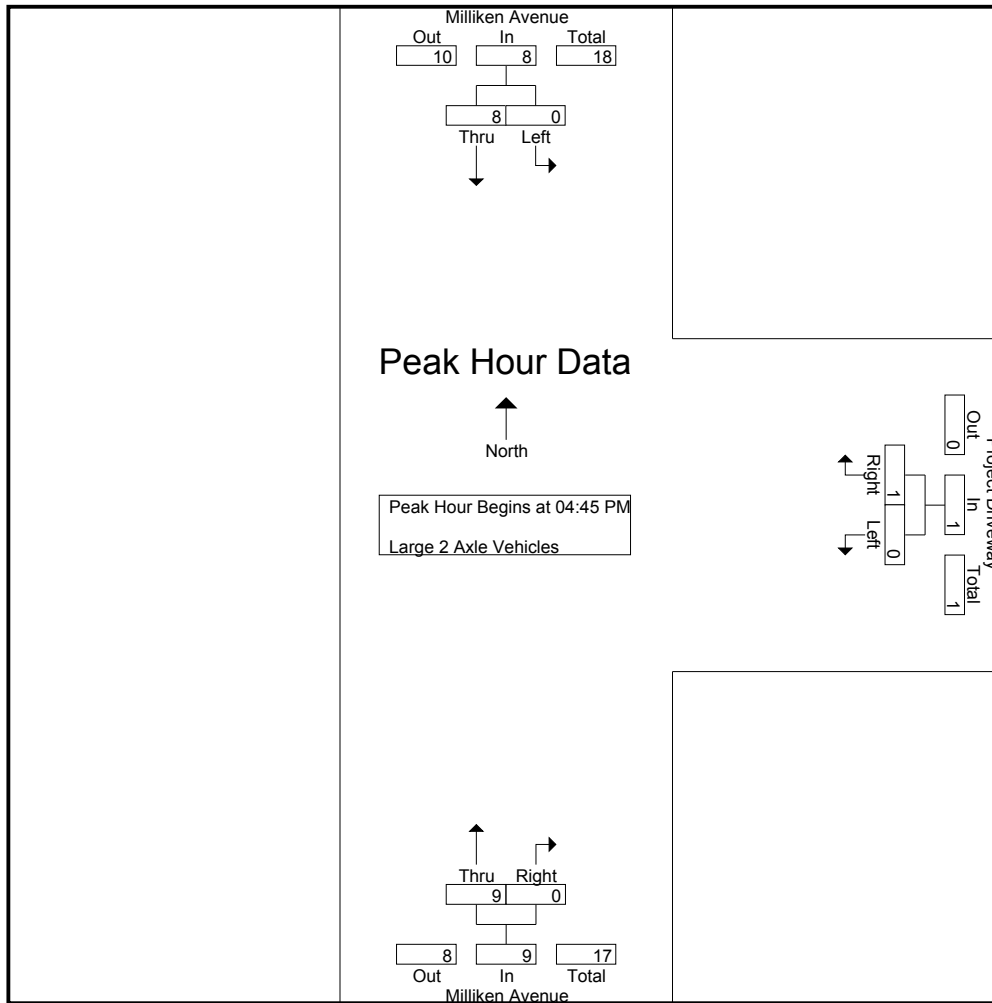
Groups Printed- Large 2 Axle Vehicles

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	4	4	0	0	0	0	0	0	4
04:15 PM	1	1	2	0	0	0	1	0	1	3
04:30 PM	0	4	4	0	0	0	4	0	4	8
04:45 PM	0	2	2	0	1	1	3	0	3	6
Total	1	11	12	0	1	1	8	0	8	21
05:00 PM	0	0	0	0	0	0	3	0	3	3
05:15 PM	0	3	3	0	0	0	2	0	2	5
05:30 PM	0	3	3	0	0	0	1	0	1	4
05:45 PM	0	4	4	0	0	0	1	0	1	5
Total	0	10	10	0	0	0	7	0	7	17
Grand Total	1	21	22	0	1	1	15	0	15	38
Apprch %	4.5	95.5		0	100		100	0		
Total %	2.6	55.3	57.9	0	2.6	2.6	39.5	0	39.5	

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	2	2	0	1	1	3	0	3	6
05:00 PM	0	0	0	0	0	0	3	0	3	3
05:15 PM	0	3	3	0	0	0	2	0	2	5
05:30 PM	0	3	3	0	0	0	1	0	1	4
Total Volume	0	8	8	0	1	1	9	0	9	18
% App. Total	0	100		0	100		100	0		
PHF	.000	.667	.667	.000	.250	.250	.750	.000	.750	.750

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWPM  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	2	2	0	1	1	3	0	3
+15 mins.	0	0	0	0	0	0	3	0	3
+30 mins.	0	3	3	0	0	0	2	0	2
+45 mins.	0	3	3	0	0	0	1	0	1
Total Volume	0	8	8	0	1	1	9	0	9
% App. Total	0	100		0	100		100	0	
PHF	.000	.667	.667	.000	.250	.250	.750	.000	.750

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWPM  
Site Code : 9222137  
Start Date : 8/18/2009  
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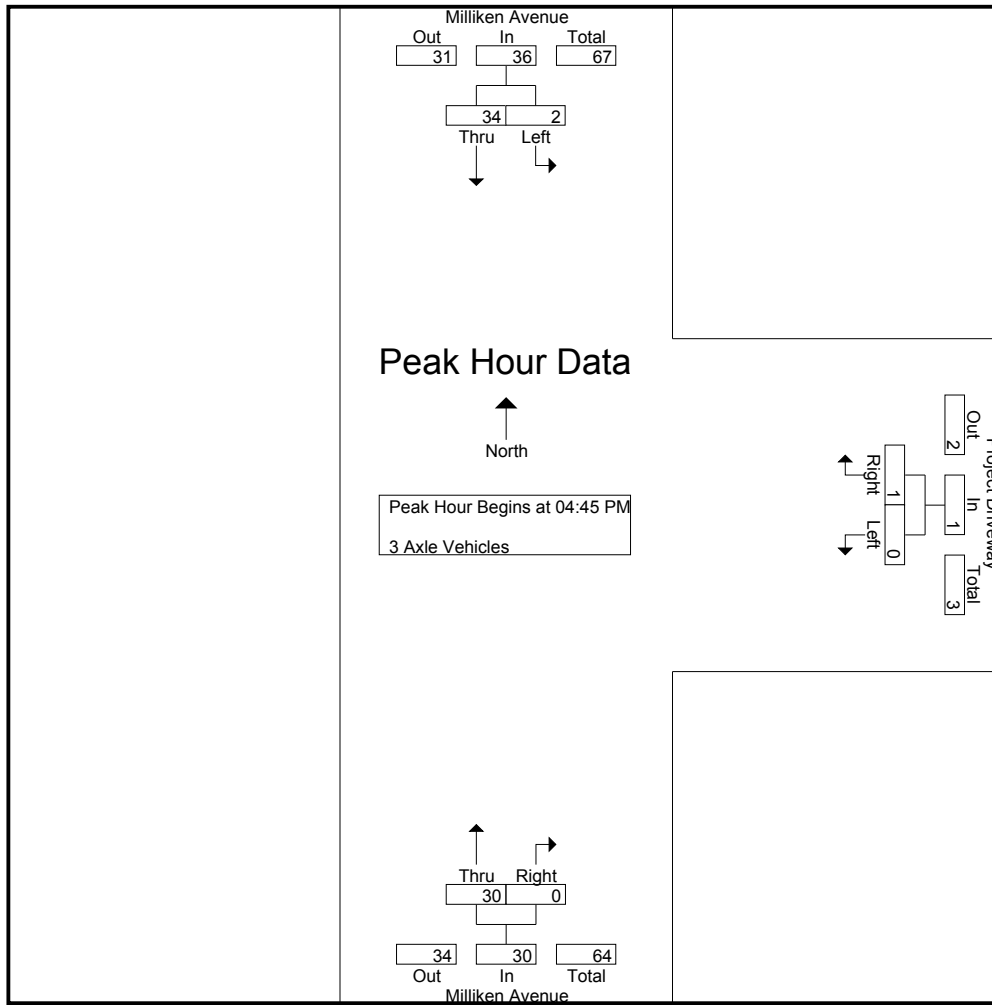
Groups Printed- 3 Axle Vehicles

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	10	10	0	1	1	9	0	9	20
04:15 PM	0	10	10	0	0	0	5	0	5	15
04:30 PM	2	7	9	0	1	1	6	0	6	16
04:45 PM	1	10	11	0	0	0	4	0	4	15
Total	3	37	40	0	2	2	24	0	24	66
05:00 PM	0	5	5	0	0	0	11	0	11	16
05:15 PM	0	9	9	0	1	1	8	0	8	18
05:30 PM	1	10	11	0	0	0	7	0	7	18
05:45 PM	1	11	12	0	1	1	9	0	9	22
Total	2	35	37	0	2	2	35	0	35	74
Grand Total	5	72	77	0	4	4	59	0	59	140
Apprch %	6.5	93.5		0	100		100	0		
Total %	3.6	51.4	55	0	2.9	2.9	42.1	0	42.1	

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	<b>1</b>	<b>10</b>	<b>11</b>	0	0	0	4	0	4	15
05:00 PM	0	5	5	0	0	0	<b>11</b>	0	<b>11</b>	16
05:15 PM	0	9	9	0	<b>1</b>	<b>1</b>	8	0	8	<b>18</b>
05:30 PM	1	10	11	0	0	0	7	0	7	18
Total Volume	2	34	36	0	1	1	30	0	30	67
% App. Total	5.6	94.4		0	100		100	0		
PHF	.500	.850	.818	.000	.250	.250	.682	.000	.682	.931

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

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Site Code : 9222137  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	1	10	11	0	0	0	4	0	4
+15 mins.	0	5	5	0	0	0	11	0	11
+30 mins.	0	9	9	0	1	1	8	0	8
+45 mins.	1	10	11	0	0	0	7	0	7
Total Volume	2	34	36	0	1	1	30	0	30
% App. Total	5.6	94.4		0	100		100	0	
PHF	.500	.850	.818	.000	.250	.250	.682	.000	.682

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWPM  
Site Code : 9222137  
Start Date : 8/18/2009  
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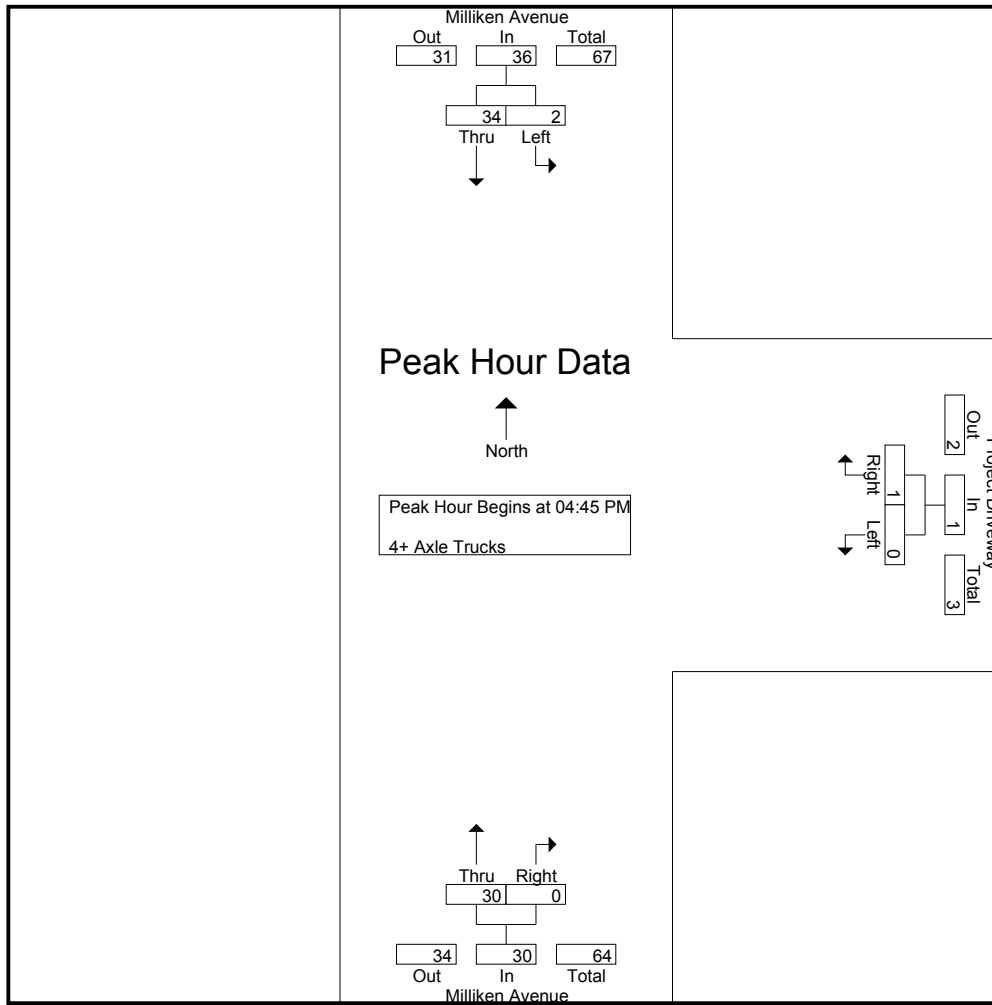
Groups Printed- 4+ Axle Trucks

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	10	10	0	1	1	9	0	9	20
04:15 PM	0	10	10	0	0	0	5	0	5	15
04:30 PM	2	7	9	0	1	1	6	0	6	16
04:45 PM	1	10	11	0	0	0	4	0	4	15
Total	3	37	40	0	2	2	24	0	24	66
05:00 PM	0	5	5	0	0	0	11	0	11	16
05:15 PM	0	9	9	0	1	1	8	0	8	18
05:30 PM	1	10	11	0	0	0	7	0	7	18
05:45 PM	1	11	12	0	1	1	9	0	9	22
Total	2	35	37	0	2	2	35	0	35	74
Grand Total	5	72	77	0	4	4	59	0	59	140
Apprch %	6.5	93.5		0	100		100	0		
Total %	3.6	51.4	55	0	2.9	2.9	42.1	0	42.1	

	Milliken Avenue Southbound			Project Driveway Westbound			Milliken Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	<b>1</b>	<b>10</b>	<b>11</b>	0	0	0	4	0	4	15
05:00 PM	0	5	5	0	0	0	<b>11</b>	0	<b>11</b>	16
05:15 PM	0	9	9	0	<b>1</b>	<b>1</b>	8	0	8	<b>18</b>
05:30 PM	1	10	11	0	0	0	7	0	7	18
Total Volume	2	34	36	0	1	1	30	0	30	67
% App. Total	5.6	94.4		0	100		100	0		
PHF	.500	.850	.818	.000	.250	.250	.682	.000	.682	.931

City of Ontario  
N/S: Milliken Avenue  
E/W: Project Driveway  
Weather: Sunny

File Name : ONTMIDWPM  
Site Code : 9222137  
Start Date : 8/18/2009  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	<b>1</b>	<b>10</b>	<b>11</b>	0	0	0	4	0	4
+15 mins.	0	5	5	0	0	0	<b>11</b>	0	<b>11</b>
+30 mins.	0	9	9	0	<b>1</b>	<b>1</b>	8	0	8
+45 mins.	1	10	11	0	0	0	7	0	7
Total Volume	2	34	36	0	1	1	30	0	30
% App. Total	5.6	94.4		0	100		100	0	
PHF	.500	.850	.818	.000	.250	.250	.682	.000	.682



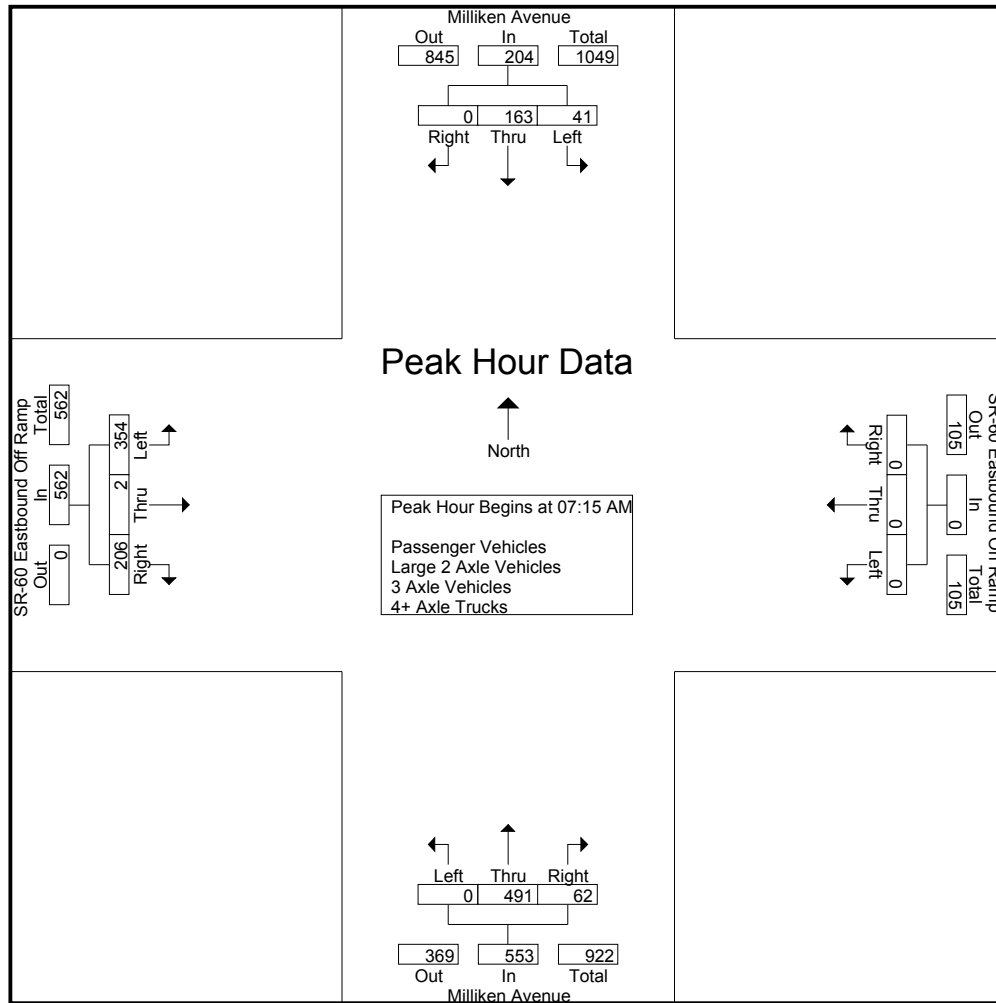
City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EAM  
Site Code : 9222141  
Start Date : 8/18/2009  
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	8	37	0	45	0	0	0	0	0	90	18	108	55	0	46	101	254
07:15 AM	12	46	0	58	0	0	0	0	0	118	19	137	62	1	92	155	350
07:30 AM	11	35	0	46	0	0	0	0	0	122	18	140	74	0	37	111	297
07:45 AM	9	43	0	52	0	0	0	0	0	140	13	153	135	0	38	173	378
Total	40	161	0	201	0	0	0	0	0	470	68	538	326	1	213	540	1279
08:00 AM	9	39	0	48	0	0	0	0	0	111	12	123	83	1	39	123	294
08:15 AM	9	25	0	34	0	0	0	0	0	105	7	112	70	0	37	107	253
08:30 AM	11	31	0	42	0	0	0	0	0	92	10	102	56	0	38	94	238
08:45 AM	9	23	0	32	0	0	0	0	0	84	6	90	63	0	43	106	228
Total	38	118	0	156	0	0	0	0	0	392	35	427	272	1	157	430	1013
Grand Total	78	279	0	357	0	0	0	0	0	862	103	965	598	2	370	970	2292
Apprch %	21.8	78.2	0		0	0	0		0	89.3	10.7		61.6	0.2	38.1		
Total %	3.4	12.2	0	15.6	0	0	0	0	0	37.6	4.5	42.1	26.1	0.1	16.1	42.3	
Passenger Vehicles	55	234	0	289	0	0	0	0	0	766	92	858	497	2	299	798	1945
% Passenger Vehicles	70.5	83.9	0	81	0	0	0	0	0	88.9	89.3	88.9	83.1	100	80.8	82.3	84.9
Large 2 Axle Vehicles	8	10	0	18	0	0	0	0	0	21	4	25	15	0	19	34	77
% Large 2 Axle Vehicles	10.3	3.6	0	5	0	0	0	0	0	2.4	3.9	2.6	2.5	0	5.1	3.5	3.4
3 Axle Vehicles	0	6	0	6	0	0	0	0	0	7	0	7	7	0	4	11	24
% 3 Axle Vehicles	0	2.2	0	1.7	0	0	0	0	0	0.8	0	0.7	1.2	0	1.1	1.1	1
4+ Axle Trucks	15	29	0	44	0	0	0	0	0	68	7	75	79	0	48	127	246
% 4+ Axle Trucks	19.2	10.4	0	12.3	0	0	0	0	0	7.9	6.8	7.8	13.2	0	13	13.1	10.7

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	12	46	0	58	0	0	0	0	0	118	19	137	62	1	92	155	350
07:30 AM	11	35	0	46	0	0	0	0	0	122	18	140	74	0	37	111	297
07:45 AM	9	43	0	52	0	0	0	0	0	140	13	153	135	0	38	173	378
08:00 AM	9	39	0	48	0	0	0	0	0	111	12	123	83	1	39	123	294
Total Volume	41	163	0	204	0	0	0	0	0	491	62	553	354	2	206	562	1319
% App. Total	20.1	79.9	0		0	0	0		0	88.8	11.2		63	0.4	36.7		
PHF	.854	.886	.000	.879	.000	.000	.000	.000	.000	.877	.816	.904	.656	.500	.560	.812	.872



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:15 AM				07:15 AM			
+0 mins.	12	46	0	58	0	0	0	0	0	118	19	137	62	1	92	155
+15 mins.	11	35	0	46	0	0	0	0	0	122	18	140	74	0	37	111
+30 mins.	9	43	0	52	0	0	0	0	0	140	13	153	135	0	38	173
+45 mins.	9	39	0	48	0	0	0	0	0	111	12	123	83	1	39	123
Total Volume	41	163	0	204	0	0	0	0	0	491	62	553	354	2	206	562
% App. Total	20.1	79.9	0		0	0	0		0	88.8	11.2		63	0.4	36.7	
PHF	.854	.886	.000	.879	.000	.000	.000	.000	.000	.877	.816	.904	.656	.500	.560	.812

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EAM  
Site Code : 9222141  
Start Date : 8/18/2009  
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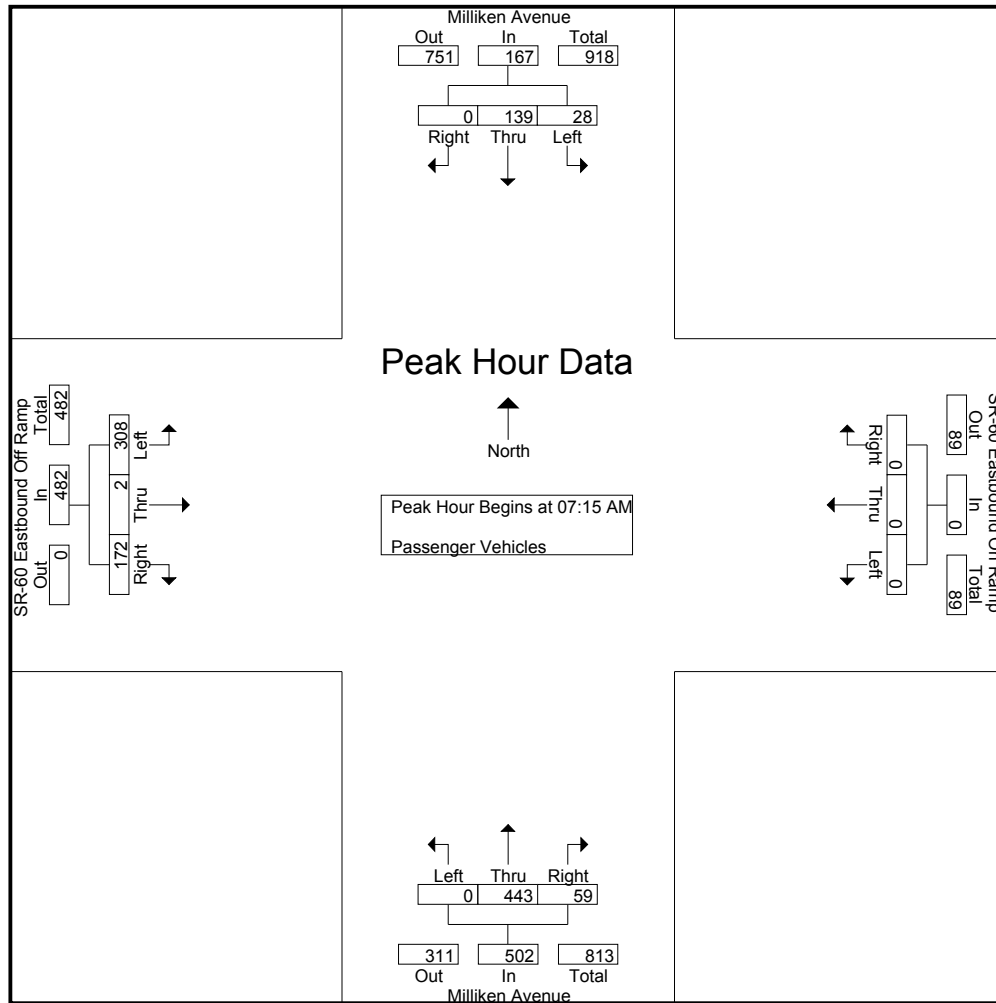
Groups Printed- Passenger Vehicles

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	34	0	39	0	0	0	0	0	81	18	99	41	0	35	76	214
07:15 AM	8	35	0	43	0	0	0	0	0	114	19	133	50	1	82	133	309
07:30 AM	8	30	0	38	0	0	0	0	0	108	17	125	64	0	26	90	253
07:45 AM	4	38	0	42	0	0	0	0	0	128	11	139	120	0	36	156	337
Total	25	137	0	162	0	0	0	0	0	431	65	496	275	1	179	455	1113
08:00 AM	8	36	0	44	0	0	0	0	0	93	12	105	74	1	28	103	252
08:15 AM	6	17	0	23	0	0	0	0	0	92	5	97	55	0	28	83	203
08:30 AM	9	26	0	35	0	0	0	0	0	79	7	86	44	0	32	76	197
08:45 AM	7	18	0	25	0	0	0	0	0	71	3	74	49	0	32	81	180
Total	30	97	0	127	0	0	0	0	0	335	27	362	222	1	120	343	832
Grand Total	55	234	0	289	0	0	0	0	0	766	92	858	497	2	299	798	1945
Apprch %	19	81	0		0	0	0		0	89.3	10.7		62.3	0.3	37.5		
Total %	2.8	12	0	14.9	0	0	0	0	0	39.4	4.7	44.1	25.6	0.1	15.4	41	

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	8	35	0	43	0	0	0	0	0	114	19	133	50	1	82	133	309
07:30 AM	8	30	0	38	0	0	0	0	0	108	17	125	64	0	26	90	253
07:45 AM	4	38	0	42	0	0	0	0	0	128	11	139	120	0	36	156	337
08:00 AM	8	36	0	44	0	0	0	0	0	93	12	105	74	1	28	103	252
Total Volume	28	139	0	167	0	0	0	0	0	443	59	502	308	2	172	482	1151
% App. Total	16.8	83.2	0		0	0	0		0	88.2	11.8		63.9	0.4	35.7		
PHF	.875	.914	.000	.949	.000	.000	.000	.000	.000	.865	.776	.903	.642	.500	.524	.772	.854

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EAM  
Site Code : 9222141  
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	8	35	0	43	0	0	0	0	0	114	19	133	50	1	82	133
+15 mins.	8	30	0	38	0	0	0	0	0	108	17	125	64	0	26	90
+30 mins.	4	38	0	42	0	0	0	0	0	128	11	139	120	0	36	156
+45 mins.	8	36	0	44	0	0	0	0	0	93	12	105	74	1	28	103
Total Volume	28	139	0	167	0	0	0	0	0	443	59	502	308	2	172	482
% App. Total	16.8	83.2	0		0	0	0		0	88.2	11.8		63.9	0.4	35.7	
PHF	.875	.914	.000	.949	.000	.000	.000	.000	.000	.865	.776	.903	.642	.500	.524	.772

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EAM  
Site Code : 9222141  
Start Date : 8/18/2009  
Page No : 1

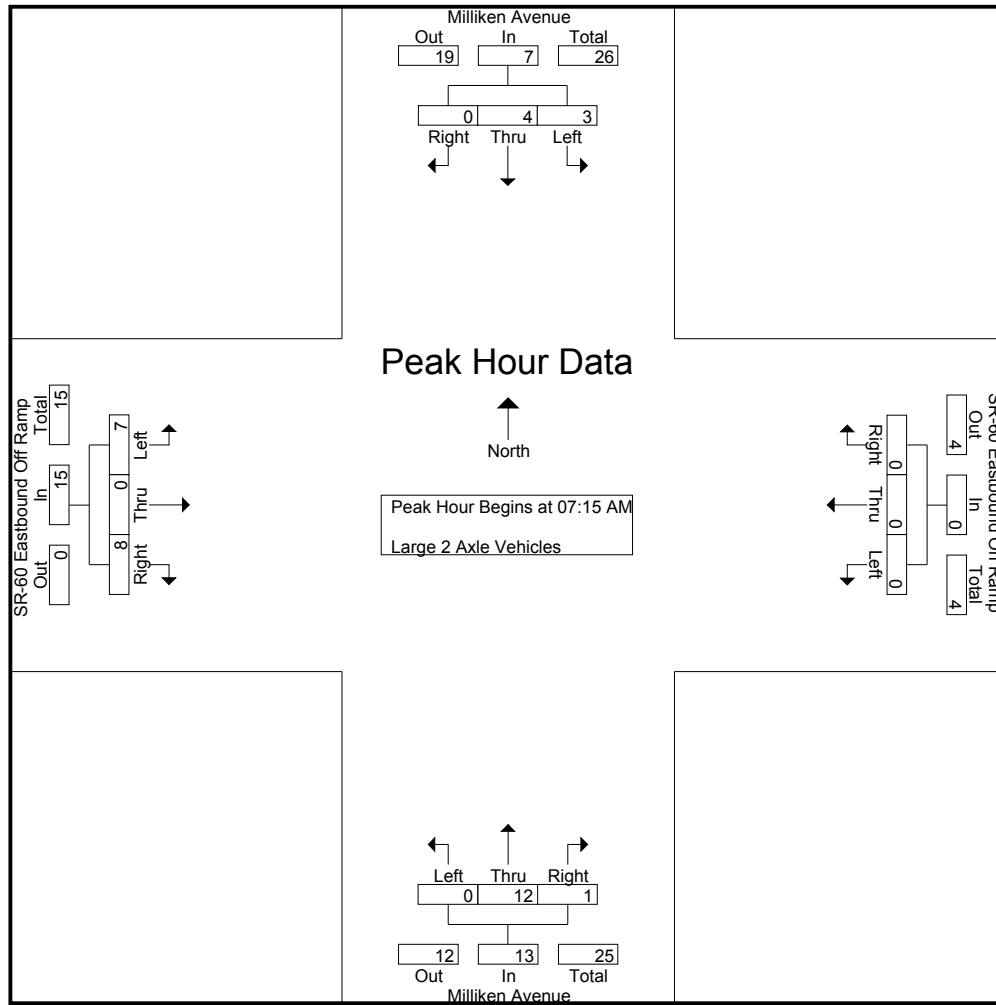
Groups Printed- Large 2 Axle Vehicles

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	1	0	3	0	0	0	0	0	1	0	1	3	0	2	5	9
07:15 AM	1	1	0	2	0	0	0	0	0	1	0	1	3	0	2	5	8
07:30 AM	0	2	0	2	0	0	0	0	0	1	0	1	1	0	3	4	7
07:45 AM	1	1	0	2	0	0	0	0	0	4	1	5	2	0	1	3	10
Total	4	5	0	9	0	0	0	0	0	7	1	8	9	0	8	17	34
08:00 AM	1	0	0	1	0	0	0	0	0	6	0	6	1	0	2	3	10
08:15 AM	1	3	0	4	0	0	0	0	0	3	0	3	1	0	3	4	11
08:30 AM	1	2	0	3	0	0	0	0	0	3	2	5	1	0	3	4	12
08:45 AM	1	0	0	1	0	0	0	0	0	2	1	3	3	0	3	6	10
Total	4	5	0	9	0	0	0	0	0	14	3	17	6	0	11	17	43
Grand Total	8	10	0	18	0	0	0	0	0	21	4	25	15	0	19	34	77
Apprch %	44.4	55.6	0		0	0	0		0	84	16		44.1	0	55.9		
Total %	10.4	13	0	23.4	0	0	0	0	0	27.3	5.2	32.5	19.5	0	24.7	44.2	

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	1	0	2	0	0	0	0	0	1	0	1	3	0	2	5	8
07:30 AM	0	2	0	2	0	0	0	0	0	1	0	1	1	0	3	4	7
07:45 AM	1	1	0	2	0	0	0	0	0	4	1	5	2	0	1	3	10
08:00 AM	1	0	0	1	0	0	0	0	0	6	0	6	1	0	2	3	10
Total Volume	3	4	0	7	0	0	0	0	0	12	1	13	7	0	8	15	35
% App. Total	42.9	57.1	0		0	0	0		0	92.3	7.7		46.7	0	53.3		
PHF	.750	.500	.000	.875	.000	.000	.000	.000	.000	.500	.250	.542	.583	.000	.667	.750	.875

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EAM  
Site Code : 9222141  
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**Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	1	1	0	2	0	0	0	0	0	1	0	1	3	0	2	5
+15 mins.	0	2	0	2	0	0	0	0	0	1	0	1	1	0	3	4
+30 mins.	1	1	0	2	0	0	0	0	0	4	1	5	2	0	1	3
+45 mins.	1	0	0	1	0	0	0	0	0	6	0	6	1	0	2	3
Total Volume	3	4	0	7	0	0	0	0	0	12	1	13	7	0	8	15
% App. Total	42.9	57.1	0		0	0	0		0	92.3	7.7		46.7	0	53.3	
PHF	.750	.500	.000	.875	.000	.000	.000	.000	.000	.500	.250	.542	.583	.000	.667	.750

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EAM  
Site Code : 9222141  
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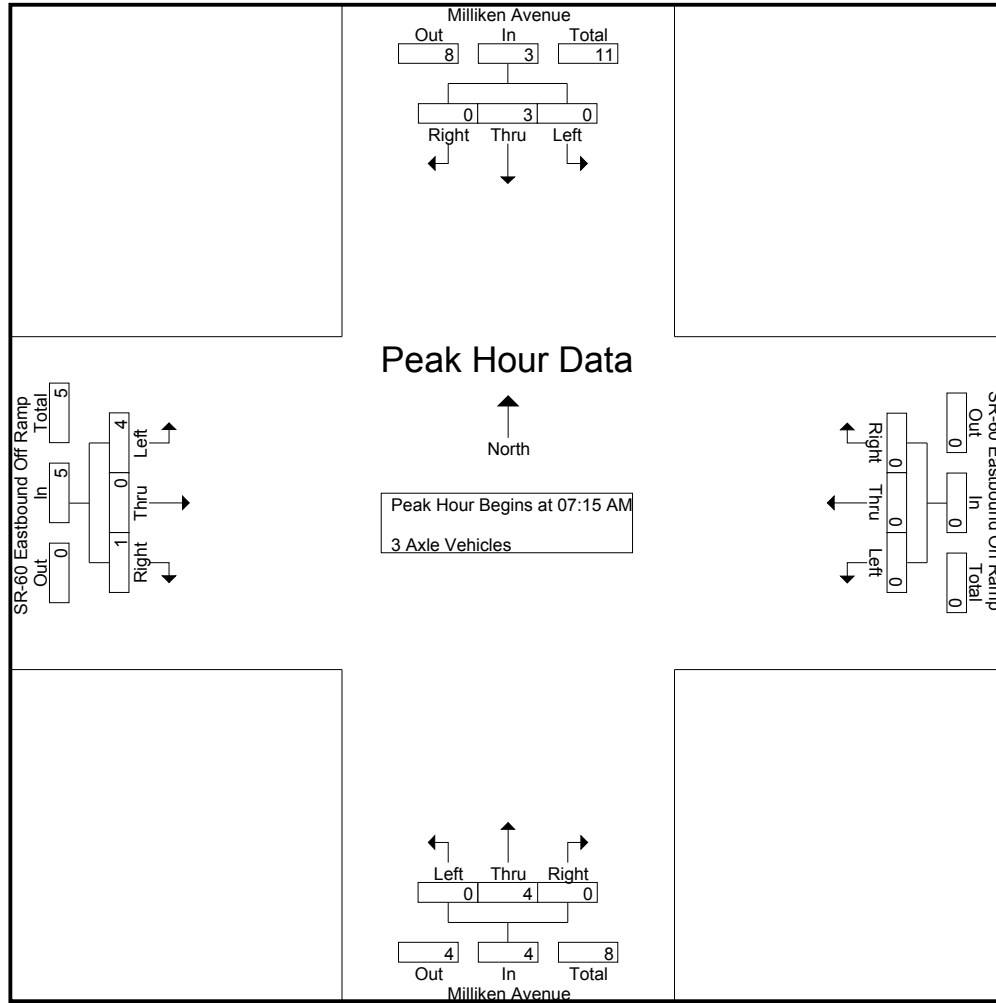
Groups Printed- 3 Axle Vehicles

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3
07:15 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	0	2	0	2	0	0	0	0	0	3	0	3	2	0	2	4	9
08:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	3	0	1	4	6
08:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	1	0	1	2	4
08:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
08:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	4	0	4	0	0	0	0	0	4	0	4	5	0	2	7	15
Grand Total	0	6	0	6	0	0	0	0	0	7	0	7	7	0	4	11	24
Apprch %	0	100	0		0	0	0		0	100	0		63.6	0	36.4		
Total %	0	25	0	25	0	0	0	0	0	29.2	0	29.2	29.2	0	16.7	45.8	

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
08:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	3	0	1	4	6
Total Volume	0	3	0	3	0	0	0	0	0	4	0	4	4	0	1	5	12
% App. Total	0	100	0		0	0	0		0	100	0		80	0	20		
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.500	.000	.500	.333	.000	.250	.313	.500

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EAM  
Site Code : 9222141  
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**Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	3	0	1	4
Total Volume	0	3	0	3	0	0	0	0	0	4	0	4	4	0	1	5
% App. Total	0	100	0		0	0	0		0	100	0		80	0	20	
PHF	.000	.375	.000	.375	.000	.000	.000	.000	.000	.500	.000	.500	.333	.000	.250	.313



City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EAM  
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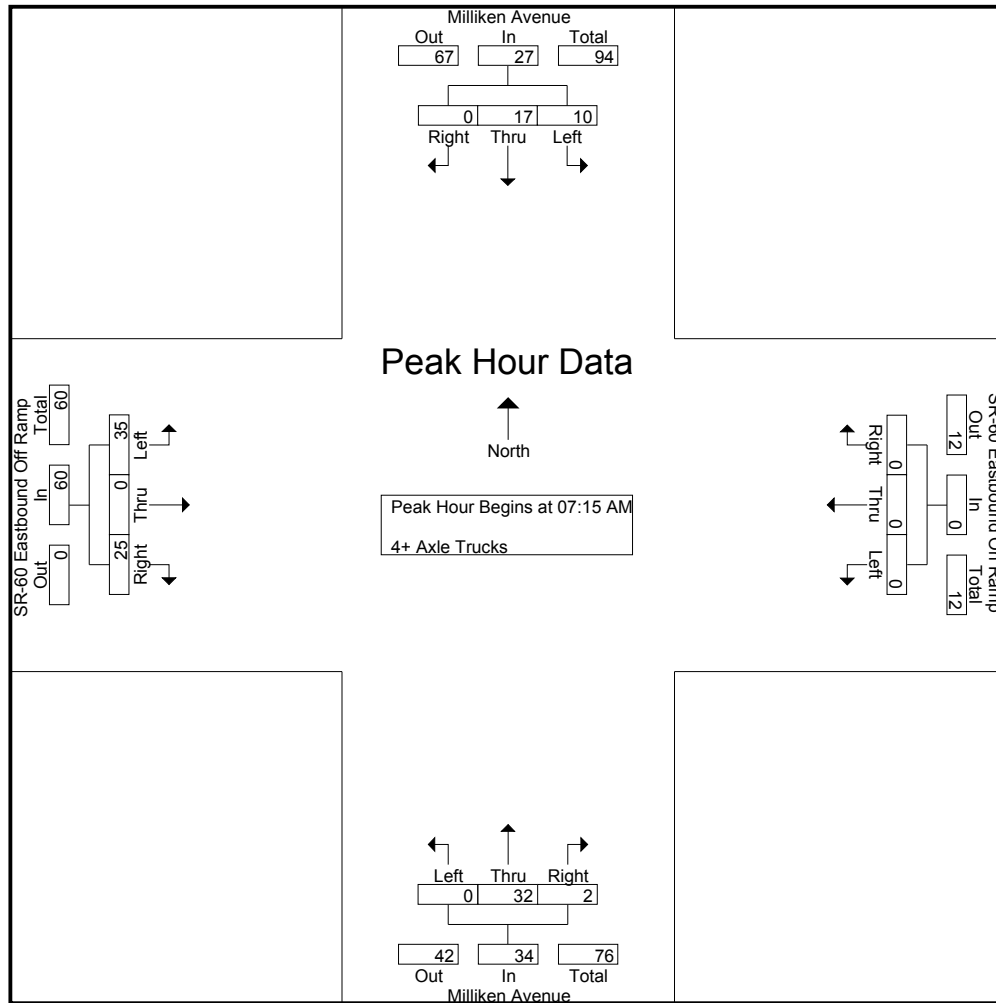
Groups Printed- 4+ Axle Trucks

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	2	0	3	0	0	0	0	0	8	0	8	10	0	7	17	28
07:15 AM	3	8	0	11	0	0	0	0	0	3	0	3	9	0	8	17	31
07:30 AM	3	3	0	6	0	0	0	0	0	11	1	12	9	0	8	17	35
07:45 AM	4	4	0	8	0	0	0	0	0	7	1	8	12	0	1	13	29
Total	11	17	0	28	0	0	0	0	0	29	2	31	40	0	24	64	123
08:00 AM	0	2	0	2	0	0	0	0	0	11	0	11	5	0	8	13	26
08:15 AM	2	4	0	6	0	0	0	0	0	9	2	11	13	0	5	18	35
08:30 AM	1	2	0	3	0	0	0	0	0	9	1	10	10	0	3	13	26
08:45 AM	1	4	0	5	0	0	0	0	0	10	2	12	11	0	8	19	36
Total	4	12	0	16	0	0	0	0	0	39	5	44	39	0	24	63	123
Grand Total	15	29	0	44	0	0	0	0	0	68	7	75	79	0	48	127	246
Apprch %	34.1	65.9	0		0	0	0		0	90.7	9.3		62.2	0	37.8		
Total %	6.1	11.8	0	17.9	0	0	0	0	0	27.6	2.8	30.5	32.1	0	19.5	51.6	

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	8	0	11	0	0	0	0	0	3	0	3	9	0	8	17	31
07:30 AM	3	3	0	6	0	0	0	0	0	11	1	12	9	0	8	17	35
07:45 AM	4	4	0	8	0	0	0	0	0	7	1	8	12	0	1	13	29
08:00 AM	0	2	0	2	0	0	0	0	0	11	0	11	5	0	8	13	26
Total Volume	10	17	0	27	0	0	0	0	0	32	2	34	35	0	25	60	121
% App. Total	37	63	0		0	0	0		0	94.1	5.9		58.3	0	41.7		
PHF	.625	.531	.000	.614	.000	.000	.000	.000	.000	.727	.500	.708	.729	.000	.781	.882	.864

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EAM  
Site Code : 9222141  
Start Date : 8/18/2009  
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**Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	3	8	0	11	0	0	0	0	0	3	0	3	9	0	8	17
+15 mins.	3	3	0	6	0	0	0	0	0	11	1	12	9	0	8	17
+30 mins.	4	4	0	8	0	0	0	0	0	7	1	8	12	0	1	13
+45 mins.	0	2	0	2	0	0	0	0	0	11	0	11	5	0	8	13
Total Volume	10	17	0	27	0	0	0	0	0	32	2	34	35	0	25	60
% App. Total	37	63	0		0	0	0		0	94.1	5.9		58.3	0	41.7	
PHF	.625	.531	.000	.614	.000	.000	.000	.000	.000	.727	.500	.708	.729	.000	.781	.882

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EPM  
Site Code : 9222141  
Start Date : 8/18/2009  
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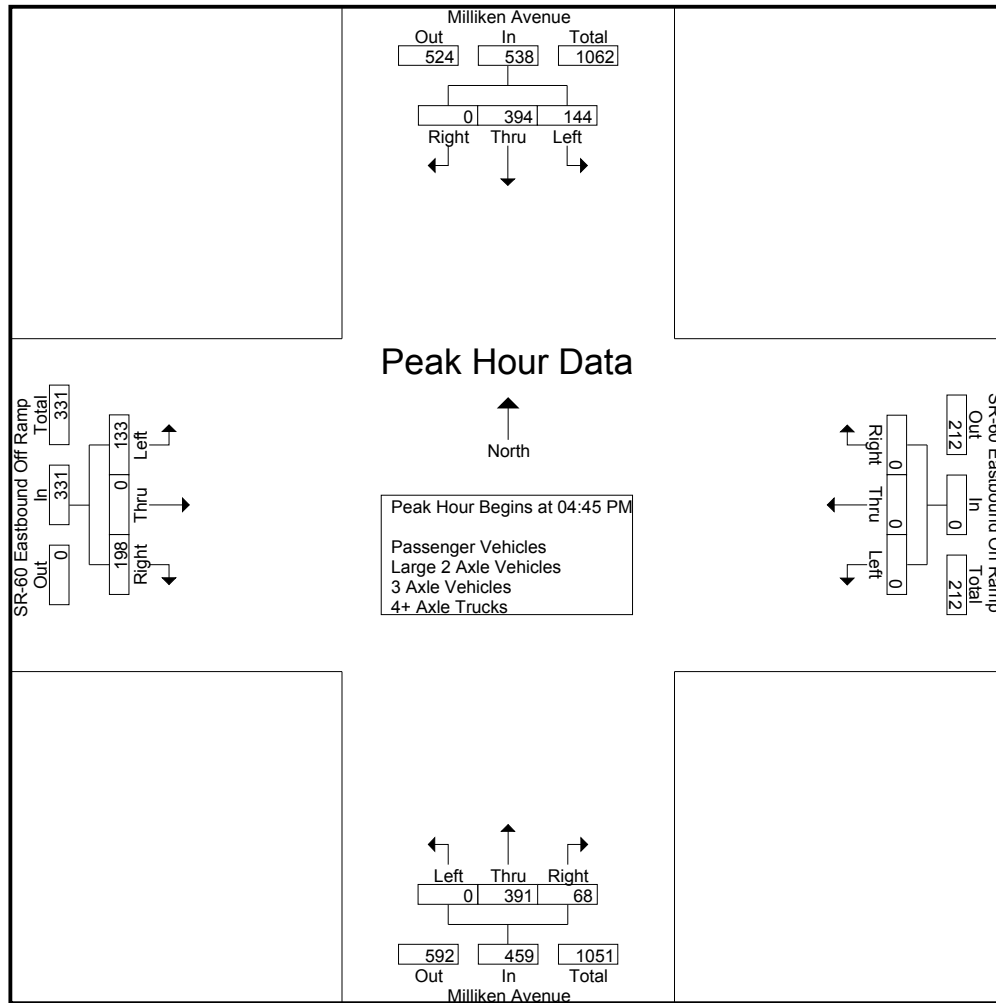
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	28	75	0	103	0	0	0	0	0	71	21	92	40	0	45	85	280
04:15 PM	33	73	0	106	0	0	0	0	0	80	14	94	37	0	46	83	283
04:30 PM	24	93	0	117	0	0	0	0	0	93	16	109	37	0	51	88	314
04:45 PM	36	89	0	125	0	0	0	0	0	87	15	102	33	0	57	90	317
Total	121	330	0	451	0	0	0	0	0	331	66	397	147	0	199	346	1194
05:00 PM	44	96	0	140	0	0	0	0	0	115	15	130	27	0	44	71	341
05:15 PM	34	105	0	139	0	0	0	0	0	93	15	108	38	0	48	86	333
05:30 PM	30	104	0	134	0	0	0	0	0	96	23	119	35	0	49	84	337
05:45 PM	27	72	0	99	0	0	0	0	0	74	11	85	29	0	53	82	266
Total	135	377	0	512	0	0	0	0	0	378	64	442	129	0	194	323	1277
Grand Total	256	707	0	963	0	0	0	0	0	709	130	839	276	0	393	669	2471
Apprch %	26.6	73.4	0		0	0	0		0	84.5	15.5		41.3	0	58.7		
Total %	10.4	28.6	0	39	0	0	0	0	0	28.7	5.3	34	11.2	0	15.9	27.1	
Passenger Vehicles	241	675	0	916	0	0	0	0	0	631	122	753	194	0	319	513	2182
% Passenger Vehicles	94.1	95.5	0	95.1	0	0	0	0	0	89	93.8	89.7	70.3	0	81.2	76.7	88.3
Large 2 Axle Vehicles	8	9	0	17	0	0	0	0	0	15	2	17	12	0	8	20	54
% Large 2 Axle Vehicles	3.1	1.3	0	1.8	0	0	0	0	0	2.1	1.5	2	4.3	0	2	3	2.2
3 Axle Vehicles	0	3	0	3	0	0	0	0	0	6	1	7	4	0	5	9	19
% 3 Axle Vehicles	0	0.4	0	0.3	0	0	0	0	0	0.8	0.8	0.8	1.4	0	1.3	1.3	0.8
4+ Axle Trucks	7	20	0	27	0	0	0	0	0	57	5	62	66	0	61	127	216
% 4+ Axle Trucks	2.7	2.8	0	2.8	0	0	0	0	0	8	3.8	7.4	23.9	0	15.5	19	8.7

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	36	89	0	125	0	0	0	0	0	87	15	102	33	0	<b>57</b>	<b>90</b>	317
05:00 PM	<b>44</b>	96	0	<b>140</b>	0	0	0	0	0	<b>115</b>	15	<b>130</b>	27	0	44	71	<b>341</b>
05:15 PM	34	<b>105</b>	0	139	0	0	0	0	0	93	15	108	<b>38</b>	0	48	86	333
05:30 PM	30	104	0	134	0	0	0	0	0	96	<b>23</b>	119	35	0	49	84	337
Total Volume	144	394	0	538	0	0	0	0	0	391	68	459	133	0	198	331	1328
% App. Total	26.8	73.2	0		0	0	0		0	85.2	14.8		40.2	0	59.8		
PHF	.818	.938	.000	.961	.000	.000	.000	.000	.000	.850	.739	.883	.875	.000	.868	.919	.974

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EPM  
Site Code : 9222141  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	36	89	0	125	0	0	0	0	0	87	15	102	33	0	57	90
+15 mins.	44	96	0	140	0	0	0	0	0	115	15	130	27	0	44	71
+30 mins.	34	105	0	139	0	0	0	0	0	93	15	108	38	0	48	86
+45 mins.	30	104	0	134	0	0	0	0	0	96	23	119	35	0	49	84
Total Volume	144	394	0	538	0	0	0	0	0	391	68	459	133	0	198	331
% App. Total	26.8	73.2	0		0	0	0		0	85.2	14.8		40.2	0	59.8	
PHF	.818	.938	.000	.961	.000	.000	.000	.000	.000	.850	.739	.883	.875	.000	.868	.919

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EPM  
Site Code : 9222141  
Start Date : 8/18/2009  
Page No : 1

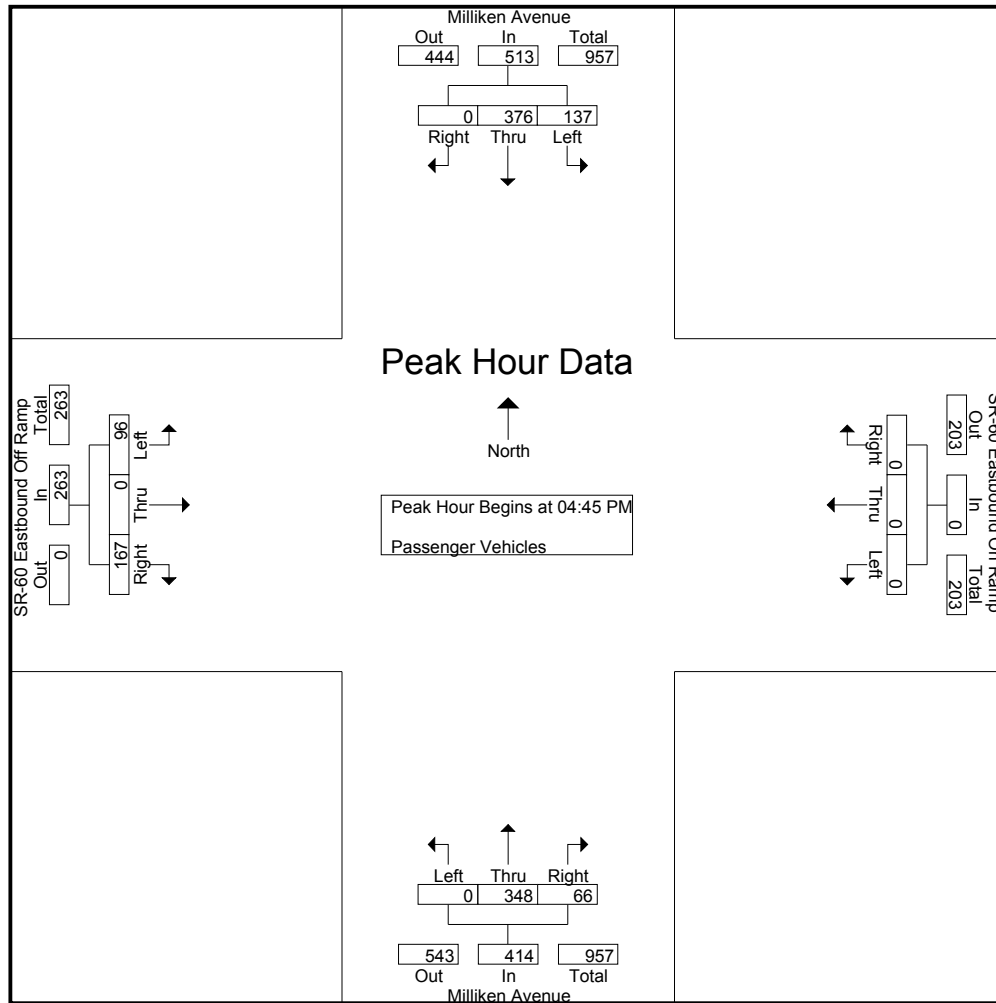
Groups Printed- Passenger Vehicles

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	25	71	0	96	0	0	0	0	0	63	18	81	27	0	34	61	238
04:15 PM	31	69	0	100	0	0	0	0	0	71	13	84	23	0	38	61	245
04:30 PM	21	88	0	109	0	0	0	0	0	85	14	99	27	0	42	69	277
04:45 PM	35	84	0	119	0	0	0	0	0	79	15	94	24	0	46	70	283
Total	112	312	0	424	0	0	0	0	0	298	60	358	101	0	160	261	1043
05:00 PM	42	94	0	136	0	0	0	0	0	104	14	118	19	0	40	59	313
05:15 PM	32	101	0	133	0	0	0	0	0	78	15	93	27	0	38	65	291
05:30 PM	28	97	0	125	0	0	0	0	0	87	22	109	26	0	43	69	303
05:45 PM	27	71	0	98	0	0	0	0	0	64	11	75	21	0	38	59	232
Total	129	363	0	492	0	0	0	0	0	333	62	395	93	0	159	252	1139
Grand Total	241	675	0	916	0	0	0	0	0	631	122	753	194	0	319	513	2182
Apprch %	26.3	73.7	0		0	0	0		0	83.8	16.2		37.8	0	62.2		
Total %	11	30.9	0	42	0	0	0	0	0	28.9	5.6	34.5	8.9	0	14.6	23.5	

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	35	84	0	119	0	0	0	0	0	79	15	94	24	0	<b>46</b>	<b>70</b>	283
05:00 PM	<b>42</b>	94	0	<b>136</b>	0	0	0	0	0	<b>104</b>	14	<b>118</b>	19	0	40	59	<b>313</b>
05:15 PM	32	<b>101</b>	0	133	0	0	0	0	0	78	15	93	<b>27</b>	0	38	65	291
05:30 PM	28	97	0	125	0	0	0	0	0	87	<b>22</b>	109	26	0	43	69	303
Total Volume	137	376	0	513	0	0	0	0	0	348	66	414	96	0	167	263	1190
% App. Total	26.7	73.3	0		0	0	0		0	84.1	15.9		36.5	0	63.5		
PHF	.815	.931	.000	.943	.000	.000	.000	.000	.000	.837	.750	.877	.889	.000	.908	.939	.950

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EPM  
Site Code : 9222141  
Start Date : 8/18/2009  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	35	84	0	119	0	0	0	0	0	79	15	94	24	0	<b>46</b>	<b>70</b>
+15 mins.	<b>42</b>	94	0	<b>136</b>	0	0	0	0	0	<b>104</b>	14	<b>118</b>	19	0	40	59
+30 mins.	32	<b>101</b>	0	133	0	0	0	0	0	78	15	93	<b>27</b>	0	38	65
+45 mins.	28	97	0	125	0	0	0	0	0	87	<b>22</b>	109	26	0	43	69
Total Volume	137	376	0	513	0	0	0	0	0	348	66	414	96	0	167	263
% App. Total	26.7	73.3	0		0	0	0	0	0	84.1	15.9		36.5	0	63.5	
PHF	.815	.931	.000	.943	.000	.000	.000	.000	.000	.837	.750	.877	.889	.000	.908	.939

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EPM  
Site Code : 9222141  
Start Date : 8/18/2009  
Page No : 1

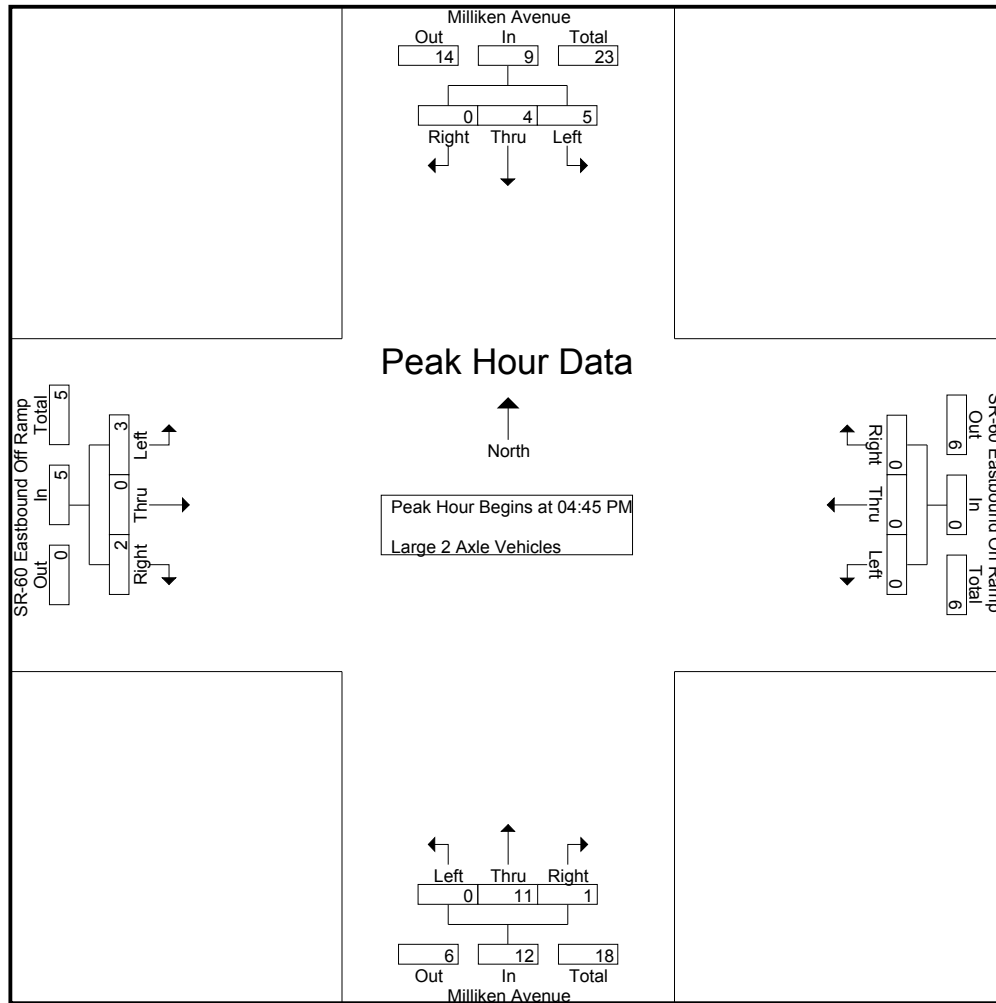
Groups Printed- Large 2 Axle Vehicles

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	2	0	3	0	0	0	0	0	0	0	0	2	0	0	2	5
04:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	6	0	2	8	10
04:30 PM	2	3	0	5	0	0	0	0	0	2	1	3	0	0	1	1	9
04:45 PM	1	1	0	2	0	0	0	0	0	5	0	5	1	0	0	1	8
Total	4	6	0	10	0	0	0	0	0	9	1	10	9	0	3	12	32
05:00 PM	1	2	0	3	0	0	0	0	0	3	1	4	1	0	0	1	8
05:15 PM	2	1	0	3	0	0	0	0	0	3	0	3	1	0	1	2	8
05:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4	4
Total	4	3	0	7	0	0	0	0	0	6	1	7	3	0	5	8	22
Grand Total	8	9	0	17	0	0	0	0	0	15	2	17	12	0	8	20	54
Apprch %	47.1	52.9	0		0	0	0		0	88.2	11.8		60	0	40		
Total %	14.8	16.7	0	31.5	0	0	0	0	0	27.8	3.7	31.5	22.2	0	14.8	37	

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	1	0	2	0	0	0	0	0	5	0	5	1	0	0	1	8
05:00 PM	1	2	0	3	0	0	0	0	0	3	1	4	1	0	0	1	8
05:15 PM	2	1	0	3	0	0	0	0	0	3	0	3	1	0	1	2	8
05:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	2
Total Volume	5	4	0	9	0	0	0	0	0	11	1	12	3	0	2	5	26
% App. Total	55.6	44.4	0		0	0	0		0	91.7	8.3		60	0	40		
PHF	.625	.500	.000	.750	.000	.000	.000	.000	.000	.550	.250	.600	.750	.000	.500	.625	.813

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EPM  
Site Code : 9222141  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	1	1	0	2	0	0	0	0	0	5	0	5	1	0	0	1
+15 mins.	1	2	0	3	0	0	0	0	0	3	1	4	1	0	0	1
+30 mins.	2	1	0	3	0	0	0	0	0	3	0	3	1	0	1	2
+45 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
Total Volume	5	4	0	9	0	0	0	0	0	11	1	12	3	0	2	5
% App. Total	55.6	44.4	0		0	0	0		0	91.7	8.3		60	0	40	
PHF	.625	.500	.000	.750	.000	.000	.000	.000	.000	.550	.250	.600	.750	.000	.500	.625



City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EPM  
Site Code : 9222141  
Start Date : 8/18/2009  
Page No : 1

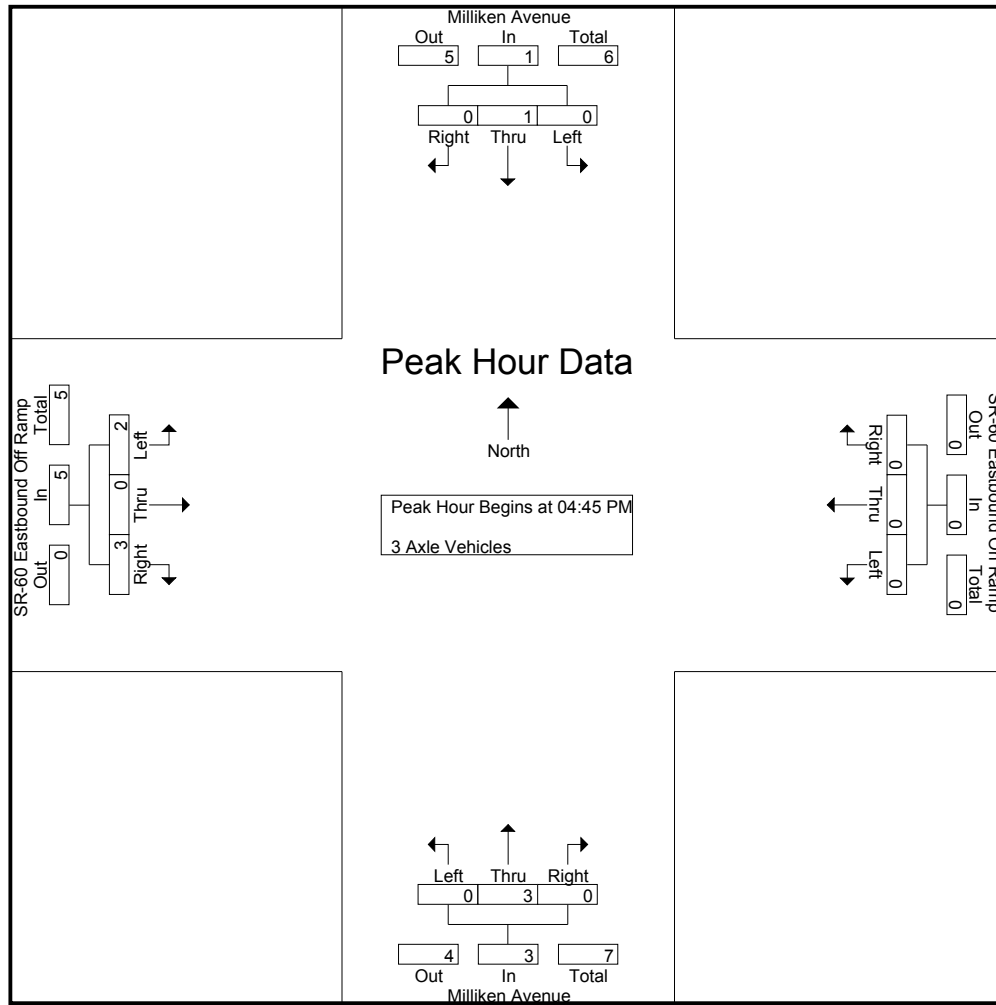
Groups Printed- 3 Axle Vehicles

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	1	0	1	2	4
04:15 PM	0	1	0	1	0	0	0	0	0	2	1	3	1	0	0	1	5
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	2	3
Total	0	3	0	3	0	0	0	0	0	3	1	4	3	0	3	6	13
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	3
05:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	1	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	3	0	3	1	0	2	3	6
Grand Total	0	3	0	3	0	0	0	0	0	6	1	7	4	0	5	9	19
Apprch %	0	100	0		0	0	0		0	85.7	14.3		44.4	0	55.6		
Total %	0	15.8	0	15.8	0	0	0	0	0	31.6	5.3	36.8	21.1	0	26.3	47.4	

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	2	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2	3
05:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	1	3
Total Volume	0	1	0	1	0	0	0	0	0	3	0	3	2	0	3	5	9
% App. Total	0	100	0		0	0	0		0	100	0		40	0	60		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.375	.000	.375	.500	.000	.375	.625	.750

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EPM  
Site Code : 9222141  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1	2
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	2	2
+45 mins.	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	1
Total Volume	0	1	0	1	0	0	0	0	0	3	0	3	2	0	3	5
% App. Total	0	100	0		0	0	0		0	100	0		40	0	60	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.375	.000	.375	.500	.000	.375	.625

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EPM  
Site Code : 9222141  
Start Date : 8/18/2009  
Page No : 1

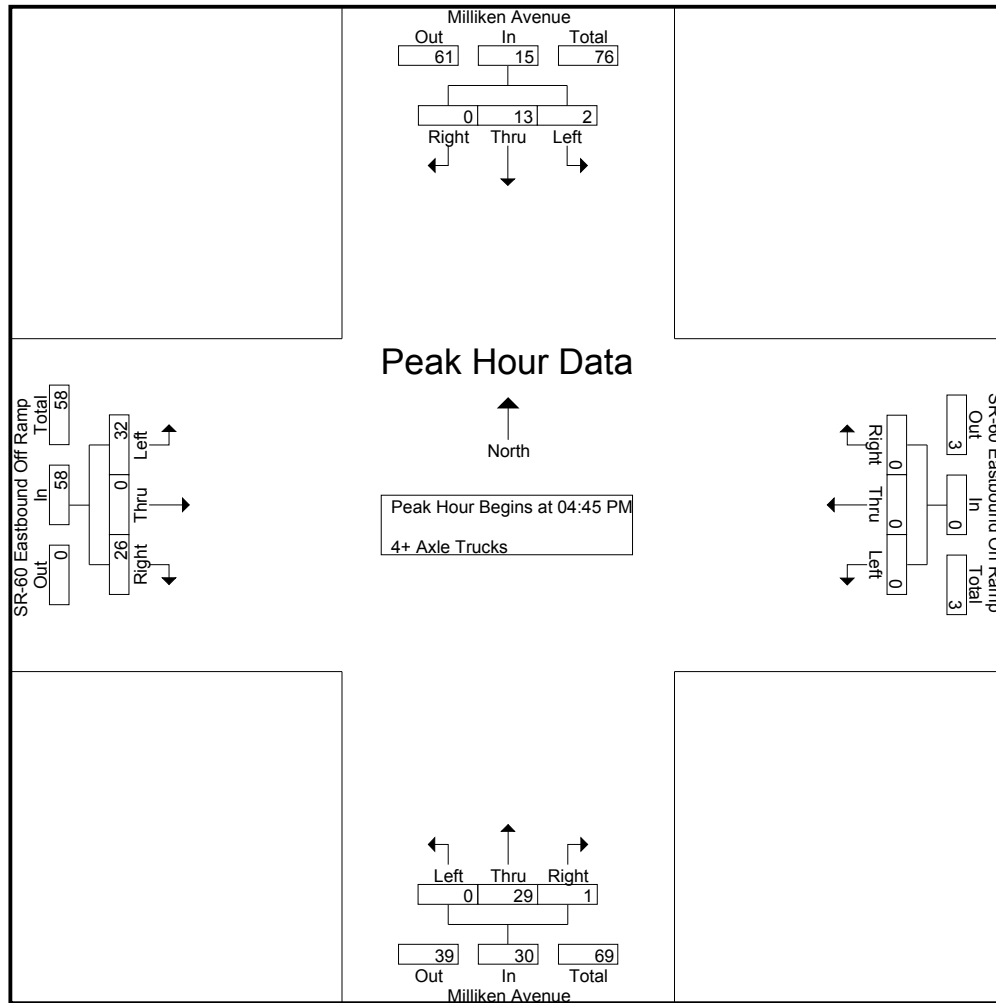
Groups Printed- 4+ Axle Trucks

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	1	0	3	0	0	0	0	0	7	3	10	10	0	10	20	33
04:15 PM	2	3	0	5	0	0	0	0	0	5	0	5	7	0	6	13	23
04:30 PM	1	2	0	3	0	0	0	0	0	6	1	7	10	0	7	17	27
04:45 PM	0	3	0	3	0	0	0	0	0	3	0	3	7	0	10	17	23
Total	5	9	0	14	0	0	0	0	0	21	4	25	34	0	33	67	106
05:00 PM	1	0	0	1	0	0	0	0	0	8	0	8	7	0	4	11	20
05:15 PM	0	3	0	3	0	0	0	0	0	11	0	11	10	0	7	17	31
05:30 PM	1	7	0	8	0	0	0	0	0	7	1	8	8	0	5	13	29
05:45 PM	0	1	0	1	0	0	0	0	0	10	0	10	7	0	12	19	30
Total	2	11	0	13	0	0	0	0	0	36	1	37	32	0	28	60	110
Grand Total	7	20	0	27	0	0	0	0	0	57	5	62	66	0	61	127	216
Apprch %	25.9	74.1	0		0	0	0		0	91.9	8.1		52	0	48		
Total %	3.2	9.3	0	12.5	0	0	0	0	0	26.4	2.3	28.7	30.6	0	28.2	58.8	

	Milliken Avenue Southbound				SR-60 Eastbound On Ramp Westbound				Milliken Avenue Northbound				SR-60 Eastbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	3	0	3	0	0	0	0	0	3	0	3	7	0	<b>10</b>	<b>17</b>	23
05:00 PM	<b>1</b>	0	0	1	0	0	0	0	0	8	0	8	7	0	4	11	20
05:15 PM	0	3	0	3	0	0	0	0	0	<b>11</b>	0	<b>11</b>	<b>10</b>	0	7	17	<b>31</b>
05:30 PM	1	<b>7</b>	0	<b>8</b>	0	0	0	0	0	7	<b>1</b>	8	8	0	5	13	29
Total Volume	2	13	0	15	0	0	0	0	0	29	1	30	32	0	26	58	103
% App. Total	13.3	86.7	0		0	0	0		0	96.7	3.3		55.2	0	44.8		
PHF	.500	.464	.000	.469	.000	.000	.000	.000	.000	.659	.250	.682	.800	.000	.650	.853	.831

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Eastbound Ramps  
Weather: Sunny

File Name : ONTMI60EPM  
Site Code : 9222141  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	3	0	3	0	0	0	0	0	3	0	3	7	0	<b>10</b>	<b>17</b>
+15 mins.	<b>1</b>	0	0	1	0	0	0	0	0	8	0	8	7	0	4	11
+30 mins.	0	3	0	3	0	0	0	0	0	<b>11</b>	0	<b>11</b>	<b>10</b>	0	7	17
+45 mins.	1	<b>7</b>	0	<b>8</b>	0	0	0	0	0	7	<b>1</b>	8	8	0	5	13
Total Volume	2	13	0	15	0	0	0	0	0	29	1	30	32	0	26	58
% App. Total	13.3	86.7	0		0	0	0		0	96.7	3.3		55.2	0	44.8	
PHF	.500	.464	.000	.469	.000	.000	.000	.000	.000	.659	.250	.682	.800	.000	.650	.853

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

File Name : ONTMI60WAM  
Site Code : 9222135  
Start Date : 8/18/2009  
Page No : 1

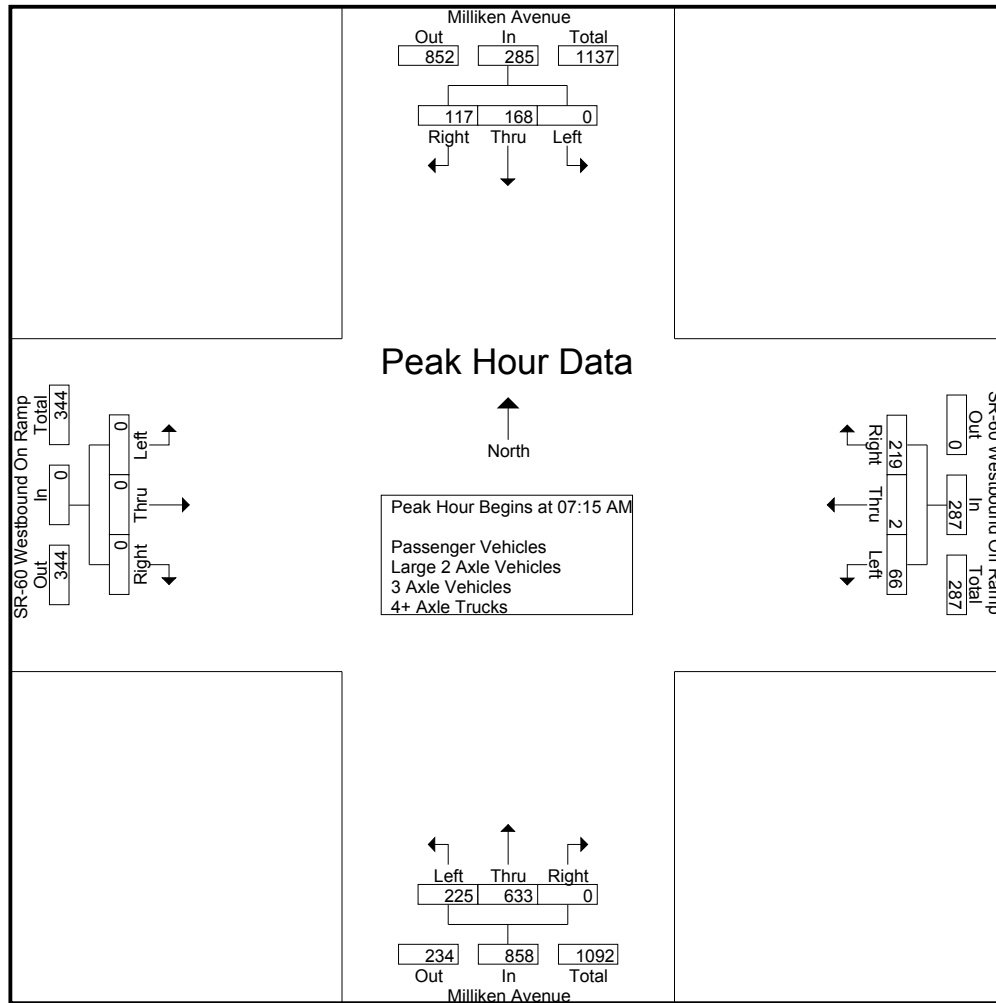
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	27	24	51	18	0	31	49	55	89	0	144	0	0	0	0	244
07:15 AM	0	46	37	83	21	0	44	65	69	115	0	184	0	0	0	0	332
07:30 AM	0	48	30	78	13	1	48	62	36	152	0	188	0	0	0	0	328
07:45 AM	0	39	25	64	14	1	64	79	63	217	0	280	0	0	0	0	423
Total	0	160	116	276	66	2	187	255	223	573	0	796	0	0	0	0	1327
08:00 AM	0	35	25	60	18	0	63	81	57	149	0	206	0	0	0	0	347
08:15 AM	0	28	19	47	14	0	32	46	38	135	0	173	0	0	0	0	266
08:30 AM	0	39	30	69	6	0	27	33	36	102	0	138	3	0	1	4	244
08:45 AM	0	32	20	52	11	0	30	41	45	97	0	142	0	0	0	0	235
Total	0	134	94	228	49	0	152	201	176	483	0	659	3	0	1	4	1092
Grand Total	0	294	210	504	115	2	339	456	399	1056	0	1455	3	0	1	4	2419
Apprch %	0	58.3	41.7		25.2	0.4	74.3		27.4	72.6	0		75	0	25		
Total %	0	12.2	8.7	20.8	4.8	0.1	14	18.9	16.5	43.7	0	60.1	0.1	0	0	0.2	
Passenger Vehicles	0	232	114	346	100	1	315	416	328	924	0	1252	2	0	1	3	2017
% Passenger Vehicles	0	78.9	54.3	68.7	87	50	92.9	91.2	82.2	87.5	0	86	66.7	0	100	75	83.4
Large 2 Axle Vehicles	0	15	15	30	5	0	3	8	17	26	0	43	0	0	0	0	81
% Large 2 Axle Vehicles	0	5.1	7.1	6	4.3	0	0.9	1.8	4.3	2.5	0	3	0	0	0	0	3.3
3 Axle Vehicles	0	6	5	11	2	0	3	5	3	11	0	14	0	0	0	0	30
% 3 Axle Vehicles	0	2	2.4	2.2	1.7	0	0.9	1.1	0.8	1	0	1	0	0	0	0	1.2
4+ Axle Trucks	0	41	76	117	8	1	18	27	51	95	0	146	1	0	0	1	291
% 4+ Axle Trucks	0	13.9	36.2	23.2	7	50	5.3	5.9	12.8	9	0	10	33.3	0	0	25	12

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	46	<b>37</b>	<b>83</b>	<b>21</b>	0	44	65	<b>69</b>	115	0	184	0	0	0	0	332
07:30 AM	0	<b>48</b>	30	78	13	<b>1</b>	48	62	36	152	0	188	0	0	0	0	328
07:45 AM	0	39	25	64	14	1	<b>64</b>	79	63	<b>217</b>	0	<b>280</b>	0	0	0	0	<b>423</b>
08:00 AM	0	35	25	60	18	0	63	<b>81</b>	57	149	0	206	0	0	0	0	347
Total Volume	0	168	117	285	66	2	219	287	225	633	0	858	0	0	0	0	1430
% App. Total	0	58.9	41.1		23	0.7	76.3		26.2	73.8	0		0	0	0		
PHF	.000	.875	.791	.858	.786	.500	.855	.886	.815	.729	.000	.766	.000	.000	.000	.000	.845

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

File Name : ONTMI60WAM  
Site Code : 9222135  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	07:15 AM				07:15 AM				07:15 AM				07:45 AM			
+0 mins.	0	46	37	83	21	0	44	65	69	115	0	184	0	0	0	0
+15 mins.	0	48	30	78	13	1	48	62	36	152	0	188	0	0	0	0
+30 mins.	0	39	25	64	14	1	64	79	63	217	0	280	0	0	0	0
+45 mins.	0	35	25	60	18	0	63	81	57	149	0	206	3	0	1	4
Total Volume	0	168	117	285	66	2	219	287	225	633	0	858	3	0	1	4
% App. Total	0	58.9	41.1		23	0.7	76.3		26.2	73.8	0		75	0	25	
PHF	.000	.875	.791	.858	.786	.500	.855	.886	.815	.729	.000	.766	.250	.000	.250	.250

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

File Name : ONTMI60WAM  
Site Code : 9222135  
Start Date : 8/18/2009  
Page No : 1

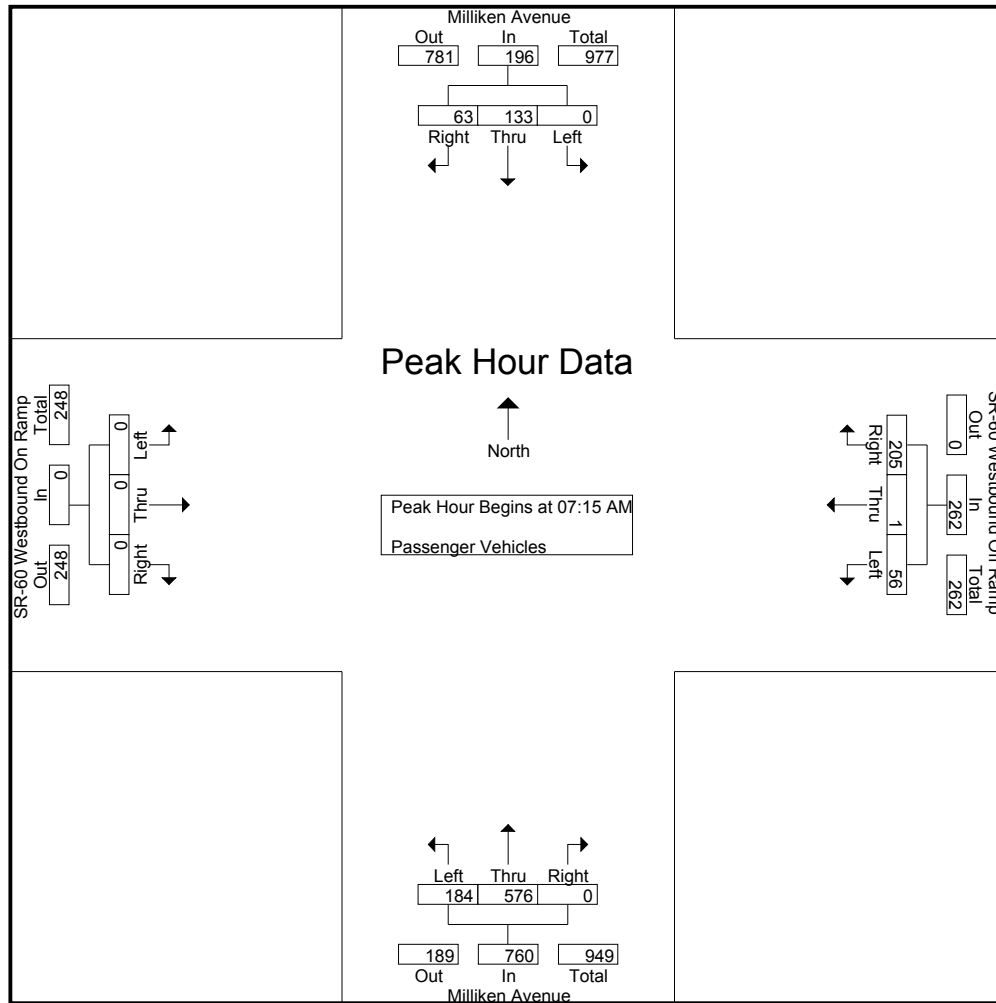
Groups Printed- Passenger Vehicles

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	24	14	38	16	0	29	45	48	73	0	121	0	0	0	0	204
07:15 AM	0	32	17	49	16	0	41	57	63	105	0	168	0	0	0	0	274
07:30 AM	0	39	16	55	12	1	41	54	29	139	0	168	0	0	0	0	277
07:45 AM	0	31	15	46	12	0	63	75	51	200	0	251	0	0	0	0	372
Total	0	126	62	188	56	1	174	231	191	517	0	708	0	0	0	0	1127
08:00 AM	0	31	15	46	16	0	60	76	41	132	0	173	0	0	0	0	295
08:15 AM	0	20	7	27	11	0	30	41	32	113	0	145	0	0	0	0	213
08:30 AM	0	31	18	49	6	0	27	33	28	82	0	110	2	0	1	3	195
08:45 AM	0	24	12	36	11	0	24	35	36	80	0	116	0	0	0	0	187
Total	0	106	52	158	44	0	141	185	137	407	0	544	2	0	1	3	890
Grand Total	0	232	114	346	100	1	315	416	328	924	0	1252	2	0	1	3	2017
Apprch %	0	67.1	32.9		24	0.2	75.7		26.2	73.8	0		66.7	0	33.3		
Total %	0	11.5	5.7	17.2	5	0	15.6	20.6	16.3	45.8	0	62.1	0.1	0	0	0.1	

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	32	<b>17</b>	49	<b>16</b>	0	41	57	<b>63</b>	105	0	168	0	0	0	0	274
07:30 AM	0	<b>39</b>	16	<b>55</b>	12	<b>1</b>	41	54	29	139	0	168	0	0	0	0	277
07:45 AM	0	31	15	46	12	0	<b>63</b>	75	51	<b>200</b>	0	<b>251</b>	0	0	0	0	<b>372</b>
08:00 AM	0	31	15	46	16	0	60	<b>76</b>	41	132	0	173	0	0	0	0	295
Total Volume	0	133	63	196	56	1	205	262	184	576	0	760	0	0	0	0	1218
% App. Total	0	67.9	32.1		21.4	0.4	78.2		24.2	75.8	0		0	0	0		
PHF	.000	.853	.926	.891	.875	.250	.813	.862	.730	.720	.000	.757	.000	.000	.000	.000	.819

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

File Name : ONTMI60WAM  
Site Code : 9222135  
Start Date : 8/18/2009  
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**Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	32	17	49	16	0	41	57	63	105	0	168	0	0	0	0
+15 mins.	0	39	16	55	12	1	41	54	29	139	0	168	0	0	0	0
+30 mins.	0	31	15	46	12	0	63	75	51	200	0	251	0	0	0	0
+45 mins.	0	31	15	46	16	0	60	76	41	132	0	173	0	0	0	0
Total Volume	0	133	63	196	56	1	205	262	184	576	0	760	0	0	0	0
% App. Total	0	67.9	32.1		21.4	0.4	78.2		24.2	75.8	0		0	0	0	
PHF	.000	.853	.926	.891	.875	.250	.813	.862	.730	.720	.000	.757	.000	.000	.000	.000



City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

File Name : ONTMI60WAM  
Site Code : 9222135  
Start Date : 8/18/2009  
Page No : 1

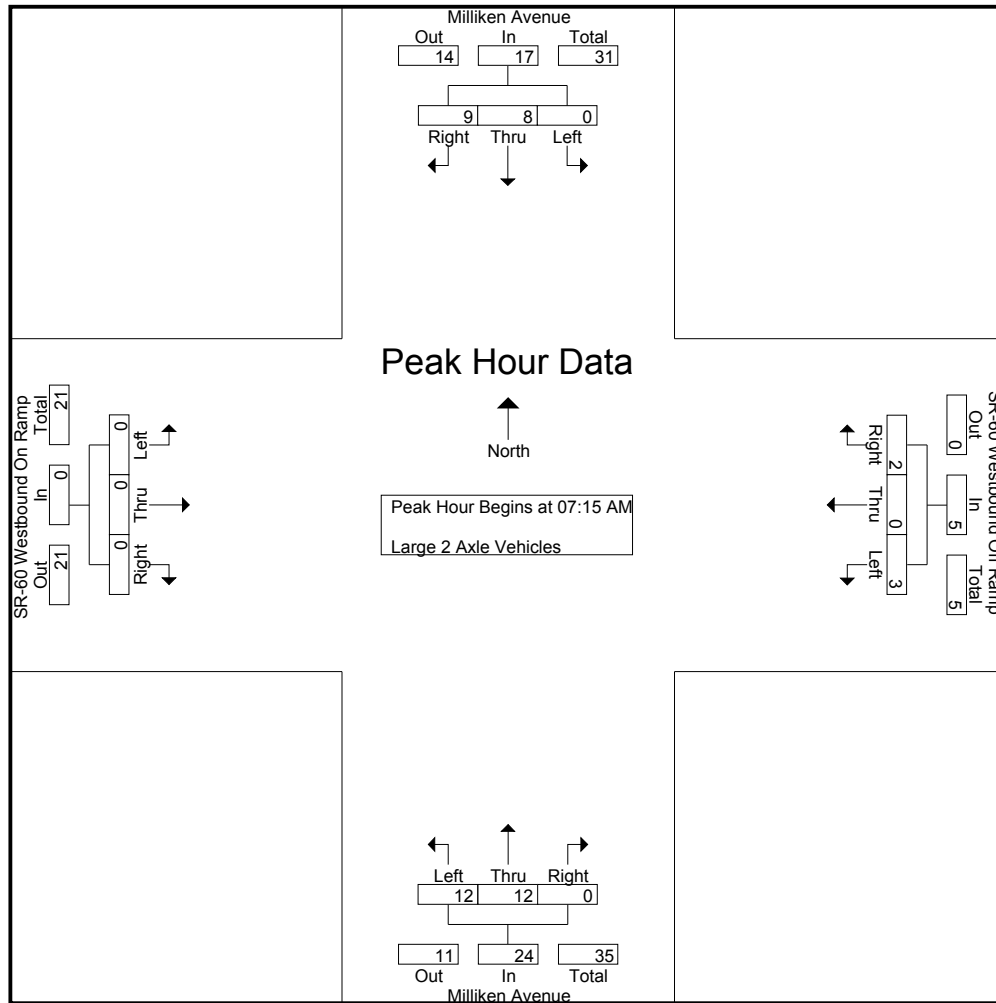
Groups Printed- Large 2 Axle Vehicles

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	2	3	1	0	1	2	1	4	0	5	0	0	0	0	10
07:15 AM	0	4	3	7	1	0	1	2	1	5	0	6	0	0	0	0	15
07:30 AM	0	1	2	3	1	0	1	2	0	0	0	0	0	0	0	0	5
07:45 AM	0	2	2	4	0	0	0	0	4	4	0	8	0	0	0	0	12
Total	0	8	9	17	3	0	3	6	6	13	0	19	0	0	0	0	42
08:00 AM	0	1	2	3	1	0	0	1	7	3	0	10	0	0	0	0	14
08:15 AM	0	3	1	4	1	0	0	1	1	4	0	5	0	0	0	0	10
08:30 AM	0	2	2	4	0	0	0	0	2	3	0	5	0	0	0	0	9
08:45 AM	0	1	1	2	0	0	0	0	1	3	0	4	0	0	0	0	6
Total	0	7	6	13	2	0	0	2	11	13	0	24	0	0	0	0	39
Grand Total	0	15	15	30	5	0	3	8	17	26	0	43	0	0	0	0	81
Apprch %	0	50	50		62.5	0	37.5		39.5	60.5	0		0	0	0		
Total %	0	18.5	18.5	37	6.2	0	3.7	9.9	21	32.1	0	53.1	0	0	0	0	

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	4	3	7	1	0	1	2	1	5	0	6	0	0	0	0	15
07:30 AM	0	1	2	3	1	0	1	2	0	0	0	0	0	0	0	0	5
07:45 AM	0	2	2	4	0	0	0	0	4	4	0	8	0	0	0	0	12
08:00 AM	0	1	2	3	1	0	0	1	7	3	0	10	0	0	0	0	14
Total Volume	0	8	9	17	3	0	2	5	12	12	0	24	0	0	0	0	46
% App. Total	0	47.1	52.9		60	0	40		50	50	0		0	0	0		
PHF	.000	.500	.750	.607	.750	.000	.500	.625	.429	.600	.000	.600	.000	.000	.000	.000	.767

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

File Name : ONTMI60WAM  
Site Code : 9222135  
Start Date : 8/18/2009  
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**Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	4	3	7	1	0	1	2	1	5	0	6	0	0	0	0
+15 mins.	0	1	2	3	1	0	1	2	0	0	0	0	0	0	0	0
+30 mins.	0	2	2	4	0	0	0	0	4	4	0	8	0	0	0	0
+45 mins.	0	1	2	3	1	0	0	1	7	3	0	10	0	0	0	0
Total Volume	0	8	9	17	3	0	2	5	12	12	0	24	0	0	0	0
% App. Total	0	47.1	52.9		60	0	40		50	50	0		0	0	0	
PHF	.000	.500	.750	.607	.750	.000	.500	.625	.429	.600	.000	.600	.000	.000	.000	.000

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

File Name : ONTMI60WAM  
Site Code : 9222135  
Start Date : 8/18/2009  
Page No : 1

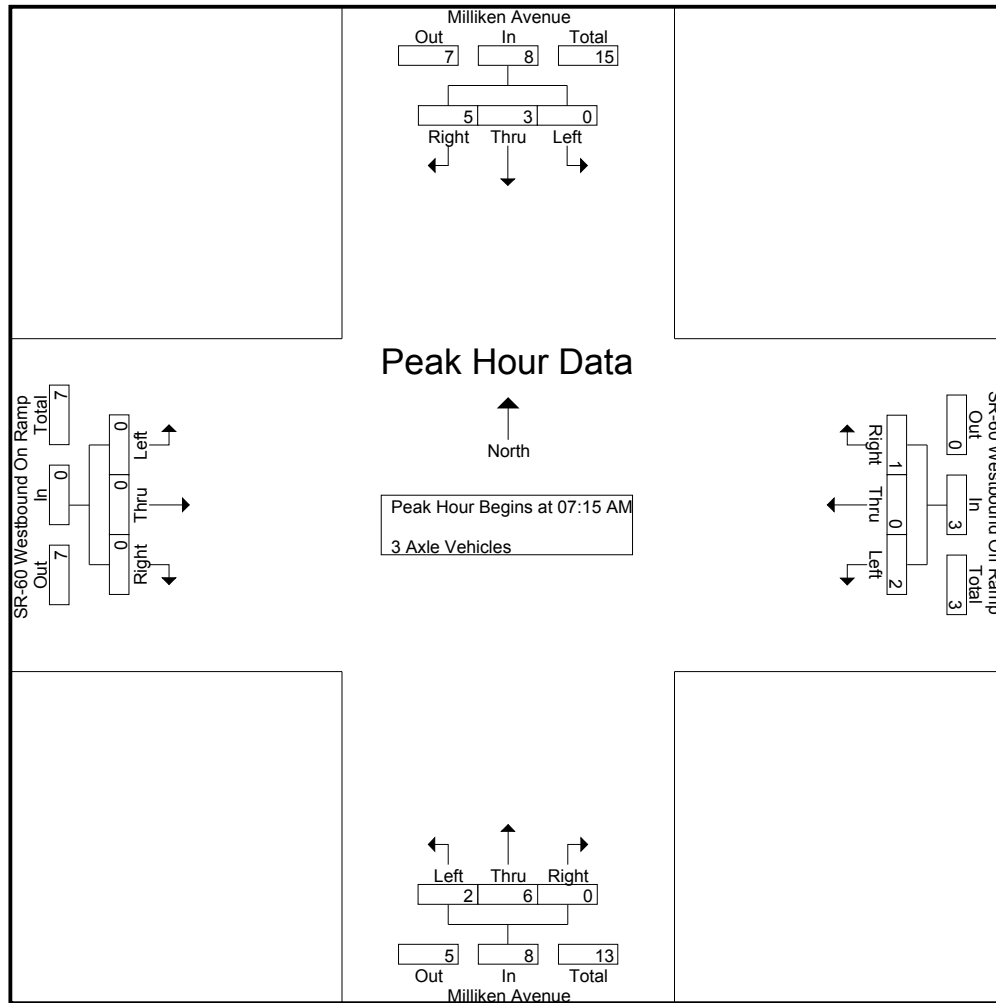
Groups Printed- 3 Axle Vehicles

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:15 AM	0	0	1	1	2	0	0	2	0	0	0	0	0	0	0	0	3
07:30 AM	0	2	0	2	0	0	1	1	0	2	0	2	0	0	0	0	5
07:45 AM	0	0	2	2	0	0	0	0	1	0	0	1	0	0	0	0	3
Total	0	2	3	5	2	0	1	3	1	3	0	4	0	0	0	0	12
08:00 AM	0	1	2	3	0	0	0	0	1	4	0	5	0	0	0	0	8
08:15 AM	0	1	0	1	0	0	1	1	1	2	0	3	0	0	0	0	5
08:30 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:45 AM	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
Total	0	4	2	6	0	0	2	2	2	8	0	10	0	0	0	0	18
Grand Total	0	6	5	11	2	0	3	5	3	11	0	14	0	0	0	0	30
Apprch %	0	54.5	45.5		40	0	60		21.4	78.6	0		0	0	0		
Total %	0	20	16.7	36.7	6.7	0	10	16.7	10	36.7	0	46.7	0	0	0	0	

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	1	1	2	0	0	2	0	0	0	0	0	0	0	0	3
07:30 AM	0	2	0	2	0	0	1	1	0	2	0	2	0	0	0	0	5
07:45 AM	0	0	2	2	0	0	0	0	1	0	0	1	0	0	0	0	3
08:00 AM	0	1	2	3	0	0	0	0	1	4	0	5	0	0	0	0	8
Total Volume	0	3	5	8	2	0	1	3	2	6	0	8	0	0	0	0	19
% App. Total	0	37.5	62.5		66.7	0	33.3		25	75	0		0	0	0		
PHF	.000	.375	.625	.667	.250	.000	.250	.375	.500	.375	.000	.400	.000	.000	.000	.000	.594

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

File Name : ONTMI60WAM  
Site Code : 9222135  
Start Date : 8/18/2009  
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**Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	1	1	2	0	0	2	0	0	0	0	0	0	0	0
+15 mins.	0	2	0	2	0	0	1	1	0	2	0	2	0	0	0	0
+30 mins.	0	0	2	2	0	0	0	0	1	0	0	1	0	0	0	0
+45 mins.	0	1	2	3	0	0	0	0	1	4	0	5	0	0	0	0
Total Volume	0	3	5	8	2	0	1	3	2	6	0	8	0	0	0	0
% App. Total	0	37.5	62.5		66.7	0	33.3		25	75	0		0	0	0	
PHF	.000	.375	.625	.667	.250	.000	.250	.375	.500	.375	.000	.400	.000	.000	.000	.000

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

File Name : ONTMI60WAM  
Site Code : 9222135  
Start Date : 8/18/2009  
Page No : 1

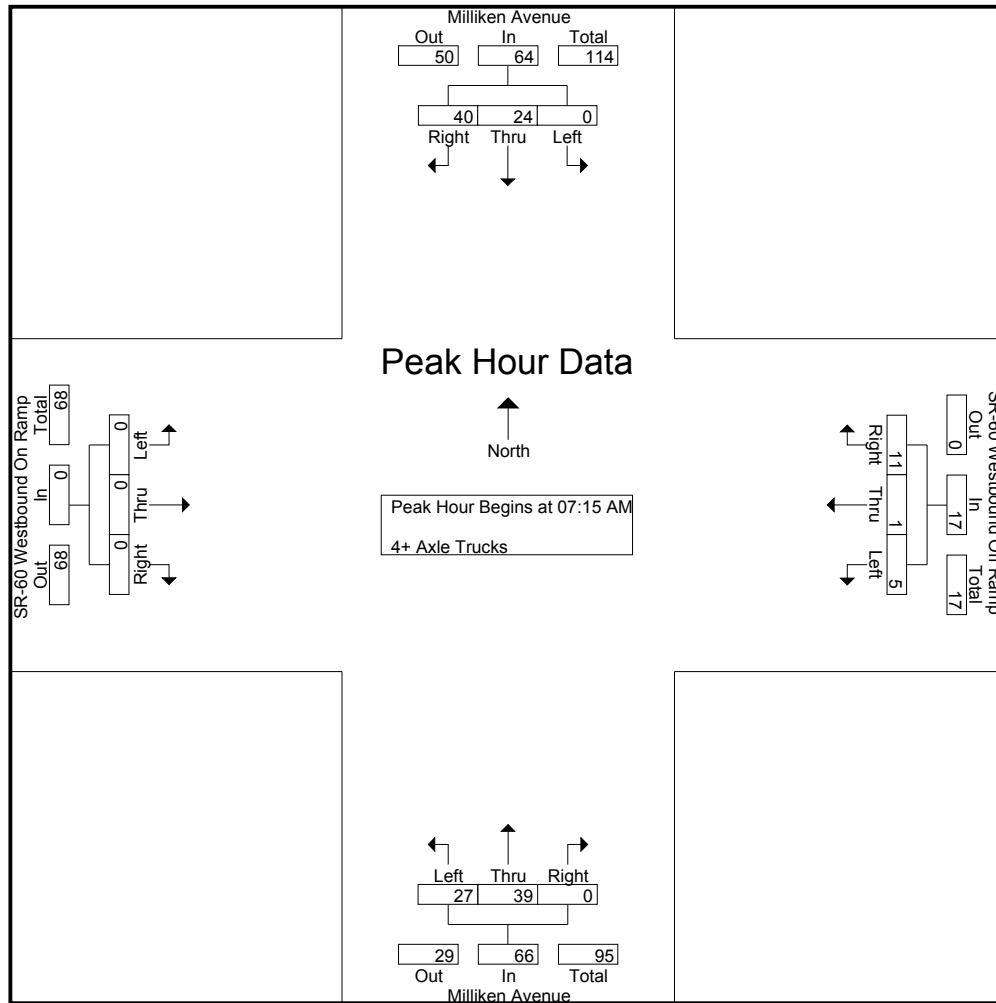
Groups Printed- 4+ Axle Trucks

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	8	10	1	0	1	2	6	11	0	17	0	0	0	0	29
07:15 AM	0	10	16	26	2	0	2	4	5	5	0	10	0	0	0	0	40
07:30 AM	0	6	12	18	0	0	5	5	7	11	0	18	0	0	0	0	41
07:45 AM	0	6	6	12	2	1	1	4	7	13	0	20	0	0	0	0	36
Total	0	24	42	66	5	1	9	15	25	40	0	65	0	0	0	0	146
08:00 AM	0	2	6	8	1	0	3	4	8	10	0	18	0	0	0	0	30
08:15 AM	0	4	11	15	2	0	1	3	4	16	0	20	0	0	0	0	38
08:30 AM	0	5	10	15	0	0	0	0	6	16	0	22	1	0	0	1	38
08:45 AM	0	6	7	13	0	0	5	5	8	13	0	21	0	0	0	0	39
Total	0	17	34	51	3	0	9	12	26	55	0	81	1	0	0	1	145
Grand Total	0	41	76	117	8	1	18	27	51	95	0	146	1	0	0	1	291
Apprch %	0	35	65		29.6	3.7	66.7		34.9	65.1	0		100	0	0		
Total %	0	14.1	26.1	40.2	2.7	0.3	6.2	9.3	17.5	32.6	0	50.2	0.3	0	0	0.3	

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	<b>10</b>	<b>16</b>	<b>26</b>	<b>2</b>	0	2	4	5	5	0	10	0	0	0	0	40
07:30 AM	0	6	12	18	0	0	<b>5</b>	<b>5</b>	7	11	0	18	0	0	0	0	<b>41</b>
07:45 AM	0	6	6	12	2	<b>1</b>	1	4	7	<b>13</b>	0	<b>20</b>	0	0	0	0	36
08:00 AM	0	2	6	8	1	0	3	4	<b>8</b>	10	0	18	0	0	0	0	30
Total Volume	0	24	40	64	5	1	11	17	27	39	0	66	0	0	0	0	147
% App. Total	0	37.5	62.5		29.4	5.9	64.7		40.9	59.1	0		0	0	0		
PHF	.000	.600	.625	.615	.625	.250	.550	.850	.844	.750	.000	.825	.000	.000	.000	.000	.896

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

File Name : ONTMI60WAM  
Site Code : 9222135  
Start Date : 8/18/2009  
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**Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	<b>10</b>	<b>16</b>	<b>26</b>	<b>2</b>	0	2	4	5	5	0	10	0	0	0	0
+15 mins.	0	6	12	18	0	0	<b>5</b>	<b>5</b>	7	11	0	18	0	0	0	0
+30 mins.	0	6	6	12	2	<b>1</b>	1	4	7	<b>13</b>	0	<b>20</b>	0	0	0	0
+45 mins.	0	2	6	8	1	0	3	4	<b>8</b>	10	0	18	0	0	0	0
Total Volume	0	24	40	64	5	1	11	17	27	39	0	66	0	0	0	0
% App. Total	0	37.5	62.5		29.4	5.9	64.7		40.9	59.1	0		0	0	0	
PHF	.000	.600	.625	.615	.625	.250	.550	.850	.844	.750	.000	.825	.000	.000	.000	.000

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

File Name : ONTMI60WPM  
Site Code : 9222135  
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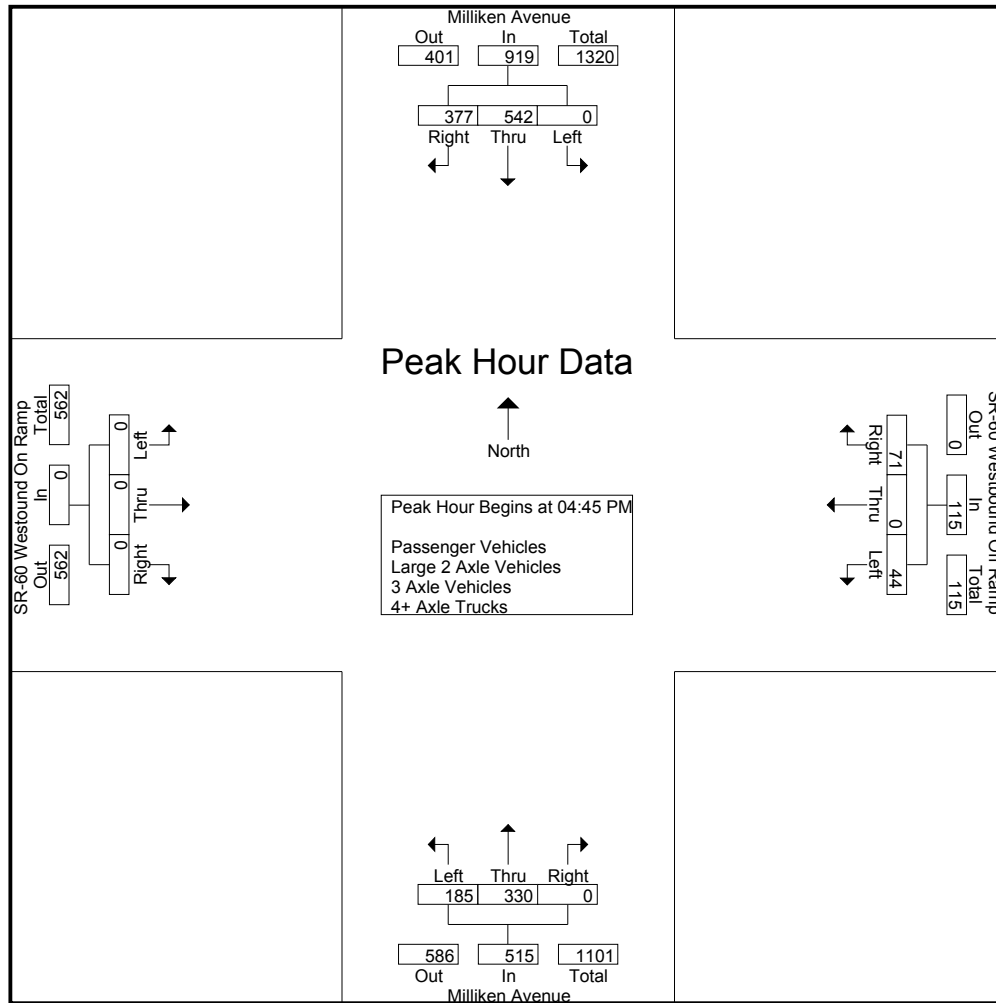
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	89	87	176	8	1	20	29	42	68	1	111	3	5	0	8	324
04:15 PM	0	92	78	170	13	0	21	34	36	75	0	111	0	0	0	0	315
04:30 PM	0	113	104	217	10	0	19	29	58	74	0	132	0	0	0	0	378
04:45 PM	0	115	91	206	10	0	27	37	43	71	0	114	0	0	0	0	357
Total	0	409	360	769	41	1	87	129	179	288	1	468	3	5	0	8	1374
05:00 PM	0	140	107	247	11	0	16	27	51	87	0	138	0	0	0	0	412
05:15 PM	0	146	85	231	13	0	15	28	48	85	0	133	0	0	0	0	392
05:30 PM	0	141	94	235	10	0	13	23	43	87	0	130	0	0	0	0	388
05:45 PM	0	90	64	154	10	0	7	17	37	67	0	104	0	0	0	0	275
Total	0	517	350	867	44	0	51	95	179	326	0	505	0	0	0	0	1467
Grand Total	0	926	710	1636	85	1	138	224	358	614	1	973	3	5	0	8	2841
Apprch %	0	56.6	43.4		37.9	0.4	61.6		36.8	63.1	0.1		37.5	62.5	0		
Total %	0	32.6	25	57.6	3	0	4.9	7.9	12.6	21.6	0	34.2	0.1	0.2	0	0.3	
Passenger Vehicles	0	883	629	1512	74	1	114	189	305	511	1	817	3	5	0	8	2526
% Passenger Vehicles	0	95.4	88.6	92.4	87.1	100	82.6	84.4	85.2	83.2	100	84	100	100	0	100	88.9
Large 2 Axle Vehicles	0	11	11	22	9	0	15	24	6	17	0	23	0	0	0	0	69
% Large 2 Axle Vehicles	0	1.2	1.5	1.3	10.6	0	10.9	10.7	1.7	2.8	0	2.4	0	0	0	0	2.4
3 Axle Vehicles	0	5	13	18	1	0	0	1	0	10	0	10	0	0	0	0	29
% 3 Axle Vehicles	0	0.5	1.8	1.1	1.2	0	0	0.4	0	1.6	0	1	0	0	0	0	1
4+ Axle Trucks	0	27	57	84	1	0	9	10	47	76	0	123	0	0	0	0	217
% 4+ Axle Trucks	0	2.9	8	5.1	1.2	0	6.5	4.5	13.1	12.4	0	12.6	0	0	0	0	7.6

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	115	91	206	10	0	27	37	43	71	0	114	0	0	0	0	357
05:00 PM	0	140	107	247	11	0	16	27	51	87	0	138	0	0	0	0	412
05:15 PM	0	146	85	231	13	0	15	28	48	85	0	133	0	0	0	0	392
05:30 PM	0	141	94	235	10	0	13	23	43	87	0	130	0	0	0	0	388
Total Volume	0	542	377	919	44	0	71	115	185	330	0	515	0	0	0	0	1549
% App. Total	0	59	41		38.3	0	61.7		35.9	64.1	0		0	0	0		
PHF	.000	.928	.881	.930	.846	.000	.657	.777	.907	.948	.000	.933	.000	.000	.000	.000	.940

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

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**Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	04:45 PM				04:00 PM				04:30 PM				04:00 PM			
+0 mins.	0	115	91	206	8	1	20	29	58	74	0	132	3	5	0	8
+15 mins.	0	140	107	247	13	0	21	34	43	71	0	114	0	0	0	0
+30 mins.	0	146	85	231	10	0	19	29	51	87	0	138	0	0	0	0
+45 mins.	0	141	94	235	10	0	27	37	48	85	0	133	0	0	0	0
Total Volume	0	542	377	919	41	1	87	129	200	317	0	517	3	5	0	8
% App. Total	0	59	41		31.8	0.8	67.4		38.7	61.3	0		37.5	62.5	0	
PHF	.000	.928	.881	.930	.788	.250	.806	.872	.862	.911	.000	.937	.250	.250	.000	.250



City of Ontario  
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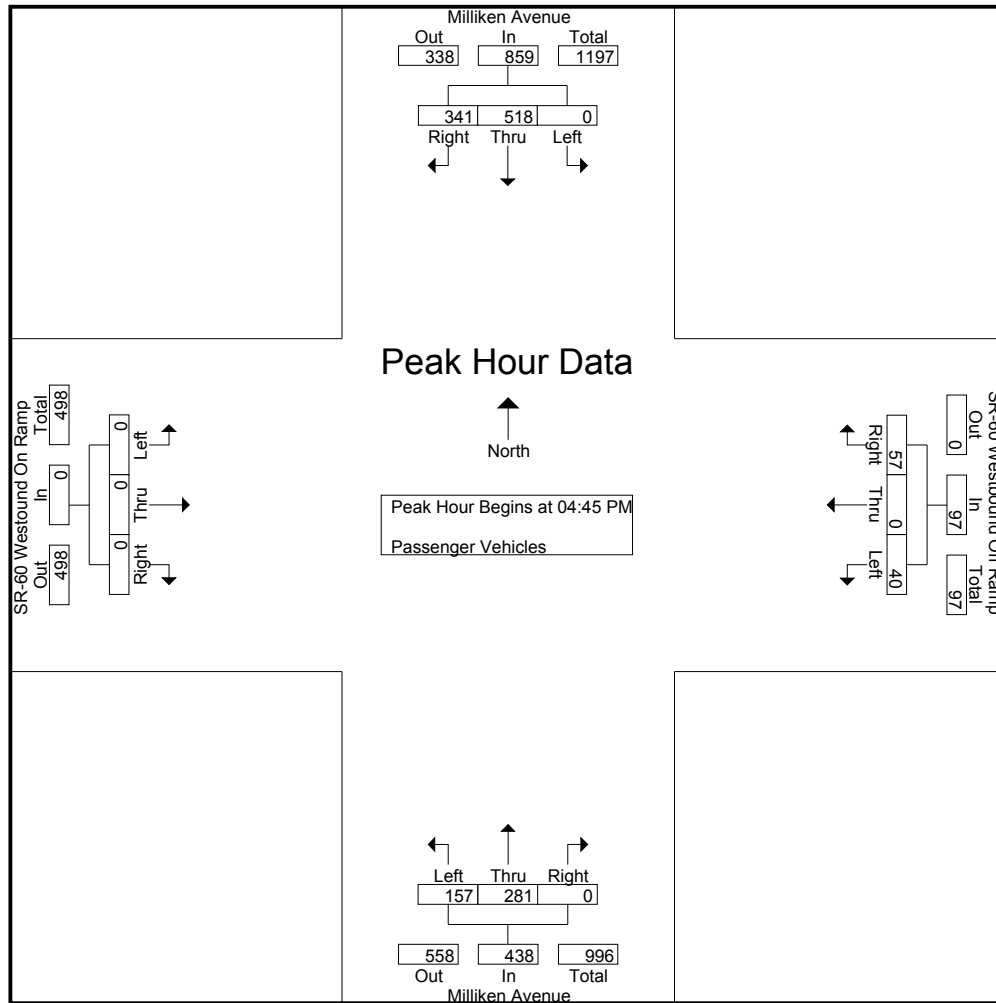
Groups Printed- Passenger Vehicles

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	84	73	157	5	1	17	23	34	54	1	89	3	5	0	8	277
04:15 PM	0	86	69	155	12	0	18	30	33	55	0	88	0	0	0	0	273
04:30 PM	0	106	90	196	7	0	15	22	51	66	0	117	0	0	0	0	335
04:45 PM	0	111	82	193	10	0	22	32	38	59	0	97	0	0	0	0	322
Total	0	387	314	701	34	1	72	107	156	234	1	391	3	5	0	8	1207
05:00 PM	0	135	97	232	11	0	15	26	45	75	0	120	0	0	0	0	378
05:15 PM	0	141	80	221	10	0	11	21	40	70	0	110	0	0	0	0	352
05:30 PM	0	131	82	213	9	0	9	18	34	77	0	111	0	0	0	0	342
05:45 PM	0	89	56	145	10	0	7	17	30	55	0	85	0	0	0	0	247
Total	0	496	315	811	40	0	42	82	149	277	0	426	0	0	0	0	1319
Grand Total	0	883	629	1512	74	1	114	189	305	511	1	817	3	5	0	8	2526
Apprch %	0	58.4	41.6		39.2	0.5	60.3		37.3	62.5	0.1		37.5	62.5	0		
Total %	0	35	24.9	59.9	2.9	0	4.5	7.5	12.1	20.2	0	32.3	0.1	0.2	0	0.3	

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	111	82	193	10	0	<b>22</b>	<b>32</b>	38	59	0	97	0	0	0	0	322
05:00 PM	0	135	<b>97</b>	<b>232</b>	<b>11</b>	0	15	26	<b>45</b>	75	0	<b>120</b>	0	0	0	0	<b>378</b>
05:15 PM	0	<b>141</b>	80	221	10	0	11	21	40	70	0	110	0	0	0	0	352
05:30 PM	0	131	82	213	9	0	9	18	34	<b>77</b>	0	111	0	0	0	0	342
Total Volume	0	518	341	859	40	0	57	97	157	281	0	438	0	0	0	0	1394
% App. Total	0	60.3	39.7		41.2	0	58.8		35.8	64.2	0		0	0	0		
PHF	.000	.918	.879	.926	.909	.000	.648	.758	.872	.912	.000	.913	.000	.000	.000	.000	.922

City of Ontario  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	111	82	193	10	0	<b>22</b>	<b>32</b>	38	59	0	97	0	0	0	0
+15 mins.	0	135	<b>97</b>	<b>232</b>	<b>11</b>	0	15	26	<b>45</b>	75	0	<b>120</b>	0	0	0	0
+30 mins.	0	<b>141</b>	80	221	10	0	11	21	40	70	0	110	0	0	0	0
+45 mins.	0	131	82	213	9	0	9	18	34	<b>77</b>	0	111	0	0	0	0
Total Volume	0	518	341	859	40	0	57	97	157	281	0	438	0	0	0	0
% App. Total	0	60.3	39.7		41.2	0	58.8		35.8	64.2	0		0	0	0	
PHF	.000	.918	.879	.926	.909	.000	.648	.758	.872	.912	.000	.913	.000	.000	.000	.000

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

File Name : ONTMI60WPM  
Site Code : 9222135  
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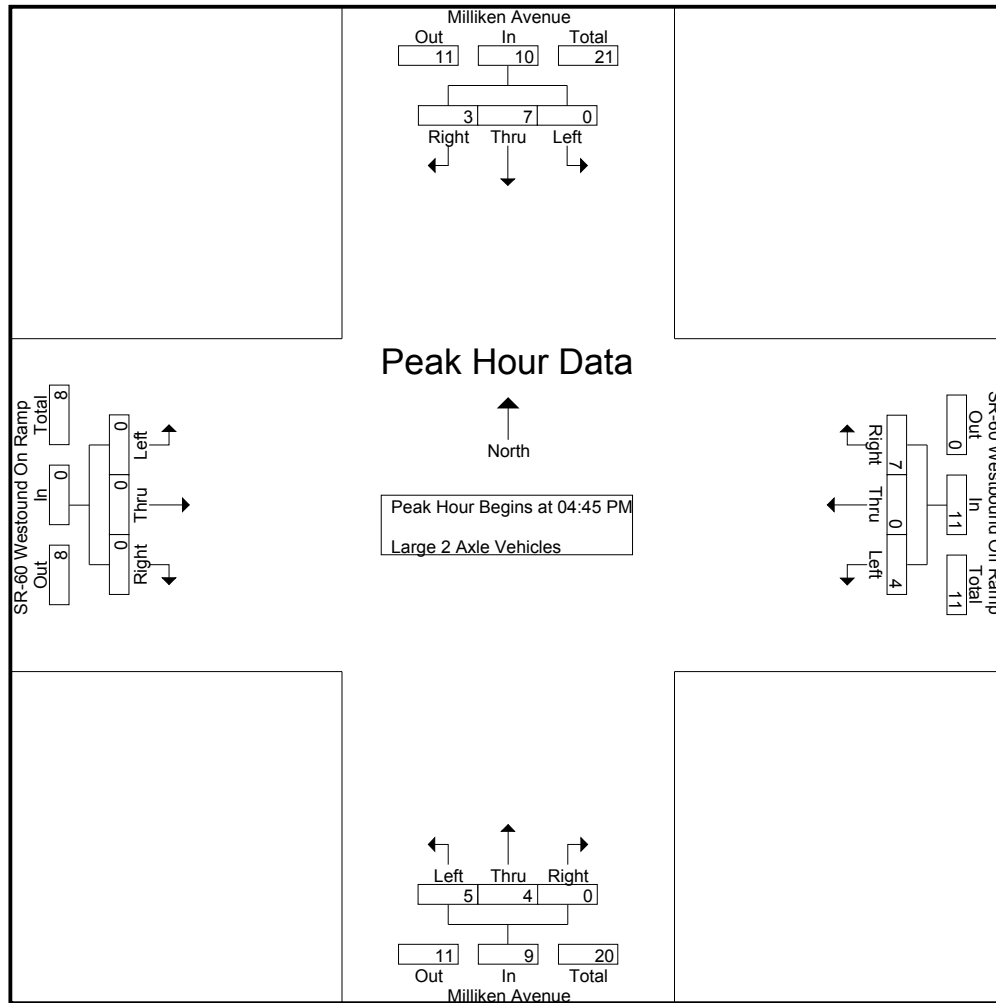
Groups Printed- Large 2 Axle Vehicles

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	4	5	2	0	3	5	0	2	0	2	0	0	0	0	12
04:15 PM	0	1	0	1	0	0	3	3	0	9	0	9	0	0	0	0	13
04:30 PM	0	2	3	5	3	0	2	5	1	1	0	2	0	0	0	0	12
04:45 PM	0	1	1	2	0	0	3	3	2	0	0	2	0	0	0	0	7
Total	0	5	8	13	5	0	11	16	3	12	0	15	0	0	0	0	44
05:00 PM	0	3	0	3	0	0	0	0	1	3	0	4	0	0	0	0	7
05:15 PM	0	2	0	2	3	0	1	4	0	1	0	1	0	0	0	0	7
05:30 PM	0	1	2	3	1	0	3	4	2	0	0	2	0	0	0	0	9
05:45 PM	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	6	3	9	4	0	4	8	3	5	0	8	0	0	0	0	25
Grand Total	0	11	11	22	9	0	15	24	6	17	0	23	0	0	0	0	69
Apprch %	0	50	50		37.5	0	62.5		26.1	73.9	0		0	0	0		
Total %	0	15.9	15.9	31.9	13	0	21.7	34.8	8.7	24.6	0	33.3	0	0	0	0	

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	1	2	0	0	3	3	2	0	0	2	0	0	0	0	7
05:00 PM	0	3	0	3	0	0	0	0	1	3	0	4	0	0	0	0	7
05:15 PM	0	2	0	2	3	0	1	4	0	1	0	1	0	0	0	0	7
05:30 PM	0	1	2	3	1	0	3	4	2	0	0	2	0	0	0	0	9
Total Volume	0	7	3	10	4	0	7	11	5	4	0	9	0	0	0	0	30
% App. Total	0	70	30		36.4	0	63.6		55.6	44.4	0		0	0	0		
PHF	.000	.583	.375	.833	.333	.000	.583	.688	.625	.333	.000	.563	.000	.000	.000	.000	.833

City of Ontario  
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Weather: Sunny

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**Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	1	1	2	0	0	3	3	2	0	0	0	2	0	0	0
+15 mins.	0	3	0	3	0	0	0	0	1	3	0	4	0	0	0	0
+30 mins.	0	2	0	2	3	0	1	4	0	1	0	1	0	0	0	0
+45 mins.	0	1	2	3	1	0	3	4	2	0	0	2	0	0	0	0
Total Volume	0	7	3	10	4	0	7	11	5	4	0	9	0	0	0	0
% App. Total	0	70	30		36.4	0	63.6		55.6	44.4	0		0	0	0	
PHF	.000	.583	.375	.833	.333	.000	.583	.688	.625	.333	.000	.563	.000	.000	.000	.000

City of Ontario  
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E/W: SR-60 Westbound Ramps  
Weather: Sunny

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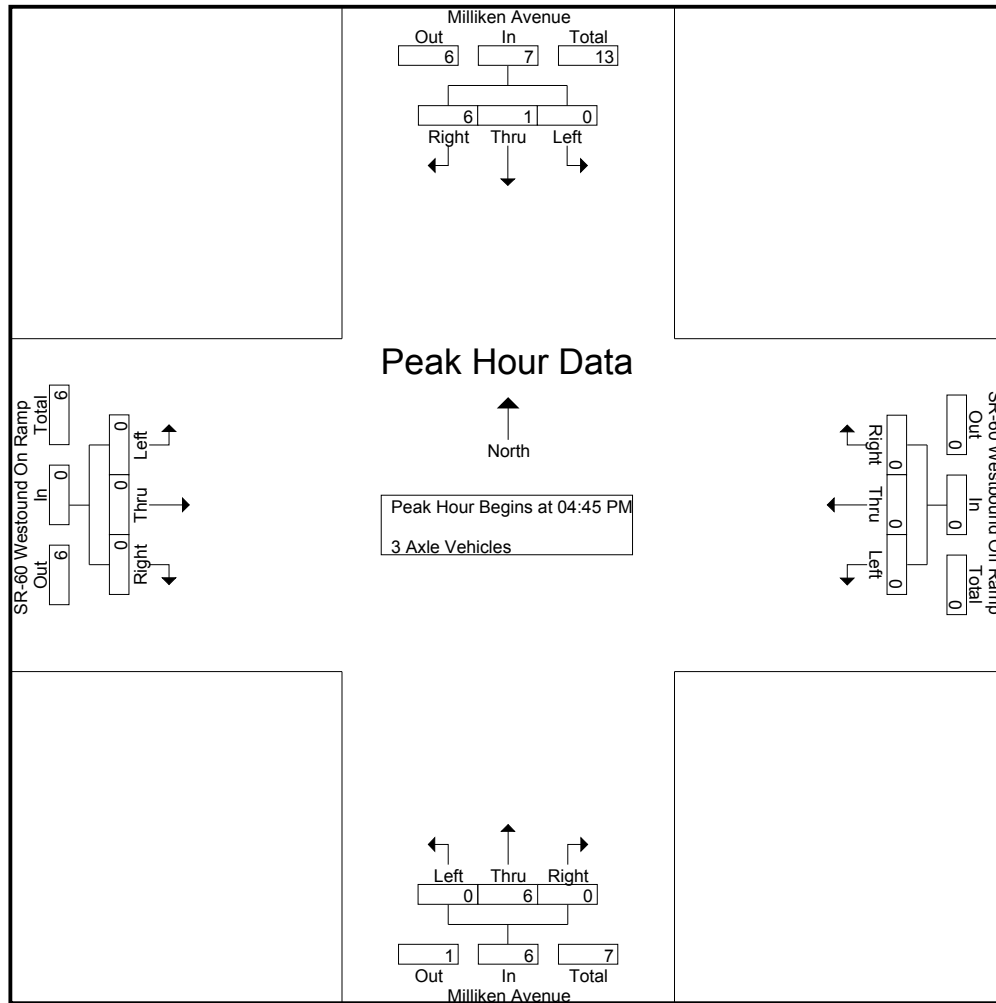
Groups Printed- 3 Axle Vehicles

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	1	1	1	0	0	1	0	2	0	2	0	0	0	0	4
04:15 PM	0	1	4	5	0	0	0	0	0	2	0	2	0	0	0	0	7
04:30 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Total	0	4	5	9	1	0	0	1	0	6	0	6	0	0	0	0	16
05:00 PM	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:30 PM	0	0	3	3	0	0	0	0	0	2	0	2	0	0	0	0	5
05:45 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	1	8	9	0	0	0	0	0	4	0	4	0	0	0	0	13
Grand Total	0	5	13	18	1	0	0	1	0	10	0	10	0	0	0	0	29
Apprch %	0	27.8	72.2		100	0	0		0	100	0		0	0	0		
Total %	0	17.2	44.8	62.1	3.4	0	0	3.4	0	34.5	0	34.5	0	0	0	0	

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:00 PM	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:15 PM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:30 PM	0	0	3	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Total Volume	0	1	6	7	0	0	0	0	0	6	0	6	0	0	0	0	13
% App. Total	0	14.3	85.7		0	0	0		0	100	0		0	0	0		
PHF	.000	.250	.500	.583	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.650

City of Ontario  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	0	3	3	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	0	1	6	7	0	0	0	0	0	6	0	6	0	0	0	0
% App. Total	0	14.3	85.7		0	0	0	0	0	100	0		0	0	0	
PHF	.000	.250	.500	.583	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000

City of Ontario  
N/S: Milliken Avenue  
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File Name : ONTMI60WPM  
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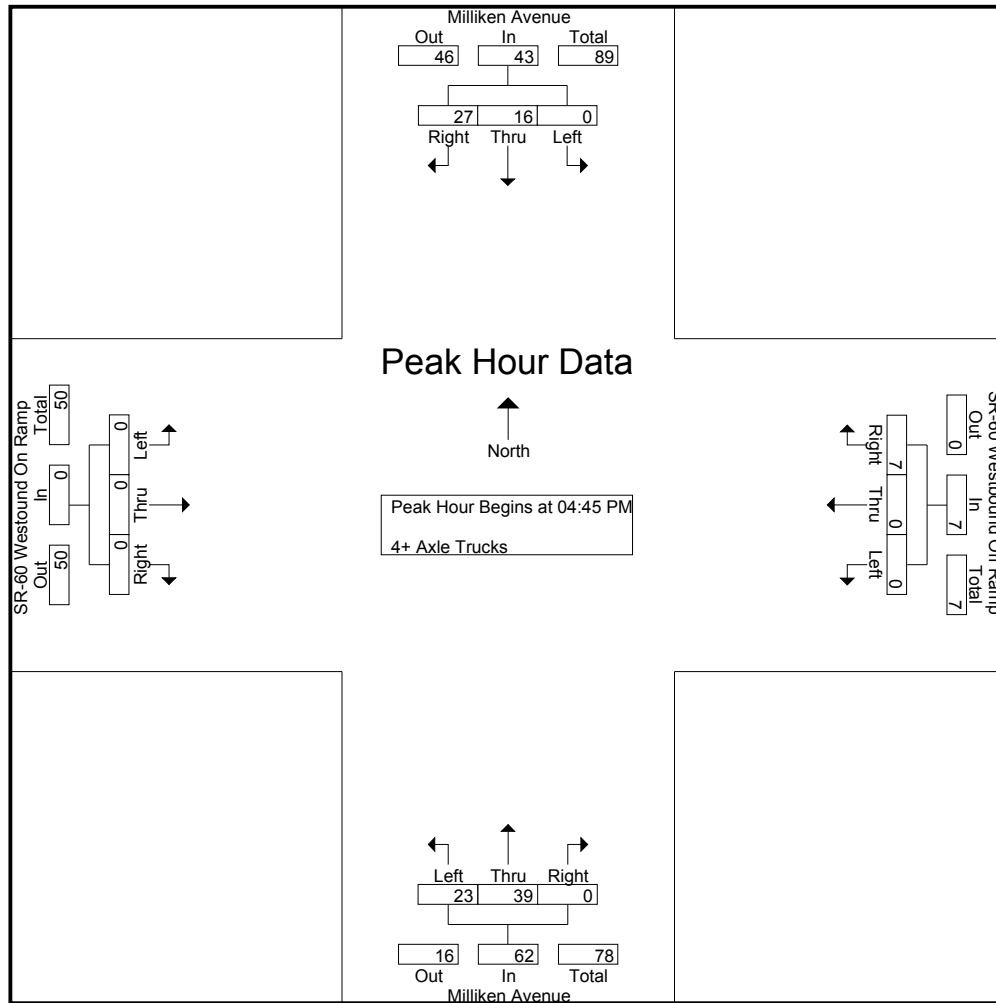
Groups Printed- 4+ Axle Trucks

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	4	9	13	0	0	0	0	8	10	0	18	0	0	0	0	31
04:15 PM	0	4	5	9	1	0	0	1	3	9	0	12	0	0	0	0	22
04:30 PM	0	2	11	13	0	0	2	2	6	7	0	13	0	0	0	0	28
04:45 PM	0	3	8	11	0	0	2	2	3	10	0	13	0	0	0	0	26
Total	0	13	33	46	1	0	4	5	20	36	0	56	0	0	0	0	107
05:00 PM	0	1	8	9	0	0	1	1	5	9	0	14	0	0	0	0	24
05:15 PM	0	3	4	7	0	0	3	3	8	12	0	20	0	0	0	0	30
05:30 PM	0	9	7	16	0	0	1	1	7	8	0	15	0	0	0	0	32
05:45 PM	0	1	5	6	0	0	0	0	7	11	0	18	0	0	0	0	24
Total	0	14	24	38	0	0	5	5	27	40	0	67	0	0	0	0	110
Grand Total	0	27	57	84	1	0	9	10	47	76	0	123	0	0	0	0	217
Apprch %	0	32.1	67.9		10	0	90		38.2	61.8	0		0	0	0		
Total %	0	12.4	26.3	38.7	0.5	0	4.1	4.6	21.7	35	0	56.7	0	0	0	0	

	Milliken Avenue Southbound				SR-60 Westbound Off Ramp Westbound				Milliken Avenue Northbound				SR-60 Westbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	3	<b>8</b>	11	0	0	2	2	3	10	0	13	0	0	0	0	26
05:00 PM	0	1	8	9	0	0	1	1	5	9	0	14	0	0	0	0	24
05:15 PM	0	3	4	7	0	0	<b>3</b>	<b>3</b>	<b>8</b>	<b>12</b>	0	<b>20</b>	0	0	0	0	30
05:30 PM	0	<b>9</b>	7	<b>16</b>	0	0	1	1	7	8	0	15	0	0	0	0	<b>32</b>
Total Volume	0	16	27	43	0	0	7	7	23	39	0	62	0	0	0	0	112
% App. Total	0	37.2	62.8		0	0	100		37.1	62.9	0		0	0	0		
PHF	.000	.444	.844	.672	.000	.000	.583	.583	.719	.813	.000	.775	.000	.000	.000	.000	.875

City of Ontario  
N/S: Milliken Avenue  
E/W: SR-60 Westbound Ramps  
Weather: Sunny

File Name : ONTMI60WPM  
Site Code : 9222135  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	3	8	11	0	0	2	2	3	10	0	13	0	0	0	0
+15 mins.	0	1	8	9	0	0	1	1	5	9	0	14	0	0	0	0
+30 mins.	0	3	4	7	0	0	3	3	8	12	0	20	0	0	0	0
+45 mins.	0	9	7	16	0	0	1	1	7	8	0	15	0	0	0	0
Total Volume	0	16	27	43	0	0	7	7	23	39	0	62	0	0	0	0
% App. Total	0	37.2	62.8		0	0	100		37.1	62.9	0		0	0	0	
PHF	.000	.444	.844	.672	.000	.000	.583	.583	.719	.813	.000	.775	.000	.000	.000	.000



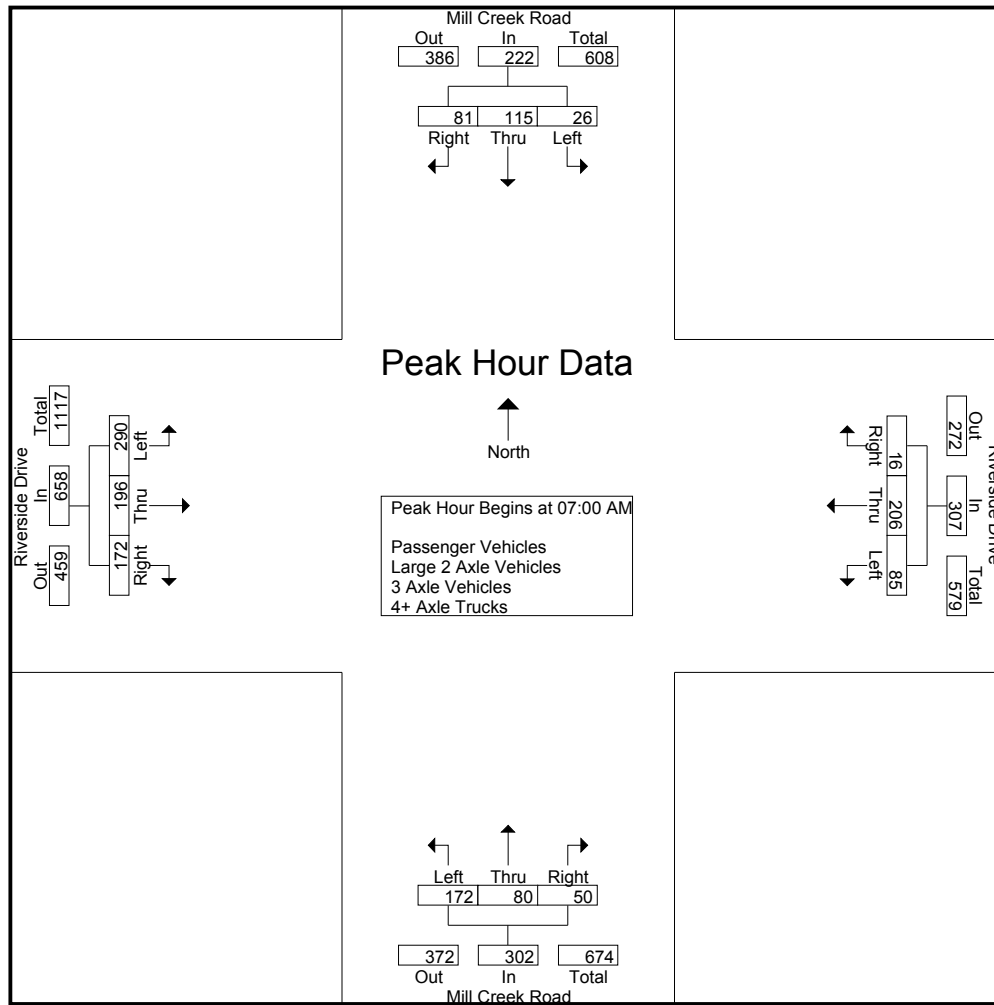
City of Ontario  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIAM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 1

Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	25	20	50	16	37	3	56	42	7	3	52	83	22	56	161	319
07:15 AM	10	78	43	131	53	79	5	137	79	52	31	162	110	55	96	261	691
07:30 AM	0	11	13	24	13	58	4	75	47	21	16	84	88	59	13	160	343
07:45 AM	11	1	5	17	3	32	4	39	4	0	0	4	9	60	7	76	136
Total	26	115	81	222	85	206	16	307	172	80	50	302	290	196	172	658	1489
08:00 AM	5	1	5	11	0	29	5	34	4	1	1	6	9	25	3	37	88
08:15 AM	5	2	8	15	1	38	5	44	5	2	0	7	8	41	9	58	124
08:30 AM	8	1	12	21	0	37	5	42	7	0	0	7	12	35	4	51	121
08:45 AM	4	0	11	15	1	40	0	41	4	0	1	5	7	21	3	31	92
Total	22	4	36	62	2	144	15	161	20	3	2	25	36	122	19	177	425
Grand Total	48	119	117	284	87	350	31	468	192	83	52	327	326	318	191	835	1914
Apprch %	16.9	41.9	41.2		18.6	74.8	6.6		58.7	25.4	15.9		39	38.1	22.9		
Total %	2.5	6.2	6.1	14.8	4.5	18.3	1.6	24.5	10	4.3	2.7	17.1	17	16.6	10	43.6	
Passenger Vehicles	47	119	115	281	84	324	30	438	185	79	49	313	323	299	183	805	1837
% Passenger Vehicles	97.9	100	98.3	98.9	96.6	92.6	96.8	93.6	96.4	95.2	94.2	95.7	99.1	94	95.8	96.4	96
Large 2 Axle Vehicles	1	0	1	2	3	12	1	16	7	3	3	13	2	6	7	15	46
% Large 2 Axle Vehicles	2.1	0	0.9	0.7	3.4	3.4	3.2	3.4	3.6	3.6	5.8	4	0.6	1.9	3.7	1.8	2.4
3 Axle Vehicles	0	0	0	0	0	1	0	1	0	1	0	1	0	1	1	2	4
% 3 Axle Vehicles	0	0	0	0	0	0.3	0	0.2	0	1.2	0	0.3	0	0.3	0.5	0.2	0.2
4+ Axle Trucks	0	0	1	1	0	13	0	13	0	0	0	0	1	12	0	13	27
% 4+ Axle Trucks	0	0	0.9	0.4	0	3.7	0	2.8	0	0	0	0	0.3	3.8	0	1.6	1.4

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	5	25	20	50	16	37	3	56	42	7	3	52	83	22	56	161	319
07:15 AM	10	78	43	131	53	79	5	137	79	52	31	162	110	55	96	261	691
07:30 AM	0	11	13	24	13	58	4	75	47	21	16	84	88	59	13	160	343
07:45 AM	11	1	5	17	3	32	4	39	4	0	0	4	9	60	7	76	136
Total Volume	26	115	81	222	85	206	16	307	172	80	50	302	290	196	172	658	1489
% App. Total	11.7	51.8	36.5		27.7	67.1	5.2		57	26.5	16.6		44.1	29.8	26.1		
PHF	.591	.369	.471	.424	.401	.652	.800	.560	.544	.385	.403	.466	.659	.817	.448	.630	.539



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

**Peak Hour for Each Approach Begins at:**

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
<b>+0 mins.</b>	<b>5</b>	<b>25</b>	<b>20</b>	<b>50</b>	<b>16</b>	<b>37</b>	<b>3</b>	<b>56</b>	<b>42</b>	<b>7</b>	<b>3</b>	<b>52</b>	<b>83</b>	<b>22</b>	<b>56</b>	<b>161</b>
<b>+15 mins.</b>	<b>10</b>	78	43	131	53	<b>79</b>	<b>5</b>	<b>137</b>	<b>79</b>	<b>52</b>	<b>31</b>	<b>162</b>	<b>110</b>	55	<b>96</b>	<b>261</b>
+30 mins.	0	11	13	24	13	58	4	75	47	21	16	84	88	59	13	160
+45 mins.	<b>11</b>	1	5	17	3	32	4	39	4	0	0	4	9	<b>60</b>	7	76
Total Volume	26	115	81	222	85	206	16	307	172	80	50	302	290	196	172	658
% App. Total	11.7	51.8	36.5		27.7	67.1	5.2		57	26.5	16.6		44.1	29.8	26.1	
PHF	.591	.369	.471	.424	.401	.652	.800	.560	.544	.385	.403	.466	.659	.817	.448	.630

City of Ontario  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIAM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 1

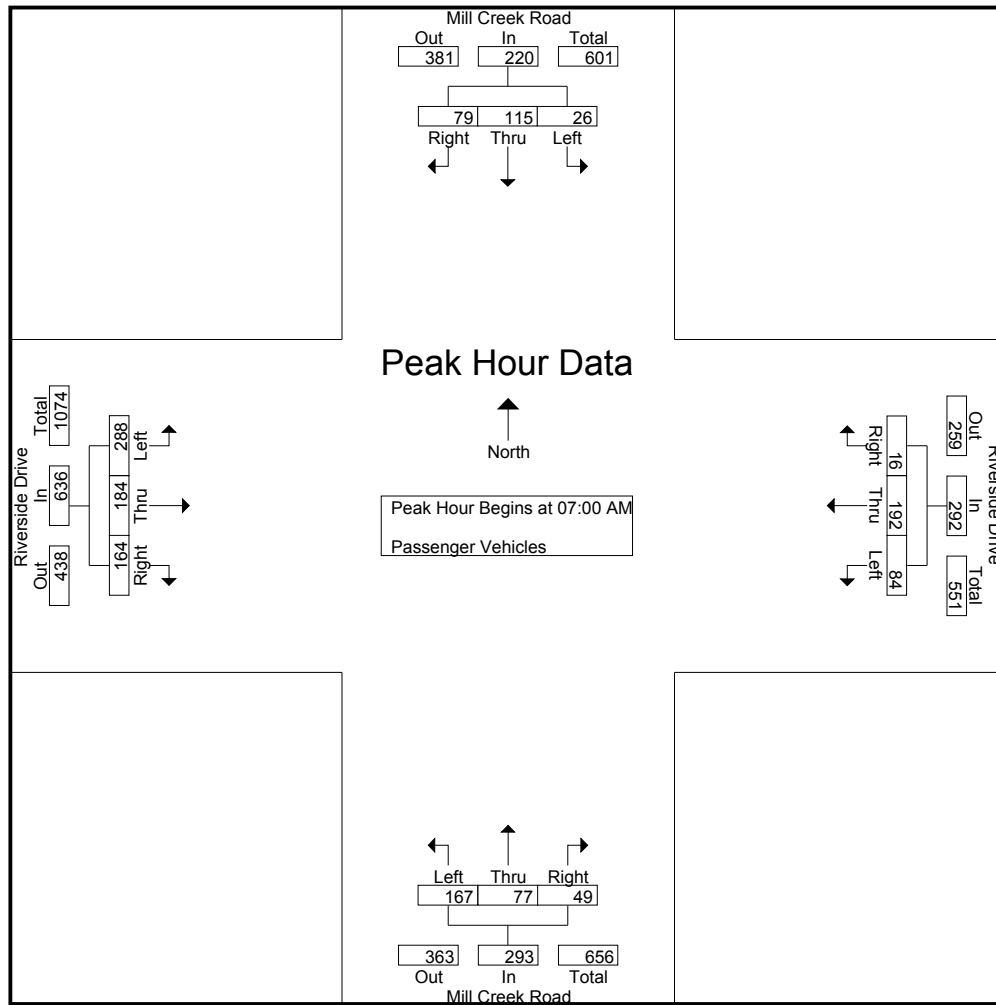
Groups Printed- Passenger Vehicles

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	25	20	50	16	34	3	53	39	4	3	46	83	21	53	157	306
07:15 AM	10	78	42	130	53	75	5	133	77	52	31	160	109	53	96	258	681
07:30 AM	0	11	12	23	13	53	4	70	47	21	15	83	87	53	9	149	325
07:45 AM	11	1	5	17	2	30	4	36	4	0	0	4	9	57	6	72	129
Total	26	115	79	220	84	192	16	292	167	77	49	293	288	184	164	636	1441
08:00 AM	5	1	5	11	0	24	5	29	4	0	0	4	8	22	3	33	77
08:15 AM	5	2	8	15	0	35	5	40	3	2	0	5	8	39	9	56	116
08:30 AM	8	1	12	21	0	35	4	39	7	0	0	7	12	34	4	50	117
08:45 AM	3	0	11	14	0	38	0	38	4	0	0	4	7	20	3	30	86
Total	21	4	36	61	0	132	14	146	18	2	0	20	35	115	19	169	396
Grand Total	47	119	115	281	84	324	30	438	185	79	49	313	323	299	183	805	1837
Apprch %	16.7	42.3	40.9		19.2	74	6.8		59.1	25.2	15.7		40.1	37.1	22.7		
Total %	2.6	6.5	6.3	15.3	4.6	17.6	1.6	23.8	10.1	4.3	2.7	17	17.6	16.3	10	43.8	

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	5	25	20	50	16	34	3	53	39	4	3	46	83	21	53	157	306
07:15 AM	10	<b>78</b>	<b>42</b>	<b>130</b>	<b>53</b>	<b>75</b>	<b>5</b>	<b>133</b>	<b>77</b>	<b>52</b>	<b>31</b>	<b>160</b>	<b>109</b>	53	<b>96</b>	<b>258</b>	<b>681</b>
07:30 AM	0	11	12	23	13	53	4	70	47	21	15	83	87	53	9	149	325
07:45 AM	<b>11</b>	1	5	17	2	30	4	36	4	0	0	4	9	<b>57</b>	6	72	129
Total Volume	26	115	79	220	84	192	16	292	167	77	49	293	288	184	164	636	1441
% App. Total	11.8	52.3	35.9		28.8	65.8	5.5		57	26.3	16.7		45.3	28.9	25.8		
PHF	.591	.369	.470	.423	.396	.640	.800	.549	.542	.370	.395	.458	.661	.807	.427	.616	.529

City of Ontario  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIAM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

**Peak Hour for Each Approach Begins at:**

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	5	25	20	50	16	34	3	53	39	4	3	46	83	21	53	157
+15 mins.	10	<b>78</b>	<b>42</b>	<b>130</b>	<b>53</b>	<b>75</b>	<b>5</b>	<b>133</b>	<b>77</b>	<b>52</b>	<b>31</b>	<b>160</b>	<b>109</b>	53	<b>96</b>	<b>258</b>
+30 mins.	0	11	12	23	13	53	4	70	47	21	15	83	87	53	9	149
+45 mins.	<b>11</b>	1	5	17	2	30	4	36	4	0	0	4	9	<b>57</b>	6	72
Total Volume	26	115	79	220	84	192	16	292	167	77	49	293	288	184	164	636
% App. Total	11.8	52.3	35.9		28.8	65.8	5.5		57	26.3	16.7		45.3	28.9	25.8	
PHF	.591	.369	.470	.423	.396	.640	.800	.549	.542	.370	.395	.458	.661	.807	.427	.616

City of Ontario  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIAM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 1

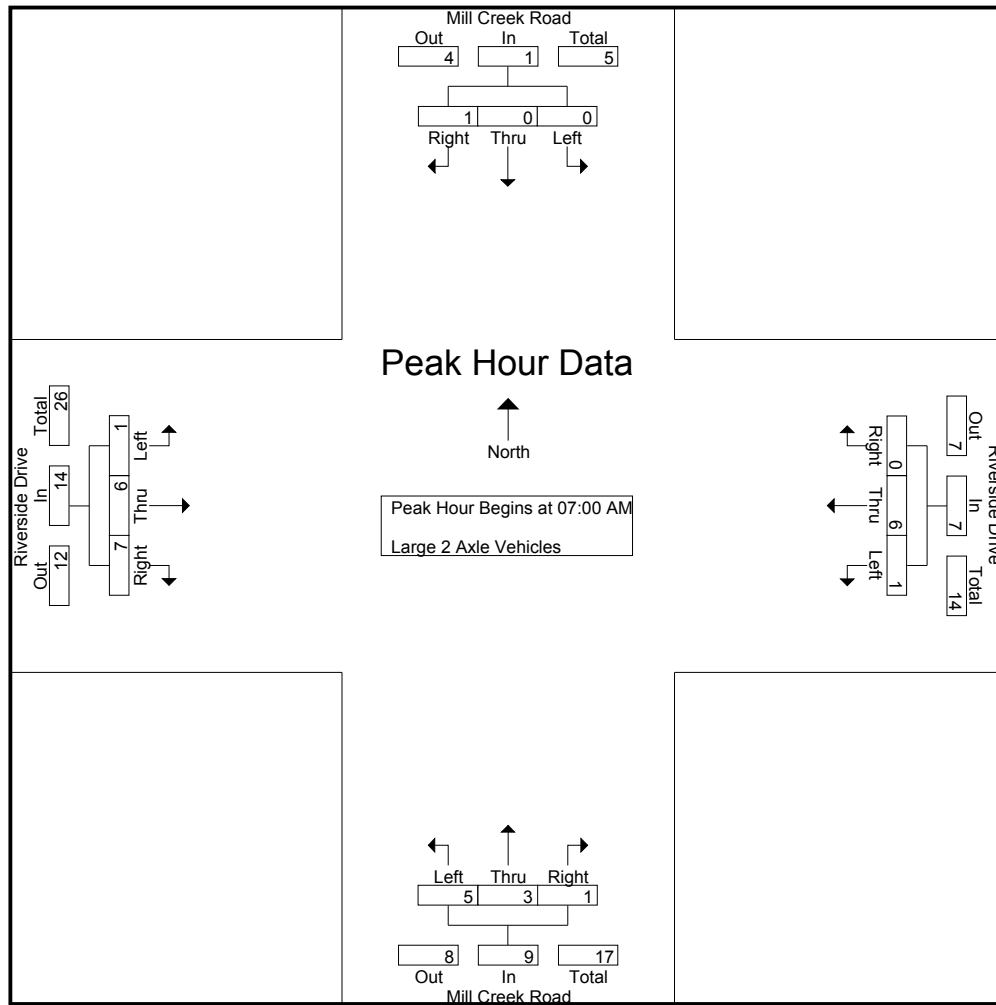
Groups Printed- Large 2 Axle Vehicles

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	1	0	1	3	3	0	6	0	0	3	3	10
07:15 AM	0	0	1	1	0	1	0	1	2	0	0	2	0	0	0	0	4
07:30 AM	0	0	0	0	0	4	0	4	0	0	1	1	1	4	4	9	14
07:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	2	3
Total	0	0	1	1	1	6	0	7	5	3	1	9	1	6	7	14	31
08:00 AM	0	0	0	0	0	2	0	2	0	0	1	1	1	0	0	1	4
08:15 AM	0	0	0	0	1	1	0	2	2	0	0	2	0	0	0	0	4
08:30 AM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2
08:45 AM	1	0	0	1	1	2	0	3	0	0	1	1	0	0	0	0	5
Total	1	0	0	1	2	6	1	9	2	0	2	4	1	0	0	1	15
Grand Total	1	0	1	2	3	12	1	16	7	3	3	13	2	6	7	15	46
Apprch %	50	0	50		18.8	75	6.2		53.8	23.1	23.1		13.3	40	46.7		
Total %	2.2	0	2.2	4.3	6.5	26.1	2.2	34.8	15.2	6.5	6.5	28.3	4.3	13	15.2	32.6	

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	1	0	1	3	3	0	6	0	0	3	3	10
07:15 AM	0	0	1	1	0	1	0	1	2	0	0	2	0	0	0	0	4
07:30 AM	0	0	0	0	0	4	0	4	0	0	1	1	1	4	4	9	14
07:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	2	3
Total Volume	0	0	1	1	1	6	0	7	5	3	1	9	1	6	7	14	31
% App. Total	0	0	100		14.3	85.7	0		55.6	33.3	11.1		7.1	42.9	50		
PHF	.000	.000	.250	.250	.250	.375	.000	.438	.417	.250	.250	.375	.250	.375	.438	.389	.554

City of Ontario  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIAM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

**Peak Hour for Each Approach Begins at:**

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
<b>+0 mins.</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>
<b>+15 mins.</b>	0	0	0	1	0	1	0	1	2	0	0	2	0	0	0	0
<b>+30 mins.</b>	0	0	0	0	0	4	0	4	0	0	1	1	1	4	4	9
<b>+45 mins.</b>	0	0	0	0	1	0	0	1	0	0	0	0	0	2	0	2
<b>Total Volume</b>	0	0	1	1	1	6	0	7	5	3	1	9	1	6	7	14
<b>% App. Total</b>	0	0	100		14.3	85.7	0		55.6	33.3	11.1		7.1	42.9	50	
<b>PHF</b>	.000	.000	.250	.250	.250	.375	.000	.438	.417	.250	.250	.375	.250	.375	.438	.389

City of Ontario  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIAM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 1

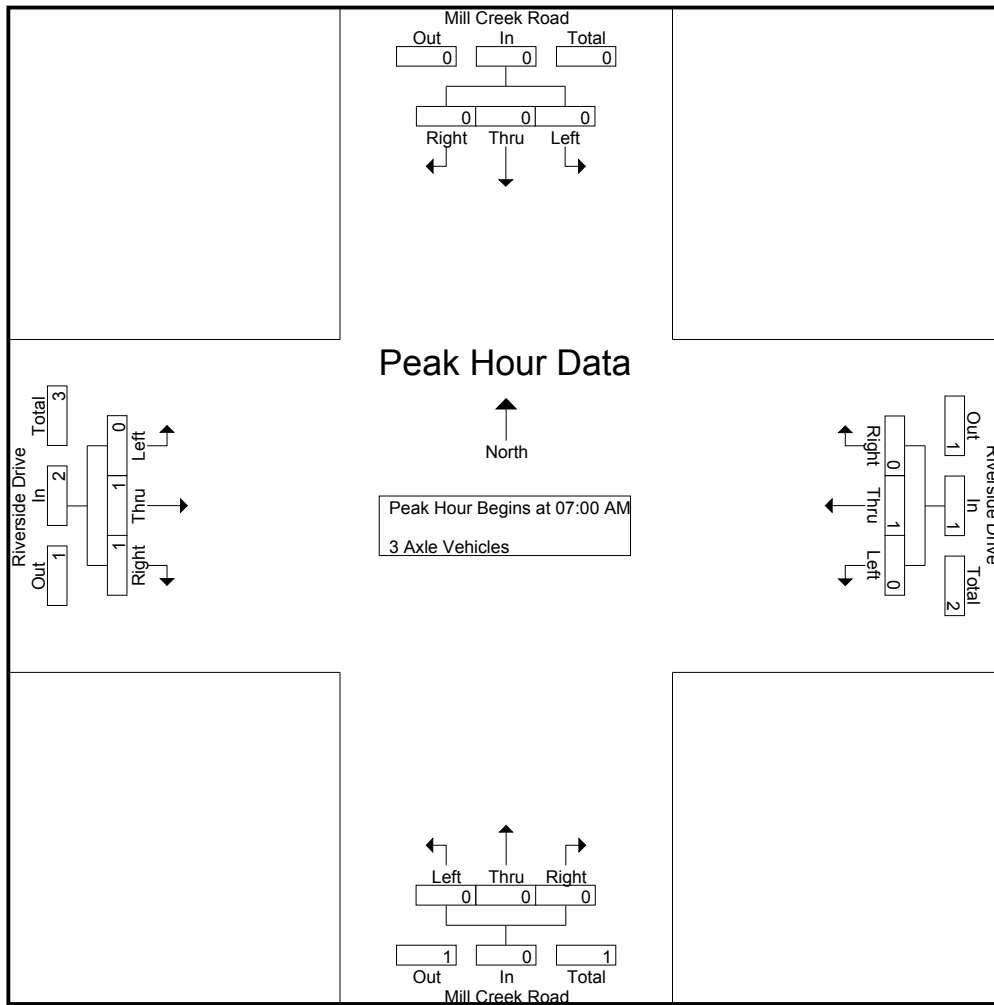
Groups Printed- 3 Axle Vehicles

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2	3
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	1	0	1	0	1	0	1	0	1	1	2	4
Apprch %	0	0	0		0	100	0		0	100	0		0	50	50		
Total %	0	0	0	0	0	25	0	25	0	25	0	25	0	25	25	50	

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2	3
% App. Total	0	0	0		0	100	0		0	0	0		0	50	50		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.250	.500	.375

City of Ontario  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIAM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

**Peak Hour for Each Approach Begins at:**

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1	2
% App. Total	0	0	0	0	0	100	0		0	0	0		0	50	50	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.250	.500



City of Ontario  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIAM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 1

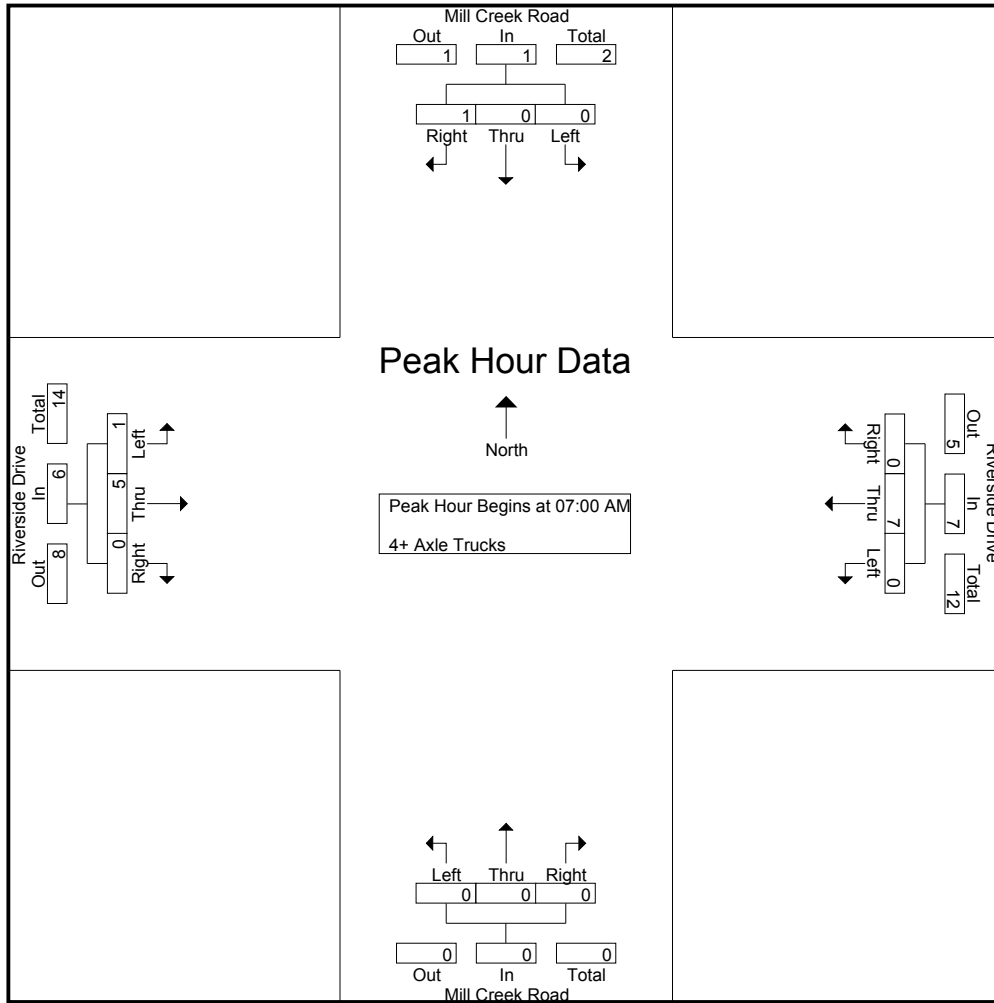
Groups Printed- 4+ Axle Trucks

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	2	4
07:30 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	2	0	2	4
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	0	0	1	1	0	7	0	7	0	0	0	0	1	5	0	6	14
08:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	6	0	6	0	0	0	0	0	7	0	7	13
Grand Total	0	0	1	1	0	13	0	13	0	0	0	0	1	12	0	13	27
Apprch %	0	0	100		0	100	0		0	0	0		7.7	92.3	0		
Total %	0	0	3.7	3.7	0	48.1	0	48.1	0	0	0	0	3.7	44.4	0	48.1	

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	2	4
07:30 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	2	0	2	4
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total Volume	0	0	1	1	0	7	0	7	0	0	0	0	1	5	0	6	14
% App. Total	0	0	100		0	100	0		0	0	0		16.7	83.3	0		
PHF	.000	.000	.250	.250	.000	.875	.000	.875	.000	.000	.000	.000	.250	.625	.000	.750	.875

City of Ontario  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIAM  
Site Code : 9222083  
Start Date : 8/18/2009  
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Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

**Peak Hour for Each Approach Begins at:**

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	2
+30 mins.	0	0	1	1	0	1	0	1	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1
Total Volume	0	0	1	1	0	7	0	7	0	0	0	0	1	5	0	6
% App. Total	0	0	100		0	100	0		0	0	0		16.7	83.3	0	
PHF	.000	.000	.250	.250	.000	.875	.000	.875	.000	.000	.000	.000	.250	.625	.000	.750

City of Riverside  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIIPM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 1

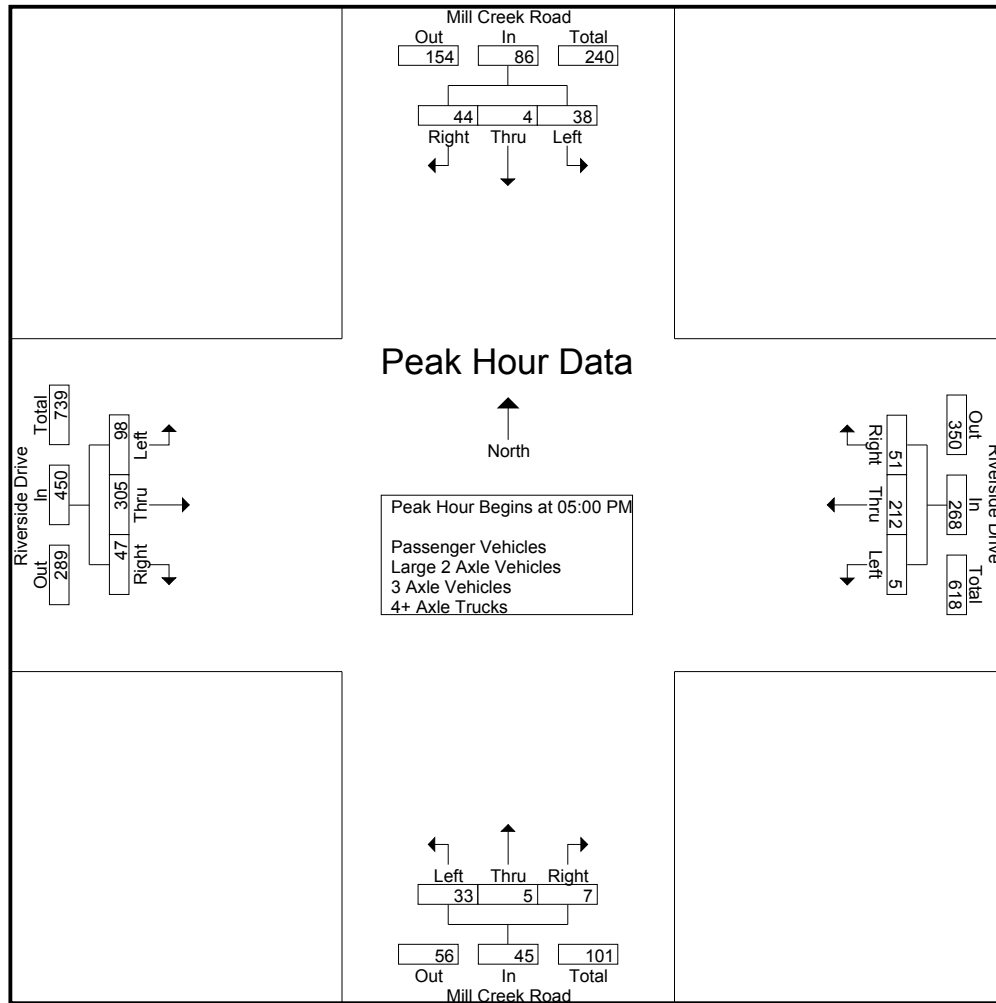
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	0	10	13	0	42	19	61	9	1	0	10	25	54	6	85	169
04:15 PM	3	3	7	13	1	34	3	38	10	3	1	14	27	60	10	97	162
04:30 PM	10	0	11	21	1	48	16	65	7	2	3	12	41	58	10	109	207
04:45 PM	11	2	7	20	3	53	17	73	6	4	0	10	32	70	9	111	214
Total	27	5	35	67	5	177	55	237	32	10	4	46	125	242	35	402	752
05:00 PM	6	2	6	14	1	52	8	61	8	1	1	10	28	73	10	111	196
05:15 PM	14	1	15	30	0	59	14	73	9	0	1	10	27	75	9	111	224
05:30 PM	6	0	10	16	0	57	14	71	3	0	1	4	17	75	13	105	196
05:45 PM	12	1	13	26	4	44	15	63	13	4	4	21	26	82	15	123	233
Total	38	4	44	86	5	212	51	268	33	5	7	45	98	305	47	450	849
Grand Total	65	9	79	153	10	389	106	505	65	15	11	91	223	547	82	852	1601
Apprch %	42.5	5.9	51.6		2	77	21		71.4	16.5	12.1		26.2	64.2	9.6		
Total %	4.1	0.6	4.9	9.6	0.6	24.3	6.6	31.5	4.1	0.9	0.7	5.7	13.9	34.2	5.1	53.2	
Passenger Vehicles	63	9	79	151	10	381	106	497	64	15	11	90	222	530	81	833	1571
% Passenger Vehicles	96.9	100	100	98.7	100	97.9	100	98.4	98.5	100	100	98.9	99.6	96.9	98.8	97.8	98.1
Large 2 Axle Vehicles	2	0	0	2	0	6	0	6	1	0	0	1	1	9	1	11	20
% Large 2 Axle Vehicles	3.1	0	0	1.3	0	1.5	0	1.2	1.5	0	0	1.1	0.4	1.6	1.2	1.3	1.2
3 Axle Vehicles	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
% 3 Axle Vehicles	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0	0.4	0	0.2	0.2
4+ Axle Trucks	0	0	0	0	0	1	0	1	0	0	0	0	0	6	0	6	7
% 4+ Axle Trucks	0	0	0	0	0	0.3	0	0.2	0	0	0	0	0	1.1	0	0.7	0.4

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	6	2	6	14	1	52	8	61	8	1	1	10	28	73	10	111	196
05:15 PM	14	1	15	30	0	59	14	73	9	0	1	10	27	75	9	111	224
05:30 PM	6	0	10	16	0	57	14	71	3	0	1	4	17	75	13	105	196
05:45 PM	12	1	13	26	4	44	15	63	13	4	4	21	26	82	15	123	233
Total Volume	38	4	44	86	5	212	51	268	33	5	7	45	98	305	47	450	849
% App. Total	44.2	4.7	51.2		1.9	79.1	19		73.3	11.1	15.6		21.8	67.8	10.4		
PHF	.679	.500	.733	.717	.313	.898	.850	.918	.635	.313	.438	.536	.875	.930	.783	.915	.911

City of Riverside  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIPM  
Site Code : 9222083  
Start Date : 8/18/2009  
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**Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	6	2	6	14	1	52	8	61	8	1	1	10	28	73	10	111
+15 mins.	14	1	15	30	0	59	14	73	9	0	1	10	27	75	9	111
+30 mins.	6	0	10	16	0	57	14	71	3	0	1	4	17	75	13	105
+45 mins.	12	1	13	26	4	44	15	63	13	4	4	21	26	82	15	123
Total Volume	38	4	44	86	5	212	51	268	33	5	7	45	98	305	47	450
% App. Total	44.2	4.7	51.2		1.9	79.1	19		73.3	11.1	15.6		21.8	67.8	10.4	
PHF	.679	.500	.733	.717	.313	.898	.850	.918	.635	.313	.438	.536	.875	.930	.783	.915

City of Riverside  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIIPM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 1

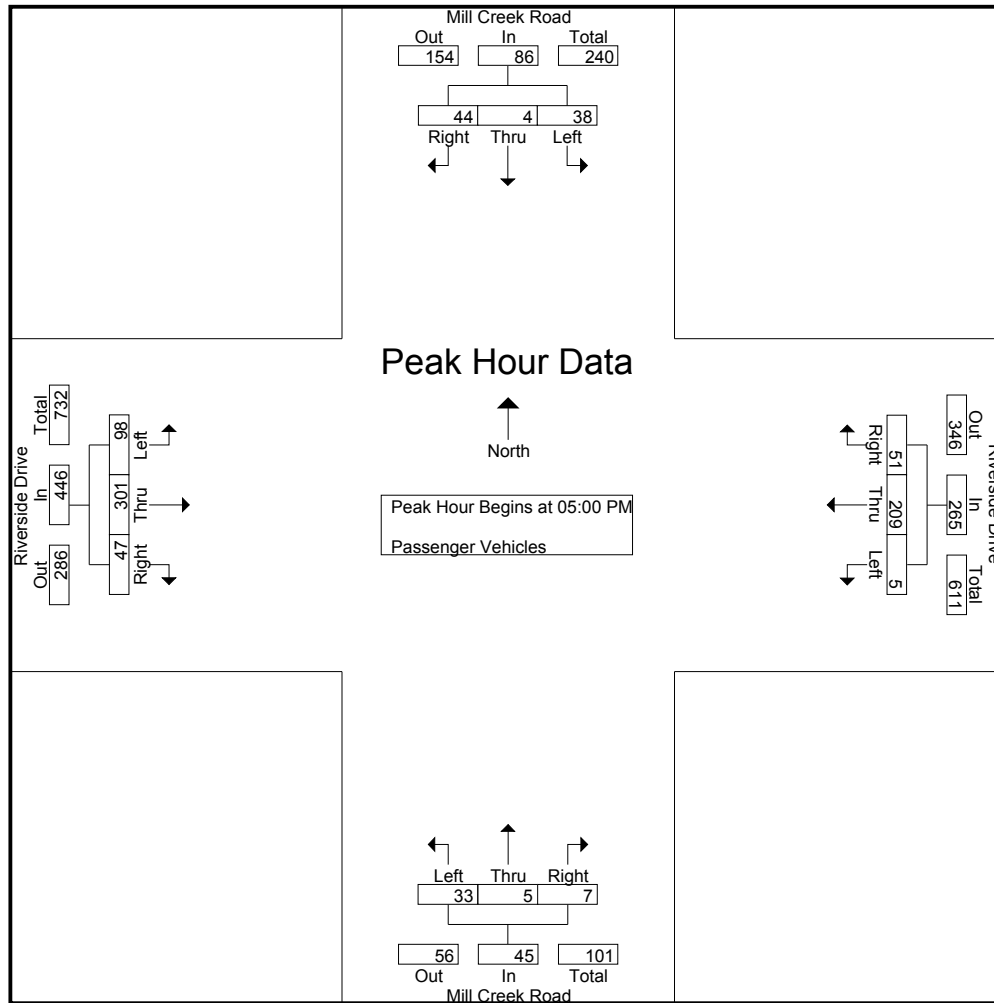
Groups Printed- Passenger Vehicles

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	0	10	13	0	42	19	61	9	1	0	10	25	51	5	81	165
04:15 PM	3	3	7	13	1	34	3	38	9	3	1	13	27	57	10	94	158
04:30 PM	10	0	11	21	1	47	16	64	7	2	3	12	41	55	10	106	203
04:45 PM	9	2	7	18	3	49	17	69	6	4	0	10	31	66	9	106	203
Total	25	5	35	65	5	172	55	232	31	10	4	45	124	229	34	387	729
05:00 PM	6	2	6	14	1	51	8	60	8	1	1	10	28	72	10	110	194
05:15 PM	14	1	15	30	0	58	14	72	9	0	1	10	27	74	9	110	222
05:30 PM	6	0	10	16	0	56	14	70	3	0	1	4	17	74	13	104	194
05:45 PM	12	1	13	26	4	44	15	63	13	4	4	21	26	81	15	122	232
Total	38	4	44	86	5	209	51	265	33	5	7	45	98	301	47	446	842
Grand Total	63	9	79	151	10	381	106	497	64	15	11	90	222	530	81	833	1571
Apprch %	41.7	6	52.3		2	76.7	21.3		71.1	16.7	12.2		26.7	63.6	9.7		
Total %	4	0.6	5	9.6	0.6	24.3	6.7	31.6	4.1	1	0.7	5.7	14.1	33.7	5.2	53	

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	6	2	6	14	1	51	8	60	8	1	1	10	28	72	10	110	194
05:15 PM	14	1	15	30	0	58	14	72	9	0	1	10	27	74	9	110	222
05:30 PM	6	0	10	16	0	56	14	70	3	0	1	4	17	74	13	104	194
05:45 PM	12	1	13	26	4	44	15	63	13	4	4	21	26	81	15	122	232
Total Volume	38	4	44	86	5	209	51	265	33	5	7	45	98	301	47	446	842
% App. Total	44.2	4.7	51.2		1.9	78.9	19.2		73.3	11.1	15.6		22	67.5	10.5		
PHF	.679	.500	.733	.717	.313	.901	.850	.920	.635	.313	.438	.536	.875	.929	.783	.914	.907

City of Riverside  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIPM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	6	2	6	14	1	51	8	60	8	1	1	10	28	72	10	110
+15 mins.	14	1	15	30	0	58	14	72	9	0	1	10	27	74	9	110
+30 mins.	6	0	10	16	0	56	14	70	3	0	1	4	17	74	13	104
+45 mins.	12	1	13	26	4	44	15	63	13	4	4	21	26	81	15	122
Total Volume	38	4	44	86	5	209	51	265	33	5	7	45	98	301	47	446
% App. Total	44.2	4.7	51.2		1.9	78.9	19.2		73.3	11.1	15.6		22	67.5	10.5	
PHF	.679	.500	.733	.717	.313	.901	.850	.920	.635	.313	.438	.536	.875	.929	.783	.914

City of Riverside  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIPM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 1

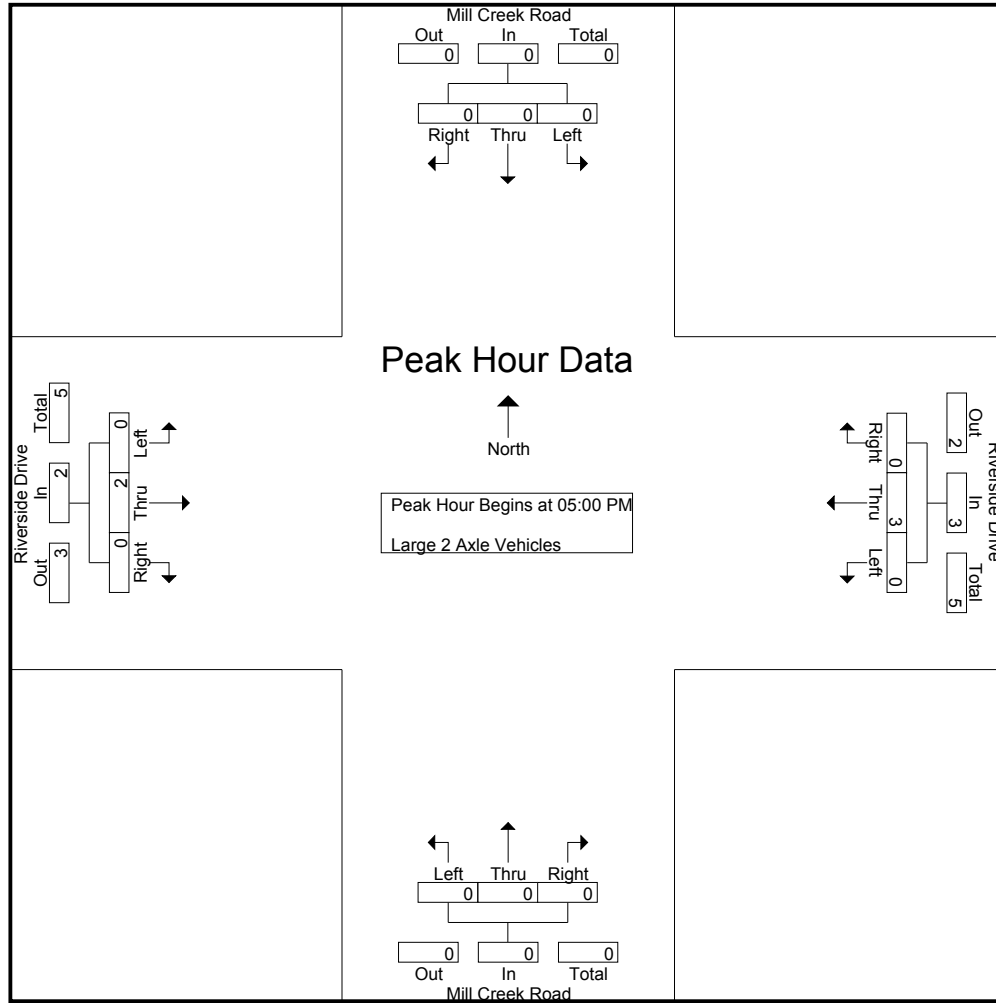
Groups Printed- Large 2 Axle Vehicles

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
04:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	2	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3
04:45 PM	2	0	0	2	0	3	0	3	0	0	0	0	1	1	0	2	7
Total	2	0	0	2	0	3	0	3	1	0	0	1	1	7	1	9	15
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Grand Total	2	0	0	2	0	6	0	6	1	0	0	1	1	9	1	11	20
Apprch %	100	0	0		0	100	0		100	0	0		9.1	81.8	9.1		
Total %	10	0	0	10	0	30	0	30	5	0	0	5	5	45	5	55	

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.500	.000	.500	.625

City of Riverside  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIPI  
Site Code : 9222083  
Start Date : 8/18/2009  
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Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.500	.000	.500



City of Riverside  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIPM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 1

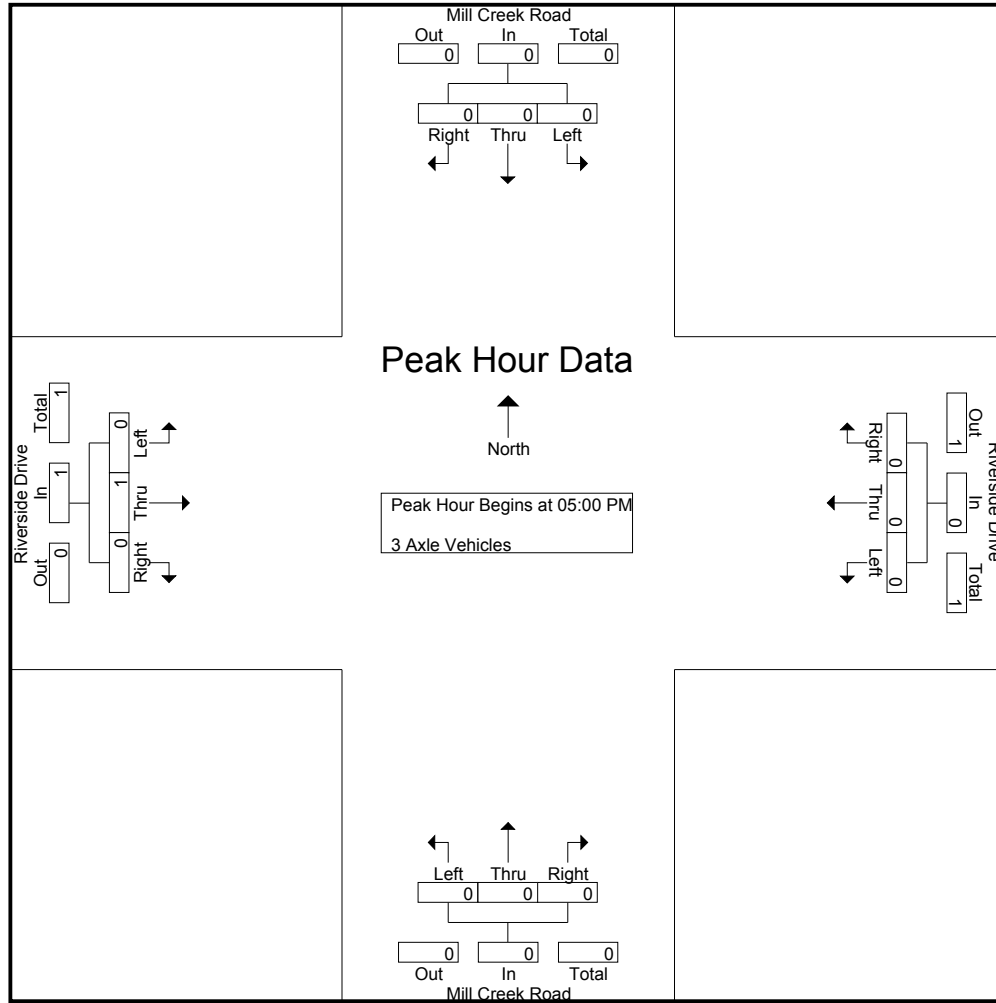
Groups Printed- 3 Axle Vehicles

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0		0	33.3	0	33.3	0	0	0		0	66.7	0	66.7	

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

City of Riverside  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIPM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250

City of Riverside  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIIPM  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 1

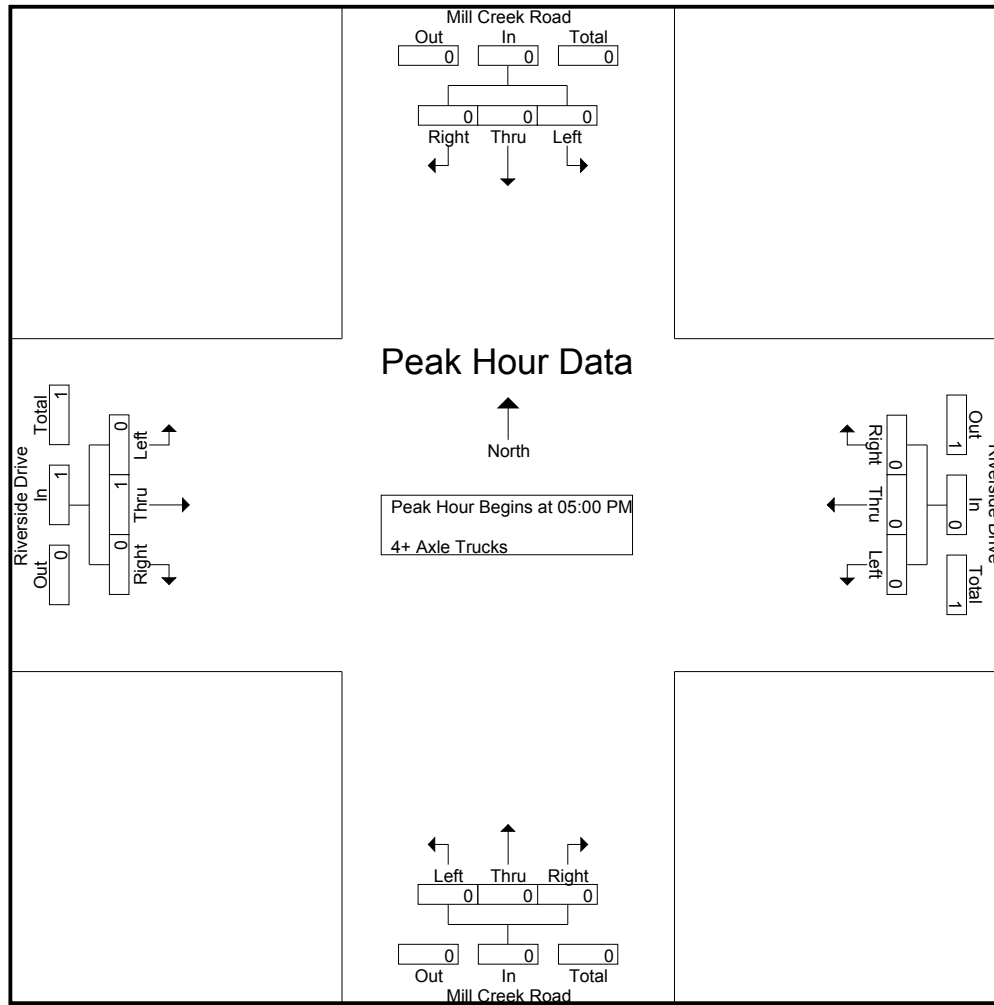
Groups Printed- 4+ Axle Trucks

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	5	0	5	6
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	1	0	1	0	0	0	0	0	6	0	6	7
Apprch %	0	0	0		0	100	0		0	0	0		0	100	0		
Total %	0	0	0		0	14.3	0	14.3	0	0	0		0	85.7	0	85.7	

	Mill Creek Road Southbound				Riverside Drive Westbound				Mill Creek Road Northbound				Riverside Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% App. Total	0	0	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.250

City of Riverside  
N/S: Mill Creek Road  
E/W: Riverside Drive  
Weather: Sunny

File Name : ONTMCRIPI  
Site Code : 9222083  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250

County of Riverside  
N/S: Sharp Street  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIAM  
Site Code : 9222022  
Start Date : 8/18/2009  
Page No : 1

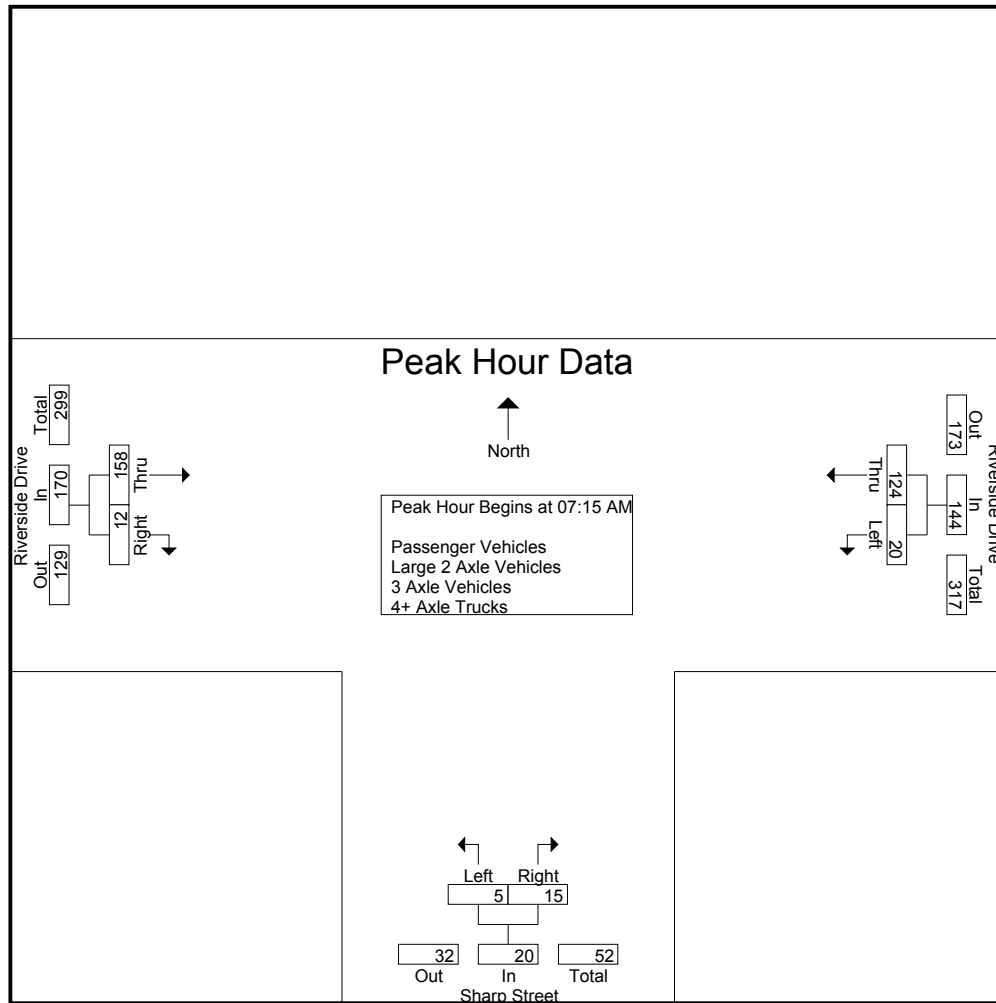
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	4	22	26	0	6	6	34	1	35	67
07:15 AM	6	27	33	2	3	5	40	2	42	80
07:30 AM	1	41	42	1	3	4	57	6	63	109
07:45 AM	6	21	27	2	6	8	40	2	42	77
Total	17	111	128	5	18	23	171	11	182	333
08:00 AM	7	35	42	0	3	3	21	2	23	68
08:15 AM	3	28	31	3	5	8	28	2	30	69
08:30 AM	4	24	28	0	1	1	29	1	30	59
08:45 AM	3	26	29	1	4	5	29	1	30	64
Total	17	113	130	4	13	17	107	6	113	260
Grand Total	34	224	258	9	31	40	278	17	295	593
Apprch %	13.2	86.8		22.5	77.5		94.2	5.8		
Total %	5.7	37.8	43.5	1.5	5.2	6.7	46.9	2.9	49.7	
Passenger Vehicles	17	131	148	5	11	16	202	11	213	377
% Passenger Vehicles	50	58.5	57.4	55.6	35.5	40	72.7	64.7	72.2	63.6
Large 2 Axle Vehicles	6	13	19	2	3	5	9	1	10	34
% Large 2 Axle Vehicles	17.6	5.8	7.4	22.2	9.7	12.5	3.2	5.9	3.4	5.7
3 Axle Vehicles	0	6	6	1	0	1	7	0	7	14
% 3 Axle Vehicles	0	2.7	2.3	11.1	0	2.5	2.5	0	2.4	2.4
4+ Axle Trucks	11	74	85	1	17	18	60	5	65	168
% 4+ Axle Trucks	32.4	33	32.9	11.1	54.8	45	21.6	29.4	22	28.3

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	6	27	33	2	3	5	40	2	42	80
07:30 AM	1	<b>41</b>	<b>42</b>	1	3	4	<b>57</b>	<b>6</b>	<b>63</b>	<b>109</b>
07:45 AM	6	21	27	2	<b>6</b>	<b>8</b>	40	2	42	77
08:00 AM	<b>7</b>	35	42	0	3	3	21	2	23	68
Total Volume	20	124	144	5	15	20	158	12	170	334
% App. Total	13.9	86.1		25	75		92.9	7.1		
PHF	.714	.756	.857	.625	.625	.625	.693	.500	.675	.766

County of Riverside  
N/S: Sharp Street  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIAM  
Site Code : 9222022  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			07:00 AM			07:00 AM		
+0 mins.	6	27	33	0	6	6	34	1	35
+15 mins.	1	41	42	2	3	5	40	2	42
+30 mins.	6	21	27	1	3	4	57	6	63
+45 mins.	7	35	42	2	6	8	40	2	42
Total Volume	20	124	144	5	18	23	171	11	182
% App. Total	13.9	86.1		21.7	78.3		94	6	
PHF	.714	.756	.857	.625	.750	.719	.750	.458	.722

County of Riverside  
N/S: Sharp Street  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIAM  
Site Code : 9222022  
Start Date : 8/18/2009  
Page No : 1

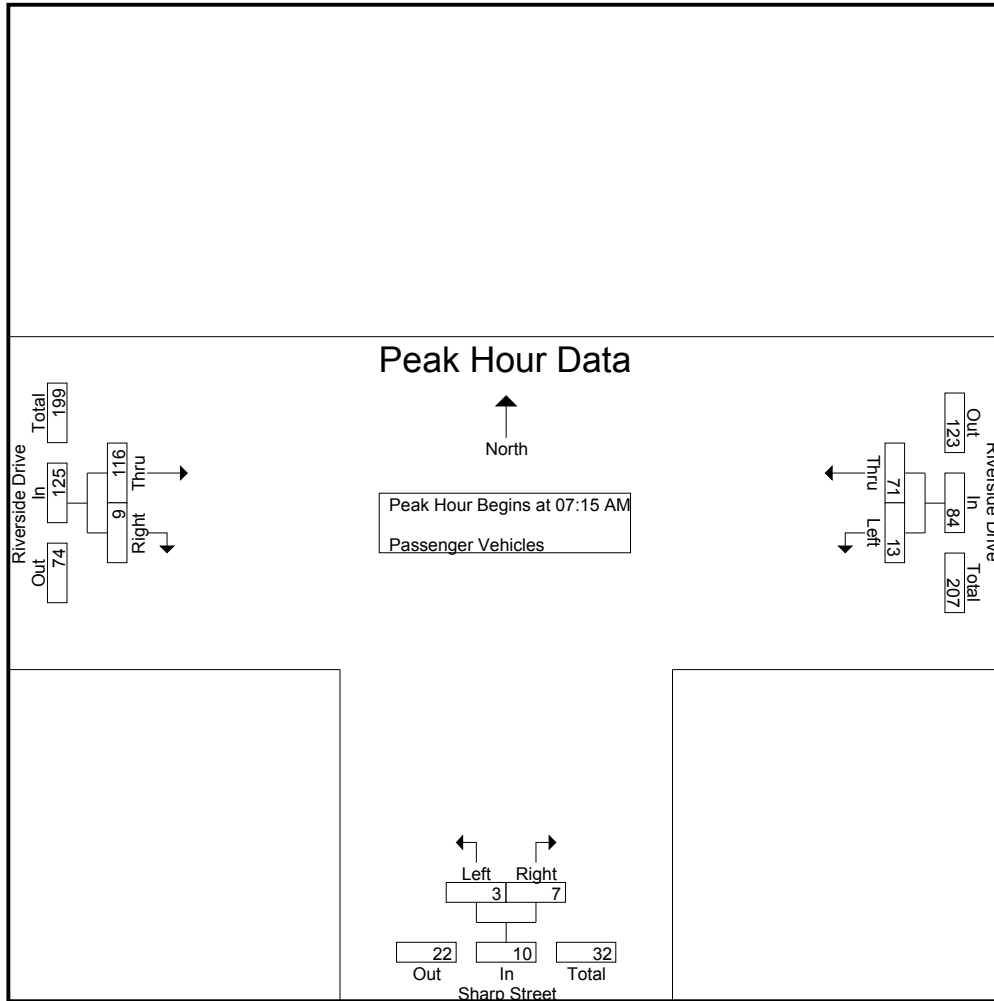
Groups Printed- Passenger Vehicles

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	1	15	16	0	0	0	23	1	24	40
07:15 AM	4	18	22	1	1	2	25	2	27	51
07:30 AM	1	22	23	1	2	3	42	5	47	73
07:45 AM	5	16	21	1	4	5	38	2	40	66
Total	11	71	82	3	7	10	128	10	138	230
08:00 AM	3	15	18	0	0	0	11	0	11	29
08:15 AM	2	16	18	2	2	4	18	0	18	40
08:30 AM	0	16	16	0	0	0	24	0	24	40
08:45 AM	1	13	14	0	2	2	21	1	22	38
Total	6	60	66	2	4	6	74	1	75	147
Grand Total	17	131	148	5	11	16	202	11	213	377
Apprch %	11.5	88.5		31.2	68.8		94.8	5.2		
Total %	4.5	34.7	39.3	1.3	2.9	4.2	53.6	2.9	56.5	

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	4	18	22	<b>1</b>	1	2	25	2	27	51
07:30 AM	1	<b>22</b>	<b>23</b>	1	2	3	<b>42</b>	<b>5</b>	<b>47</b>	<b>73</b>
07:45 AM	<b>5</b>	16	21	1	<b>4</b>	<b>5</b>	38	2	40	66
08:00 AM	3	15	18	0	0	0	11	0	11	29
Total Volume	13	71	84	3	7	10	116	9	125	219
% App. Total	15.5	84.5		30	70		92.8	7.2		
PHF	.650	.807	.913	.750	.438	.500	.690	.450	.665	.750

County of Riverside  
N/S: Sharp Street  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIAM  
Site Code : 9222022  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	4	18	22	1	1	2	25	2	27
+15 mins.	1	22	23	1	2	3	42	5	47
+30 mins.	5	16	21	1	4	5	38	2	40
+45 mins.	3	15	18	0	0	0	11	0	11
Total Volume	13	71	84	3	7	10	116	9	125
% App. Total	15.5	84.5		30	70		92.8	7.2	
PHF	.650	.807	.913	.750	.438	.500	.690	.450	.665



County of Riverside  
N/S: Sharp Street  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIAM  
Site Code : 9222022  
Start Date : 8/18/2009  
Page No : 1

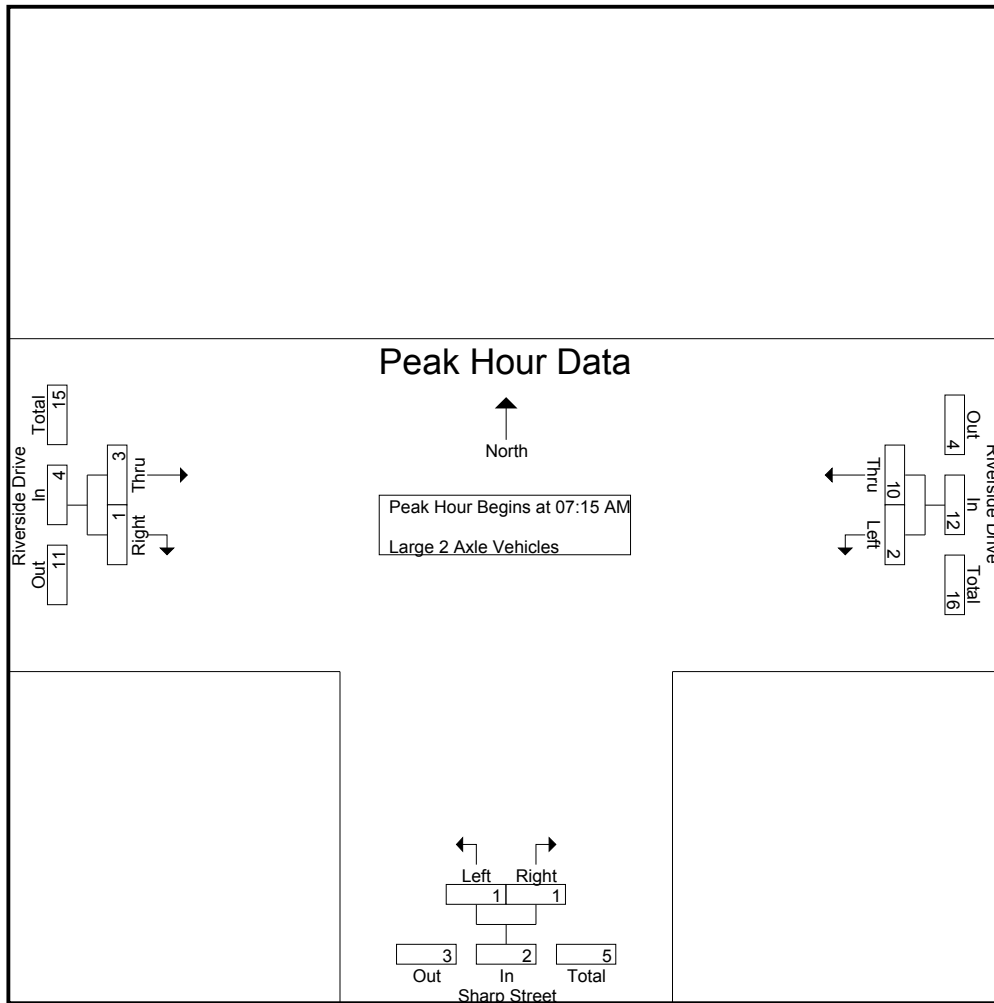
Groups Printed- Large 2 Axle Vehicles

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	3	1	4	0	0	0	2	0	2	6
07:15 AM	2	0	2	1	0	1	2	0	2	5
07:30 AM	0	6	6	0	0	0	1	1	2	8
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	5	7	12	1	0	1	5	1	6	19
08:00 AM	0	4	4	0	1	1	0	0	0	5
08:15 AM	0	2	2	0	1	1	2	0	2	5
08:30 AM	0	0	0	0	1	1	2	0	2	3
08:45 AM	1	0	1	1	0	1	0	0	0	2
Total	1	6	7	1	3	4	4	0	4	15
Grand Total	6	13	19	2	3	5	9	1	10	34
Apprch %	31.6	68.4		40	60		90	10		
Total %	17.6	38.2	55.9	5.9	8.8	14.7	26.5	2.9	29.4	

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	2	0	2	1	0	1	2	0	2	5
07:30 AM	0	6	6	0	0	0	1	1	2	8
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	4	4	0	1	1	0	0	0	5
Total Volume	2	10	12	1	1	2	3	1	4	18
% App. Total	16.7	83.3		50	50		75	25		
PHF	.250	.417	.500	.250	.250	.500	.375	.250	.500	.563

County of Riverside  
N/S: Sharp Street  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIAM  
Site Code : 9222022  
Start Date : 8/18/2009  
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	2	0	2	1	0	1	2	0	2
+15 mins.	0	6	6	0	0	0	1	1	2
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	4	4	0	1	1	0	0	0
Total Volume	2	10	12	1	1	2	3	1	4
% App. Total	16.7	83.3		50	50		75	25	
PHF	.250	.417	.500	.250	.250	.500	.375	.250	.500

County of Riverside  
N/S: Sharp Street  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIAM  
Site Code : 9222022  
Start Date : 8/18/2009  
Page No : 1

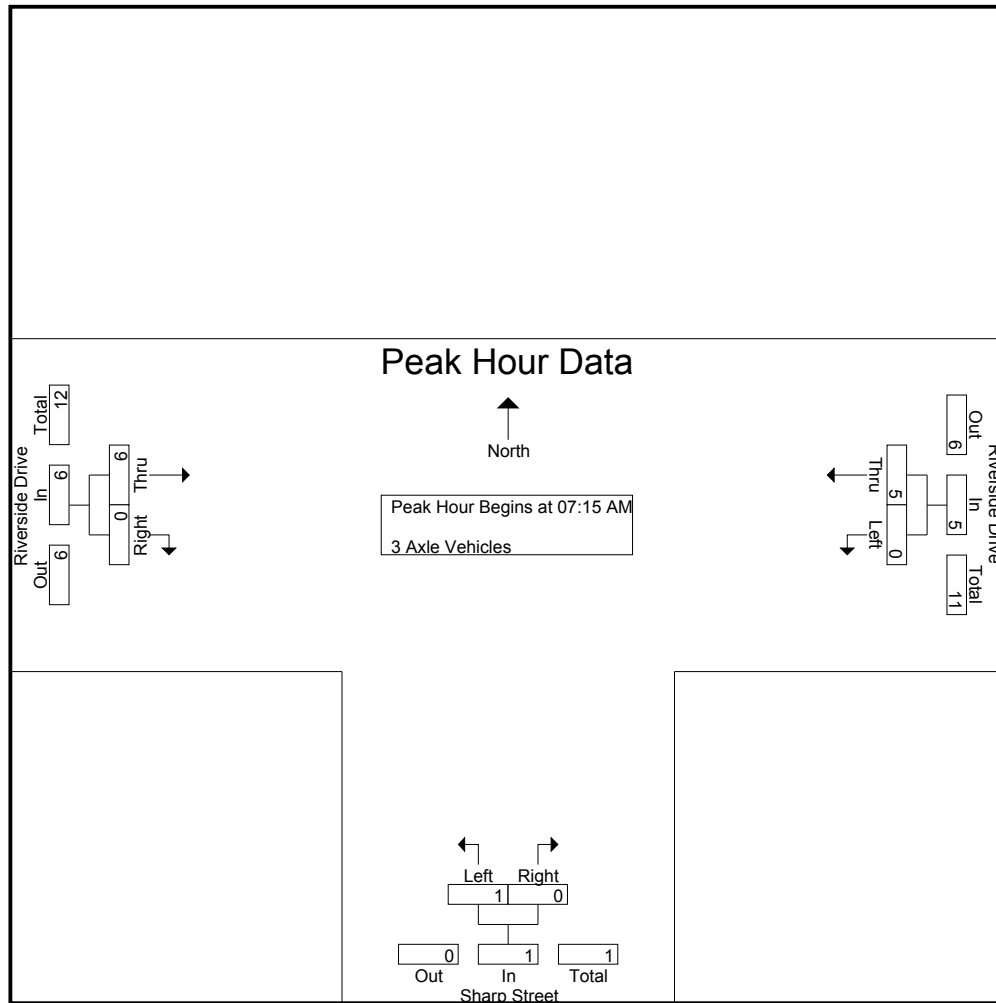
Groups Printed- 3 Axle Vehicles

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	3	0	3	3
07:30 AM	0	1	1	0	0	0	3	0	3	4
07:45 AM	0	1	1	1	0	1	0	0	0	2
Total	0	2	2	1	0	1	6	0	6	9
08:00 AM	0	3	3	0	0	0	0	0	0	3
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	1	0	1	1
08:45 AM	0	1	1	0	0	0	0	0	0	1
Total	0	4	4	0	0	0	1	0	1	5
Grand Total	0	6	6	1	0	1	7	0	7	14
Apprch %	0	100		100	0		100	0		
Total %	0	42.9	42.9	7.1	0	7.1	50	0	50	

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	0	0	0	0	0	3	0	3	3
07:30 AM	0	1	1	0	0	0	3	0	3	4
07:45 AM	0	1	1	1	0	1	0	0	0	2
08:00 AM	0	3	3	0	0	0	0	0	0	3
Total Volume	0	5	5	1	0	1	6	0	6	12
% App. Total	0	100		100	0		100	0		
PHF	.000	.417	.417	.250	.000	.250	.500	.000	.500	.750

County of Riverside  
N/S: Sharp Street  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIAM  
Site Code : 9222022  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	0	0	0	3	0	3
+15 mins.	0	1	1	0	0	0	3	0	3
+30 mins.	0	1	1	1	0	1	0	0	0
+45 mins.	0	3	3	0	0	0	0	0	0
Total Volume	0	5	5	1	0	1	6	0	6
% App. Total	0	100		100	0		100	0	
PHF	.000	.417	.417	.250	.000	.250	.500	.000	.500

County of Riverside  
N/S: Sharp Street  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIAM  
Site Code : 9222022  
Start Date : 8/18/2009  
Page No : 1

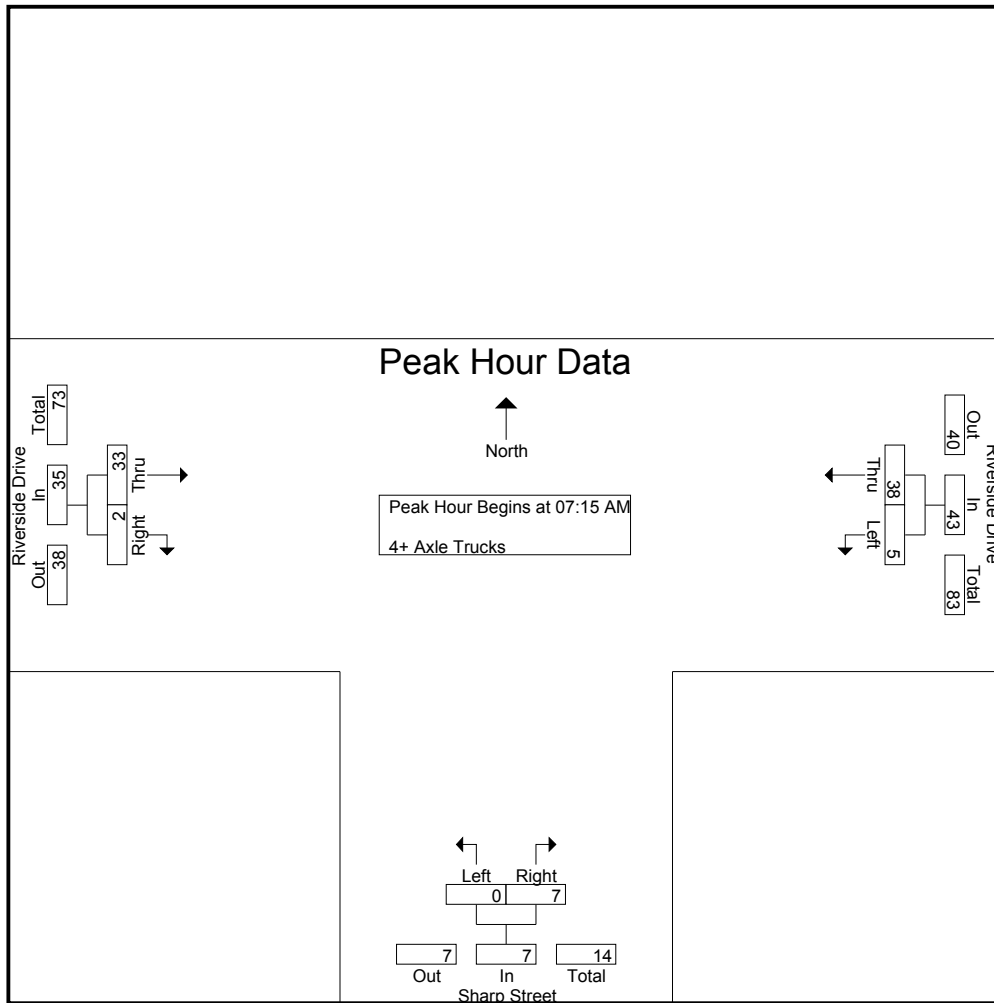
Groups Printed- 4+ Axle Trucks

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	6	6	0	6	6	9	0	9	21
07:15 AM	0	9	9	0	2	2	10	0	10	21
07:30 AM	0	12	12	0	1	1	11	0	11	24
07:45 AM	1	4	5	0	2	2	2	0	2	9
Total	1	31	32	0	11	11	32	0	32	75
08:00 AM	4	13	17	0	2	2	10	2	12	31
08:15 AM	1	10	11	1	2	3	8	2	10	24
08:30 AM	4	8	12	0	0	0	2	1	3	15
08:45 AM	1	12	13	0	2	2	8	0	8	23
Total	10	43	53	1	6	7	28	5	33	93
Grand Total	11	74	85	1	17	18	60	5	65	168
Apprch %	12.9	87.1		5.6	94.4		92.3	7.7		
Total %	6.5	44	50.6	0.6	10.1	10.7	35.7	3	38.7	

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	9	9	0	2	2	10	0	10	21
07:30 AM	0	12	12	0	1	1	11	0	11	24
07:45 AM	1	4	5	0	2	2	2	0	2	9
08:00 AM	4	13	17	0	2	2	10	2	12	31
Total Volume	5	38	43	0	7	7	33	2	35	85
% App. Total	11.6	88.4		0	100		94.3	5.7		
PHF	.313	.731	.632	.000	.875	.875	.750	.250	.729	.685

County of Riverside  
N/S: Sharp Street  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIAM  
Site Code : 9222022  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	9	9	0	2	2	10	0	10
+15 mins.	0	12	12	0	1	1	11	0	11
+30 mins.	1	4	5	0	2	2	2	0	2
+45 mins.	4	13	17	0	2	2	10	2	12
Total Volume	5	38	43	0	7	7	33	2	35
% App. Total	11.6	88.4		0	100		94.3	5.7	
PHF	.313	.731	.632	.000	.875	.875	.750	.250	.729

County of Riverside  
N/S: Sharp Street  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIPM  
Site Code : 9222022  
Start Date : 8/18/2009  
Page No : 1

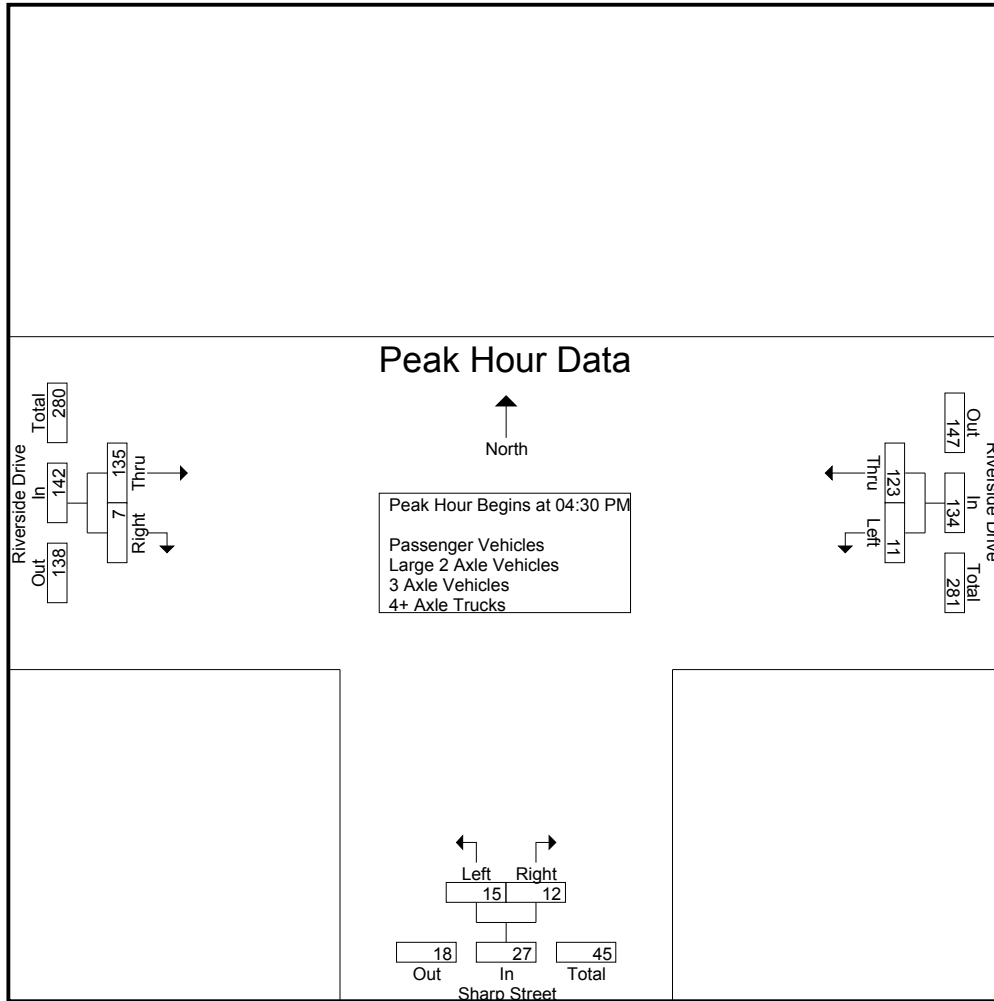
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	3	19	22	2	1	3	33	5	38	63
04:15 PM	1	23	24	0	3	3	34	0	34	61
04:30 PM	4	34	38	8	9	17	34	3	37	92
04:45 PM	2	27	29	2	1	3	34	1	35	67
Total	10	103	113	12	14	26	135	9	144	283
05:00 PM	5	33	38	2	1	3	28	1	29	70
05:15 PM	0	29	29	3	1	4	39	2	41	74
05:30 PM	2	22	24	3	1	4	27	2	29	57
05:45 PM	0	26	26	4	1	5	32	0	32	63
Total	7	110	117	12	4	16	126	5	131	264
Grand Total	17	213	230	24	18	42	261	14	275	547
Apprch %	7.4	92.6		57.1	42.9		94.9	5.1		
Total %	3.1	38.9	42	4.4	3.3	7.7	47.7	2.6	50.3	
Passenger Vehicles	5	163	168	18	14	32	180	6	186	386
% Passenger Vehicles	29.4	76.5	73	75	77.8	76.2	69	42.9	67.6	70.6
Large 2 Axle Vehicles	2	8	10	0	0	0	14	0	14	24
% Large 2 Axle Vehicles	11.8	3.8	4.3	0	0	0	5.4	0	5.1	4.4
3 Axle Vehicles	7	8	15	4	0	4	11	1	12	31
% 3 Axle Vehicles	41.2	3.8	6.5	16.7	0	9.5	4.2	7.1	4.4	5.7
4+ Axle Trucks	3	34	37	2	4	6	56	7	63	106
% 4+ Axle Trucks	17.6	16	16.1	8.3	22.2	14.3	21.5	50	22.9	19.4

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	4	<b>34</b>	<b>38</b>	<b>8</b>	<b>9</b>	<b>17</b>	34	<b>3</b>	37	<b>92</b>
04:45 PM	2	27	29	2	1	3	34	1	35	67
05:00 PM	<b>5</b>	33	38	2	1	3	28	1	29	70
05:15 PM	0	29	29	3	1	4	<b>39</b>	2	<b>41</b>	74
Total Volume	11	123	134	15	12	27	135	7	142	303
% App. Total	8.2	91.8		55.6	44.4		95.1	4.9		
PHF	.550	.904	.882	.469	.333	.397	.865	.583	.866	.823

County of Riverside  
N/S: Sharp Stret  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIPM  
Site Code : 9222022  
Start Date : 8/18/2009  
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:00 PM		
+0 mins.	4	<b>34</b>	<b>38</b>	<b>8</b>	<b>9</b>	<b>17</b>	33	<b>5</b>	<b>38</b>
+15 mins.	2	27	29	2	1	3	<b>34</b>	0	34
+30 mins.	<b>5</b>	33	38	2	1	3	34	3	37
+45 mins.	0	29	29	3	1	4	34	1	35
Total Volume	11	123	134	15	12	27	135	9	144
% App. Total	8.2	91.8		55.6	44.4		93.8	6.2	
PHF	.550	.904	.882	.469	.333	.397	.993	.450	.947



County of Riverside  
N/S: Sharp Stret  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIPM  
Site Code : 9222022  
Start Date : 8/18/2009  
Page No : 1

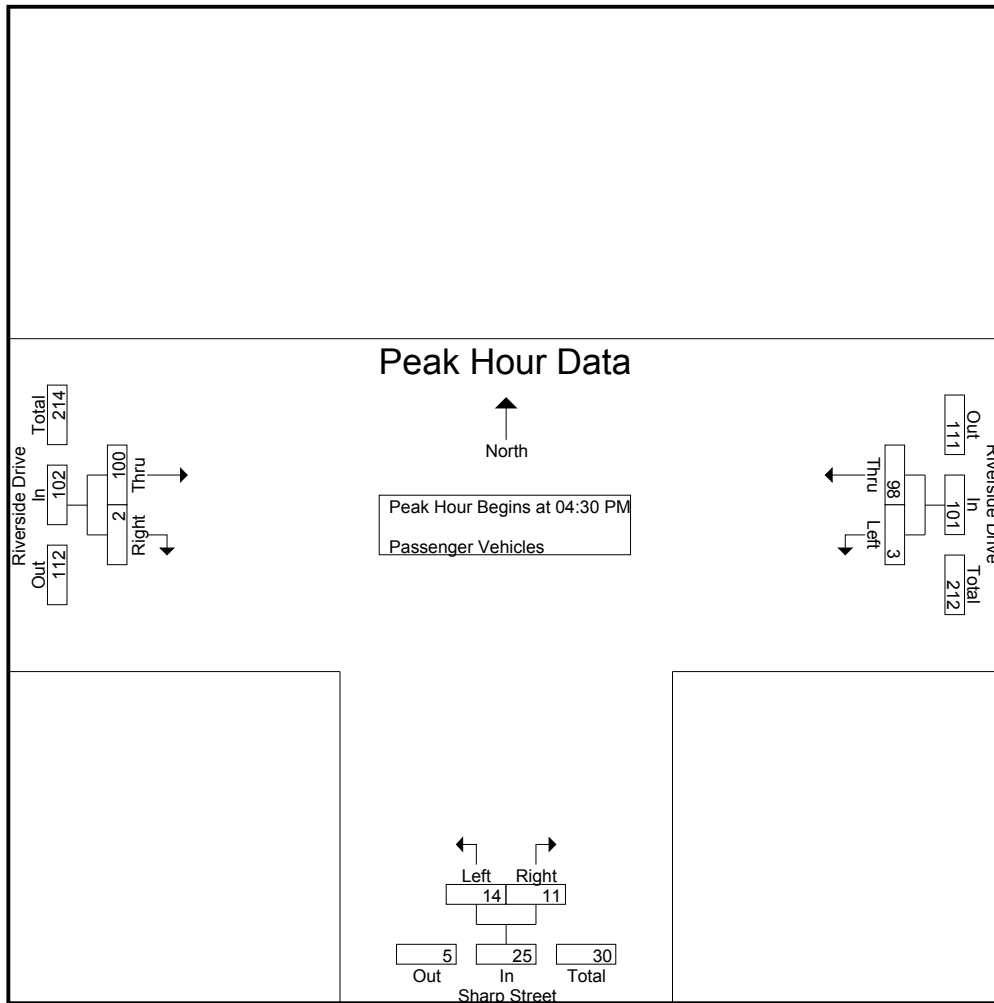
Groups Printed- Passenger Vehicles

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	1	13	14	1	1	2	19	3	22	38
04:15 PM	1	19	20	0	2	2	22	0	22	44
04:30 PM	2	31	33	8	9	17	29	1	30	80
04:45 PM	0	24	24	2	0	2	20	0	20	46
Total	4	87	91	11	12	23	90	4	94	208
05:00 PM	1	23	24	1	1	2	23	1	24	50
05:15 PM	0	20	20	3	1	4	28	0	28	52
05:30 PM	0	17	17	2	0	2	22	1	23	42
05:45 PM	0	16	16	1	0	1	17	0	17	34
Total	1	76	77	7	2	9	90	2	92	178
Grand Total	5	163	168	18	14	32	180	6	186	386
Apprch %	3	97		56.2	43.8		96.8	3.2		
Total %	1.3	42.2	43.5	4.7	3.6	8.3	46.6	1.6	48.2	

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	2	31	33	8	9	17	29	1	30	80
04:45 PM	0	24	24	2	0	2	20	0	20	46
05:00 PM	1	23	24	1	1	2	23	1	24	50
05:15 PM	0	20	20	3	1	4	28	0	28	52
Total Volume	3	98	101	14	11	25	100	2	102	228
% App. Total	3	97		56	44		98	2		
PHF	.375	.790	.765	.438	.306	.368	.862	.500	.850	.713

County of Riverside  
N/S: Sharp Stret  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIPM  
Site Code : 9222022  
Start Date : 8/18/2009  
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**Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	2	31	33	8	9	17	29	1	30
+15 mins.	0	24	24	2	0	2	20	0	20
+30 mins.	1	23	24	1	1	2	23	1	24
+45 mins.	0	20	20	3	1	4	28	0	28
Total Volume	3	98	101	14	11	25	100	2	102
% App. Total	3	97		56	44		98	2	
PHF	.375	.790	.765	.438	.306	.368	.862	.500	.850

County of Riverside  
N/S: Sharp Stret  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIPM  
Site Code : 9222022  
Start Date : 8/18/2009  
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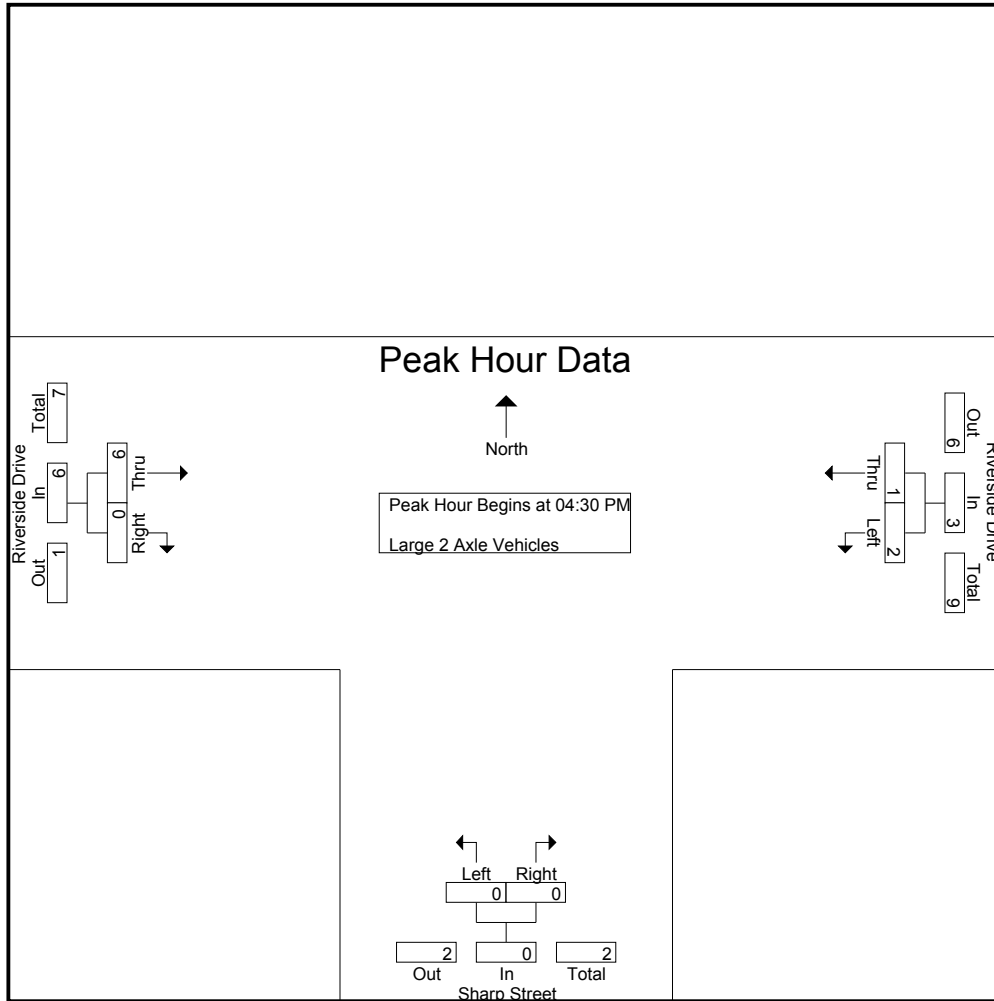
Groups Printed- Large 2 Axle Vehicles

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	2	0	0	0	3	0	3	5
04:15 PM	0	1	1	0	0	0	2	0	2	3
04:30 PM	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	1	1	0	0	0	3	0	3	4
Total	0	4	4	0	0	0	9	0	9	13
05:00 PM	2	0	2	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	2	0	2	2
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	3	3	0	0	0	3	0	3	6
Total	2	4	6	0	0	0	5	0	5	11
Grand Total	2	8	10	0	0	0	14	0	14	24
Apprch %	20	80		0	0		100	0		
Total %	8.3	33.3	41.7	0	0	0	58.3	0	58.3	

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	1	1	0	0	0	3	0	3	4
05:00 PM	2	0	2	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	2	0	2	2
Total Volume	2	1	3	0	0	0	6	0	6	9
% App. Total	66.7	33.3		0	0		100	0		
PHF	.250	.250	.375	.000	.000	.000	.500	.000	.500	.563

County of Riverside  
N/S: Sharp Stret  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIPM  
Site Code : 9222022  
Start Date : 8/18/2009  
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**Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	0	0	0	0	0	0	1	0	1
+15 mins.	0	1	1	0	0	0	3	0	3
+30 mins.	2	0	2	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	2	0	2
Total Volume	2	1	3	0	0	0	6	0	6
% App. Total	66.7	33.3		0	0		100	0	
PHF	.250	.250	.375	.000	.000	.000	.500	.000	.500

County of Riverside  
N/S: Sharp Stret  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIPM  
Site Code : 9222022  
Start Date : 8/18/2009  
Page No : 1

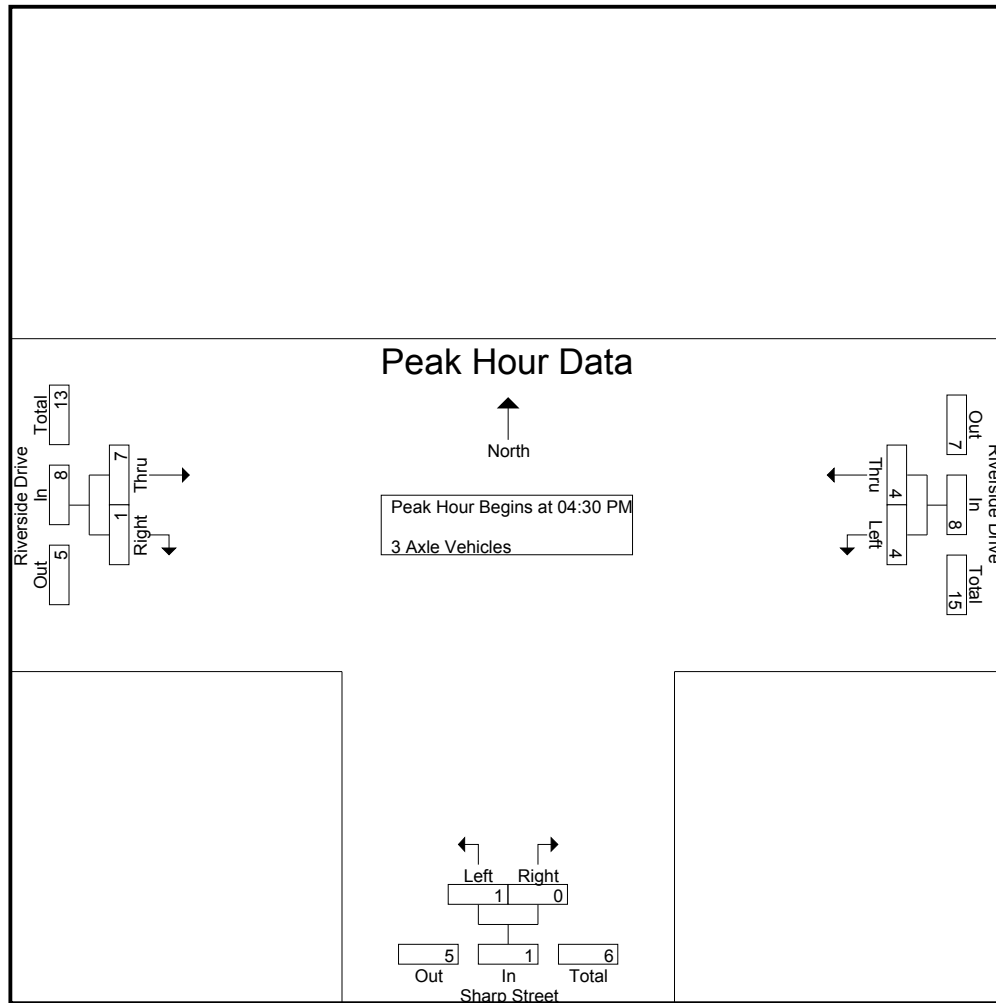
Groups Printed- 3 Axle Vehicles

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	2	0	2	0	0	0	3	0	3	5
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	1	1	2	0	0	0	0	0	0	2
04:45 PM	2	0	2	0	0	0	1	0	1	3
Total	5	1	6	0	0	0	4	0	4	10
05:00 PM	1	2	3	1	0	1	2	0	2	6
05:15 PM	0	1	1	0	0	0	4	1	5	6
05:30 PM	1	2	3	1	0	1	0	0	0	4
05:45 PM	0	2	2	2	0	2	1	0	1	5
Total	2	7	9	4	0	4	7	1	8	21
Grand Total	7	8	15	4	0	4	11	1	12	31
Apprch %	46.7	53.3		100	0		91.7	8.3		
Total %	22.6	25.8	48.4	12.9	0	12.9	35.5	3.2	38.7	

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	1	1	2	0	0	0	0	0	0	2
04:45 PM	2	0	2	0	0	0	1	0	1	3
05:00 PM	1	2	3	1	0	1	2	0	2	6
05:15 PM	0	1	1	0	0	0	4	1	5	6
Total Volume	4	4	8	1	0	1	7	1	8	17
% App. Total	50	50		100	0		87.5	12.5		
PHF	.500	.500	.667	.250	.000	.250	.438	.250	.400	.708

County of Riverside  
N/S: Sharp Stret  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIPM  
Site Code : 9222022  
Start Date : 8/18/2009  
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Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	1	1	2	0	0	0	0	0	0
+15 mins.	2	0	2	0	0	0	1	0	1
+30 mins.	1	2	3	1	0	1	2	0	2
+45 mins.	0	1	1	0	0	0	4	1	5
Total Volume	4	4	8	1	0	1	7	1	8
% App. Total	50	50		100	0		87.5	12.5	
PHF	.500	.500	.667	.250	.000	.250	.438	.250	.400

County of Riverside  
N/S: Sharp Stret  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIPM  
Site Code : 9222022  
Start Date : 8/18/2009  
Page No : 1

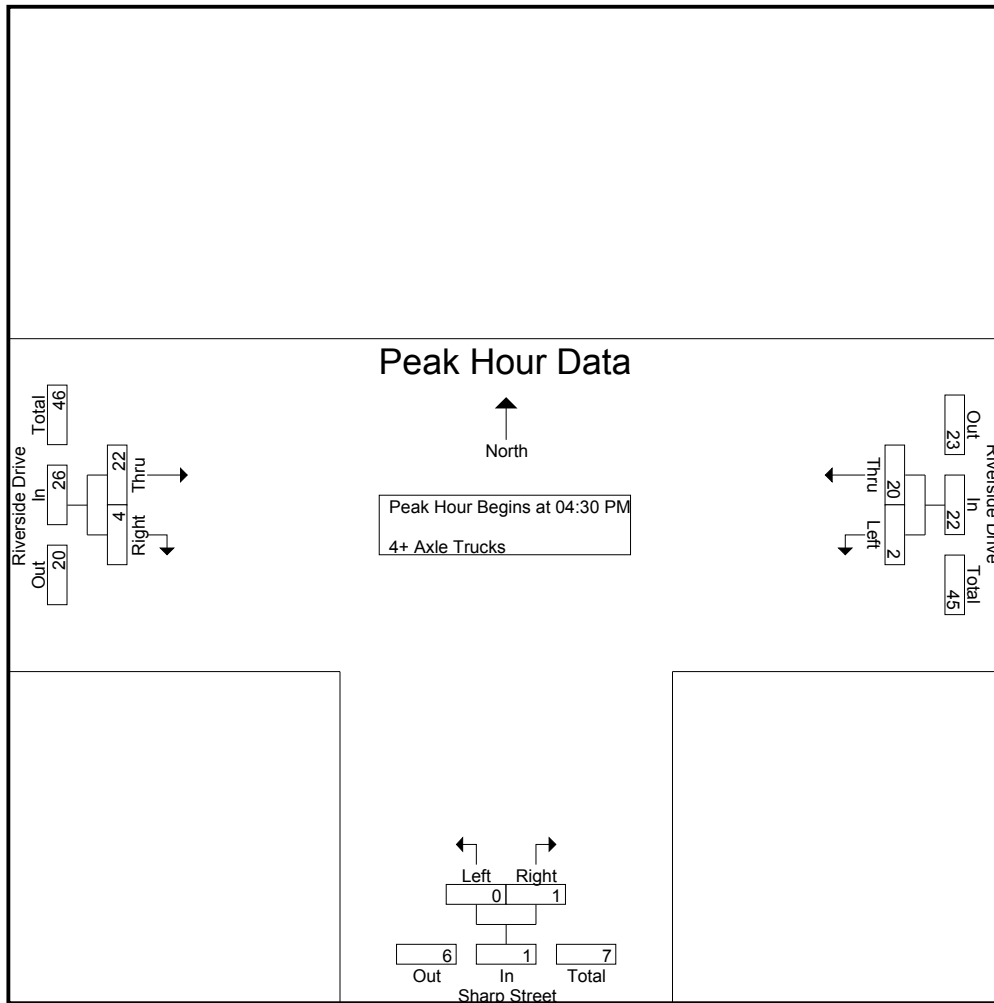
Groups Printed- 4+ Axle Trucks

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	4	4	1	0	1	8	2	10	15
04:15 PM	0	3	3	0	1	1	10	0	10	14
04:30 PM	1	2	3	0	0	0	4	2	6	9
04:45 PM	0	2	2	0	1	1	10	1	11	14
Total	1	11	12	1	2	3	32	5	37	52
05:00 PM	1	8	9	0	0	0	3	0	3	12
05:15 PM	0	8	8	0	0	0	5	1	6	14
05:30 PM	1	2	3	0	1	1	5	1	6	10
05:45 PM	0	5	5	1	1	2	11	0	11	18
Total	2	23	25	1	2	3	24	2	26	54
Grand Total	3	34	37	2	4	6	56	7	63	106
Apprch %	8.1	91.9		33.3	66.7		88.9	11.1		
Total %	2.8	32.1	34.9	1.9	3.8	5.7	52.8	6.6	59.4	

	Riverside Drive Westbound			Sharp Street Northbound			Riverside Drive Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	1	2	3	0	0	0	4	2	6	9
04:45 PM	0	2	2	0	1	1	10	1	11	14
05:00 PM	1	8	9	0	0	0	3	0	3	12
05:15 PM	0	8	8	0	0	0	5	1	6	14
Total Volume	2	20	22	0	1	1	22	4	26	49
% App. Total	9.1	90.9		0	100		84.6	15.4		
PHF	.500	.625	.611	.000	.250	.250	.550	.500	.591	.875

County of Riverside  
N/S: Sharp Stret  
E/W: Riverside Drive  
Weather: Sunny

File Name : CRVSHRIPM  
Site Code : 9222022  
Start Date : 8/18/2009  
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**Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	04:30 PM			04:30 PM			04:30 PM		
+0 mins.	<b>1</b>	2	3	0	0	0	4	<b>2</b>	6
+15 mins.	0	2	2	0	<b>1</b>	<b>1</b>	<b>10</b>	1	<b>11</b>
+30 mins.	1	<b>8</b>	<b>9</b>	0	0	0	3	0	3
+45 mins.	0	8	8	0	0	0	5	1	6
Total Volume	2	20	22	0	1	1	22	4	26
% App. Total	9.1	90.9		0	100		84.6	15.4	
PHF	.500	.625	.611	.000	.250	.250	.550	.500	.591



City of Ontario  
N/S: Hamner Avenue  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : ONTHACGAM  
Site Code : 9222035  
Start Date : 8/18/2009  
Page No : 1

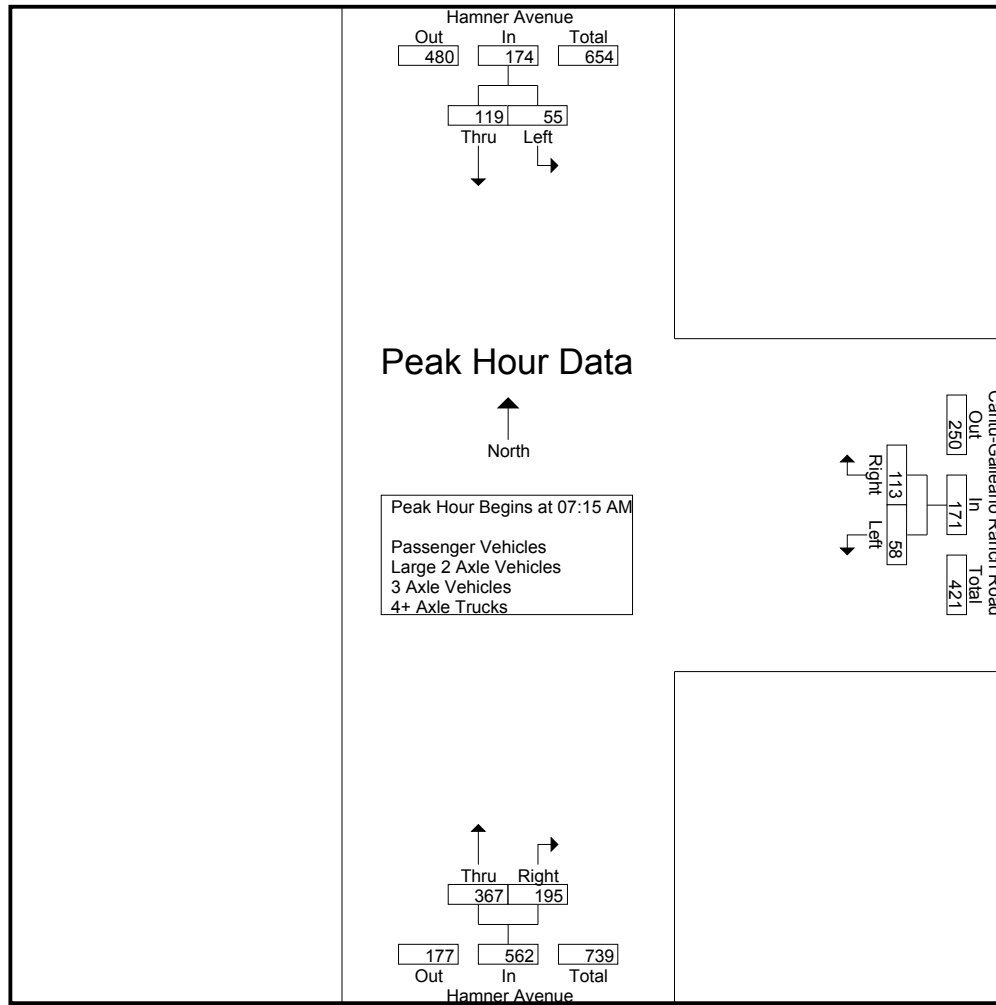
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Hamner Avenue Southbound			Cantu-Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	9	13	22	21	21	42	66	46	112	176
07:15 AM	15	25	40	14	21	35	81	63	144	219
07:30 AM	12	37	49	14	29	43	95	54	149	241
07:45 AM	18	30	48	17	33	50	104	41	145	243
Total	54	105	159	66	104	170	346	204	550	879
08:00 AM	10	27	37	13	30	43	87	37	124	204
08:15 AM	19	34	53	10	41	51	77	37	114	218
08:30 AM	14	36	50	18	32	50	76	31	107	207
08:45 AM	10	29	39	23	21	44	75	36	111	194
Total	53	126	179	64	124	188	315	141	456	823
Grand Total	107	231	338	130	228	358	661	345	1006	1702
Apprch %	31.7	68.3		36.3	63.7		65.7	34.3		
Total %	6.3	13.6	19.9	7.6	13.4	21	38.8	20.3	59.1	
Passenger Vehicles	80	208	288	115	201	316	652	340	992	1596
% Passenger Vehicles	74.8	90	85.2	88.5	88.2	88.3	98.6	98.6	98.6	93.8
Large 2 Axle Vehicles	9	13	22	5	15	20	6	1	7	49
% Large 2 Axle Vehicles	8.4	5.6	6.5	3.8	6.6	5.6	0.9	0.3	0.7	2.9
3 Axle Vehicles	6	3	9	3	2	5	0	1	1	15
% 3 Axle Vehicles	5.6	1.3	2.7	2.3	0.9	1.4	0	0.3	0.1	0.9
4+ Axle Trucks	12	7	19	7	10	17	3	3	6	42
% 4+ Axle Trucks	11.2	3	5.6	5.4	4.4	4.7	0.5	0.9	0.6	2.5

	Hamner Avenue Southbound			Cantu-Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	15	25	40	14	21	35	81	<b>63</b>	144	219
07:30 AM	12	<b>37</b>	<b>49</b>	14	29	43	95	54	<b>149</b>	241
07:45 AM	<b>18</b>	30	48	<b>17</b>	<b>33</b>	<b>50</b>	<b>104</b>	41	145	<b>243</b>
08:00 AM	10	27	37	13	30	43	87	37	124	204
Total Volume	55	119	174	58	113	171	367	195	562	907
% App. Total	31.6	68.4		33.9	66.1		65.3	34.7		
PHF	.764	.804	.888	.853	.856	.855	.882	.774	.943	.933

City of Ontario  
N/S: Hamner Avenue  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : ONTHACGAM  
Site Code : 9222035  
Start Date : 8/18/2009  
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Peak Hour Analysis From 07:15 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:45 AM			07:45 AM			07:15 AM		
+0 mins.	18	30	48	17	33	50	81	<b>63</b>	144
+15 mins.	10	27	37	13	30	43	95	54	<b>149</b>
+30 mins.	<b>19</b>	34	<b>53</b>	10	<b>41</b>	<b>51</b>	<b>104</b>	41	145
+45 mins.	14	<b>36</b>	50	<b>18</b>	32	50	87	37	124
Total Volume	61	127	188	58	136	194	367	195	562
% App. Total	32.4	67.6		29.9	70.1		65.3	34.7	
PHF	.803	.882	.887	.806	.829	.951	.882	.774	.943

City of Ontario  
N/S: Hamner Avenue  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : ONTHACGAM  
Site Code : 9222035  
Start Date : 8/18/2009  
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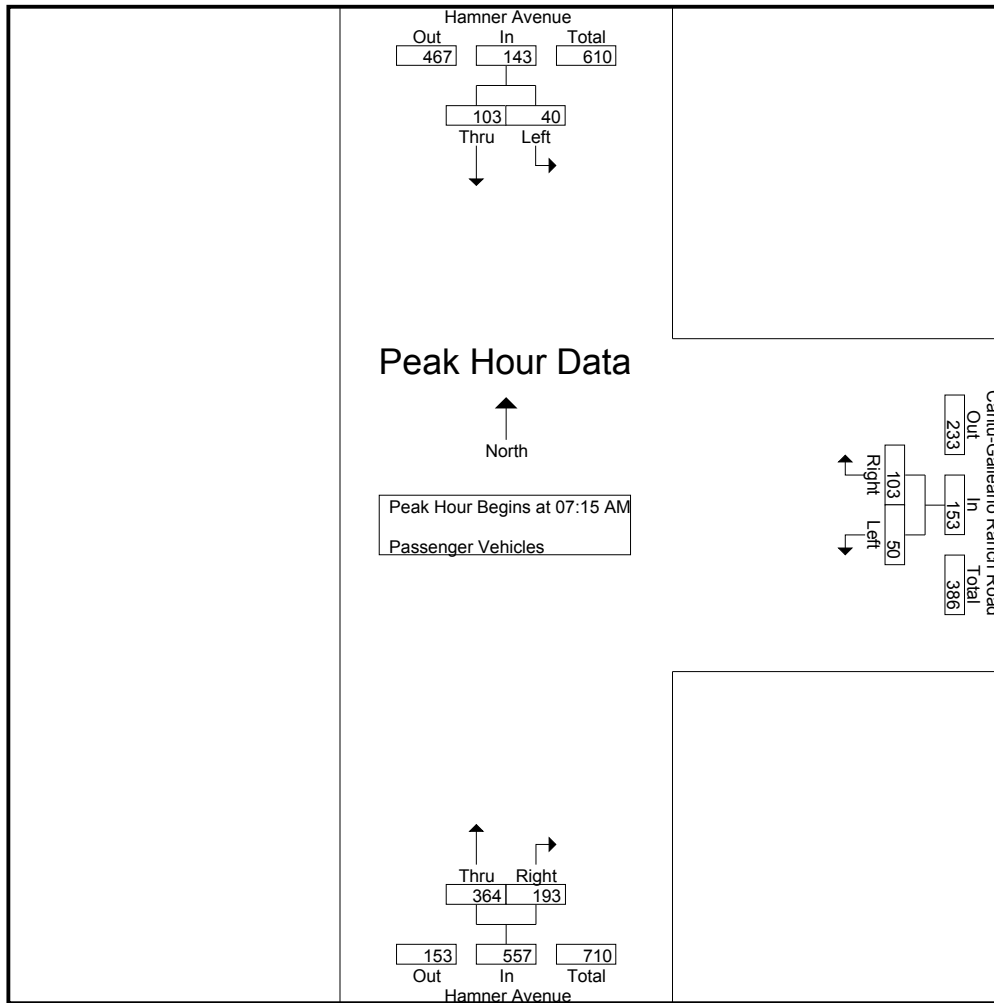
Groups Printed- Passenger Vehicles

	Hamner Avenue Southbound			Cantu-Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	9	13	22	18	18	36	65	46	111	169
07:15 AM	10	21	31	12	21	33	81	62	143	207
07:30 AM	10	29	39	11	24	35	94	53	147	221
07:45 AM	12	29	41	16	30	46	102	41	143	230
Total	41	92	133	57	93	150	342	202	544	827
08:00 AM	8	24	32	11	28	39	87	37	124	195
08:15 AM	17	30	47	9	34	43	76	36	112	202
08:30 AM	9	35	44	17	27	44	74	30	104	192
08:45 AM	5	27	32	21	19	40	73	35	108	180
Total	39	116	155	58	108	166	310	138	448	769
Grand Total	80	208	288	115	201	316	652	340	992	1596
Apprch %	27.8	72.2		36.4	63.6		65.7	34.3		
Total %	5	13	18	7.2	12.6	19.8	40.9	21.3	62.2	

	Hamner Avenue Southbound			Cantu-Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	10	21	31	12	21	33	81	<b>62</b>	143	207
07:30 AM	10	<b>29</b>	39	11	24	35	94	53	<b>147</b>	221
07:45 AM	<b>12</b>	29	<b>41</b>	<b>16</b>	<b>30</b>	<b>46</b>	<b>102</b>	41	143	<b>230</b>
08:00 AM	8	24	32	11	28	39	87	37	124	195
Total Volume	40	103	143	50	103	153	364	193	557	853
% App. Total	28	72		32.7	67.3		65.4	34.6		
PHF	.833	.888	.872	.781	.858	.832	.892	.778	.947	.927

City of Ontario  
N/S: Hamner Avenue  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

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Peak Hour Analysis From 07:15 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:45 AM			07:45 AM			07:15 AM		
+0 mins.	12	29	41	16	30	<b>46</b>	81	<b>62</b>	143
+15 mins.	8	24	32	11	28	39	94	53	<b>147</b>
+30 mins.	<b>17</b>	30	<b>47</b>	9	<b>34</b>	43	<b>102</b>	41	143
+45 mins.	9	<b>35</b>	44	<b>17</b>	27	44	87	37	124
Total Volume	46	118	164	53	119	172	364	193	557
% App. Total	28	72		30.8	69.2		65.4	34.6	
PHF	.676	.843	.872	.779	.875	.935	.892	.778	.947

City of Ontario  
N/S: Hamner Avenue  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

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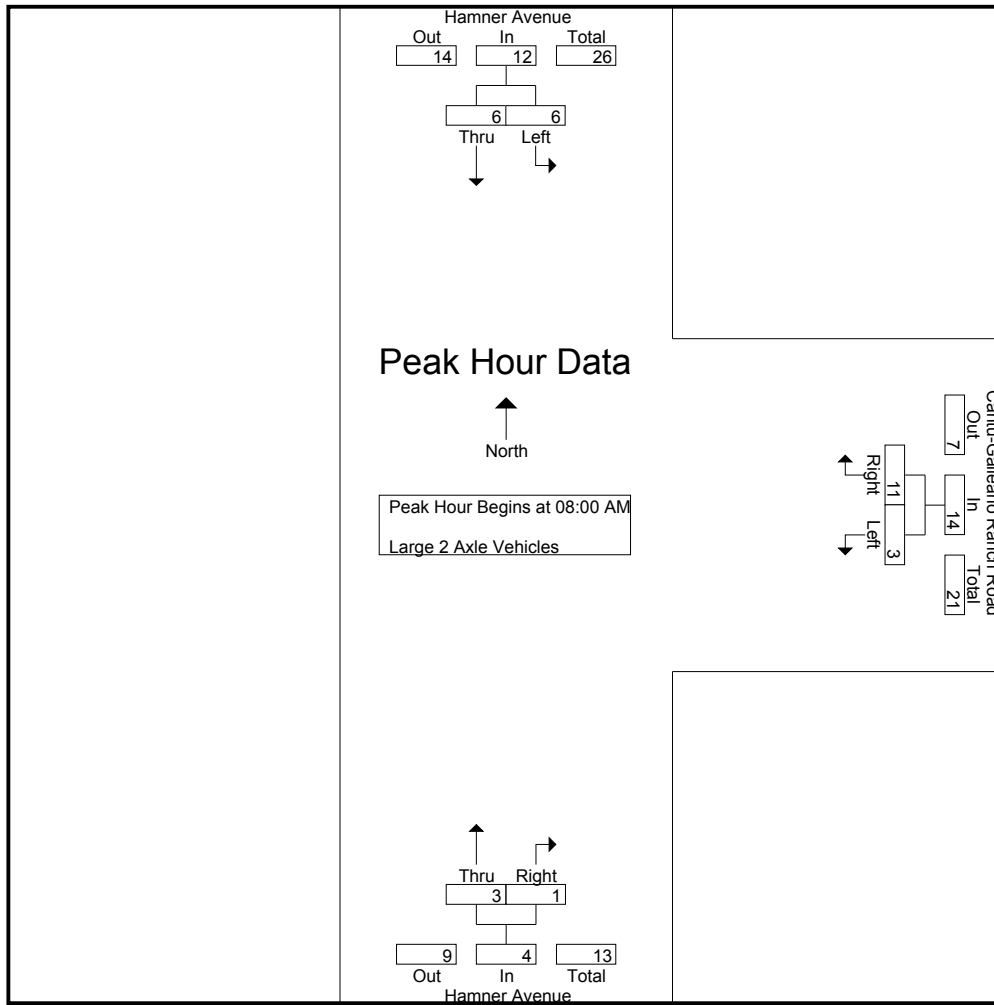
Groups Printed- Large 2 Axle Vehicles

	Hamner Avenue Southbound			Cantu-Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	1	1	0	1	2
07:15 AM	1	2	3	1	0	1	0	0	0	4
07:30 AM	1	5	6	1	2	3	0	0	0	9
07:45 AM	1	0	1	0	1	1	2	0	2	4
Total	3	7	10	2	4	6	3	0	3	19
08:00 AM	0	1	1	2	2	4	0	0	0	5
08:15 AM	0	3	3	1	5	6	0	0	0	9
08:30 AM	4	1	5	0	3	3	1	0	1	9
08:45 AM	2	1	3	0	1	1	2	1	3	7
Total	6	6	12	3	11	14	3	1	4	30
Grand Total	9	13	22	5	15	20	6	1	7	49
Apprch %	40.9	59.1		25	75		85.7	14.3		
Total %	18.4	26.5	44.9	10.2	30.6	40.8	12.2	2	14.3	

	Hamner Avenue Southbound			Cantu-Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	0	1	1	2	2	4	0	0	0	5
08:15 AM	0	3	3	1	5	6	0	0	0	9
08:30 AM	4	1	5	0	3	3	1	0	1	9
08:45 AM	2	1	3	0	1	1	2	1	3	7
Total Volume	6	6	12	3	11	14	3	1	4	30
% App. Total	50	50		21.4	78.6		75	25		
PHF	.375	.500	.600	.375	.550	.583	.375	.250	.333	.833

City of Ontario  
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Peak Hour Analysis From 07:15 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	08:00 AM			07:30 AM			08:00 AM		
+0 mins.	0	1	1	1	2	3	0	0	0
+15 mins.	0	3	3	0	1	1	0	0	0
+30 mins.	4	1	5	2	2	4	1	0	1
+45 mins.	2	1	3	1	5	6	2	1	3
Total Volume	6	6	12	4	10	14	3	1	4
% App. Total	50	50		28.6	71.4		75	25	
PHF	.375	.500	.600	.500	.500	.583	.375	.250	.333

City of Ontario  
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Weather: Sunny

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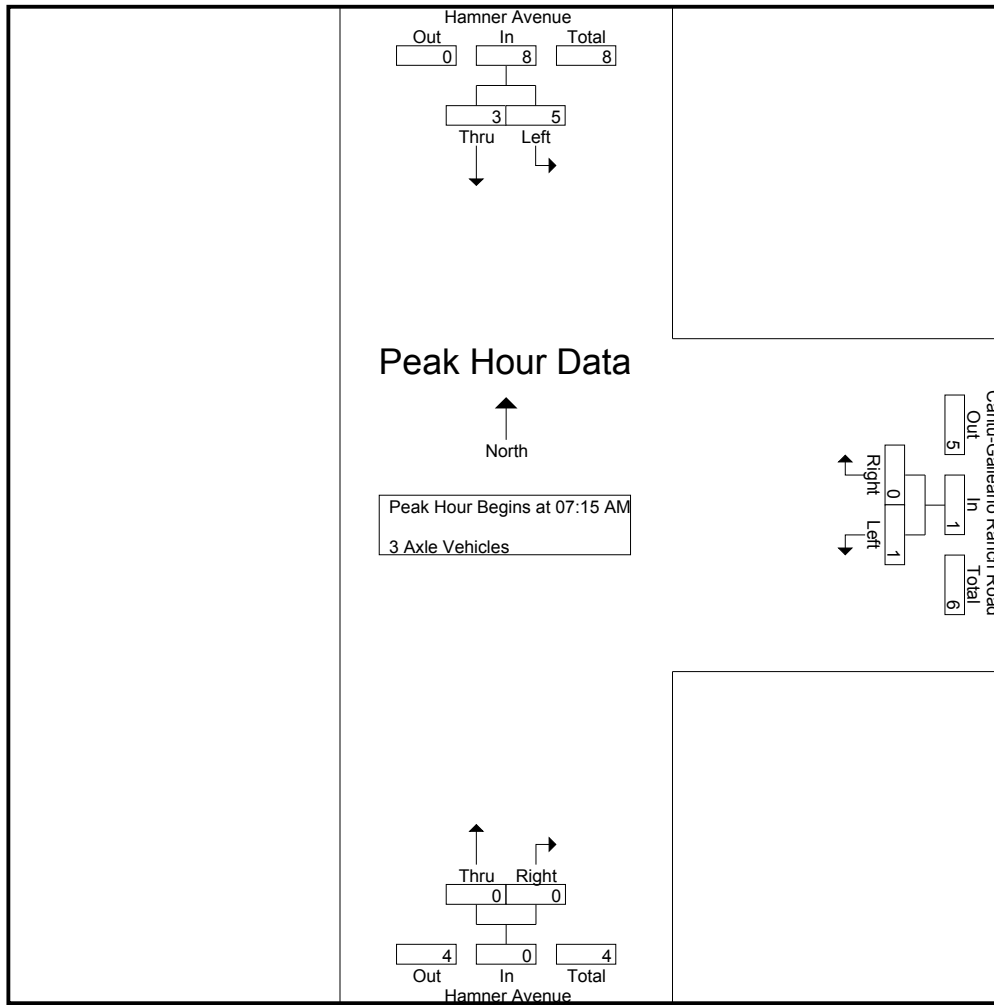
Groups Printed- 3 Axle Vehicles

	Hamner Avenue Southbound			Cantu-Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	2	2	0	0	0	2
07:15 AM	2	0	2	0	0	0	0	0	0	2
07:30 AM	0	1	1	1	0	1	0	0	0	2
07:45 AM	2	1	3	0	0	0	0	0	0	3
Total	4	2	6	1	2	3	0	0	0	9
08:00 AM	1	1	2	0	0	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	1	0	1	0	0	0	1
08:45 AM	1	0	1	1	0	1	0	0	0	2
Total	2	1	3	2	0	2	0	1	1	6
Grand Total	6	3	9	3	2	5	0	1	1	15
Apprch %	66.7	33.3		60	40		0	100		
Total %	40	20	60	20	13.3	33.3	0	6.7	6.7	

	Hamner Avenue Southbound			Cantu-Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	2	0	2	0	0	0	0	0	0	2
07:30 AM	0	1	1	1	0	1	0	0	0	2
07:45 AM	2	1	3	0	0	0	0	0	0	3
08:00 AM	1	1	2	0	0	0	0	0	0	2
Total Volume	5	3	8	1	0	1	0	0	0	9
% App. Total	62.5	37.5		100	0		0	0		
PHF	.625	.750	.667	.250	.000	.250	.000	.000	.000	.750

City of Ontario  
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Weather: Sunny

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Peak Hour Analysis From 07:15 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			08:00 AM			07:30 AM		
+0 mins.	2	0	2	0	0	0	0	0	0
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	2	1	3	1	0	1	0	0	0
+45 mins.	1	1	2	1	0	1	0	1	1
Total Volume	5	3	8	2	0	2	0	1	1
% App. Total	62.5	37.5		100	0		0	100	
PHF	.625	.750	.667	.500	.000	.500	.000	.250	.250



City of Ontario  
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Weather: Sunny

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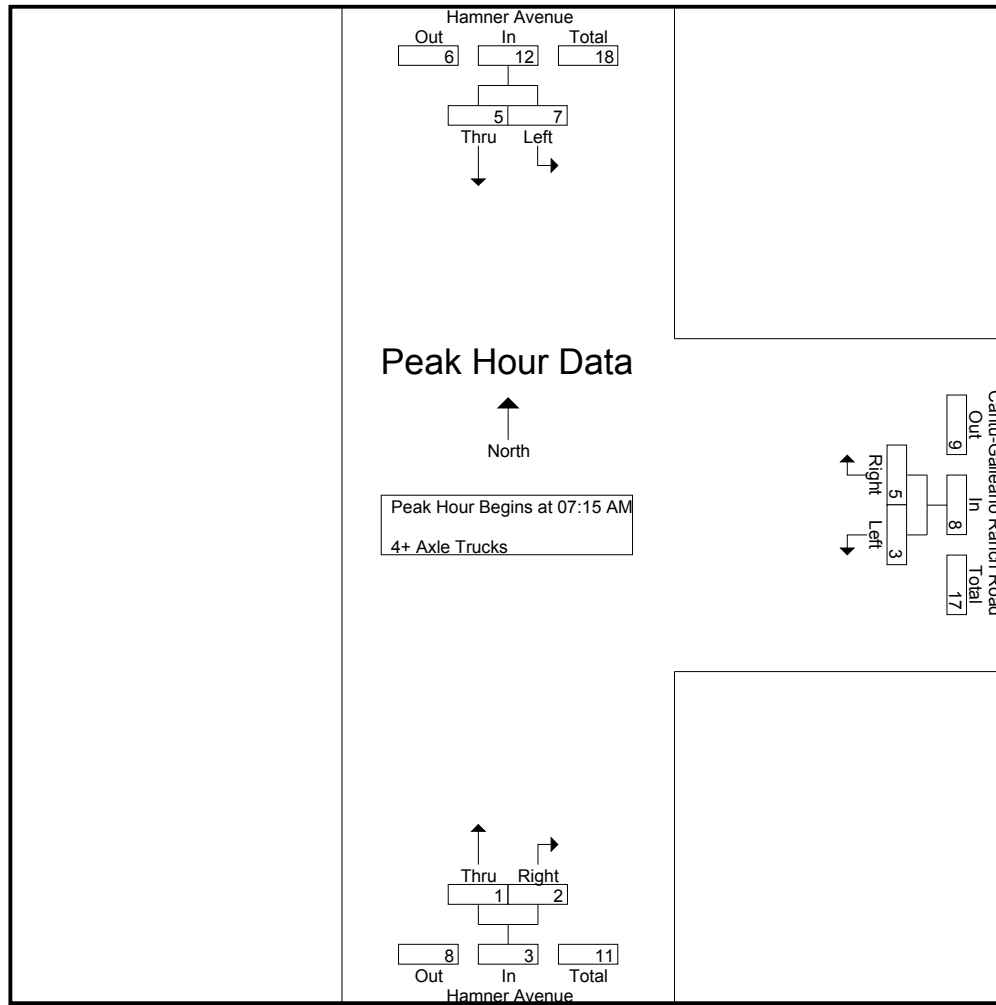
Groups Printed- 4+ Axle Trucks

	Hamner Avenue Southbound			Cantu-Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	3	0	3	0	0	0	3
07:15 AM	2	2	4	1	0	1	0	1	1	6
07:30 AM	1	2	3	1	3	4	1	1	2	9
07:45 AM	3	0	3	1	2	3	0	0	0	6
Total	6	4	10	6	5	11	1	2	3	24
08:00 AM	1	1	2	0	0	0	0	0	0	2
08:15 AM	2	1	3	0	2	2	1	0	1	6
08:30 AM	1	0	1	0	2	2	1	1	2	5
08:45 AM	2	1	3	1	1	2	0	0	0	5
Total	6	3	9	1	5	6	2	1	3	18
Grand Total	12	7	19	7	10	17	3	3	6	42
Apprch %	63.2	36.8		41.2	58.8		50	50		
Total %	28.6	16.7	45.2	16.7	23.8	40.5	7.1	7.1	14.3	

	Hamner Avenue Southbound			Cantu-Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	2	2	4	1	0	1	0	1	1	6
07:30 AM	1	2	3	1	3	4	1	1	2	9
07:45 AM	3	0	3	1	2	3	0	0	0	6
08:00 AM	1	1	2	0	0	0	0	0	0	2
Total Volume	7	5	12	3	5	8	1	2	3	23
% App. Total	58.3	41.7		37.5	62.5		33.3	66.7		
PHF	.583	.625	.750	.750	.417	.500	.250	.500	.375	.639

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Peak Hour Analysis From 07:15 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:15 AM			07:30 AM			07:45 AM		
+0 mins.	2	2	4	1	3	4	0	1	1
+15 mins.	1	2	3	1	2	3	1	1	2
+30 mins.	3	0	3	0	0	0	0	0	0
+45 mins.	1	1	2	0	2	2	0	0	0
Total Volume	7	5	12	2	7	9	1	2	3
% App. Total	58.3	41.7		22.2	77.8		33.3	66.7	
PHF	.583	.625	.750	.500	.583	.563	.250	.500	.375

City of Ontario  
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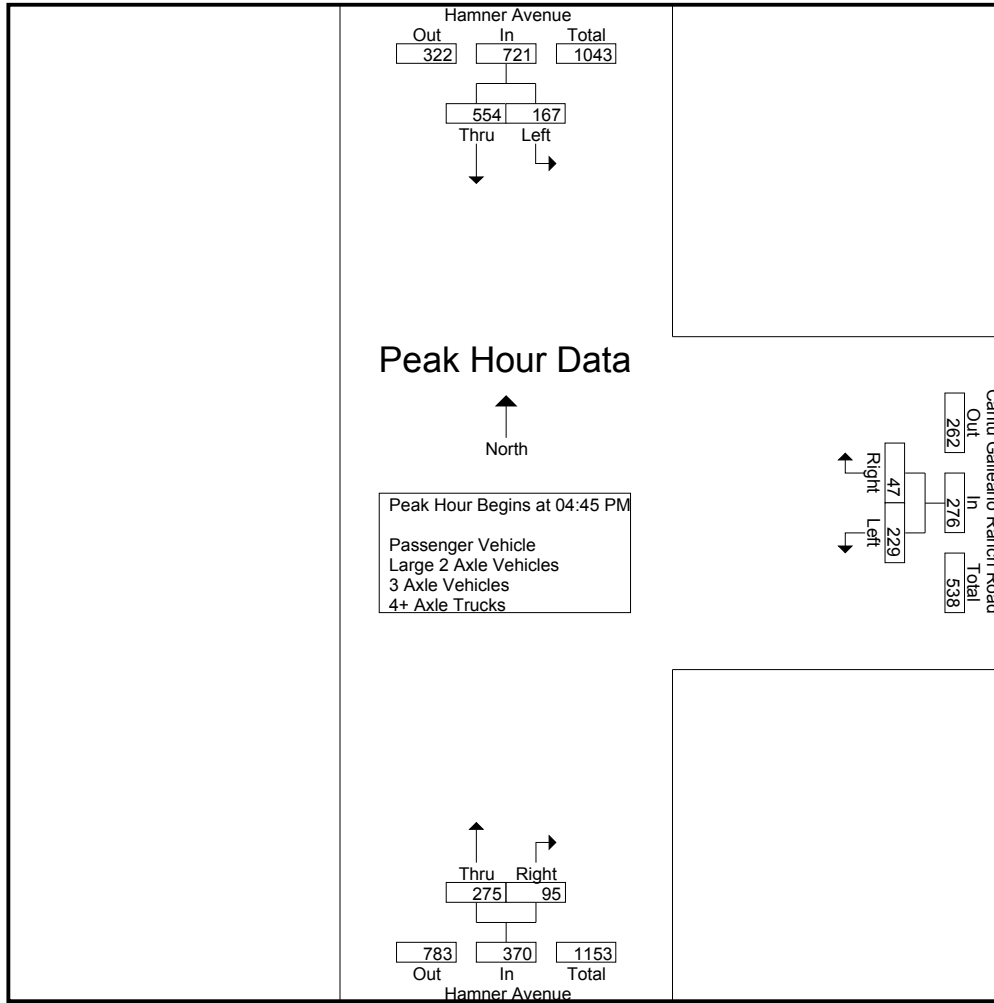
Groups Printed- Passenger Vehicle - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Hamner Avenue Southbound			Cantu Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	43	89	132	34	12	46	61	31	92	270
04:15 PM	34	92	126	44	10	54	58	34	92	272
04:30 PM	41	102	143	38	9	47	67	32	99	289
04:45 PM	34	128	162	47	12	59	75	22	97	318
Total	152	411	563	163	43	206	261	119	380	1149
05:00 PM	44	144	188	45	8	53	64	29	93	334
05:15 PM	46	135	181	63	14	77	66	23	89	347
05:30 PM	43	147	190	74	13	87	70	21	91	368
05:45 PM	25	136	161	51	7	58	60	23	83	302
Total	158	562	720	233	42	275	260	96	356	1351
Grand Total	310	973	1283	396	85	481	521	215	736	2500
Apprch %	24.2	75.8		82.3	17.7		70.8	29.2		
Total %	12.4	38.9	51.3	15.8	3.4	19.2	20.8	8.6	29.4	
Passenger Vehicle	295	958	1253	389	66	455	509	206	715	2423
% Passenger Vehicle	95.2	98.5	97.7	98.2	77.6	94.6	97.7	95.8	97.1	96.9
Large 2 Axle Vehicles	7	9	16	4	7	11	8	7	15	42
% Large 2 Axle Vehicles	2.3	0.9	1.2	1	8.2	2.3	1.5	3.3	2	1.7
3 Axle Vehicles	2	3	5	0	3	3	0	1	1	9
% 3 Axle Vehicles	0.6	0.3	0.4	0	3.5	0.6	0	0.5	0.1	0.4
4+ Axle Trucks	6	3	9	3	9	12	4	1	5	26
% 4+ Axle Trucks	1.9	0.3	0.7	0.8	10.6	2.5	0.8	0.5	0.7	1

	Hamner Avenue Southbound			Cantu Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	34	128	162	47	12	59	<b>75</b>	22	<b>97</b>	318
05:00 PM	44	144	188	45	8	53	64	<b>29</b>	93	334
05:15 PM	<b>46</b>	135	181	63	<b>14</b>	77	66	23	89	347
05:30 PM	43	<b>147</b>	<b>190</b>	<b>74</b>	13	<b>87</b>	70	21	91	<b>368</b>
Total Volume	167	554	721	229	47	276	275	95	370	1367
% App. Total	23.2	76.8		83	17		74.3	25.7		
PHF	.908	.942	.949	.774	.839	.793	.917	.819	.954	.929

City of Ontario  
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:15 PM		
+0 mins.	34	128	162	47	12	59	58	<b>34</b>	92
+15 mins.	44	144	188	45	8	53	67	32	<b>99</b>
+30 mins.	<b>46</b>	135	181	63	<b>14</b>	77	<b>75</b>	22	97
+45 mins.	43	<b>147</b>	<b>190</b>	<b>74</b>	13	<b>87</b>	64	29	93
Total Volume	167	554	721	229	47	276	264	117	381
% App. Total	23.2	76.8		83	17		69.3	30.7	
PHF	.908	.942	.949	.774	.839	.793	.880	.860	.962

City of Ontario  
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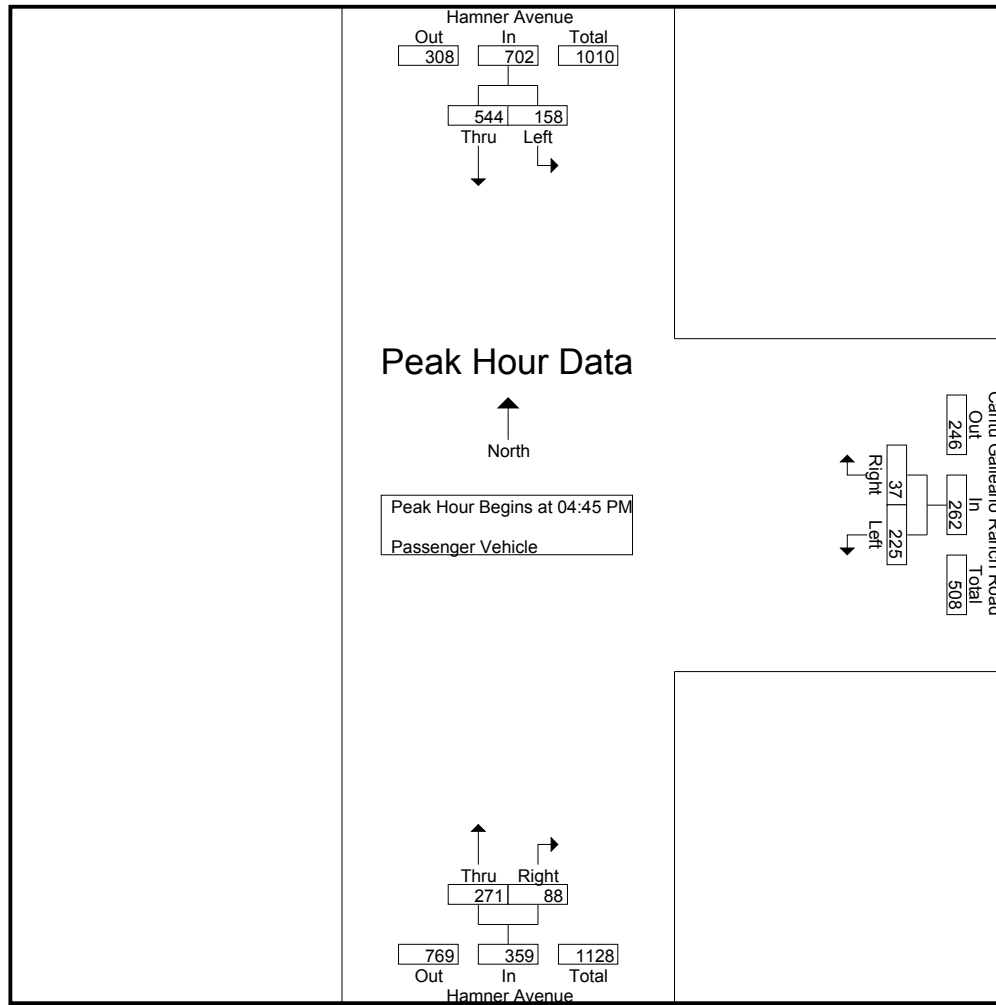
Groups Printed- Passenger Vehicle

	Hamner Avenue Southbound			Cantu Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	42	88	130	33	9	42	58	30	88	260
04:15 PM	33	90	123	44	8	52	55	33	88	263
04:30 PM	38	101	139	36	6	42	65	32	97	278
04:45 PM	31	124	155	46	10	56	75	21	96	307
Total	144	403	547	159	33	192	253	116	369	1108
05:00 PM	41	142	183	44	8	52	63	26	89	324
05:15 PM	45	133	178	63	10	73	65	22	87	338
05:30 PM	41	145	186	72	9	81	68	19	87	354
05:45 PM	24	135	159	51	6	57	60	23	83	299
Total	151	555	706	230	33	263	256	90	346	1315
Grand Total	295	958	1253	389	66	455	509	206	715	2423
Apprch %	23.5	76.5		85.5	14.5		71.2	28.8		
Total %	12.2	39.5	51.7	16.1	2.7	18.8	21	8.5	29.5	

	Hamner Avenue Southbound			Cantu Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	31	124	155	46	<b>10</b>	56	<b>75</b>	21	<b>96</b>	307
05:00 PM	41	142	183	44	8	52	63	<b>26</b>	89	324
05:15 PM	<b>45</b>	133	178	63	10	73	65	22	87	338
05:30 PM	41	<b>145</b>	<b>186</b>	<b>72</b>	9	<b>81</b>	68	19	87	<b>354</b>
Total Volume	158	544	702	225	37	262	271	88	359	1323
% App. Total	22.5	77.5		85.9	14.1		75.5	24.5		
PHF	.878	.938	.944	.781	.925	.809	.903	.846	.935	.934

City of Ontario  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	31	124	155	46	<b>10</b>	56	<b>75</b>	21	<b>96</b>
+15 mins.	41	142	183	44	8	52	63	<b>26</b>	89
+30 mins.	<b>45</b>	133	178	63	10	73	65	22	87
+45 mins.	41	<b>145</b>	<b>186</b>	<b>72</b>	9	<b>81</b>	68	19	87
Total Volume	158	544	702	225	37	262	271	88	359
% App. Total	22.5	77.5		85.9	14.1		75.5	24.5	
PHF	.878	.938	.944	.781	.925	.809	.903	.846	.935

City of Ontario  
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Weather: Sunny

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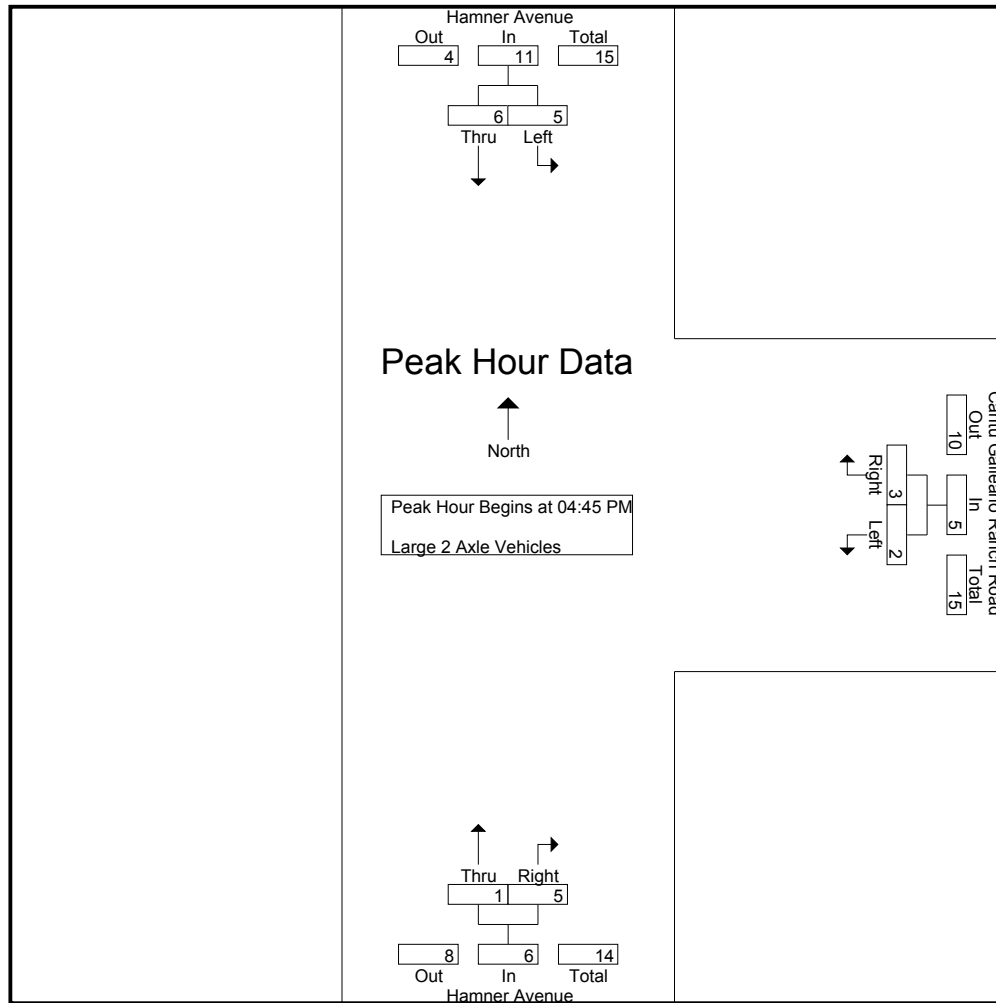
Groups Printed- Large 2 Axle Vehicles

	Hamner Avenue Southbound			Cantu Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	1	2	3	3	1	4	7
04:15 PM	0	2	2	0	1	1	2	1	3	6
04:30 PM	2	1	3	1	1	2	2	0	2	7
04:45 PM	2	3	5	1	0	1	0	1	1	7
Total	4	6	10	3	4	7	7	3	10	27
05:00 PM	1	1	2	1	0	1	1	2	3	6
05:15 PM	1	1	2	0	3	3	0	1	1	6
05:30 PM	1	1	2	0	0	0	0	1	1	3
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	3	3	6	1	3	4	1	4	5	15
Grand Total	7	9	16	4	7	11	8	7	15	42
Apprch %	43.8	56.2		36.4	63.6		53.3	46.7		
Total %	16.7	21.4	38.1	9.5	16.7	26.2	19	16.7	35.7	

	Hamner Avenue Southbound			Cantu Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	2	3	5	1	0	1	0	1	1	7
05:00 PM	1	1	2	1	0	1	1	2	3	6
05:15 PM	1	1	2	0	3	3	0	1	1	6
05:30 PM	1	1	2	0	0	0	0	1	1	3
Total Volume	5	6	11	2	3	5	1	5	6	22
% App. Total	45.5	54.5		40	60		16.7	83.3		
PHF	.625	.500	.550	.500	.250	.417	.250	.625	.500	.786

City of Ontario  
N/S: Hamner Avenue  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : ONTHACGPM  
Site Code : 9222035  
Start Date : 8/18/2009  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	2	3	5	1	0	1	0	1	1
+15 mins.	1	1	2	1	0	1	1	2	3
+30 mins.	1	1	2	0	3	3	0	1	1
+45 mins.	1	1	2	0	0	0	0	1	1
Total Volume	5	6	11	2	3	5	1	5	6
% App. Total	45.5	54.5		40	60		16.7	83.3	
PHF	.625	.500	.550	.500	.250	.417	.250	.625	.500



City of Ontario  
N/S: Hamner Avenue  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : ONTHACGPM  
Site Code : 9222035  
Start Date : 8/18/2009  
Page No : 1

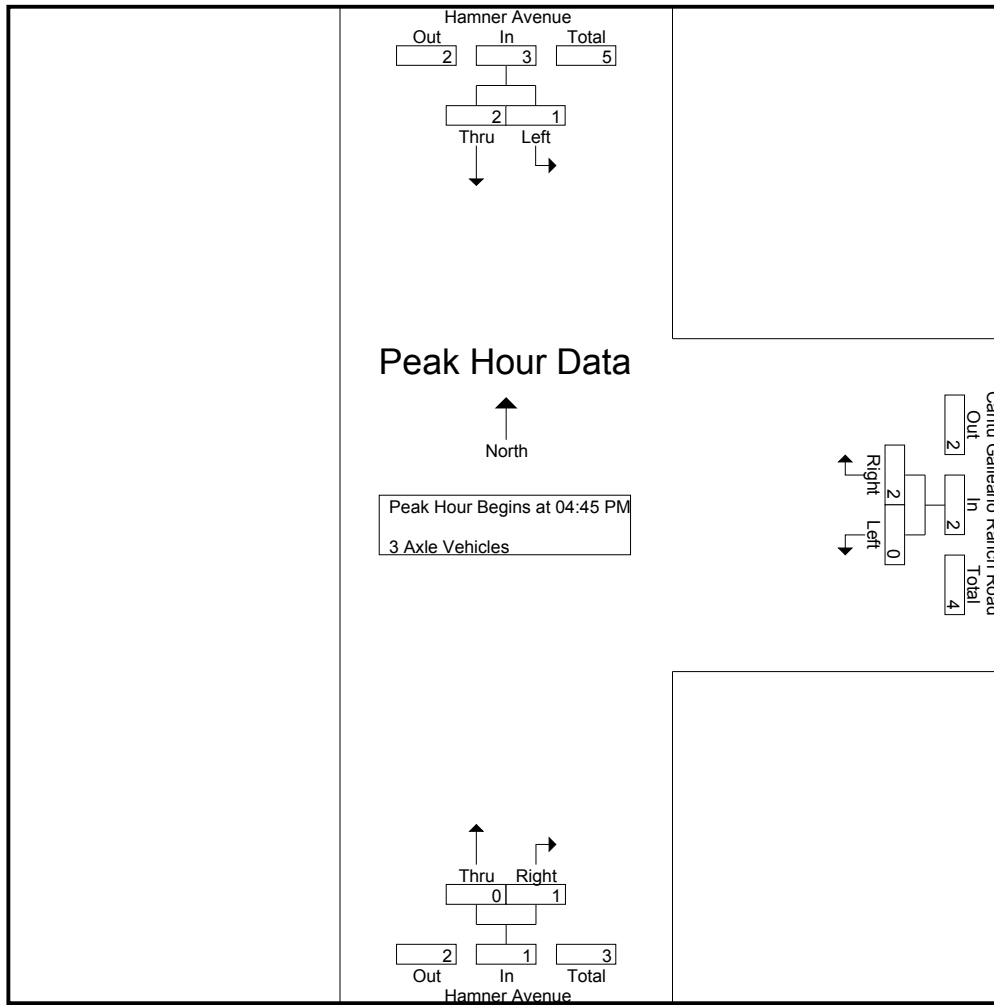
Groups Printed- 3 Axle Vehicles

	Hamner Avenue Southbound			Cantu Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	1	0	1	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	1	0	1	0	0	0	0	0	0	1
05:00 PM	0	1	1	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	1	1	2	0	2	2	0	1	1	5
05:45 PM	0	1	1	0	1	1	0	0	0	2
Total	1	3	4	0	3	3	0	1	1	8
Grand Total	2	3	5	0	3	3	0	1	1	9
Apprch %	40	60		0	100		0	100		
Total %	22.2	33.3	55.6	0	33.3	33.3	0	11.1	11.1	

	Hamner Avenue Southbound			Cantu Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	1	1	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	1	1	2	0	2	2	0	1	1	5
Total Volume	1	2	3	0	2	2	0	1	1	6
% App. Total	33.3	66.7		0	100		0	100		
PHF	.250	.500	.375	.000	.250	.250	.000	.250	.250	.300

City of Ontario  
N/S: Hamner Avenue  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : ONTHACGPM  
Site Code : 9222035  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	1	1	2	0	2	2	0	1	1
Total Volume	1	2	3	0	2	2	0	1	1
% App. Total	33.3	66.7		0	100		0	100	
PHF	.250	.500	.375	.000	.250	.250	.000	.250	.250

City of Ontario  
N/S: Hamner Avenue  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : ONTHACGPM  
Site Code : 9222035  
Start Date : 8/18/2009  
Page No : 1

Groups Printed- 4+ Axle Trucks

	Hamner Avenue Southbound			Cantu Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	1	1	2	0	1	1	0	0	0	3
04:15 PM	1	0	1	0	1	1	1	0	1	3
04:30 PM	0	0	0	1	2	3	0	0	0	3
04:45 PM	1	1	2	0	2	2	0	0	0	4
Total	3	2	5	1	6	7	1	0	1	13
05:00 PM	2	0	2	0	0	0	0	1	1	3
05:15 PM	0	1	1	0	1	1	1	0	1	3
05:30 PM	0	0	0	2	2	4	2	0	2	6
05:45 PM	1	0	1	0	0	0	0	0	0	1
Total	3	1	4	2	3	5	3	1	4	13
Grand Total	6	3	9	3	9	12	4	1	5	26
Apprch %	66.7	33.3		25	75		80	20		
Total %	23.1	11.5	34.6	11.5	34.6	46.2	15.4	3.8	19.2	

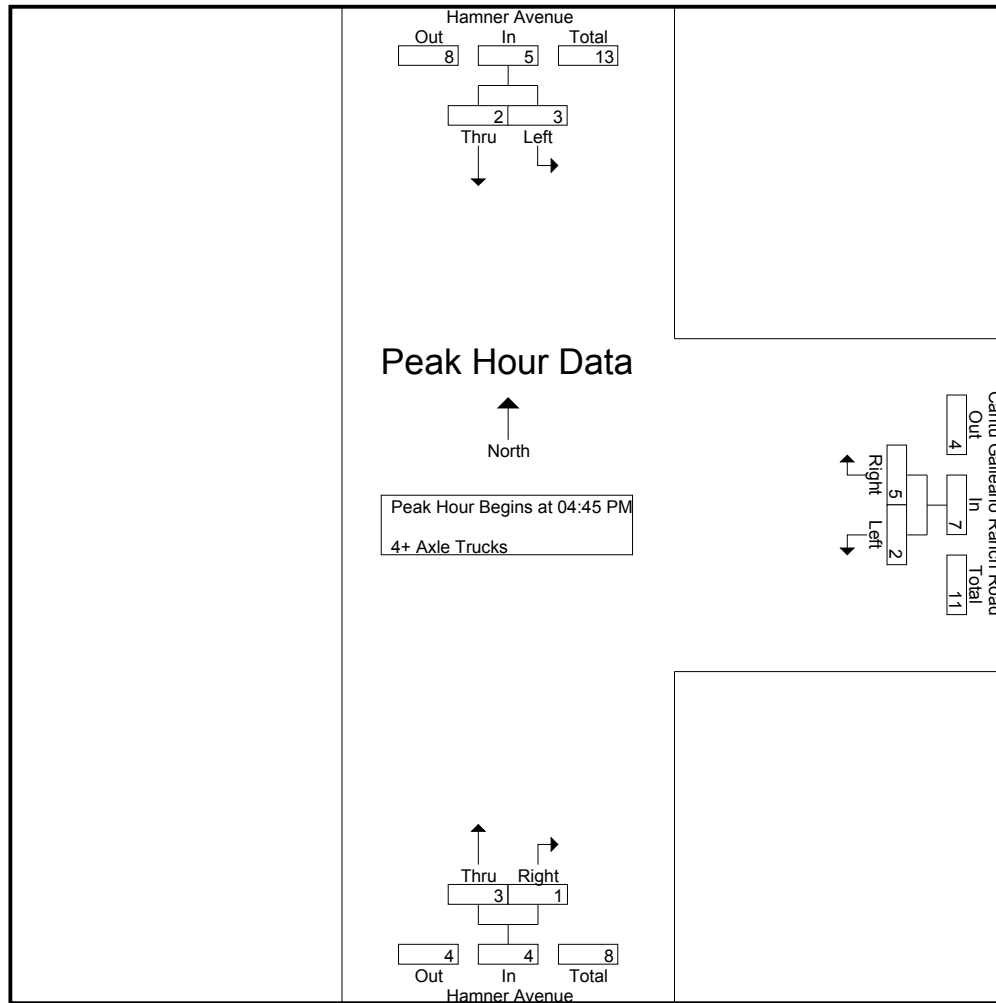
	Hamner Avenue Southbound			Cantu Galleano Ranch Road Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:45 PM	1	1	2	0	2	2	0	0	0	4
05:00 PM	2	0	2	0	0	0	0	1	1	3
05:15 PM	0	1	1	0	1	1	1	0	1	3
05:30 PM	0	0	0	2	2	4	2	0	2	6
Total Volume	3	2	5	2	5	7	3	1	4	16
% App. Total	60	40		28.6	71.4		75	25		
PHF	.375	.500	.625	.250	.625	.438	.375	.250	.500	.667

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

City of Ontario  
N/S: Hamner Avenue  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : ONTHACGPM  
Site Code : 9222035  
Start Date : 8/18/2009  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	1	1	2	0	2	2	0	0	0
+15 mins.	2	0	2	0	0	0	0	1	1
+30 mins.	0	1	1	0	1	1	1	0	1
+45 mins.	0	0	0	2	2	4	2	0	2
Total Volume	3	2	5	2	5	7	3	1	4
% App. Total	60	40		28.6	71.4		75	25	
PHF	.375	.500	.625	.250	.625	.438	.375	.250	.500

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGAM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 1

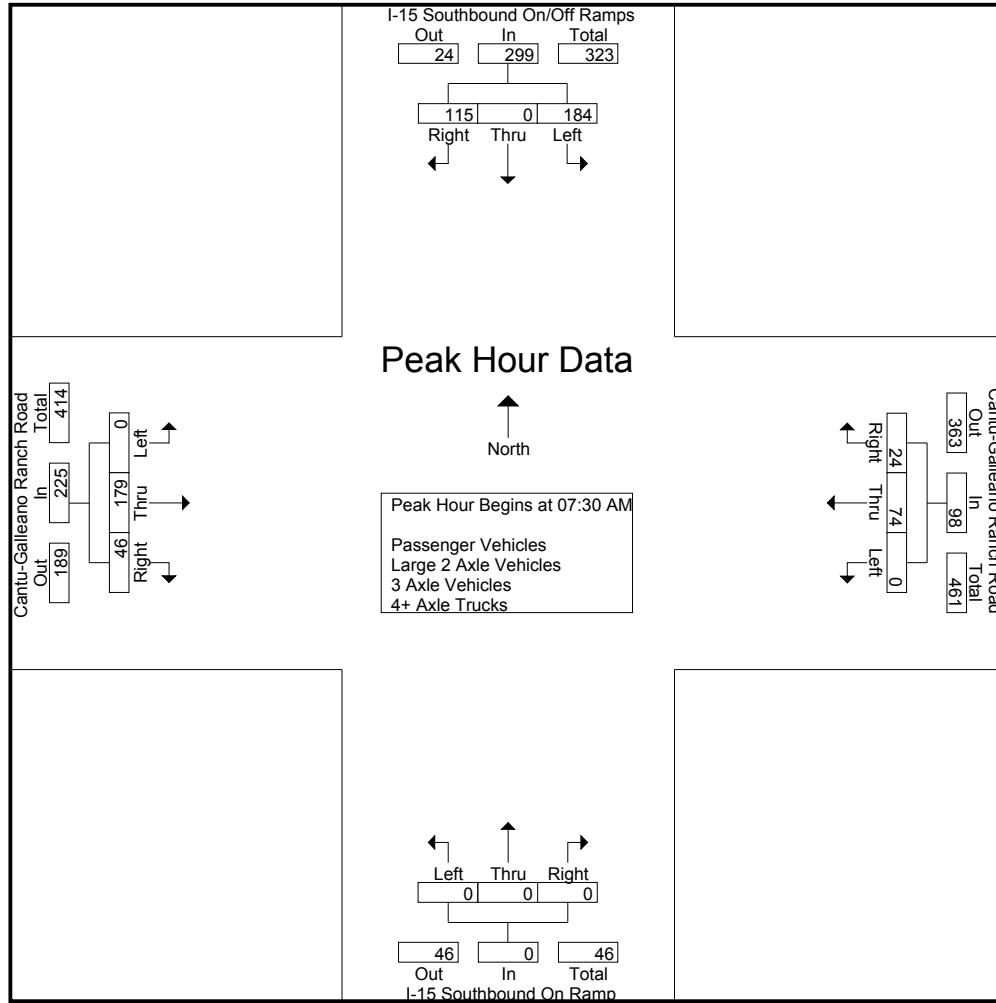
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				I-15 Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	25	1	26	52	0	16	13	29	0	0	0	0	0	41	8	49	130
07:15 AM	31	0	17	48	0	16	9	25	0	0	0	0	0	60	13	73	146
07:30 AM	46	0	28	74	0	21	10	31	0	0	0	0	0	59	9	68	173
07:45 AM	53	0	33	86	0	14	5	19	0	0	0	0	0	41	13	54	159
Total	155	1	104	260	0	67	37	104	0	0	0	0	0	201	43	244	608
08:00 AM	40	0	21	61	0	22	3	25	0	0	0	0	0	37	10	47	133
08:15 AM	45	0	33	78	0	17	6	23	0	0	0	0	0	42	14	56	157
08:30 AM	42	0	28	70	0	22	6	28	0	0	0	0	0	34	5	39	137
08:45 AM	25	0	34	59	0	15	7	22	0	0	0	0	0	42	7	49	130
Total	152	0	116	268	0	76	22	98	0	0	0	0	0	155	36	191	557
Grand Total	307	1	220	528	0	143	59	202	0	0	0	0	0	356	79	435	1165
Apprch %	58.1	0.2	41.7		0	70.8	29.2		0	0	0		0	81.8	18.2		
Total %	26.4	0.1	18.9	45.3	0	12.3	5.1	17.3	0	0	0	0	0	30.6	6.8	37.3	
Passenger Vehicles	268	1	193	462	0	125	35	160	0	0	0	0	0	339	67	406	1028
% Passenger Vehicles	87.3	100	87.7	87.5	0	87.4	59.3	79.2	0	0	0	0	0	95.2	84.8	93.3	88.2
Large 2 Axle Vehicles	13	0	11	24	0	11	8	19	0	0	0	0	0	5	6	11	54
% Large 2 Axle Vehicles	4.2	0	5	4.5	0	7.7	13.6	9.4	0	0	0	0	0	1.4	7.6	2.5	4.6
3 Axle Vehicles	9	0	3	12	0	3	2	5	0	0	0	0	0	2	2	4	21
% 3 Axle Vehicles	2.9	0	1.4	2.3	0	2.1	3.4	2.5	0	0	0	0	0	0.6	2.5	0.9	1.8
4+ Axle Trucks	17	0	13	30	0	4	14	18	0	0	0	0	0	10	4	14	62
% 4+ Axle Trucks	5.5	0	5.9	5.7	0	2.8	23.7	8.9	0	0	0	0	0	2.8	5.1	3.2	5.3

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				I-15 Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	46	0	28	74	0	21	<b>10</b>	<b>31</b>	0	0	0	0	0	<b>59</b>	9	<b>68</b>	<b>173</b>
07:45 AM	<b>53</b>	0	<b>33</b>	<b>86</b>	0	14	5	19	0	0	0	0	0	41	13	54	159
08:00 AM	40	0	21	61	0	<b>22</b>	3	25	0	0	0	0	0	37	10	47	133
08:15 AM	45	0	33	78	0	17	6	23	0	0	0	0	0	42	<b>14</b>	56	157
Total Volume	184	0	115	299	0	74	24	98	0	0	0	0	0	179	46	225	622
% App. Total	61.5	0	38.5		0	75.5	24.5		0	0	0		0	79.6	20.4		
PHF	.868	.000	.871	.869	.000	.841	.600	.790	.000	.000	.000	.000	.000	.758	.821	.827	.899

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGAM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	46	0	28	74	0	16	13	29	0	0	0	0	0	41	8	49
+15 mins.	53	0	33	86	0	16	9	25	0	0	0	0	0	60	13	73
+30 mins.	40	0	21	61	0	21	10	31	0	0	0	0	0	59	9	68
+45 mins.	45	0	33	78	0	14	5	19	0	0	0	0	0	41	13	54
Total Volume	184	0	115	299	0	67	37	104	0	0	0	0	0	201	43	244
% App. Total	61.5	0	38.5		0	64.4	35.6		0	0	0		0	82.4	17.6	
PHF	.868	.000	.871	.869	.000	.798	.712	.839	.000	.000	.000	.000	.000	.838	.827	.836

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGAM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 1

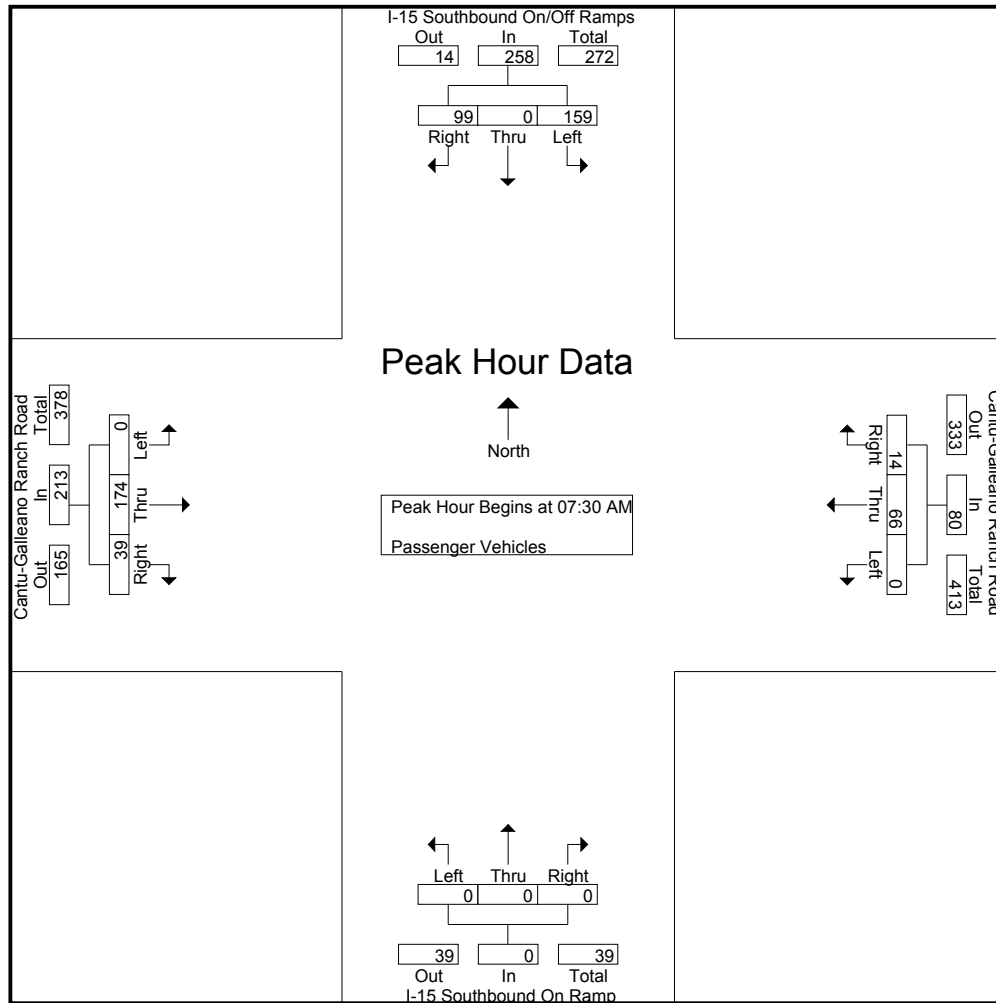
Groups Printed- Passenger Vehicles

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				I-15 Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	21	1	23	45	0	13	11	24	0	0	0	0	0	40	8	48	117
07:15 AM	29	0	15	44	0	15	2	17	0	0	0	0	0	57	11	68	129
07:30 AM	37	0	25	62	0	18	7	25	0	0	0	0	0	58	8	66	153
07:45 AM	48	0	29	77	0	13	2	15	0	0	0	0	0	38	9	47	139
Total	135	1	92	228	0	59	22	81	0	0	0	0	0	193	36	229	538
08:00 AM	35	0	20	55	0	20	2	22	0	0	0	0	0	37	9	46	123
08:15 AM	39	0	25	64	0	15	3	18	0	0	0	0	0	41	13	54	136
08:30 AM	38	0	23	61	0	20	5	25	0	0	0	0	0	30	4	34	120
08:45 AM	21	0	33	54	0	11	3	14	0	0	0	0	0	38	5	43	111
Total	133	0	101	234	0	66	13	79	0	0	0	0	0	146	31	177	490
Grand Total	268	1	193	462	0	125	35	160	0	0	0	0	0	339	67	406	1028
Apprch %	58	0.2	41.8		0	78.1	21.9		0	0	0		0	83.5	16.5		
Total %	26.1	0.1	18.8	44.9	0	12.2	3.4	15.6	0	0	0	0	0	33	6.5	39.5	

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				I-15 Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	37	0	25	62	0	18	<b>7</b>	<b>25</b>	0	0	0	0	0	<b>58</b>	8	<b>66</b>	<b>153</b>
07:45 AM	<b>48</b>	0	<b>29</b>	<b>77</b>	0	13	2	15	0	0	0	0	0	38	9	47	139
08:00 AM	35	0	20	55	0	<b>20</b>	2	22	0	0	0	0	0	37	9	46	123
08:15 AM	39	0	25	64	0	15	3	18	0	0	0	0	0	41	<b>13</b>	54	136
Total Volume	159	0	99	258	0	66	14	80	0	0	0	0	0	174	39	213	551
% App. Total	61.6	0	38.4		0	82.5	17.5		0	0	0		0	81.7	18.3		
PHF	.828	.000	.853	.838	.000	.825	.500	.800	.000	.000	.000	.000	.000	.750	.750	.807	.900

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGAM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	37	0	25	62	0	18	7	25	0	0	0	0	0	58	8	66
+15 mins.	48	0	29	77	0	13	2	15	0	0	0	0	0	38	9	47
+30 mins.	35	0	20	55	0	20	2	22	0	0	0	0	0	37	9	46
+45 mins.	39	0	25	64	0	15	3	18	0	0	0	0	0	41	13	54
Total Volume	159	0	99	258	0	66	14	80	0	0	0	0	0	174	39	213
% App. Total	61.6	0	38.4		0	82.5	17.5		0	0	0		0	81.7	18.3	
PHF	.828	.000	.853	.838	.000	.825	.500	.800	.000	.000	.000	.000	.000	.750	.750	.807



County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGAM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 1

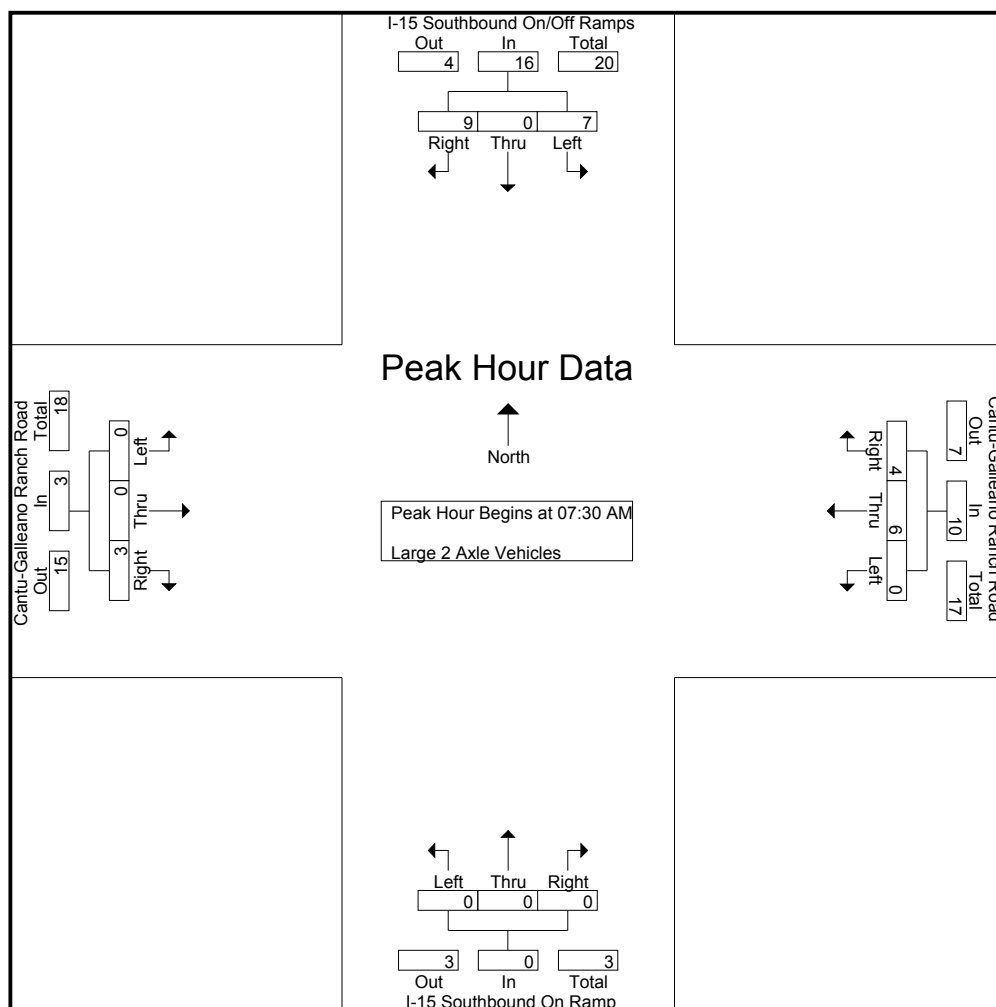
Groups Printed- Large 2 Axle Vehicles

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				I-15 Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	0	0	2	0	1	1	2	0	0	0	0	0	0	0	0	4
07:15 AM	2	0	1	3	0	0	2	2	0	0	0	0	0	0	1	1	6
07:30 AM	3	0	0	3	0	2	2	4	0	0	0	0	0	0	1	1	8
07:45 AM	1	0	2	3	0	0	0	0	0	0	0	0	0	0	1	1	4
Total	8	0	3	11	0	3	5	8	0	0	0	0	0	0	3	3	22
08:00 AM	1	0	1	2	0	2	0	2	0	0	0	0	0	0	0	0	4
08:15 AM	2	0	6	8	0	2	2	4	0	0	0	0	0	0	1	1	13
08:30 AM	1	0	1	2	0	2	0	2	0	0	0	0	0	2	1	3	7
08:45 AM	1	0	0	1	0	2	1	3	0	0	0	0	0	3	1	4	8
Total	5	0	8	13	0	8	3	11	0	0	0	0	0	5	3	8	32
Grand Total	13	0	11	24	0	11	8	19	0	0	0	0	0	5	6	11	54
Apprch %	54.2	0	45.8		0	57.9	42.1		0	0	0		0	45.5	54.5		
Total %	24.1	0	20.4	44.4	0	20.4	14.8	35.2	0	0	0	0	0	9.3	11.1	20.4	

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				I-15 Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	0	0	3	0	2	2	4	0	0	0	0	0	0	1	1	8
07:45 AM	1	0	2	3	0	0	0	0	0	0	0	0	0	0	1	1	4
08:00 AM	1	0	1	2	0	2	0	2	0	0	0	0	0	0	0	0	4
08:15 AM	2	0	6	8	0	2	2	4	0	0	0	0	0	0	1	1	13
Total Volume	7	0	9	16	0	6	4	10	0	0	0	0	0	0	3	3	29
% App. Total	43.8	0	56.2		0	60	40		0	0	0		0	0	100		
PHF	.583	.000	.375	.500	.000	.750	.500	.625	.000	.000	.000	.000	.000	.000	.750	.750	.558

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGAM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 2



Peak Hour for Each Approach Begins at:

[illegible]

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGAM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 1

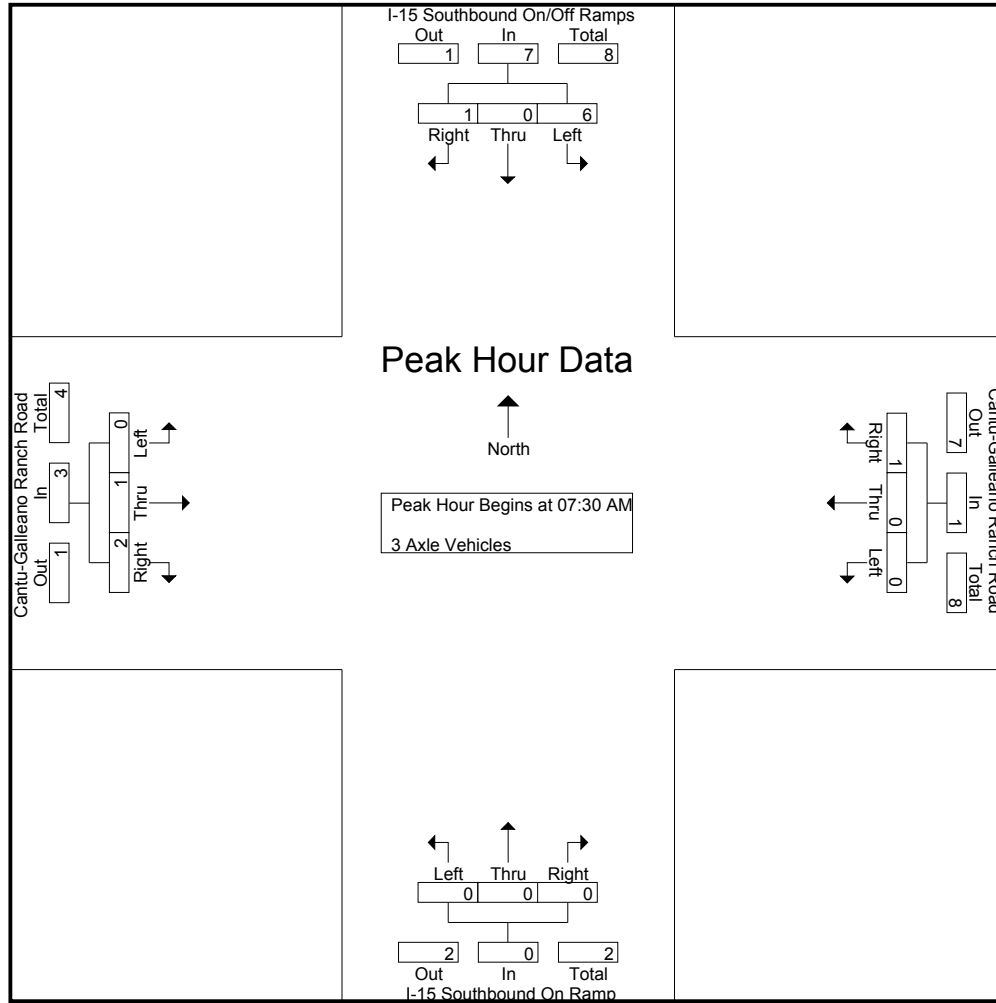
Groups Printed- 3 Axle Vehicles

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				I-15 Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:30 AM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	2	0	0	2	0	0	0	0	0	0	0	0	0	1	1	2	4
Total	4	0	1	5	0	2	0	2	0	0	0	0	0	2	1	3	10
08:00 AM	2	0	0	2	0	0	1	1	0	0	0	0	0	0	1	1	4
08:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	2	2	0	0	1	1	0	0	0	0	0	0	0	0	3
08:45 AM	2	0	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
Total	5	0	2	7	0	1	2	3	0	0	0	0	0	0	1	1	11
Grand Total	9	0	3	12	0	3	2	5	0	0	0	0	0	2	2	4	21
Apprch %	75	0	25		0	60	40		0	0	0		0	50	50		
Total %	42.9	0	14.3	57.1	0	14.3	9.5	23.8	0	0	0	0	0	9.5	9.5	19	

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				I-15 Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:45 AM	2	0	0	2	0	0	0	0	0	0	0	0	0	1	1	2	4
08:00 AM	2	0	0	2	0	0	1	1	0	0	0	0	0	0	1	1	4
08:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	6	0	1	7	0	0	1	1	0	0	0	0	0	1	2	3	11
% App. Total	85.7	0	14.3		0	0	100		0	0	0		0	33.3	66.7		
PHF	.750	.000	.250	.875	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.500	.375	.688

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGAM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	2	0	0	2	0	0	0	0	0	0	0	0	0	1	1	2
+30 mins.	2	0	0	2	0	0	1	1	0	0	0	0	0	0	1	1
+45 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	6	0	1	7	0	0	1	1	0	0	0	0	0	1	2	3
% App. Total	85.7	0	14.3		0	0	100		0	0	0		0	33.3	66.7	
PHF	.750	.000	.250	.875	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.500	.375

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGAM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 1

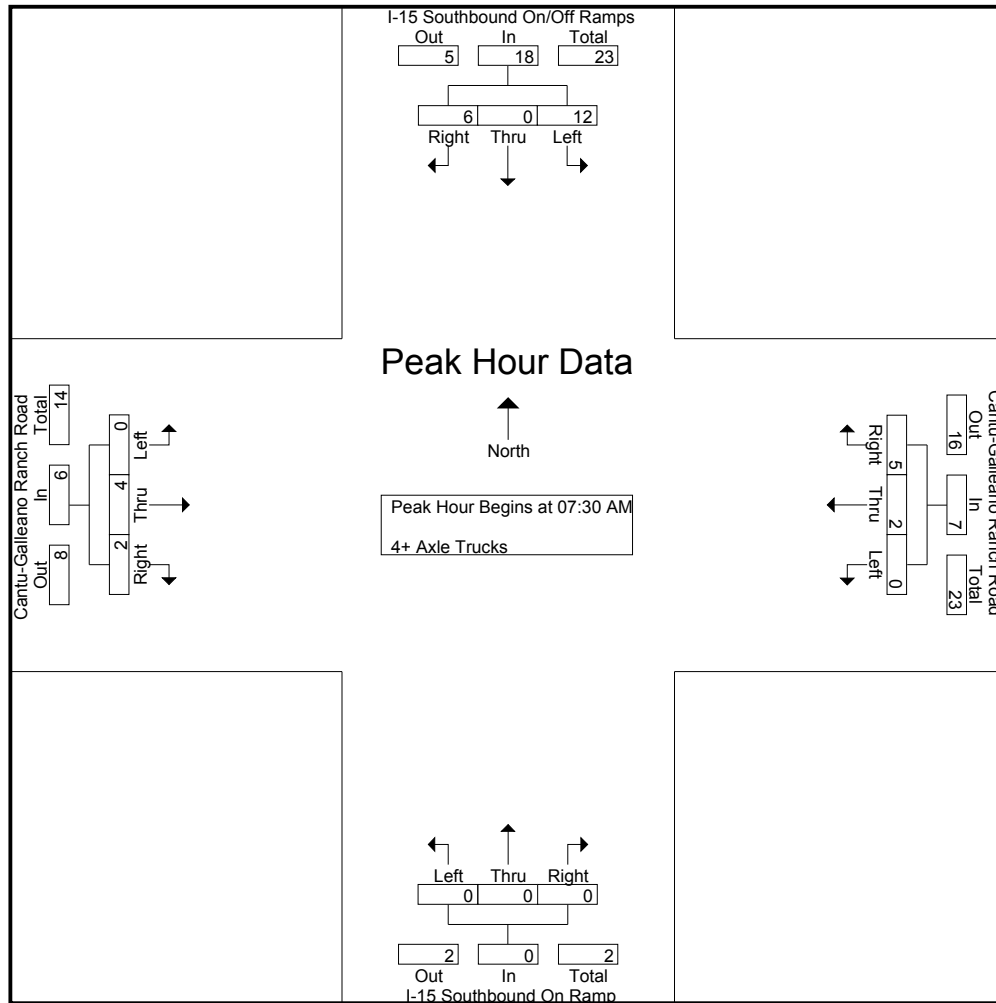
Groups Printed- 4+ Axle Trucks

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				I-15 Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	3	4	0	0	1	1	0	0	0	0	0	1	0	1	6
07:15 AM	0	0	1	1	0	1	5	6	0	0	0	0	0	2	1	3	10
07:30 AM	5	0	2	7	0	1	1	2	0	0	0	0	0	1	0	1	10
07:45 AM	2	0	2	4	0	1	3	4	0	0	0	0	0	2	2	4	12
Total	8	0	8	16	0	3	10	13	0	0	0	0	0	6	3	9	38
08:00 AM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	3	0	2	5	0	0	1	1	0	0	0	0	0	1	0	1	7
08:30 AM	3	0	2	5	0	0	0	0	0	0	0	0	0	2	0	2	7
08:45 AM	1	0	1	2	0	1	3	4	0	0	0	0	0	1	1	2	8
Total	9	0	5	14	0	1	4	5	0	0	0	0	0	4	1	5	24
Grand Total	17	0	13	30	0	4	14	18	0	0	0	0	0	10	4	14	62
Apprch %	56.7	0	43.3		0	22.2	77.8		0	0	0		0	71.4	28.6		
Total %	27.4	0	21	48.4	0	6.5	22.6	29	0	0	0	0	0	16.1	6.5	22.6	

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				I-15 Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	5	0	2	7	0	1	1	2	0	0	0	0	0	1	0	1	10
07:45 AM	2	0	2	4	0	1	3	4	0	0	0	0	0	2	2	4	12
08:00 AM	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	3	0	2	5	0	0	1	1	0	0	0	0	0	1	0	1	7
Total Volume	12	0	6	18	0	2	5	7	0	0	0	0	0	4	2	6	31
% App. Total	66.7	0	33.3		0	28.6	71.4		0	0	0		0	66.7	33.3		
PHF	.600	.000	.750	.643	.000	.500	.417	.438	.000	.000	.000	.000	.000	.500	.250	.375	.646

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGAM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	5	0	2	7	0	1	1	2	0	0	0	0	0	1	0	1
+15 mins.	2	0	2	4	0	1	3	4	0	0	0	0	0	2	2	4
+30 mins.	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	3	0	2	5	0	0	1	1	0	0	0	0	0	1	0	1
Total Volume	12	0	6	18	0	2	5	7	0	0	0	0	0	4	2	6
% App. Total	66.7	0	33.3		0	28.6	71.4		0	0	0		0	66.7	33.3	
PHF	.600	.000	.750	.643	.000	.500	.417	.438	.000	.000	.000	.000	.000	.500	.250	.375

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGPM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 1

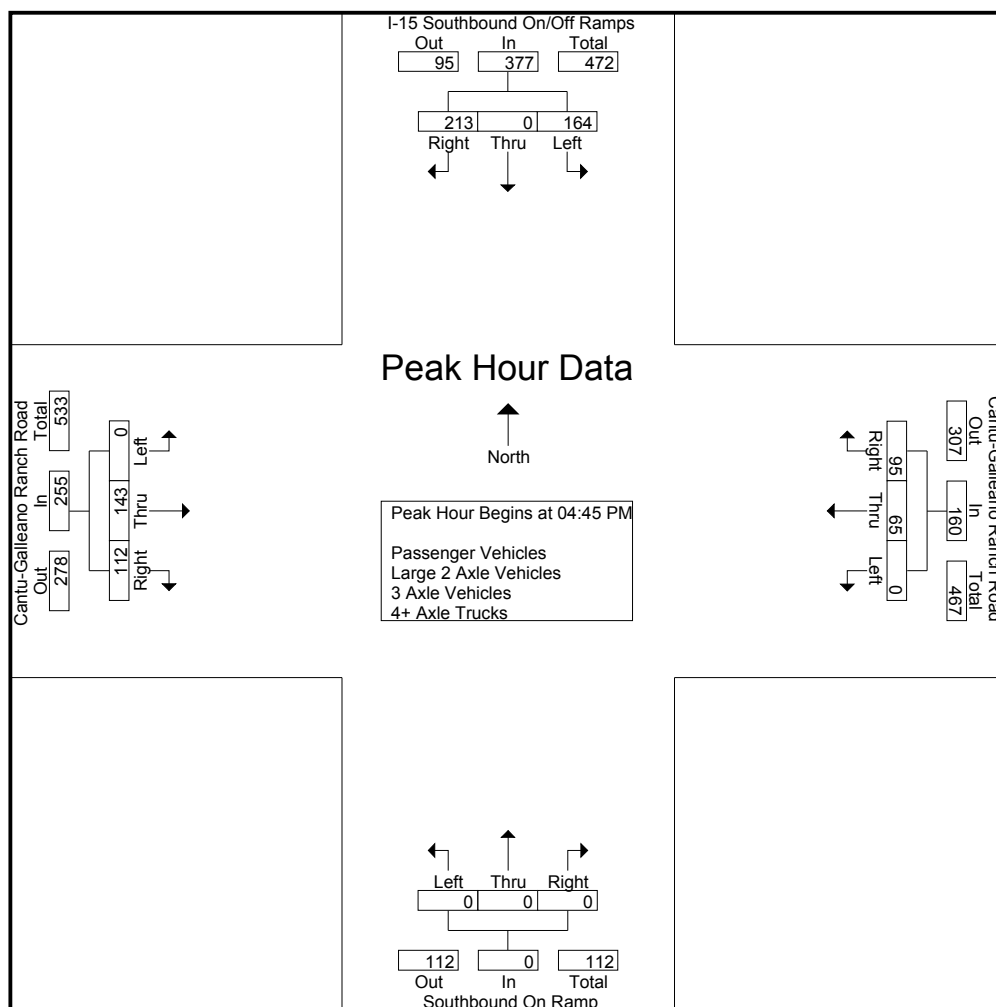
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	45	0	32	77	0	14	27	41	0	0	0	0	0	36	24	60	178
04:15 PM	40	0	38	78	0	10	19	29	0	0	0	0	0	40	27	67	174
04:30 PM	44	0	43	87	0	10	20	30	0	0	0	0	0	36	35	71	188
04:45 PM	46	0	43	89	0	16	15	31	0	0	0	0	0	29	23	52	172
Total	175	0	156	331	0	50	81	131	0	0	0	0	0	141	109	250	712
05:00 PM	38	0	45	83	0	14	25	39	0	0	0	0	0	42	33	75	197
05:15 PM	39	0	59	98	0	16	29	45	0	0	0	0	0	36	29	65	208
05:30 PM	41	0	66	107	0	19	26	45	0	0	0	0	0	36	27	63	215
05:45 PM	43	0	48	91	0	13	15	28	0	0	0	0	0	26	17	43	162
Total	161	0	218	379	0	62	95	157	0	0	0	0	0	140	106	246	782
Grand Total	336	0	374	710	0	112	176	288	0	0	0	0	0	281	215	496	1494
Apprch %	47.3	0	52.7		0	38.9	61.1		0	0	0		0	56.7	43.3		
Total %	22.5	0	25	47.5	0	7.5	11.8	19.3	0	0	0	0	0	18.8	14.4	33.2	
Passenger Vehicles	312	0	357	669	0	105	159	264	0	0	0	0	0	260	212	472	1405
% Passenger Vehicles	92.9	0	95.5	94.2	0	93.8	90.3	91.7	0	0	0	0	0	92.5	98.6	95.2	94
Large 2 Axle Vehicles	8	0	6	14	0	4	4	8	0	0	0	0	0	9	3	12	34
% Large 2 Axle Vehicles	2.4	0	1.6	2	0	3.6	2.3	2.8	0	0	0	0	0	3.2	1.4	2.4	2.3
3 Axle Vehicles	5	0	5	10	0	0	0	0	0	0	0	0	0	2	0	2	12
% 3 Axle Vehicles	1.5	0	1.3	1.4	0	0	0	0	0	0	0	0	0	0.7	0	0.4	0.8
4+ Axle Trucks	11	0	6	17	0	3	13	16	0	0	0	0	0	10	0	10	43
% 4+ Axle Trucks	3.3	0	1.6	2.4	0	2.7	7.4	5.6	0	0	0	0	0	3.6	0	2	2.9

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	<b>46</b>	0	43	89	0	16	15	31	0	0	0	0	0	29	23	52	172
05:00 PM	38	0	45	83	0	14	25	39	0	0	0	0	0	<b>42</b>	<b>33</b>	<b>75</b>	197
05:15 PM	39	0	59	98	0	16	<b>29</b>	<b>45</b>	0	0	0	0	0	36	29	65	208
05:30 PM	41	0	<b>66</b>	<b>107</b>	0	<b>19</b>	26	45	0	0	0	0	0	36	27	63	<b>215</b>
Total Volume	164	0	213	377	0	65	95	160	0	0	0	0	0	143	112	255	792
% App. Total	43.5	0	56.5		0	40.6	59.4		0	0	0		0	56.1	43.9		
PHF	.891	.000	.807	.881	.000	.855	.819	.889	.000	.000	.000	.000	.000	.851	.848	.850	.921

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGPM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	46	0	43	89	0	16	15	31	0	0	0	0	0	29	23	52
+15 mins.	38	0	45	83	0	14	25	39	0	0	0	0	0	42	33	75
+30 mins.	39	0	59	98	0	16	29	45	0	0	0	0	0	36	29	65
+45 mins.	41	0	66	107	0	19	26	45	0	0	0	0	0	36	27	63
Total Volume	164	0	213	377	0	65	95	160	0	0	0	0	0	143	112	255
% App. Total	43.5	0	56.5		0	40.6	59.4		0	0	0		0	56.1	43.9	
PHF	.891	.000	.807	.881	.000	.855	.819	.889	.000	.000	.000	.000	.000	.851	.848	.850



County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGPM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 1

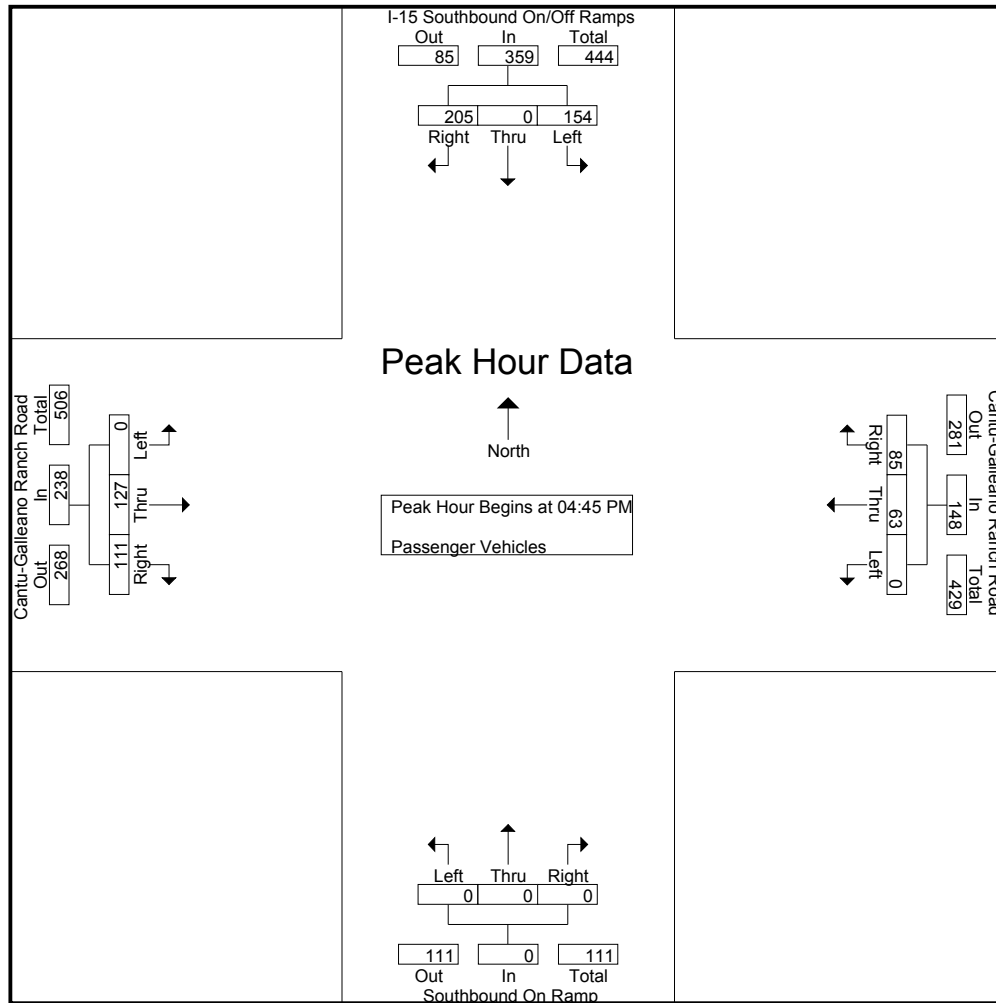
Groups Printed- Passenger Vehicles

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	39	0	31	70	0	11	22	33	0	0	0	0	0	34	24	58	161
04:15 PM	38	0	38	76	0	10	19	29	0	0	0	0	0	39	27	66	171
04:30 PM	41	0	37	78	0	9	20	29	0	0	0	0	0	34	33	67	174
04:45 PM	41	0	42	83	0	16	13	29	0	0	0	0	0	24	23	47	159
Total	159	0	148	307	0	46	74	120	0	0	0	0	0	131	107	238	665
05:00 PM	37	0	44	81	0	14	24	38	0	0	0	0	0	36	32	68	187
05:15 PM	38	0	57	95	0	15	24	39	0	0	0	0	0	35	29	64	198
05:30 PM	38	0	62	100	0	18	24	42	0	0	0	0	0	32	27	59	201
05:45 PM	40	0	46	86	0	12	13	25	0	0	0	0	0	26	17	43	154
Total	153	0	209	362	0	59	85	144	0	0	0	0	0	129	105	234	740
Grand Total	312	0	357	669	0	105	159	264	0	0	0	0	0	260	212	472	1405
Apprch %	46.6	0	53.4		0	39.8	60.2		0	0	0		0	55.1	44.9		
Total %	22.2	0	25.4	47.6	0	7.5	11.3	18.8	0	0	0	0	0	18.5	15.1	33.6	

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	<b>41</b>	0	42	83	0	16	13	29	0	0	0	0	0	24	23	47	159
05:00 PM	37	0	44	81	0	14	<b>24</b>	38	0	0	0	0	0	<b>36</b>	<b>32</b>	<b>68</b>	187
05:15 PM	38	0	57	95	0	15	24	39	0	0	0	0	0	35	29	64	198
05:30 PM	38	0	<b>62</b>	<b>100</b>	0	<b>18</b>	24	<b>42</b>	0	0	0	0	0	32	27	59	<b>201</b>
Total Volume	154	0	205	359	0	63	85	148	0	0	0	0	0	127	111	238	745
% App. Total	42.9	0	57.1		0	42.6	57.4		0	0	0		0	53.4	46.6		
PHF	.939	.000	.827	.898	.000	.875	.885	.881	.000	.000	.000	.000	.000	.882	.867	.875	.927

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGPM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	41	0	42	83	0	16	13	29	0	0	0	0	0	24	23	47
+15 mins.	37	0	44	81	0	14	24	38	0	0	0	0	0	36	32	68
+30 mins.	38	0	57	95	0	15	24	39	0	0	0	0	0	35	29	64
+45 mins.	38	0	62	100	0	18	24	42	0	0	0	0	0	32	27	59
Total Volume	154	0	205	359	0	63	85	148	0	0	0	0	0	127	111	238
% App. Total	42.9	0	57.1		0	42.6	57.4		0	0	0		0	53.4	46.6	
PHF	.939	.000	.827	.898	.000	.875	.885	.881	.000	.000	.000	.000	.000	.882	.867	.875

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGPM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 1

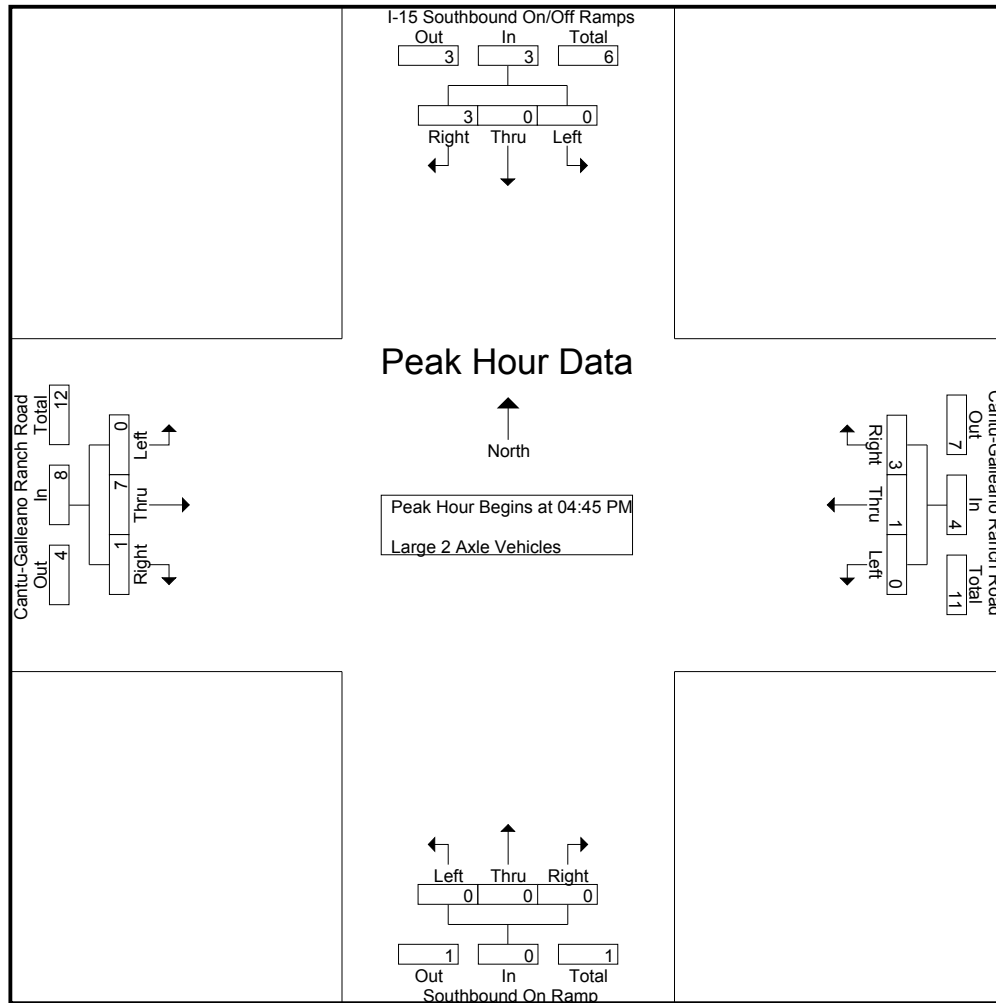
Groups Printed- Large 2 Axle Vehicles

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	0	1	3	0	2	1	3	0	0	0	0	0	0	0	0	6
04:15 PM	2	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	3
04:30 PM	2	0	2	4	0	0	0	0	0	0	0	0	0	1	2	3	7
04:45 PM	0	0	1	1	0	0	1	1	0	0	0	0	0	3	0	3	5
Total	6	0	4	10	0	2	2	4	0	0	0	0	0	5	2	7	21
05:00 PM	0	0	1	1	0	0	1	1	0	0	0	0	0	2	1	3	5
05:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
05:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:45 PM	2	0	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
Total	2	0	2	4	0	2	2	4	0	0	0	0	0	4	1	5	13
Grand Total	8	0	6	14	0	4	4	8	0	0	0	0	0	9	3	12	34
Apprch %	57.1	0	42.9		0	50	50		0	0	0		0	75	25		
Total %	23.5	0	17.6	41.2	0	11.8	11.8	23.5	0	0	0	0	0	26.5	8.8	35.3	

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	1	1	0	0	1	1	0	0	0	0	0	3	0	3	5
05:00 PM	0	0	1	1	0	0	1	1	0	0	0	0	0	2	1	3	5
05:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1	3
05:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Total Volume	0	0	3	3	0	1	3	4	0	0	0	0	0	7	1	8	15
% App. Total	0	0	100		0	25	75		0	0	0		0	87.5	12.5		
PHF	.000	.000	.750	.750	.000	.250	.750	.500	.000	.000	.000	.000	.000	.583	.250	.667	.750

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGPM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	1	1	0	0	1	1	0	0	0	0	0	3	0	3
+15 mins.	0	0	1	1	0	0	1	1	0	0	0	0	0	2	1	3
+30 mins.	0	0	0	0	0	1	1	2	0	0	0	0	0	1	0	1
+45 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	0	3	3	0	1	3	4	0	0	0	0	0	7	1	8
% App. Total	0	0	100		0	25	75		0	0	0		0	87.5	12.5	
PHF	.000	.000	.750	.750	.000	.250	.750	.500	.000	.000	.000	.000	.000	.583	.250	.667

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGPM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 1

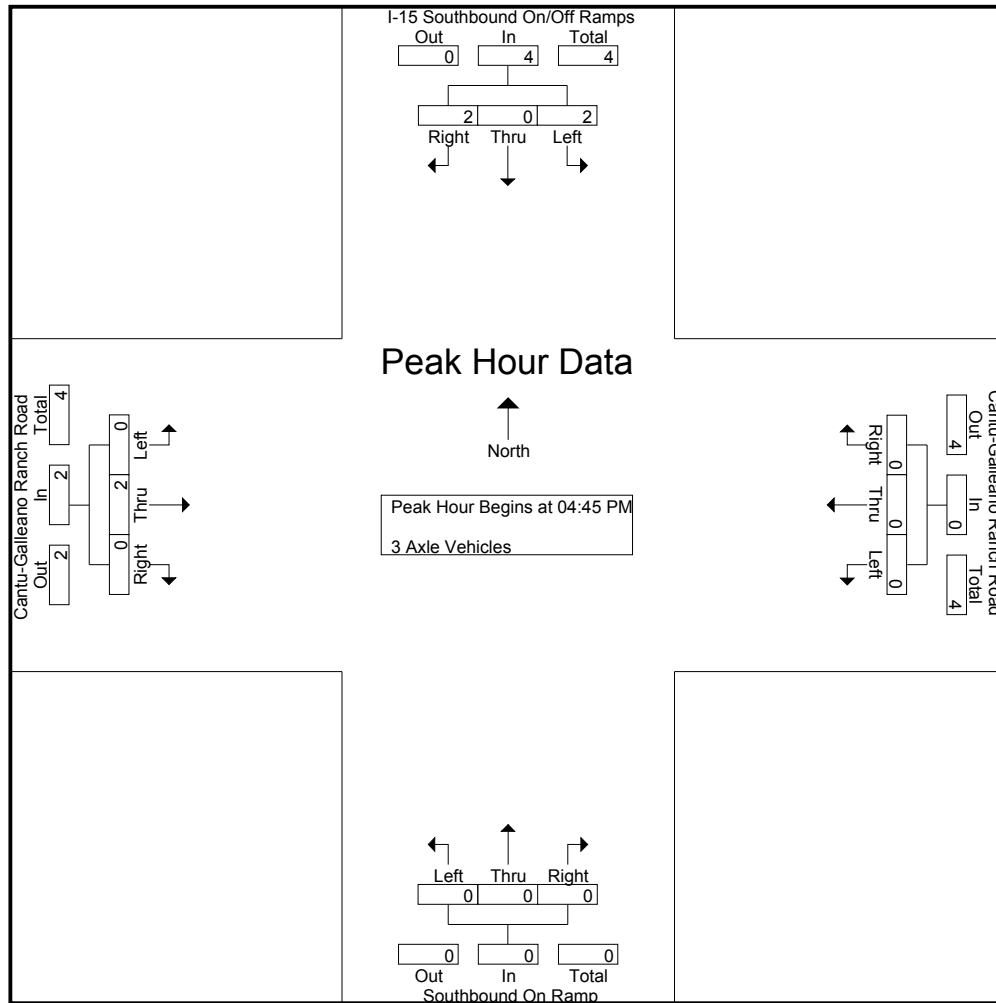
Groups Printed- 3 Axle Vehicles

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	2	0	2	4
05:45 PM	1	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	3	0	4	7	0	0	0	0	0	0	0	0	0	2	0	2	9
Grand Total	5	0	5	10	0	0	0	0	0	0	0	0	0	2	0	2	12
Apprch %	50	0	50		0	0	0		0	0	0		0	100	0		
Total %	41.7	0	41.7	83.3	0	0	0	0	0	0	0	0	0	16.7	0	16.7	

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	2	0	2	4
Total Volume	2	0	2	4	0	0	0	0	0	0	0	0	0	2	0	2	6
% App. Total	50	0	50		0	0	0		0	0	0		0	100	0		
PHF	.500	.000	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.375

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGPM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	2	2	0	0	0	0	0	0	0	0	0	2	0	2
Total Volume	2	0	2	4	0	0	0	0	0	0	0	0	0	2	0	2
% App. Total	50	0	50		0	0	0		0	0	0		0	100	0	
PHF	.500	.000	.250	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGPM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 1

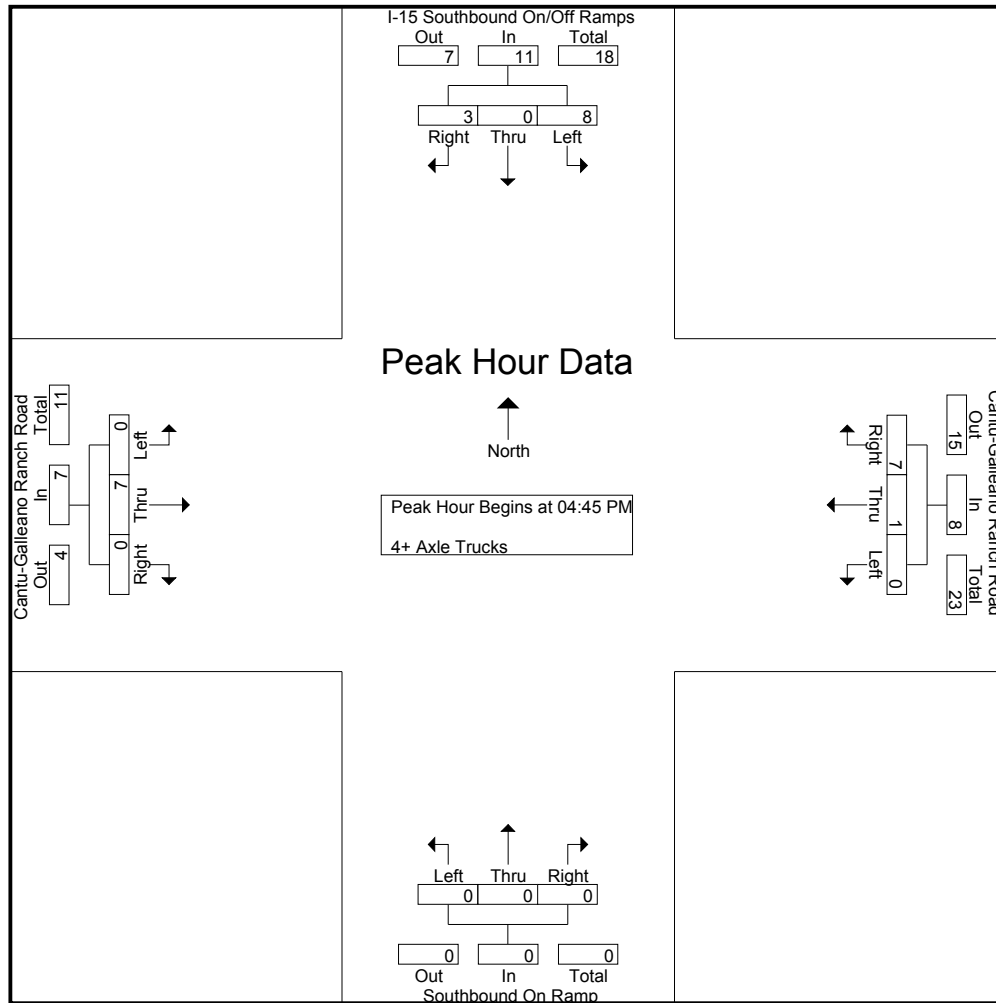
Groups Printed- 4+ Axle Trucks

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	0	0	3	0	1	4	5	0	0	0	0	0	2	0	2	10
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	3	3	0	1	0	1	0	0	0	0	0	1	0	1	5
04:45 PM	5	0	0	5	0	0	1	1	0	0	0	0	0	2	0	2	8
Total	8	0	3	11	0	2	5	7	0	0	0	0	0	5	0	5	23
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
05:15 PM	0	0	2	2	0	0	4	4	0	0	0	0	0	0	0	0	6
05:30 PM	3	0	1	4	0	1	2	3	0	0	0	0	0	1	0	1	8
05:45 PM	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	2
Total	3	0	3	6	0	1	8	9	0	0	0	0	0	5	0	5	20
Grand Total	11	0	6	17	0	3	13	16	0	0	0	0	0	10	0	10	43
Apprch %	64.7	0	35.3		0	18.8	81.2		0	0	0		0	100	0		
Total %	25.6	0	14	39.5	0	7	30.2	37.2	0	0	0	0	0	23.3	0	23.3	

	I-15 Southbound On/Off Ramps Southbound				Cantu-Galleano Ranch Road Westbound				Southbound On Ramp Northbound				Cantu-Galleano Ranch Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	5	0	0	5	0	0	1	1	0	0	0	0	0	2	0	2	8
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	4
05:15 PM	0	0	2	2	0	0	4	4	0	0	0	0	0	0	0	0	6
05:30 PM	3	0	1	4	0	1	2	3	0	0	0	0	0	1	0	1	8
Total Volume	8	0	3	11	0	1	7	8	0	0	0	0	0	7	0	7	26
% App. Total	72.7	0	27.3		0	12.5	87.5		0	0	0		0	100	0		
PHF	.400	.000	.375	.550	.000	.250	.438	.500	.000	.000	.000	.000	.000	.438	.000	.438	.813

County of Riverside  
N/S: I-15 Southbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15SCGPM  
Site Code : 9222063  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	5	0	0	5	0	0	1	1	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4
+30 mins.	0	0	2	2	0	0	4	4	0	0	0	0	0	0	0	0
+45 mins.	3	0	1	4	0	1	2	3	0	0	0	0	0	1	0	1
Total Volume	8	0	3	11	0	1	7	8	0	0	0	0	0	7	0	7
% App. Total	72.7	0	27.3		0	12.5	87.5		0	0	0		0	100	0	
PHF	.400	.000	.375	.550	.000	.250	.438	.500	.000	.000	.000	.000	.000	.438	.000	.438



County of Riverside  
N/S: I-15 Northbound On/Off Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGAM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 1

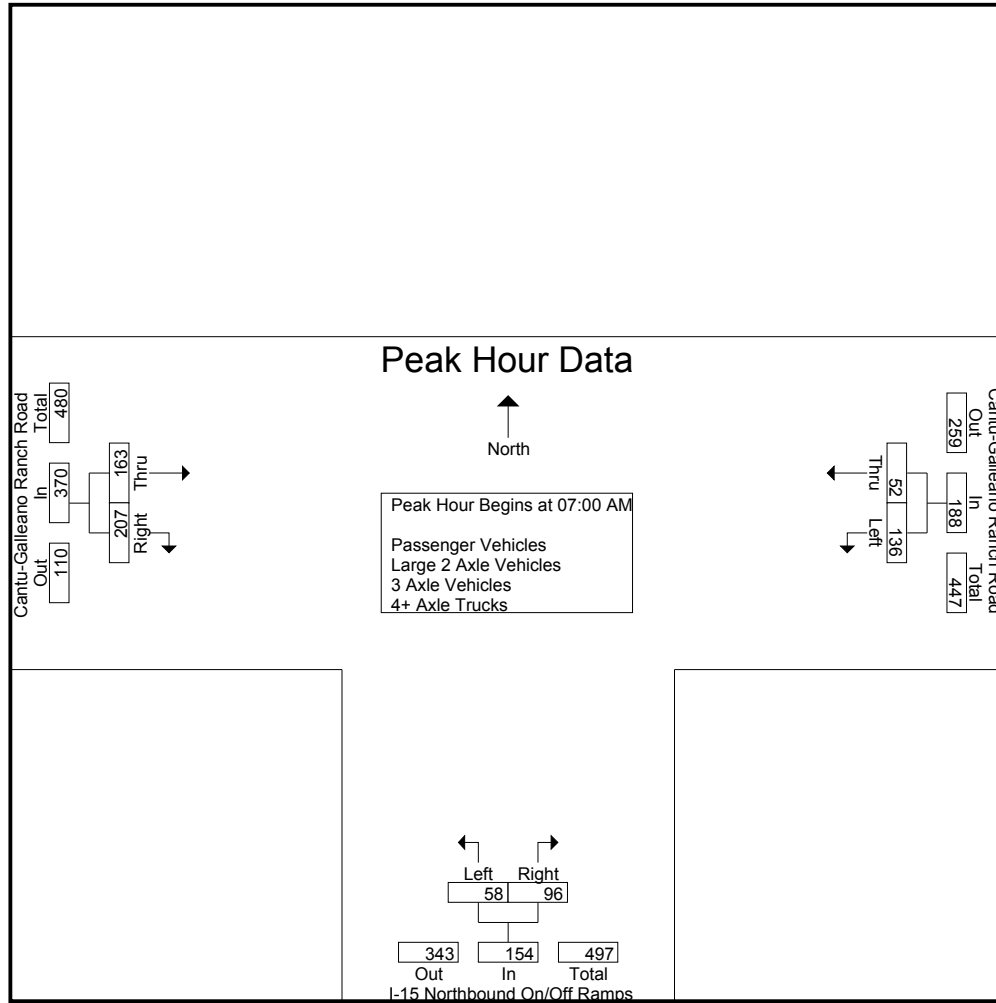
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	29	18	47	12	25	37	30	44	74	158
07:15 AM	27	11	38	16	26	42	37	56	93	173
07:30 AM	48	16	64	18	26	44	42	64	106	214
07:45 AM	32	7	39	12	19	31	54	43	97	167
Total	136	52	188	58	96	154	163	207	370	712
08:00 AM	29	8	37	19	22	41	44	34	78	156
08:15 AM	39	11	50	17	19	36	47	38	85	171
08:30 AM	43	12	55	17	18	35	54	29	83	173
08:45 AM	29	17	46	9	24	33	28	40	68	147
Total	140	48	188	62	83	145	173	141	314	647
Grand Total	276	100	376	120	179	299	336	348	684	1359
Apprch %	73.4	26.6		40.1	59.9		49.1	50.9		
Total %	20.3	7.4	27.7	8.8	13.2	22	24.7	25.6	50.3	
Passenger Vehicles	224	65	289	106	159	265	298	326	624	1178
% Passenger Vehicles	81.2	65	76.9	88.3	88.8	88.6	88.7	93.7	91.2	86.7
Large 2 Axle Vehicles	12	12	24	11	5	16	11	10	21	61
% Large 2 Axle Vehicles	4.3	12	6.4	9.2	2.8	5.4	3.3	2.9	3.1	4.5
3 Axle Vehicles	0	3	3	0	4	4	8	2	10	17
% 3 Axle Vehicles	0	3	0.8	0	2.2	1.3	2.4	0.6	1.5	1.3
4+ Axle Trucks	40	20	60	3	11	14	19	10	29	103
% 4+ Axle Trucks	14.5	20	16	2.5	6.1	4.7	5.7	2.9	4.2	7.6

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	29	<b>18</b>	47	12	25	37	30	44	74	158
07:15 AM	27	11	38	16	<b>26</b>	42	37	56	93	173
07:30 AM	<b>48</b>	16	<b>64</b>	<b>18</b>	26	<b>44</b>	42	<b>64</b>	<b>106</b>	<b>214</b>
07:45 AM	32	7	39	12	19	31	<b>54</b>	43	97	167
Total Volume	136	52	188	58	96	154	163	207	370	712
% App. Total	72.3	27.7		37.7	62.3		44.1	55.9		
PHF	.708	.722	.734	.806	.923	.875	.755	.809	.873	.832

County of Riverside  
N/S: I-15 Northbound On/Off Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGAM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	07:30 AM			07:15 AM			07:15 AM		
+0 mins.	48	16	64	16	26	42	37	56	93
+15 mins.	32	7	39	18	26	44	42	64	106
+30 mins.	29	8	37	12	19	31	54	43	97
+45 mins.	39	11	50	19	22	41	44	34	78
Total Volume	148	42	190	65	93	158	177	197	374
% App. Total	77.9	22.1		41.1	58.9		47.3	52.7	
PHF	.771	.656	.742	.855	.894	.898	.819	.770	.882

County of Riverside  
N/S: I-15 Northbound On/Off Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGAM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 1

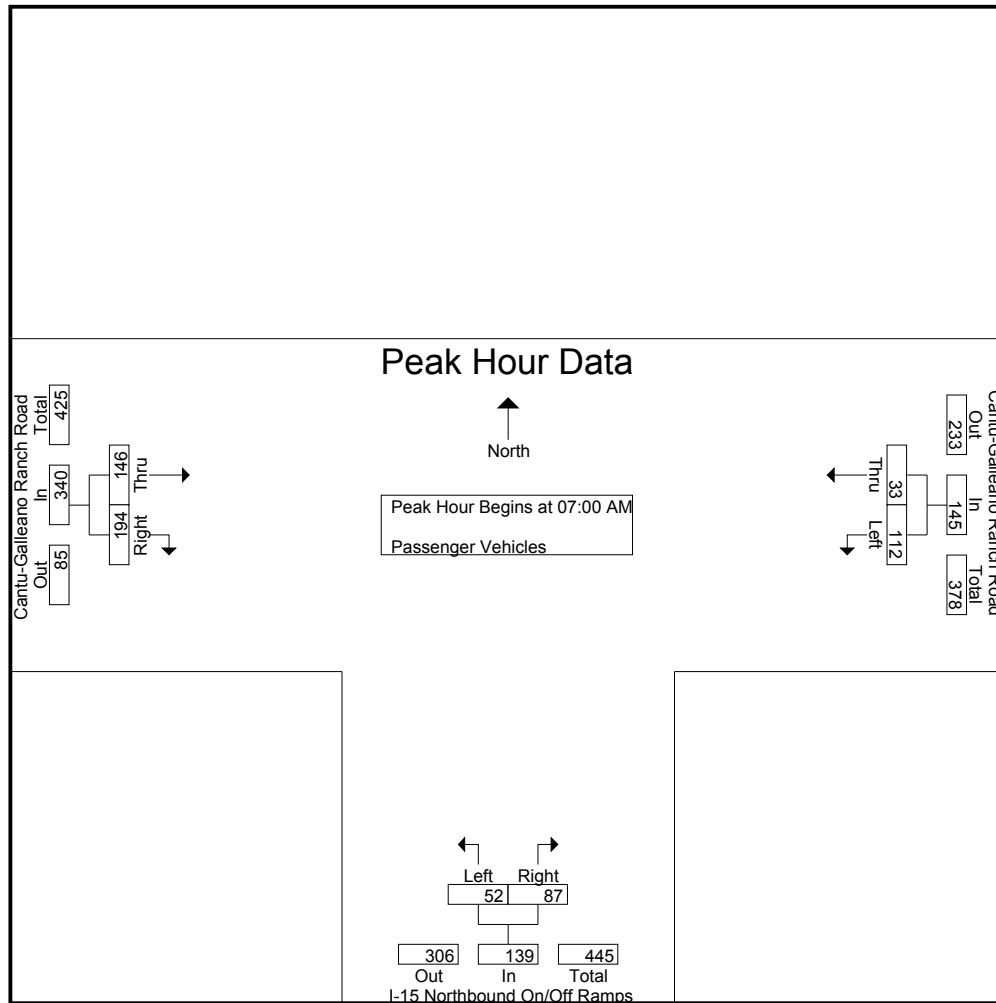
Groups Printed- Passenger Vehicles

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	23	14	37	12	24	36	26	41	67	140
07:15 AM	25	3	28	14	24	38	34	55	89	155
07:30 AM	40	12	52	14	22	36	37	58	95	183
07:45 AM	24	4	28	12	17	29	49	40	89	146
Total	112	33	145	52	87	139	146	194	340	624
08:00 AM	24	6	30	17	21	38	39	34	73	141
08:15 AM	34	6	40	15	17	32	42	35	77	149
08:30 AM	34	10	44	16	14	30	48	26	74	148
08:45 AM	20	10	30	6	20	26	23	37	60	116
Total	112	32	144	54	72	126	152	132	284	554
Grand Total	224	65	289	106	159	265	298	326	624	1178
Apprch %	77.5	22.5		40	60		47.8	52.2		
Total %	19	5.5	24.5	9	13.5	22.5	25.3	27.7	53	

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	23	<b>14</b>	37	12	<b>24</b>	36	26	41	67	140
07:15 AM	25	3	28	<b>14</b>	24	<b>38</b>	34	55	89	155
07:30 AM	<b>40</b>	12	<b>52</b>	14	22	36	37	<b>58</b>	<b>95</b>	<b>183</b>
07:45 AM	24	4	28	12	17	29	<b>49</b>	40	89	146
Total Volume	112	33	145	52	87	139	146	194	340	624
% App. Total	77.2	22.8		37.4	62.6		42.9	57.1		
PHF	.700	.589	.697	.929	.906	.914	.745	.836	.895	.852

County of Riverside  
N/S: I-15 Northbound On/Off Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGAM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1**

**Peak Hour for Each Approach Begins at:**

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	23	<b>14</b>	37	12	<b>24</b>	36	26	41	67
+15 mins.	25	3	28	<b>14</b>	24	<b>38</b>	34	55	89
+30 mins.	<b>40</b>	12	<b>52</b>	14	22	36	37	<b>58</b>	<b>95</b>
+45 mins.	24	4	28	12	17	29	<b>49</b>	40	89
Total Volume	112	33	145	52	87	139	146	194	340
% App. Total	77.2	22.8		37.4	62.6		42.9	57.1	
PHF	.700	.589	.697	.929	.906	.914	.745	.836	.895

County of Riverside  
N/S: I-15 Northbound On/Off Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGAM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 1

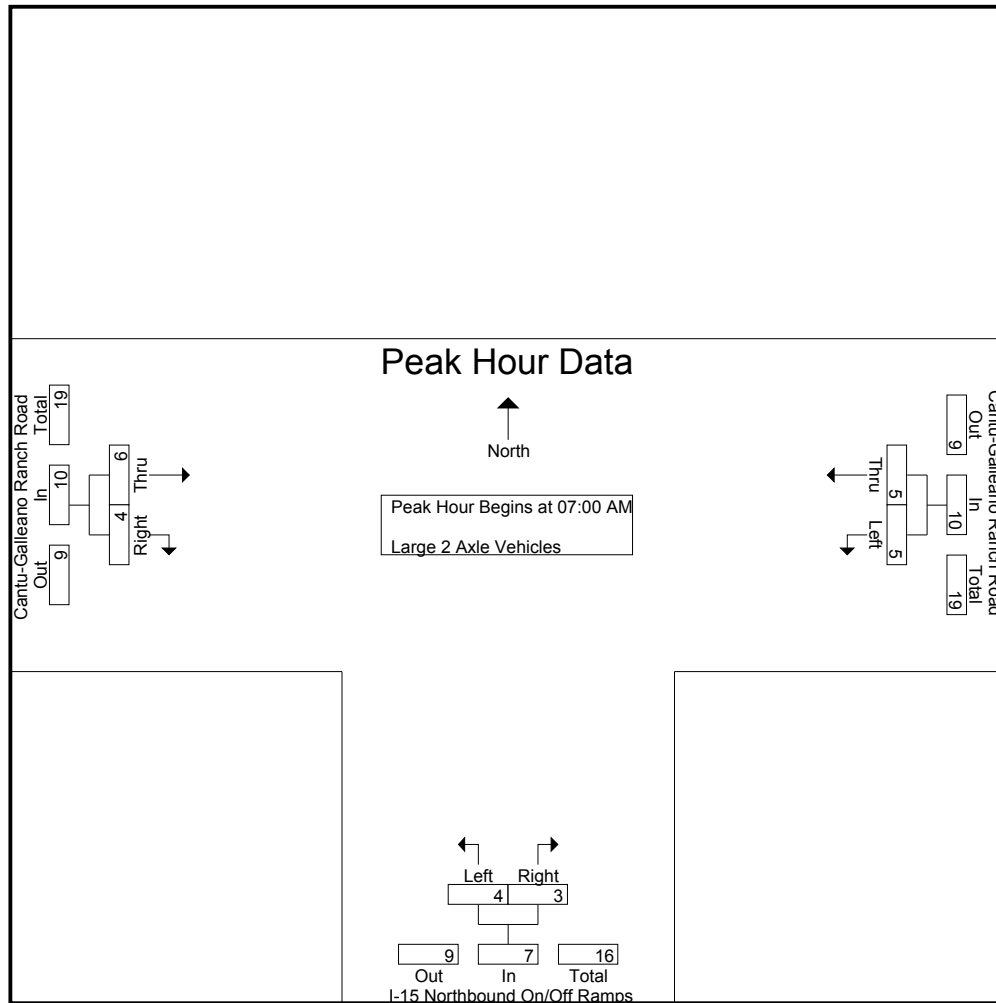
Groups Printed- Large 2 Axle Vehicles

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	2	0	0	0	1	1	2	4
07:15 AM	0	1	1	1	2	3	2	0	2	6
07:30 AM	2	2	4	3	1	4	0	3	3	11
07:45 AM	3	0	3	0	0	0	3	0	3	6
Total	5	5	10	4	3	7	6	4	10	27
08:00 AM	1	1	2	2	0	2	1	0	1	5
08:15 AM	2	3	5	2	1	3	1	1	2	10
08:30 AM	3	1	4	1	0	1	2	2	4	9
08:45 AM	1	2	3	2	1	3	1	3	4	10
Total	7	7	14	7	2	9	5	6	11	34
Grand Total	12	12	24	11	5	16	11	10	21	61
Apprch %	50	50		68.8	31.2		52.4	47.6		
Total %	19.7	19.7	39.3	18	8.2	26.2	18	16.4	34.4	

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	2	2	0	0	0	1	1	2	4
07:15 AM	0	1	1	1	2	3	2	0	2	6
07:30 AM	2	2	4	3	1	4	0	3	3	11
07:45 AM	3	0	3	0	0	0	3	0	3	6
Total Volume	5	5	10	4	3	7	6	4	10	27
% App. Total	50	50		57.1	42.9		60	40		
PHF	.417	.625	.625	.333	.375	.438	.500	.333	.833	.614

County of Riverside  
N/S: I-15 Northbound On/Off Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGAM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	2	2	0	0	0	1	1	2
+15 mins.	0	1	1	1	2	3	2	0	2
+30 mins.	2	2	4	3	1	4	0	3	3
+45 mins.	3	0	3	0	0	0	3	0	3
Total Volume	5	5	10	4	3	7	6	4	10
% App. Total	50	50		57.1	42.9		60	40	
PHF	.417	.625	.625	.333	.375	.438	.500	.333	.833

County of Riverside  
N/S: I-15 Northbound On/Off Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGAM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 1

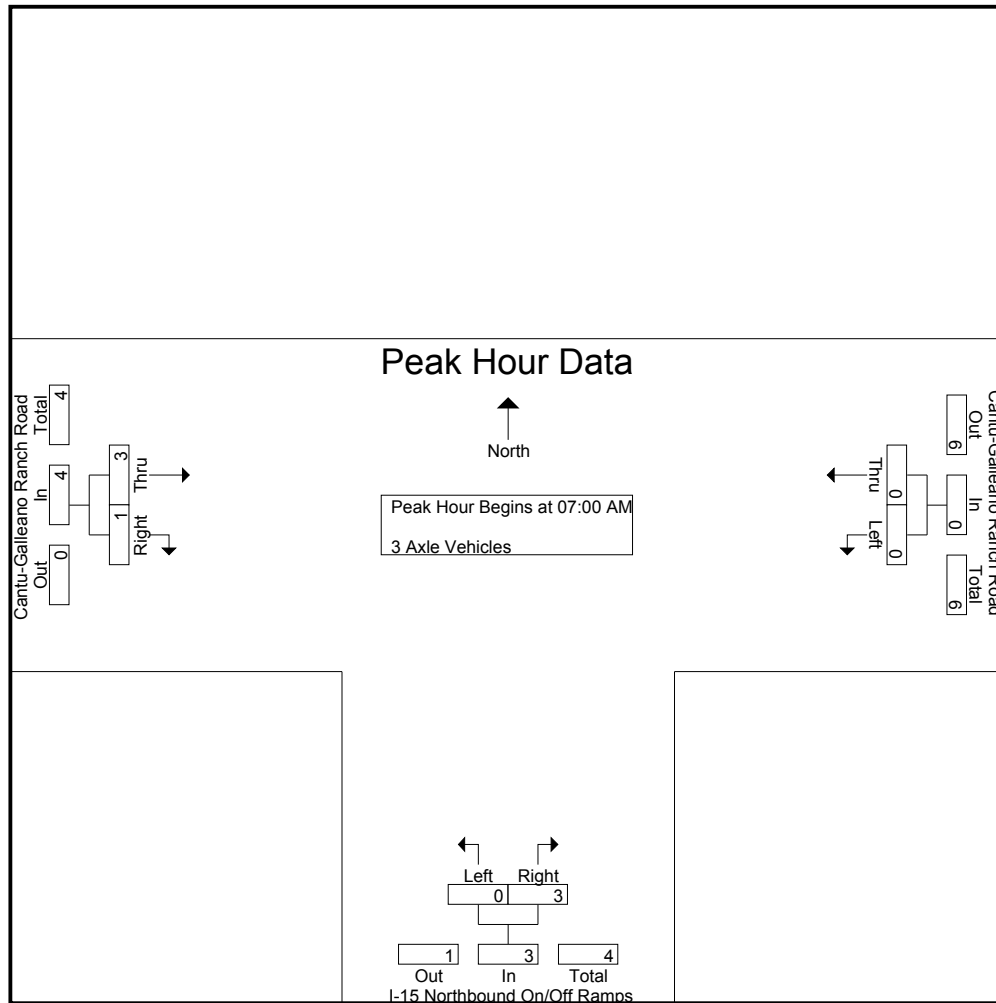
Groups Printed- 3 Axle Vehicles

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	1	1	0	1	2
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	0	0	0	2	2	1	0	1	3
07:45 AM	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	3	3	3	1	4	7
08:00 AM	0	1	1	0	0	0	2	0	2	3
08:15 AM	0	0	0	0	0	0	1	1	2	2
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	1	1	0	1	1	2	0	2	4
Total	0	3	3	0	1	1	5	1	6	10
Grand Total	0	3	3	0	4	4	8	2	10	17
Apprch %	0	100		0	100		80	20		
Total %	0	17.6	17.6	0	23.5	23.5	47.1	11.8	58.8	

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	0	0	0	1	1	1	0	1	2
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	0	0	0	2	2	1	0	1	3
07:45 AM	0	0	0	0	0	0	0	1	1	1
Total Volume	0	0	0	0	3	3	3	1	4	7
% App. Total	0	0		0	100		75	25		
PHF	.000	.000	.000	.000	.375	.375	.750	.250	1.000	.583

County of Riverside  
N/S: I-15 Northbound On/Off Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGAM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	0	0	0	1	1	1	0	1
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	2	2	1	0	1
+45 mins.	0	0	0	0	0	0	0	1	1
Total Volume	0	0	0	0	3	3	3	1	4
% App. Total	0	0		0	100		75	25	
PHF	.000	.000	.000	.000	.375	.375	.750	.250	1.000



County of Riverside  
N/S: I-15 Northbound On/Off Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGAM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 1

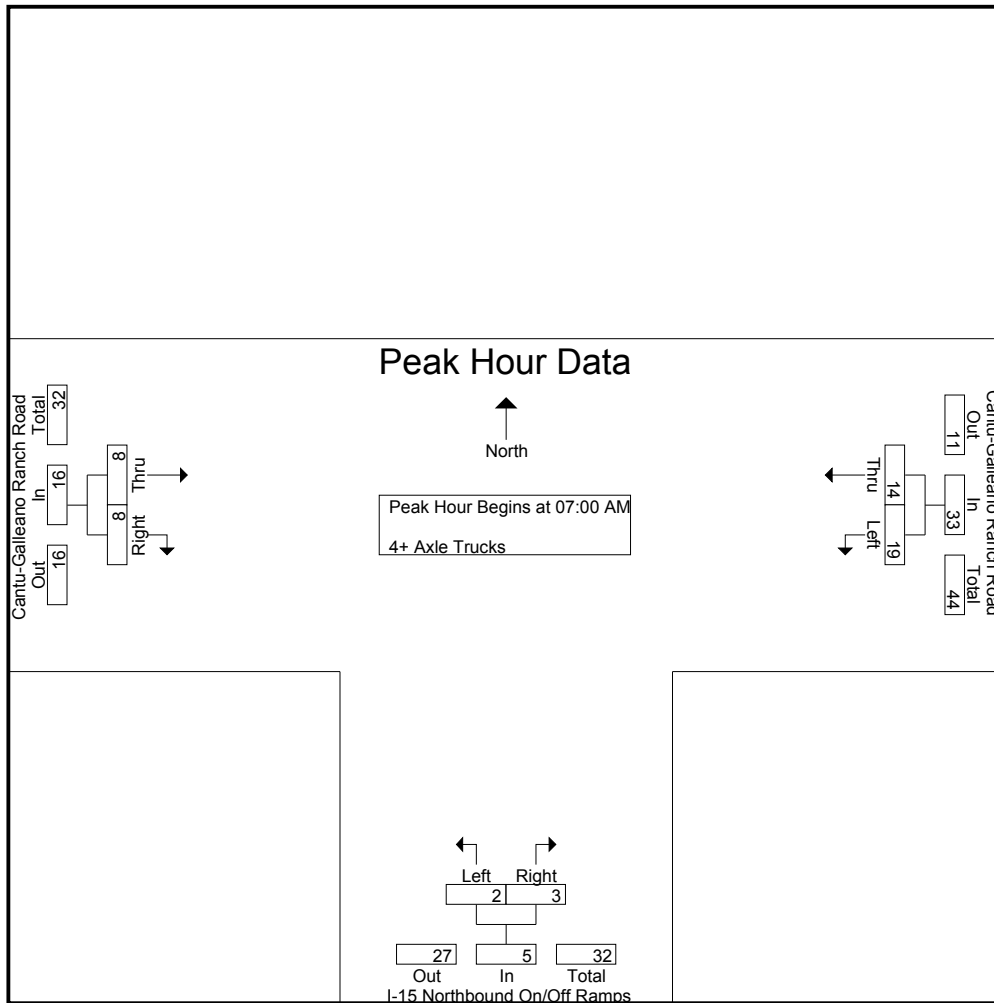
Groups Printed- 4+ Axle Trucks

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	6	2	8	0	0	0	2	2	4	12
07:15 AM	2	7	9	1	0	1	0	1	1	11
07:30 AM	6	2	8	1	1	2	4	3	7	17
07:45 AM	5	3	8	0	2	2	2	2	4	14
Total	19	14	33	2	3	5	8	8	16	54
08:00 AM	4	0	4	0	1	1	2	0	2	7
08:15 AM	3	2	5	0	1	1	3	1	4	10
08:30 AM	6	0	6	0	4	4	4	1	5	15
08:45 AM	8	4	12	1	2	3	2	0	2	17
Total	21	6	27	1	8	9	11	2	13	49
Grand Total	40	20	60	3	11	14	19	10	29	103
Apprch %	66.7	33.3		21.4	78.6		65.5	34.5		
Total %	38.8	19.4	58.3	2.9	10.7	13.6	18.4	9.7	28.2	

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	<b>6</b>	2	8	0	0	0	2	2	4	12
07:15 AM	2	<b>7</b>	<b>9</b>	<b>1</b>	0	1	0	1	1	11
07:30 AM	6	2	8	1	1	<b>2</b>	<b>4</b>	<b>3</b>	<b>7</b>	<b>17</b>
07:45 AM	5	3	8	0	<b>2</b>	2	2	2	4	14
Total Volume	19	14	33	2	3	5	8	8	16	54
% App. Total	57.6	42.4		40	60		50	50		
PHF	.792	.500	.917	.500	.375	.625	.500	.667	.571	.794

County of Riverside  
N/S: I-15 Northbound On/Off Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGAM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	6	2	8	0	0	0	2	2	4
+15 mins.	2	7	9	1	0	1	0	1	1
+30 mins.	6	2	8	1	1	2	4	3	7
+45 mins.	5	3	8	0	2	2	2	2	4
Total Volume	19	14	33	2	3	5	8	8	16
% App. Total	57.6	42.4		40	60		50	50	
PHF	.792	.500	.917	.500	.375	.625	.500	.667	.571

County of Riverside  
N/S: I-15 Northbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGPM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 1

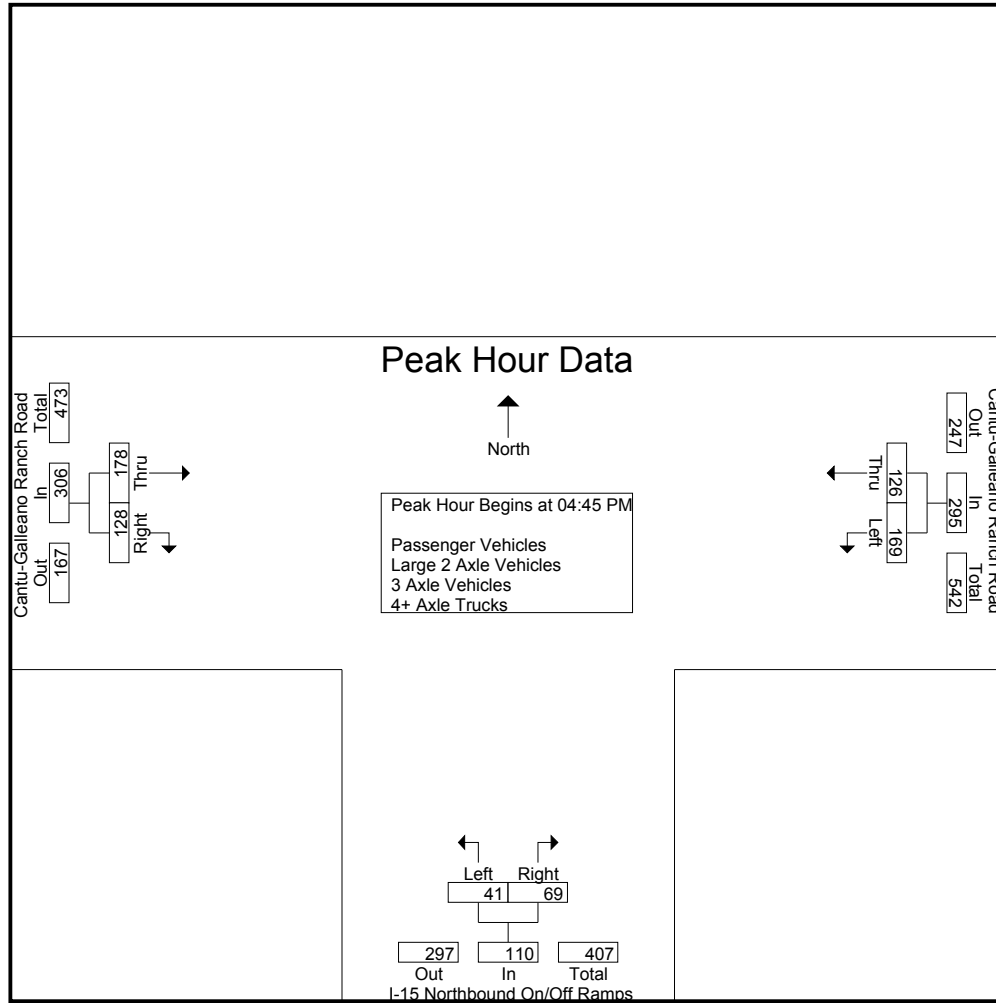
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	49	44	93	3	10	13	49	32	81	187
04:15 PM	28	23	51	6	4	10	49	35	84	145
04:30 PM	47	23	70	8	10	18	52	35	87	175
04:45 PM	28	19	47	12	19	31	53	24	77	155
Total	152	109	261	29	43	72	203	126	329	662
05:00 PM	49	34	83	8	16	24	35	39	74	181
05:15 PM	51	40	91	12	17	29	42	35	77	197
05:30 PM	41	33	74	9	17	26	48	30	78	178
05:45 PM	22	28	50	9	10	19	44	27	71	140
Total	163	135	298	38	60	98	169	131	300	696
Grand Total	315	244	559	67	103	170	372	257	629	1358
Apprch %	56.4	43.6		39.4	60.6		59.1	40.9		
Total %	23.2	18	41.2	4.9	7.6	12.5	27.4	18.9	46.3	
Passenger Vehicles	291	222	513	62	73	135	348	237	585	1233
% Passenger Vehicles	92.4	91	91.8	92.5	70.9	79.4	93.5	92.2	93	90.8
Large 2 Axle Vehicles	6	8	14	2	7	9	10	7	17	40
% Large 2 Axle Vehicles	1.9	3.3	2.5	3	6.8	5.3	2.7	2.7	2.7	2.9
3 Axle Vehicles	0	0	0	0	2	2	5	3	8	10
% 3 Axle Vehicles	0	0	0	0	1.9	1.2	1.3	1.2	1.3	0.7
4+ Axle Trucks	18	14	32	3	21	24	9	10	19	75
% 4+ Axle Trucks	5.7	5.7	5.7	4.5	20.4	14.1	2.4	3.9	3	5.5

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	28	19	47	12	19	31	53	24	77	155
05:00 PM	49	34	83	8	16	24	35	39	74	181
05:15 PM	51	40	91	12	17	29	42	35	77	197
05:30 PM	41	33	74	9	17	26	48	30	78	178
Total Volume	169	126	295	41	69	110	178	128	306	711
% App. Total	57.3	42.7		37.3	62.7		58.2	41.8		
PHF	.828	.788	.810	.854	.908	.887	.840	.821	.981	.902

County of Riverside  
N/S: I-15 Northbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGPM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	05:00 PM			04:45 PM			04:00 PM		
+0 mins.	49	34	83	12	19	31	49	32	81
+15 mins.	51	40	91	8	16	24	49	35	84
+30 mins.	41	33	74	12	17	29	52	35	87
+45 mins.	22	28	50	9	17	26	53	24	77
Total Volume	163	135	298	41	69	110	203	126	329
% App. Total	54.7	45.3		37.3	62.7		61.7	38.3	
PHF	.799	.844	.819	.854	.908	.887	.958	.900	.945

County of Riverside  
N/S: I-15 Northbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGPM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 1

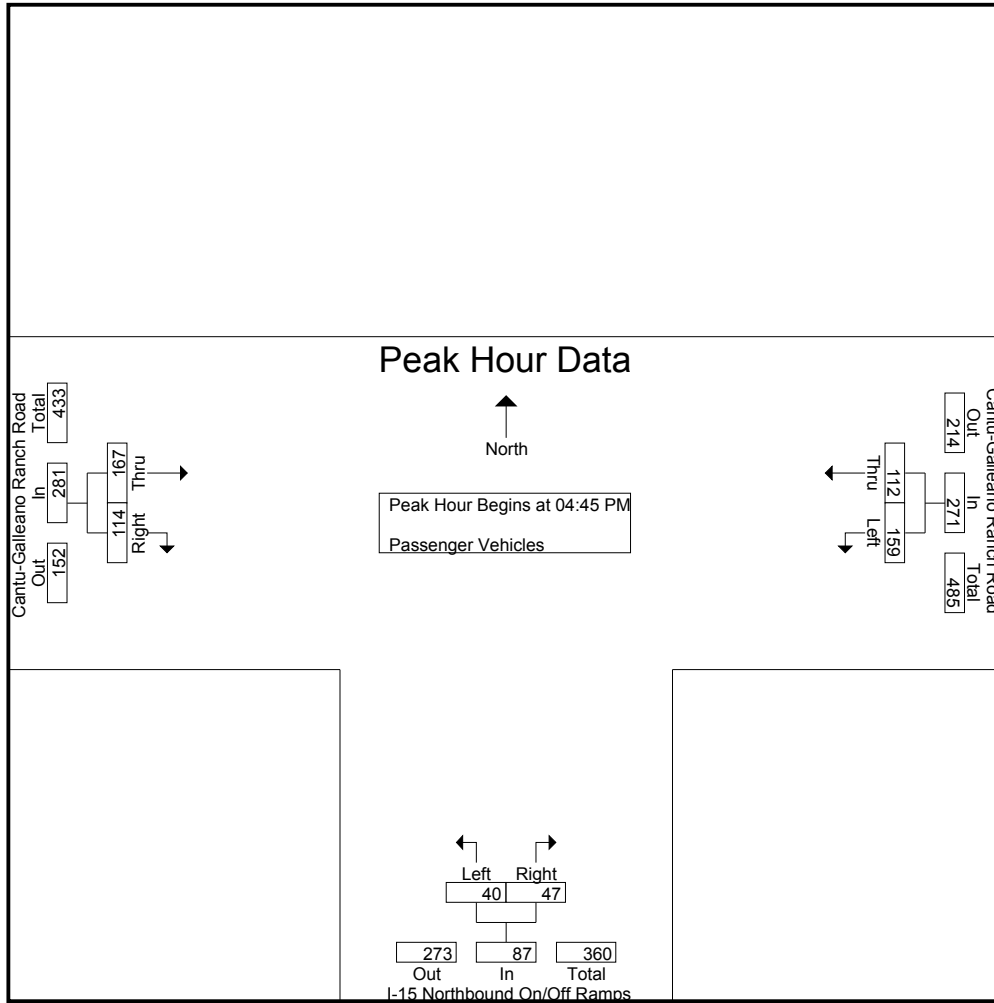
Groups Printed- Passenger Vehicles

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	42	39	81	2	9	11	45	29	74	166
04:15 PM	25	23	48	6	3	9	46	34	80	137
04:30 PM	44	23	67	7	7	14	49	33	82	163
04:45 PM	26	17	43	12	12	24	48	20	68	135
Total	137	102	239	27	31	58	188	116	304	601
05:00 PM	46	33	79	8	12	20	33	35	68	167
05:15 PM	48	34	82	11	12	23	41	34	75	180
05:30 PM	39	28	67	9	11	20	45	25	70	157
05:45 PM	21	25	46	7	7	14	41	27	68	128
Total	154	120	274	35	42	77	160	121	281	632
Grand Total	291	222	513	62	73	135	348	237	585	1233
Apprch %	56.7	43.3		45.9	54.1		59.5	40.5		
Total %	23.6	18	41.6	5	5.9	10.9	28.2	19.2	47.4	

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	26	17	43	<b>12</b>	<b>12</b>	<b>24</b>	<b>48</b>	20	68	135
05:00 PM	46	33	79	8	12	20	33	<b>35</b>	68	167
05:15 PM	<b>48</b>	<b>34</b>	<b>82</b>	11	12	23	41	34	<b>75</b>	<b>180</b>
05:30 PM	39	28	67	9	11	20	45	25	70	157
Total Volume	159	112	271	40	47	87	167	114	281	639
% App. Total	58.7	41.3		46	54		59.4	40.6		
PHF	.828	.824	.826	.833	.979	.906	.870	.814	.937	.888

County of Riverside  
N/S: I-15 Northbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGPM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	26	17	43	12	12	24	48	20	68
+15 mins.	46	33	79	8	12	20	33	35	68
+30 mins.	48	34	82	11	12	23	41	34	75
+45 mins.	39	28	67	9	11	20	45	25	70
Total Volume	159	112	271	40	47	87	167	114	281
% App. Total	58.7	41.3		46	54		59.4	40.6	
PHF	.828	.824	.826	.833	.979	.906	.870	.814	.937

County of Riverside  
N/S: I-15 Northbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGPM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 1

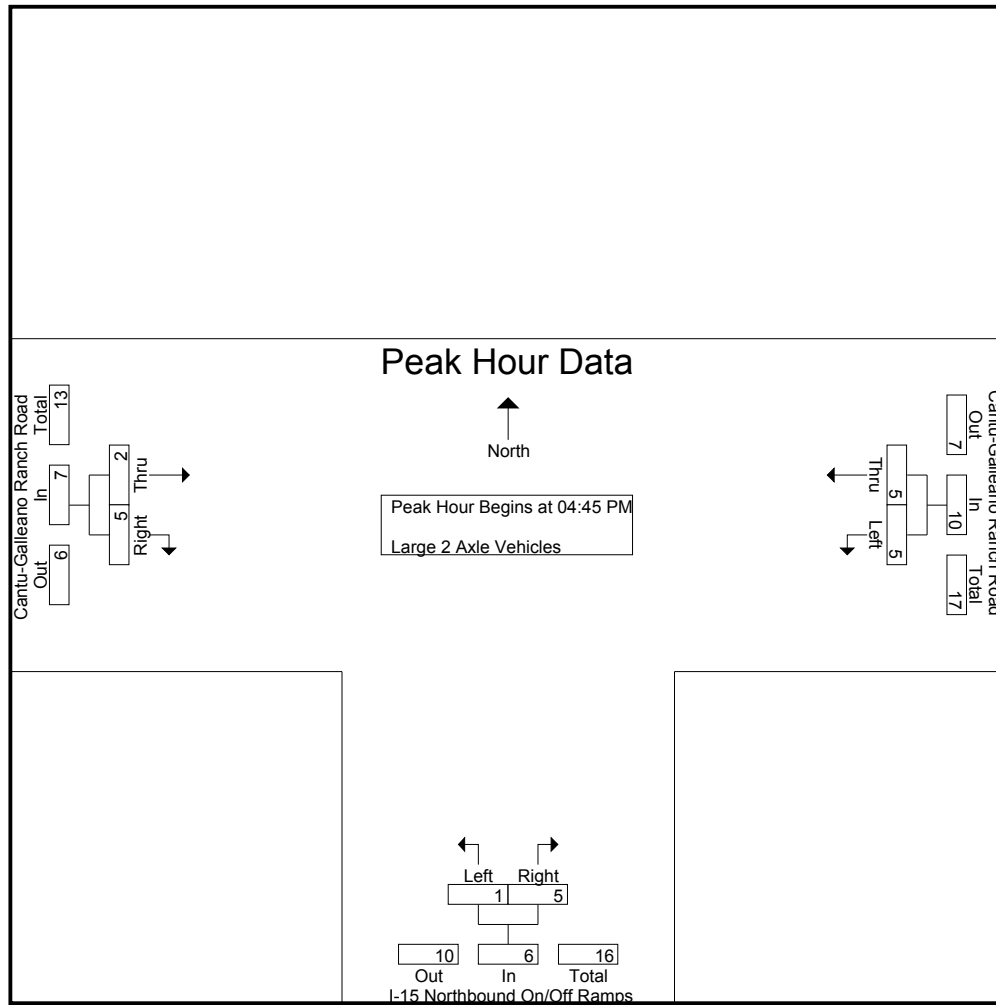
Groups Printed- Large 2 Axle Vehicles

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	2	0	1	1	1	0	1	4
04:15 PM	1	0	1	0	0	0	3	1	4	5
04:30 PM	0	0	0	0	1	1	2	1	3	4
04:45 PM	1	1	2	0	1	1	2	1	3	6
Total	2	3	5	0	3	3	8	3	11	19
05:00 PM	2	1	3	0	1	1	0	2	2	6
05:15 PM	2	3	5	1	3	4	0	1	1	10
05:30 PM	0	0	0	0	0	0	0	1	1	1
05:45 PM	0	1	1	1	0	1	2	0	2	4
Total	4	5	9	2	4	6	2	4	6	21
Grand Total	6	8	14	2	7	9	10	7	17	40
Apprch %	42.9	57.1		22.2	77.8		58.8	41.2		
Total %	15	20	35	5	17.5	22.5	25	17.5	42.5	

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	1	1	2	0	1	1	2	1	3	6
05:00 PM	2	1	3	0	1	1	0	2	2	6
05:15 PM	2	3	5	1	3	4	0	1	1	10
05:30 PM	0	0	0	0	0	0	0	1	1	1
Total Volume	5	5	10	1	5	6	2	5	7	23
% App. Total	50	50		16.7	83.3		28.6	71.4		
PHF	.625	.417	.500	.250	.417	.375	.250	.625	.583	.575

County of Riverside  
N/S: I-15 Northbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGPM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 2



**Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1**

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	1	1	2	0	1	1	2	1	3
+15 mins.	2	1	3	0	1	1	0	2	2
+30 mins.	2	3	5	1	3	4	0	1	1
+45 mins.	0	0	0	0	0	0	0	1	1
Total Volume	5	5	10	1	5	6	2	5	7
% App. Total	50	50		16.7	83.3		28.6	71.4	
PHF	.625	.417	.500	.250	.417	.375	.250	.625	.583



County of Riverside  
N/S: I-15 Northbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGPM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 1

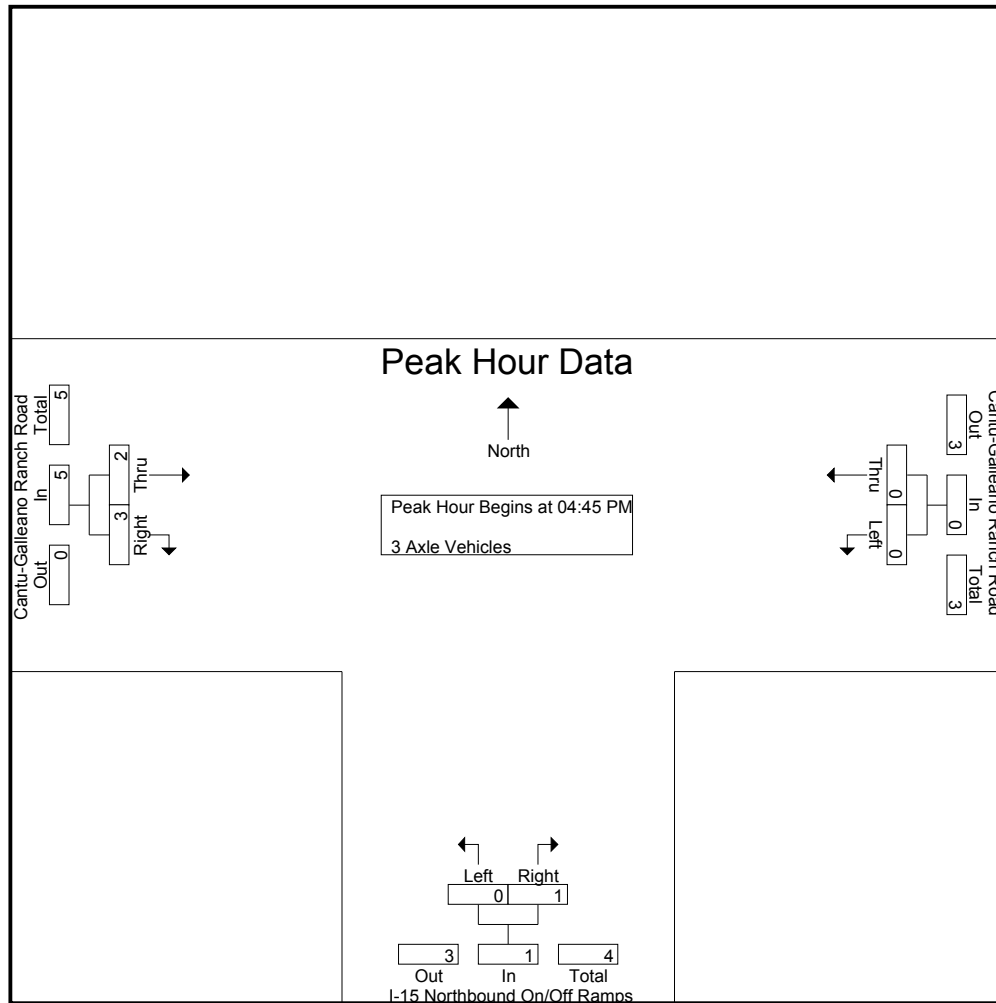
Groups Printed- 3 Axle Vehicles

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	2	0	2	2
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	1	1	1	0	1	2
05:30 PM	0	0	0	0	0	0	0	3	3	3
05:45 PM	0	0	0	0	1	1	1	0	1	2
Total	0	0	0	0	2	2	3	3	6	8
Grand Total	0	0	0	0	2	2	5	3	8	10
Apprch %	0	0		0	100		62.5	37.5		
Total %	0	0		0	20	20	50	30	80	

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	1	1	1	0	1	2
05:30 PM	0	0	0	0	0	0	0	3	3	3
Total Volume	0	0	0	0	1	1	2	3	5	6
% App. Total	0	0		0	100		40	60		
PHF	.000	.000	.000	.000	.250	.250	.500	.250	.417	.500

County of Riverside  
N/S: I-15 Northbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGPM  
Site Code : 9222051  
Start Date : 8/18/2009  
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	1	1	1	0	1
+45 mins.	0	0	0	0	0	0	0	3	3
Total Volume	0	0	0	0	1	1	2	3	5
% App. Total	0	0	0	0	100		40	60	
PHF	.000	.000	.000	.000	.250	.250	.500	.250	.417

County of Riverside  
N/S: I-15 Northbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGPM  
Site Code : 9222051  
Start Date : 8/18/2009  
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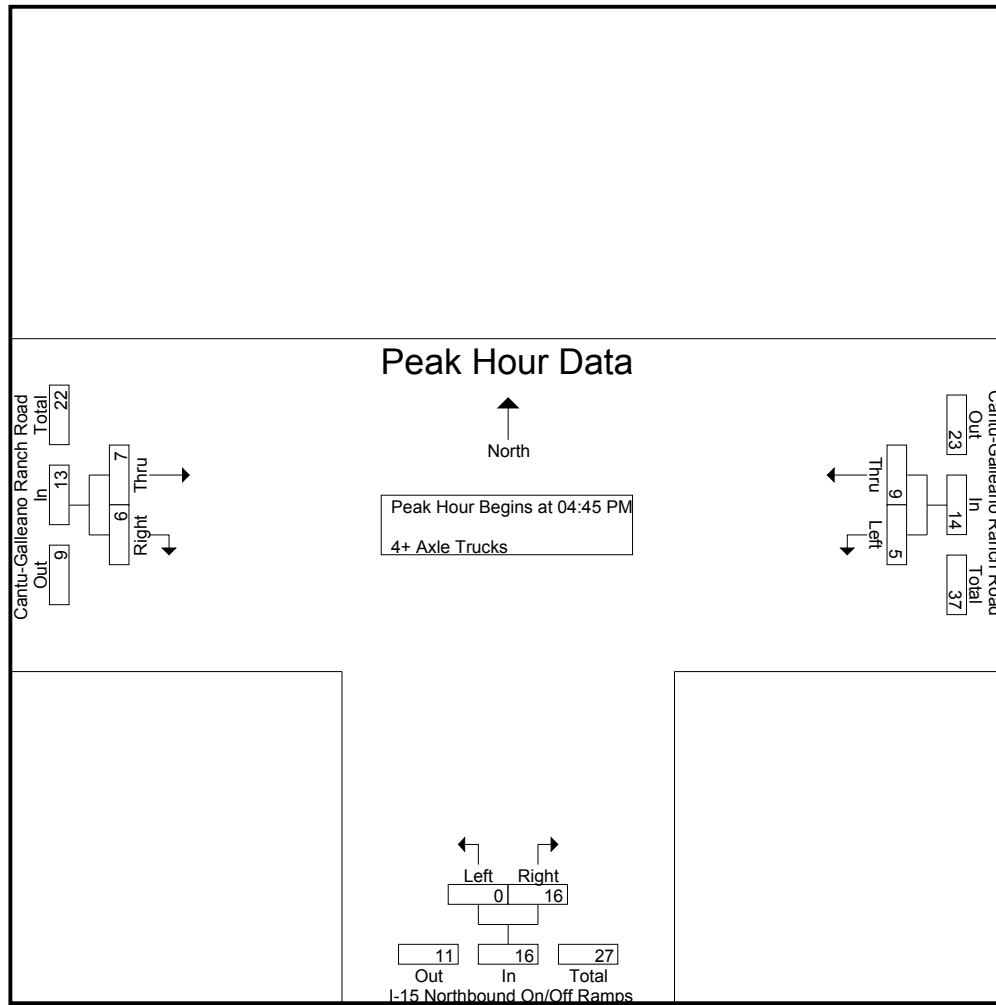
Groups Printed- 4+ Axle Trucks

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	7	3	10	1	0	1	2	3	5	16
04:15 PM	2	0	2	0	1	1	0	0	0	3
04:30 PM	3	0	3	1	2	3	0	1	1	7
04:45 PM	1	1	2	0	6	6	3	3	6	14
Total	13	4	17	2	9	11	5	7	12	40
05:00 PM	1	0	1	0	3	3	1	2	3	7
05:15 PM	1	3	4	0	1	1	0	0	0	5
05:30 PM	2	5	7	0	6	6	3	1	4	17
05:45 PM	1	2	3	1	2	3	0	0	0	6
Total	5	10	15	1	12	13	4	3	7	35
Grand Total	18	14	32	3	21	24	9	10	19	75
Apprch %	56.2	43.8		12.5	87.5		47.4	52.6		
Total %	24	18.7	42.7	4	28	32	12	13.3	25.3	

	Cantu-Galleano Ranch Road Westbound			I-15 Northbound On/Off Ramps Northbound			Cantu-Galleano Ranch Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	1	1	2	0	6	6	3	3	6	14
05:00 PM	1	0	1	0	3	3	1	2	3	7
05:15 PM	1	3	4	0	1	1	0	0	0	5
05:30 PM	2	5	7	0	6	6	3	1	4	17
Total Volume	5	9	14	0	16	16	7	6	13	43
% App. Total	35.7	64.3		0	100		53.8	46.2		
PHF	.625	.450	.500	.000	.667	.667	.583	.500	.542	.632

County of Riverside  
N/S: I-15 Northbound Ramps  
E/W: Cantu-Galleano Ranch Road  
Weather: Sunny

File Name : CRV15NCGPM  
Site Code : 9222051  
Start Date : 8/18/2009  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	1	1	2	0	6	6	3	3	6
+15 mins.	1	0	1	0	3	3	1	2	3
+30 mins.	1	3	4	0	1	1	0	0	0
+45 mins.	2	5	7	0	6	6	3	1	4
Total Volume	5	9	14	0	16	16	7	6	13
% App. Total	35.7	64.3		0	100		53.8	46.2	
PHF	.625	.450	.500	.000	.667	.667	.583	.500	.542

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAAM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 1

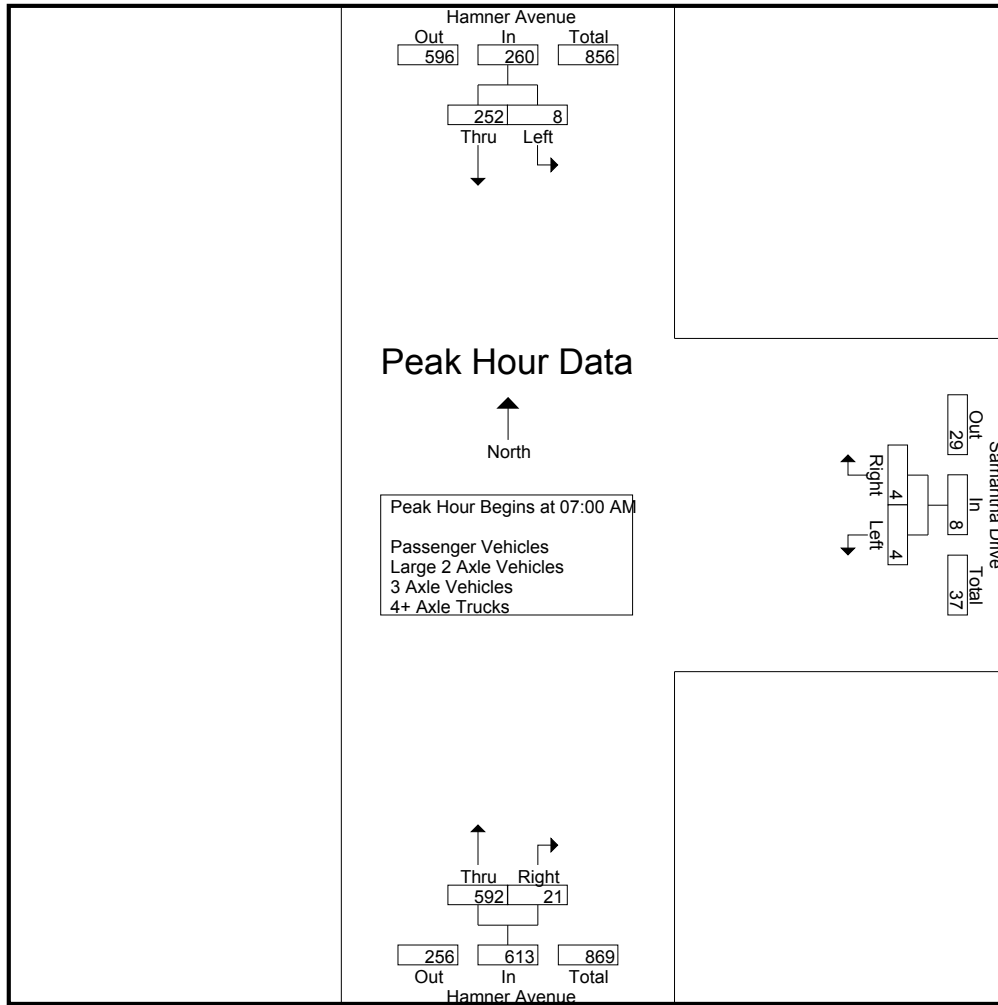
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	59	59	0	0	0	152	4	156	215
07:15 AM	2	54	56	0	2	2	141	2	143	201
07:30 AM	4	63	67	4	2	6	138	3	141	214
07:45 AM	2	76	78	0	0	0	161	12	173	251
Total	8	252	260	4	4	8	592	21	613	881
08:00 AM	0	51	51	1	0	1	112	3	115	167
08:15 AM	2	50	52	1	1	2	111	3	114	168
08:30 AM	4	60	64	0	4	4	94	3	97	165
08:45 AM	3	55	58	1	2	3	100	6	106	167
Total	9	216	225	3	7	10	417	15	432	667
Grand Total	17	468	485	7	11	18	1009	36	1045	1548
Apprch %	3.5	96.5		38.9	61.1		96.6	3.4		
Total %	1.1	30.2	31.3	0.5	0.7	1.2	65.2	2.3	67.5	
Passenger Vehicles	14	398	412	3	4	7	941	29	970	1389
% Passenger Vehicles	82.4	85	84.9	42.9	36.4	38.9	93.3	80.6	92.8	89.7
Large 2 Axle Vehicles	0	30	30	0	0	0	36	1	37	67
% Large 2 Axle Vehicles	0	6.4	6.2	0	0	0	3.6	2.8	3.5	4.3
3 Axle Vehicles	1	8	9	0	1	1	7	0	7	17
% 3 Axle Vehicles	5.9	1.7	1.9	0	9.1	5.6	0.7	0	0.7	1.1
4+ Axle Trucks	2	32	34	4	6	10	25	6	31	75
% 4+ Axle Trucks	11.8	6.8	7	57.1	54.5	55.6	2.5	16.7	3	4.8

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	59	59	0	0	0	152	4	156	215
07:15 AM	2	54	56	0	2	2	141	2	143	201
07:30 AM	4	63	67	4	2	6	138	3	141	214
07:45 AM	2	76	78	0	0	0	161	12	173	251
Total Volume	8	252	260	4	4	8	592	21	613	881
% App. Total	3.1	96.9		50	50		96.6	3.4		
PHF	.500	.829	.833	.250	.500	.333	.919	.438	.886	.877

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAAM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM			08:00 AM			07:00 AM		
+0 mins.	0	59	59	1	0	1	152	4	156
+15 mins.	2	54	56	1	1	2	141	2	143
+30 mins.	4	63	67	0	4	4	138	3	141
+45 mins.	2	76	78	1	2	3	161	12	173
Total Volume	8	252	260	3	7	10	592	21	613
% App. Total	3.1	96.9		30	70		96.6	3.4	
PHF	.500	.829	.833	.750	.438	.625	.919	.438	.886

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAAM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 1

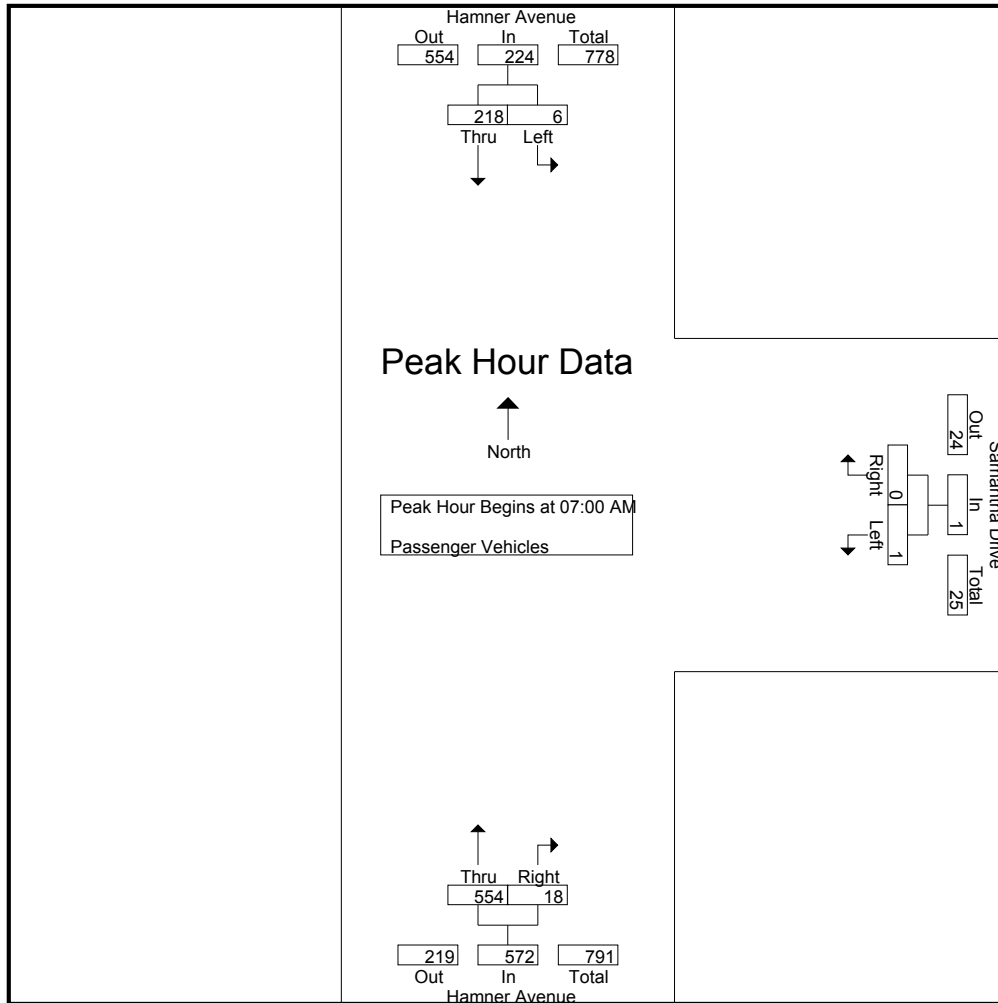
Groups Printed- Passenger Vehicles

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	47	47	0	0	0	137	2	139	186
07:15 AM	1	46	47	0	0	0	132	2	134	181
07:30 AM	4	58	62	1	0	1	129	3	132	195
07:45 AM	1	67	68	0	0	0	156	11	167	235
Total	6	218	224	1	0	1	554	18	572	797
08:00 AM	0	46	46	1	0	1	103	2	105	152
08:15 AM	1	43	44	1	1	2	107	2	109	155
08:30 AM	4	47	51	0	2	2	85	3	88	141
08:45 AM	3	44	47	0	1	1	92	4	96	144
Total	8	180	188	2	4	6	387	11	398	592
Grand Total	14	398	412	3	4	7	941	29	970	1389
Apprch %	3.4	96.6		42.9	57.1		97	3		
Total %	1	28.7	29.7	0.2	0.3	0.5	67.7	2.1	69.8	

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	47	47	0	0	0	137	2	139	186
07:15 AM	1	46	47	0	0	0	132	2	134	181
07:30 AM	4	58	62	1	0	1	129	3	132	195
07:45 AM	1	67	68	0	0	0	156	11	167	235
Total Volume	6	218	224	1	0	1	554	18	572	797
% App. Total	2.7	97.3		100	0		96.9	3.1		
PHF	.375	.813	.824	.250	.000	.250	.888	.409	.856	.848

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAAM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	47	47	0	0	0	137	2	139
+15 mins.	1	46	47	0	0	0	132	2	134
+30 mins.	4	58	62	1	0	1	129	3	132
+45 mins.	1	67	68	0	0	0	156	11	167
Total Volume	6	218	224	1	0	1	554	18	572
% App. Total	2.7	97.3		100	0		96.9	3.1	
PHF	.375	.813	.824	.250	.000	.250	.888	.409	.856



County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAAM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 1

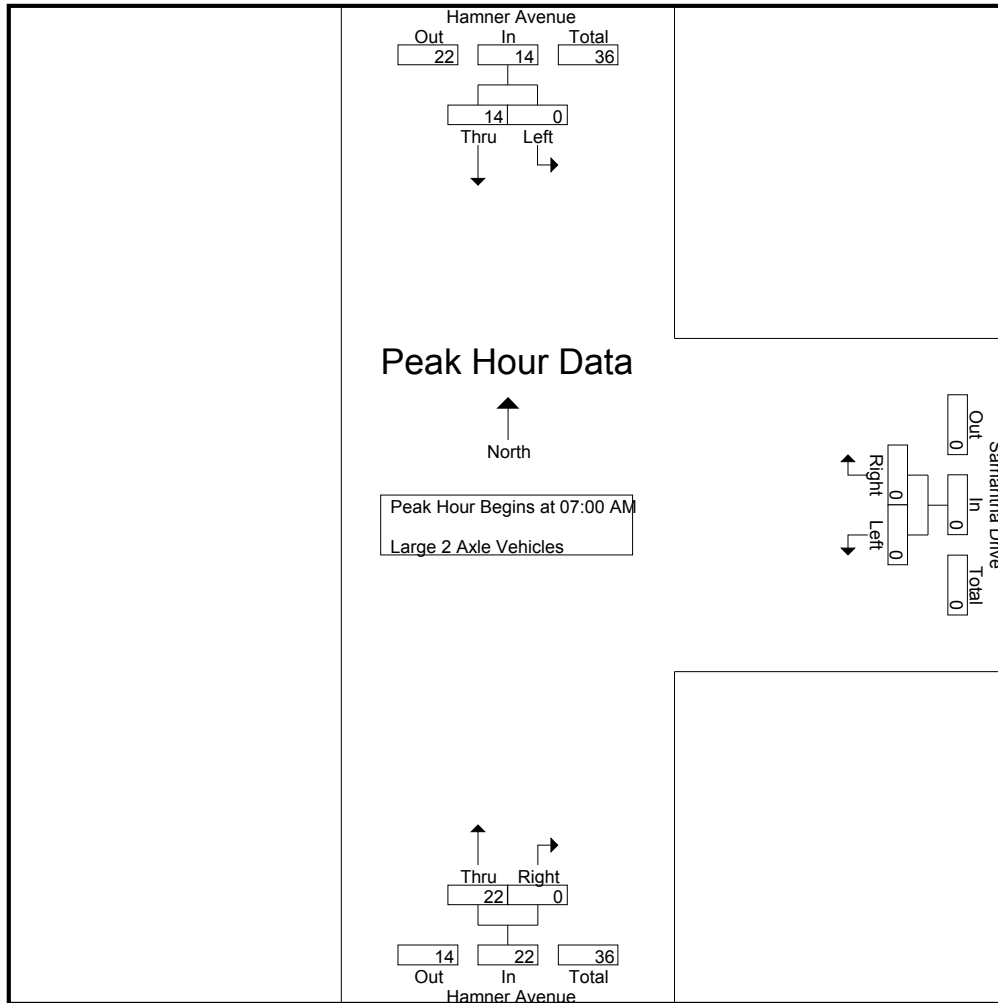
Groups Printed- Large 2 Axle Vehicles

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	7	7	0	0	0	9	0	9	16
07:15 AM	0	3	3	0	0	0	5	0	5	8
07:30 AM	0	2	2	0	0	0	5	0	5	7
07:45 AM	0	2	2	0	0	0	3	0	3	5
Total	0	14	14	0	0	0	22	0	22	36
08:00 AM	0	1	1	0	0	0	4	0	4	5
08:15 AM	0	3	3	0	0	0	2	0	2	5
08:30 AM	0	5	5	0	0	0	3	0	3	8
08:45 AM	0	7	7	0	0	0	5	1	6	13
Total	0	16	16	0	0	0	14	1	15	31
Grand Total	0	30	30	0	0	0	36	1	37	67
Apprch %	0	100		0	0		97.3	2.7		
Total %	0	44.8	44.8	0	0	0	53.7	1.5	55.2	

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	7	7	0	0	0	9	0	9	16
07:15 AM	0	3	3	0	0	0	5	0	5	8
07:30 AM	0	2	2	0	0	0	5	0	5	7
07:45 AM	0	2	2	0	0	0	3	0	3	5
Total Volume	0	14	14	0	0	0	22	0	22	36
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.611	.000	.611	.563

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAAM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	7	7	0	0	0	9	0	9
+15 mins.	0	3	3	0	0	0	5	0	5
+30 mins.	0	2	2	0	0	0	5	0	5
+45 mins.	0	2	2	0	0	0	3	0	3
Total Volume	0	14	14	0	0	0	22	0	22
% App. Total	0	100		0	0		100	0	
PHF	.000	.500	.500	.000	.000	.000	.611	.000	.611

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAAM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 1

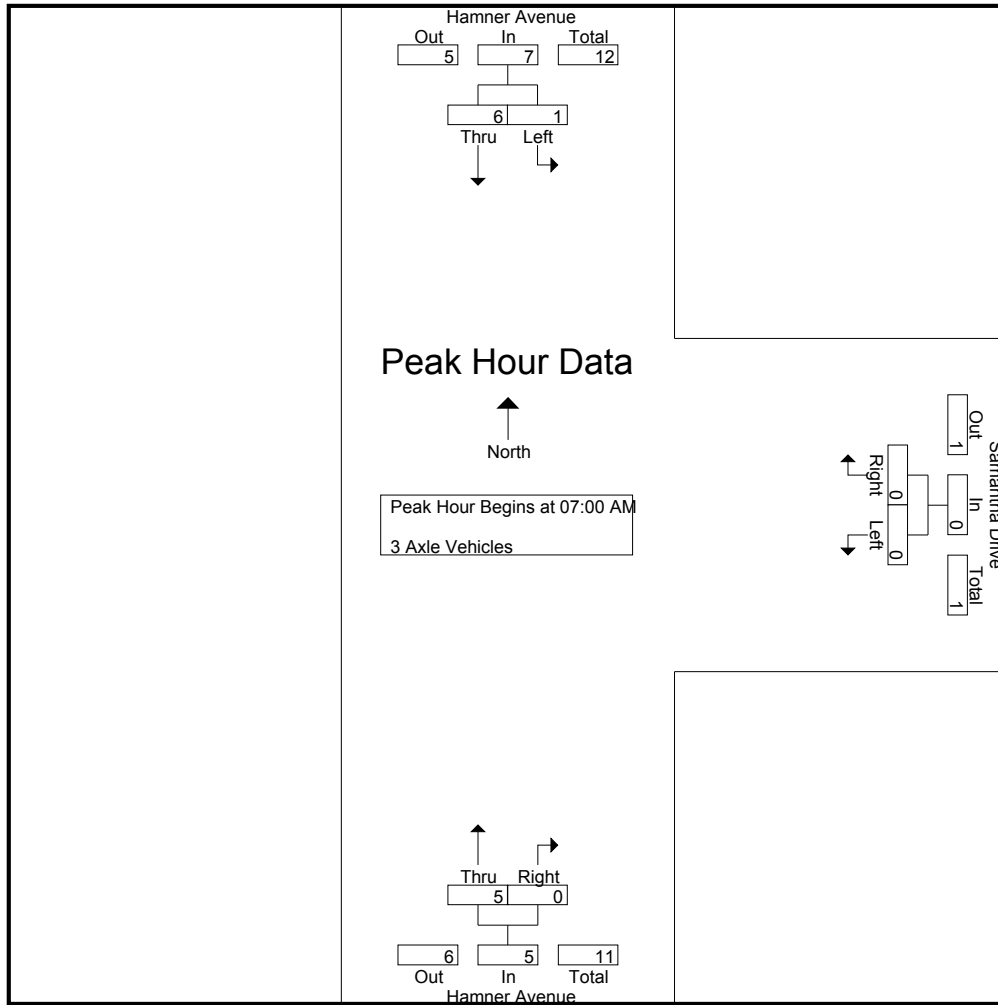
Groups Printed- 3 Axle Vehicles

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	2	0	0	0	3	0	3	5
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	1	1	0	0	0	1	0	1	2
07:45 AM	1	3	4	0	0	0	0	0	0	4
Total	1	6	7	0	0	0	5	0	5	12
08:00 AM	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	2	2	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	1	1	0	0	0	1
Total	0	2	2	0	1	1	2	0	2	5
Grand Total	1	8	9	0	1	1	7	0	7	17
Apprch %	11.1	88.9		0	100		100	0		
Total %	5.9	47.1	52.9	0	5.9	5.9	41.2	0	41.2	

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	2	2	0	0	0	3	0	3	5
07:15 AM	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	1	1	0	0	0	1	0	1	2
07:45 AM	1	3	4	0	0	0	0	0	0	4
Total Volume	1	6	7	0	0	0	5	0	5	12
% App. Total	14.3	85.7		0	0		100	0		
PHF	.250	.500	.438	.000	.000	.000	.417	.000	.417	.600

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAAM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	2	2	0	0	0	3	0	3
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	1	1	0	0	0	1	0	1
+45 mins.	1	3	4	0	0	0	0	0	0
Total Volume	1	6	7	0	0	0	5	0	5
% App. Total	14.3	85.7		0	0		100	0	
PHF	.250	.500	.438	.000	.000	.000	.417	.000	.417

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAAM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 1

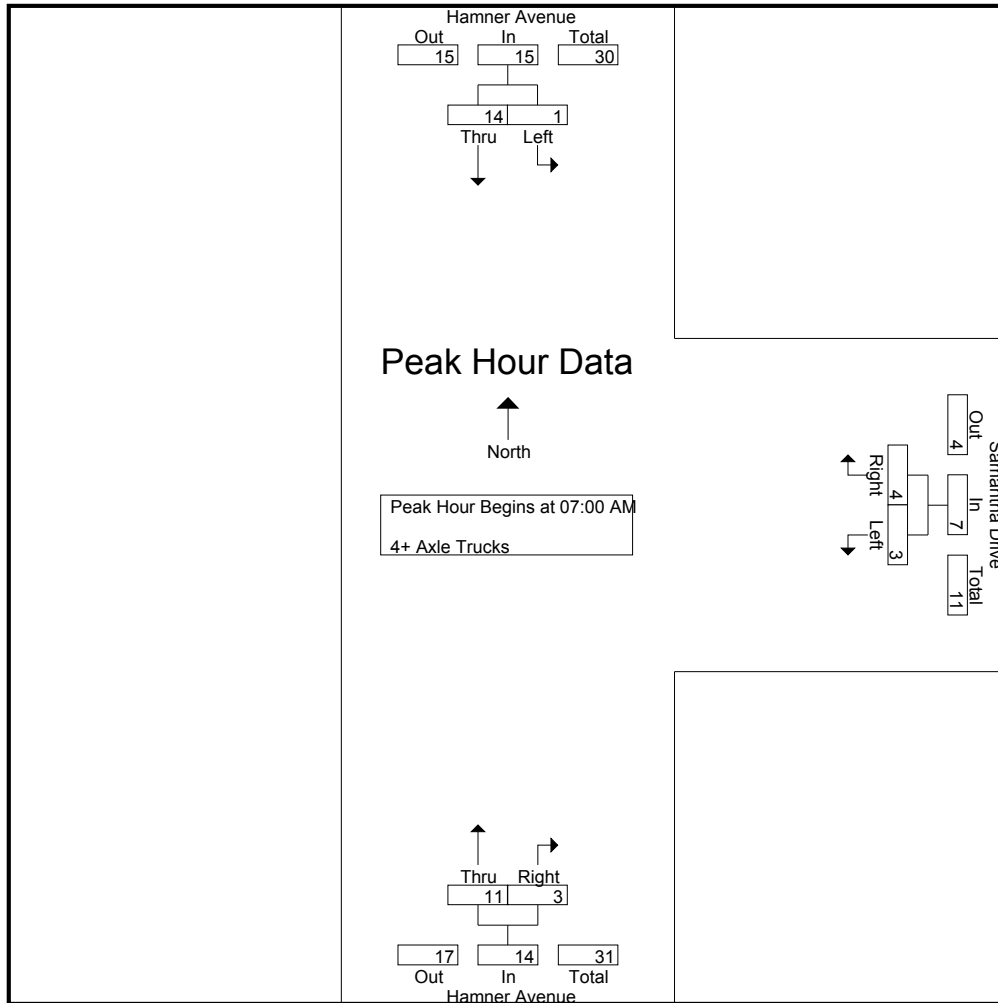
Groups Printed- 4+ Axle Trucks

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	3	3	0	0	0	3	2	5	8
07:15 AM	1	5	6	0	2	2	3	0	3	11
07:30 AM	0	2	2	3	2	5	3	0	3	10
07:45 AM	0	4	4	0	0	0	2	1	3	7
Total	1	14	15	3	4	7	11	3	14	36
08:00 AM	0	4	4	0	0	0	4	1	5	9
08:15 AM	1	4	5	0	0	0	1	1	2	7
08:30 AM	0	6	6	0	2	2	6	0	6	14
08:45 AM	0	4	4	1	0	1	3	1	4	9
Total	1	18	19	1	2	3	14	3	17	39
Grand Total	2	32	34	4	6	10	25	6	31	75
Apprch %	5.9	94.1		40	60		80.6	19.4		
Total %	2.7	42.7	45.3	5.3	8	13.3	33.3	8	41.3	

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	0	3	3	0	0	0	3	2	5	8
07:15 AM	1	5	6	0	2	2	3	0	3	11
07:30 AM	0	2	2	3	2	5	3	0	3	10
07:45 AM	0	4	4	0	0	0	2	1	3	7
Total Volume	1	14	15	3	4	7	11	3	14	36
% App. Total	6.7	93.3		42.9	57.1		78.6	21.4		
PHF	.250	.700	.625	.250	.500	.350	.917	.375	.700	.818

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAAM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 2



Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:00 AM		
+0 mins.	0	3	3	0	0	0	3	2	5
+15 mins.	1	5	6	0	2	2	3	0	3
+30 mins.	0	2	2	3	2	5	3	0	3
+45 mins.	0	4	4	0	0	0	2	1	3
Total Volume	1	14	15	3	4	7	11	3	14
% App. Total	6.7	93.3		42.9	57.1		78.6	21.4	
PHF	.250	.700	.625	.250	.500	.350	.917	.375	.700

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAPM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 1

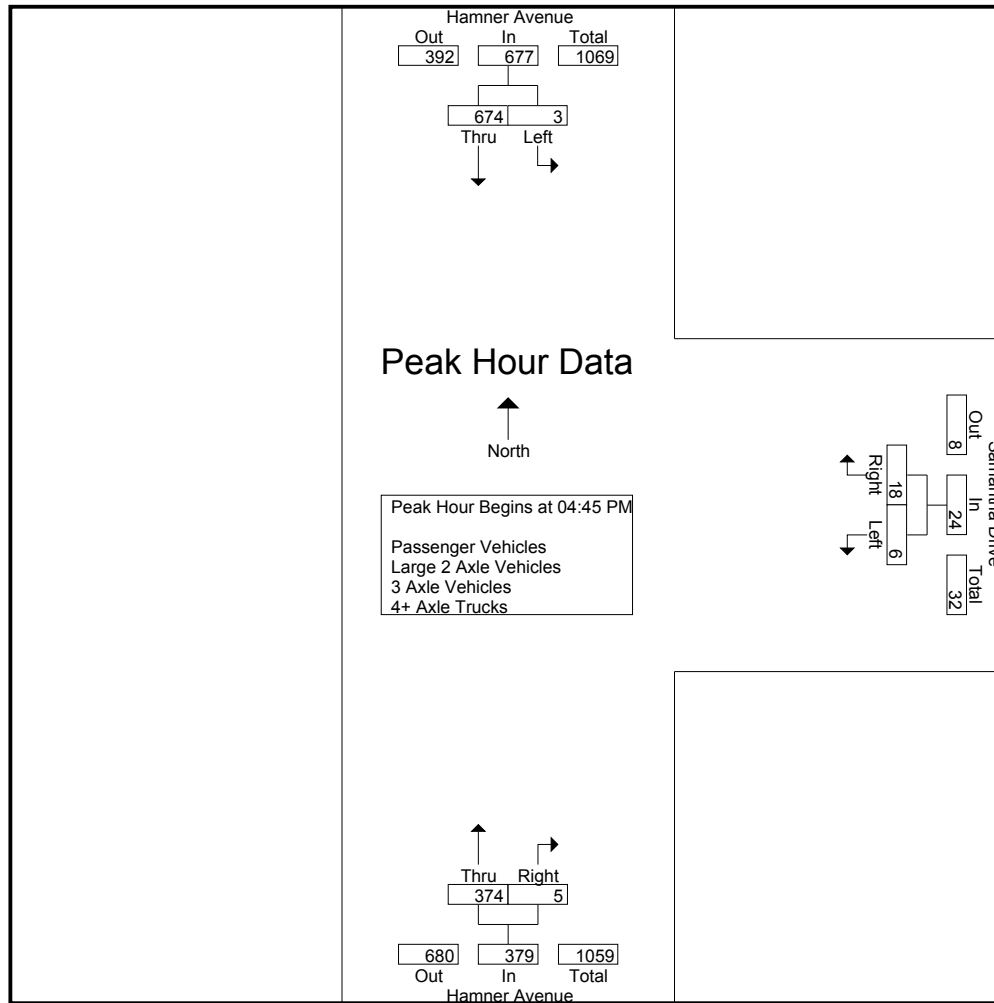
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	1	139	140	0	1	1	78	0	78	219
04:15 PM	2	144	146	0	0	0	84	0	84	230
04:30 PM	1	150	151	1	4	5	107	2	109	265
04:45 PM	0	146	146	4	1	5	75	3	78	229
Total	4	579	583	5	6	11	344	5	349	943
05:00 PM	1	154	155	0	4	4	113	0	113	272
05:15 PM	1	192	193	1	2	3	88	2	90	286
05:30 PM	1	182	183	1	11	12	98	0	98	293
05:45 PM	0	124	124	2	4	6	84	2	86	216
Total	3	652	655	4	21	25	383	4	387	1067
Grand Total	7	1231	1238	9	27	36	727	9	736	2010
Apprch %	0.6	99.4		25	75		98.8	1.2		
Total %	0.3	61.2	61.6	0.4	1.3	1.8	36.2	0.4	36.6	
Passenger Vehicles	3	1187	1190	6	22	28	693	4	697	1915
% Passenger Vehicles	42.9	96.4	96.1	66.7	81.5	77.8	95.3	44.4	94.7	95.3
Large 2 Axle Vehicles	1	26	27	1	1	2	22	2	24	53
% Large 2 Axle Vehicles	14.3	2.1	2.2	11.1	3.7	5.6	3	22.2	3.3	2.6
3 Axle Vehicles	0	5	5	0	0	0	3	0	3	8
% 3 Axle Vehicles	0	0.4	0.4	0	0	0	0.4	0	0.4	0.4
4+ Axle Trucks	3	13	16	2	4	6	9	3	12	34
% 4+ Axle Trucks	42.9	1.1	1.3	22.2	14.8	16.7	1.2	33.3	1.6	1.7

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	146	146	<b>4</b>	1	5	75	<b>3</b>	78	229
05:00 PM	<b>1</b>	154	155	0	4	4	<b>113</b>	0	<b>113</b>	272
05:15 PM	1	<b>192</b>	<b>193</b>	1	2	3	88	2	90	286
05:30 PM	1	182	183	1	<b>11</b>	<b>12</b>	98	0	98	<b>293</b>
Total Volume	3	674	677	6	18	24	374	5	379	1080
% App. Total	0.4	99.6		25	75		98.7	1.3		
PHF	.750	.878	.877	.375	.409	.500	.827	.417	.838	.922

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAPM  
Site Code : 9246083  
Start Date : 9/22/2009  
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			05:00 PM			04:30 PM		
+0 mins.	0	146	146	0	4	4	107	2	109
+15 mins.	1	154	155	1	2	3	75	3	78
+30 mins.	1	192	193	1	11	12	113	0	113
+45 mins.	1	182	183	2	4	6	88	2	90
Total Volume	3	674	677	4	21	25	383	7	390
% App. Total	0.4	99.6		16	84		98.2	1.8	
PHF	.750	.878	.877	.500	.477	.521	.847	.583	.863



County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAPM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 1

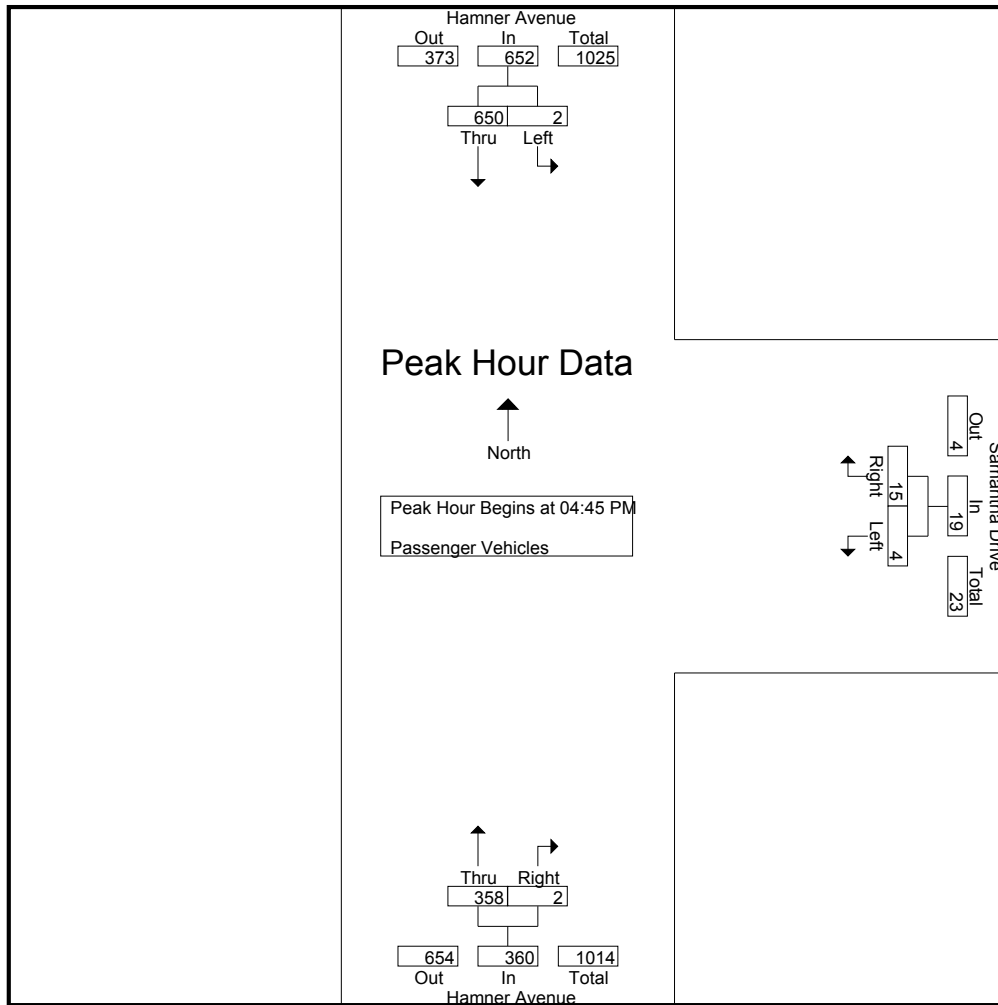
Groups Printed- Passenger Vehicles

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	1	133	134	0	1	1	73	0	73	208
04:15 PM	0	138	138	0	0	0	74	0	74	212
04:30 PM	0	146	146	1	2	3	105	2	107	256
04:45 PM	0	143	143	3	1	4	72	2	74	221
Total	1	560	561	4	4	8	324	4	328	897
05:00 PM	1	148	149	0	3	3	110	0	110	262
05:15 PM	0	184	184	0	1	1	85	0	85	270
05:30 PM	1	175	176	1	10	11	91	0	91	278
05:45 PM	0	120	120	1	4	5	83	0	83	208
Total	2	627	629	2	18	20	369	0	369	1018
Grand Total	3	1187	1190	6	22	28	693	4	697	1915
Apprch %	0.3	99.7		21.4	78.6		99.4	0.6		
Total %	0.2	62	62.1	0.3	1.1	1.5	36.2	0.2	36.4	

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	143	143	3	1	4	72	2	74	221
05:00 PM	1	148	149	0	3	3	110	0	110	262
05:15 PM	0	184	184	0	1	1	85	0	85	270
05:30 PM	1	175	176	1	10	11	91	0	91	278
Total Volume	2	650	652	4	15	19	358	2	360	1031
% App. Total	0.3	99.7		21.1	78.9		99.4	0.6		
PHF	.500	.883	.886	.333	.375	.432	.814	.250	.818	.927

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAPM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	143	143	3	1	4	72	2	74
+15 mins.	1	148	149	0	3	3	110	0	110
+30 mins.	0	184	184	0	1	1	85	0	85
+45 mins.	1	175	176	1	10	11	91	0	91
Total Volume	2	650	652	4	15	19	358	2	360
% App. Total	0.3	99.7		21.1	78.9		99.4	0.6	
PHF	.500	.883	.886	.333	.375	.432	.814	.250	.818

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAPM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 1

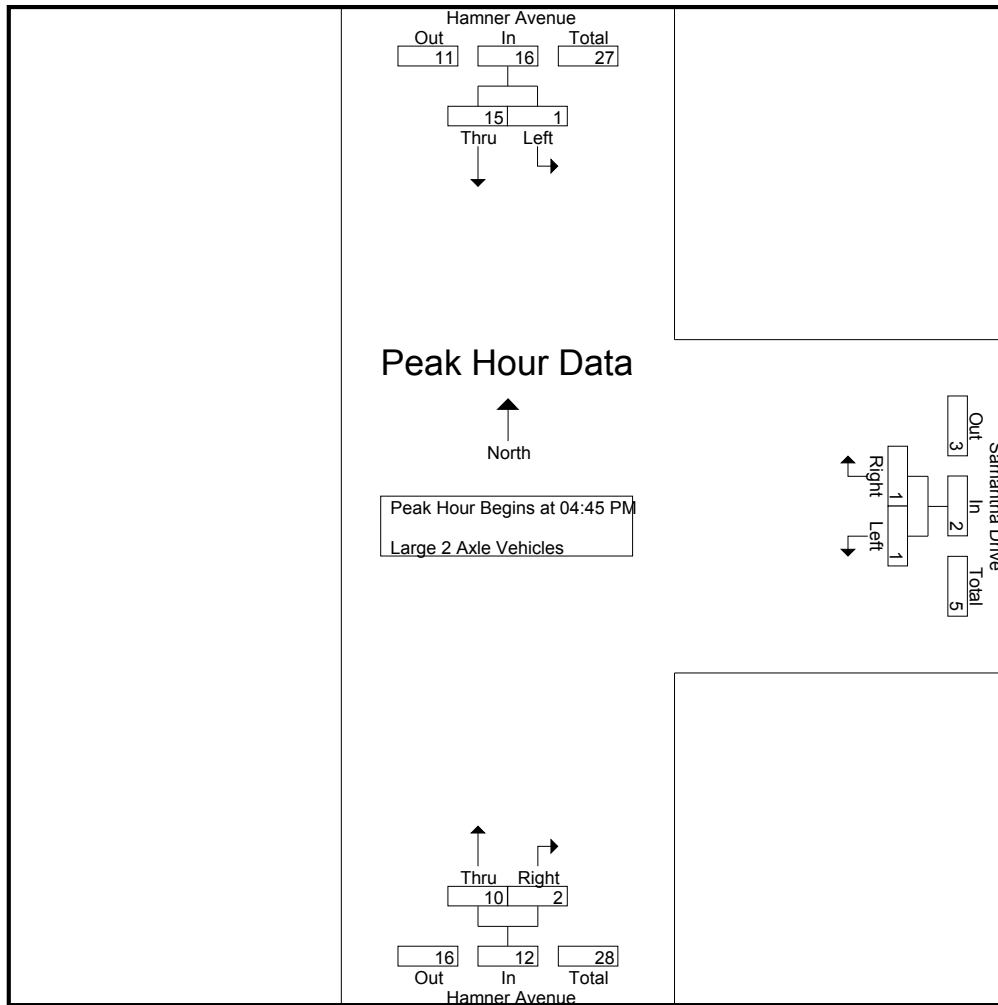
Groups Printed- Large 2 Axle Vehicles

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	4	4	0	0	0	2	0	2	6
04:15 PM	0	2	2	0	0	0	8	0	8	10
04:30 PM	0	2	2	0	0	0	1	0	1	3
04:45 PM	0	2	2	0	0	0	2	0	2	4
Total	0	10	10	0	0	0	13	0	13	23
05:00 PM	0	5	5	0	0	0	2	0	2	7
05:15 PM	1	5	6	1	1	2	2	2	4	12
05:30 PM	0	3	3	0	0	0	4	0	4	7
05:45 PM	0	3	3	0	0	0	1	0	1	4
Total	1	16	17	1	1	2	9	2	11	30
Grand Total	1	26	27	1	1	2	22	2	24	53
Apprch %	3.7	96.3		50	50		91.7	8.3		
Total %	1.9	49.1	50.9	1.9	1.9	3.8	41.5	3.8	45.3	

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	2	2	0	0	0	2	0	2	4
05:00 PM	0	5	5	0	0	0	2	0	2	7
05:15 PM	1	5	6	1	1	2	2	2	4	12
05:30 PM	0	3	3	0	0	0	4	0	4	7
Total Volume	1	15	16	1	1	2	10	2	12	30
% App. Total	6.2	93.8		50	50		83.3	16.7		
PHF	.250	.750	.667	.250	.250	.250	.625	.250	.750	.625

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAPM  
Site Code : 9246083  
Start Date : 9/22/2009  
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	2	2	0	0	0	2	0	2
+15 mins.	0	5	5	0	0	0	2	0	2
+30 mins.	1	5	6	1	1	2	2	2	4
+45 mins.	0	3	3	0	0	0	4	0	4
Total Volume	1	15	16	1	1	2	10	2	12
% App. Total	6.2	93.8		50	50		83.3	16.7	
PHF	.250	.750	.667	.250	.250	.250	.625	.250	.750

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAPM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 1

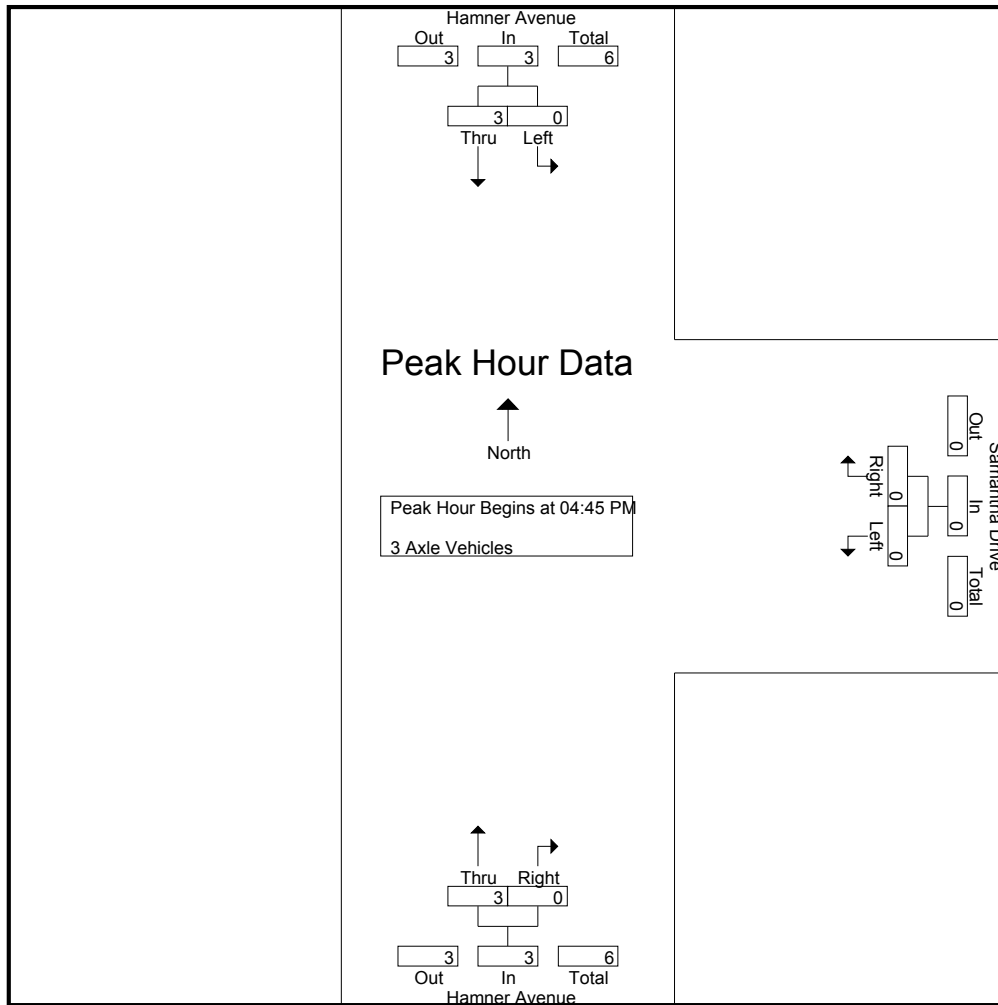
Groups Printed- 3 Axle Vehicles

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	1	0	0	0	0	0	0	1
04:15 PM	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	1	0	0	0	1	0	1	2
Total	0	3	3	0	0	0	1	0	1	4
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	2	2	0	0	0	1	0	1	3
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	2	2	0	0	0	2	0	2	4
Grand Total	0	5	5	0	0	0	3	0	3	8
Apprch %	0	100		0	0		100	0		
Total %	0	62.5	62.5	0	0	0	37.5	0	37.5	

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	1	1	0	0	0	1	0	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	2	2	0	0	0	1	0	1	3
Total Volume	0	3	3	0	0	0	3	0	3	6
% App. Total	0	100		0	0		100	0		
PHF	.000	.375	.375	.000	.000	.000	.750	.000	.750	.500

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAPM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	1	1	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	1	0	1
+45 mins.	0	2	2	0	0	0	1	0	1
Total Volume	0	3	3	0	0	0	3	0	3
% App. Total	0	100		0	0		100	0	
PHF	.000	.375	.375	.000	.000	.000	.750	.000	.750

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAPM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 1

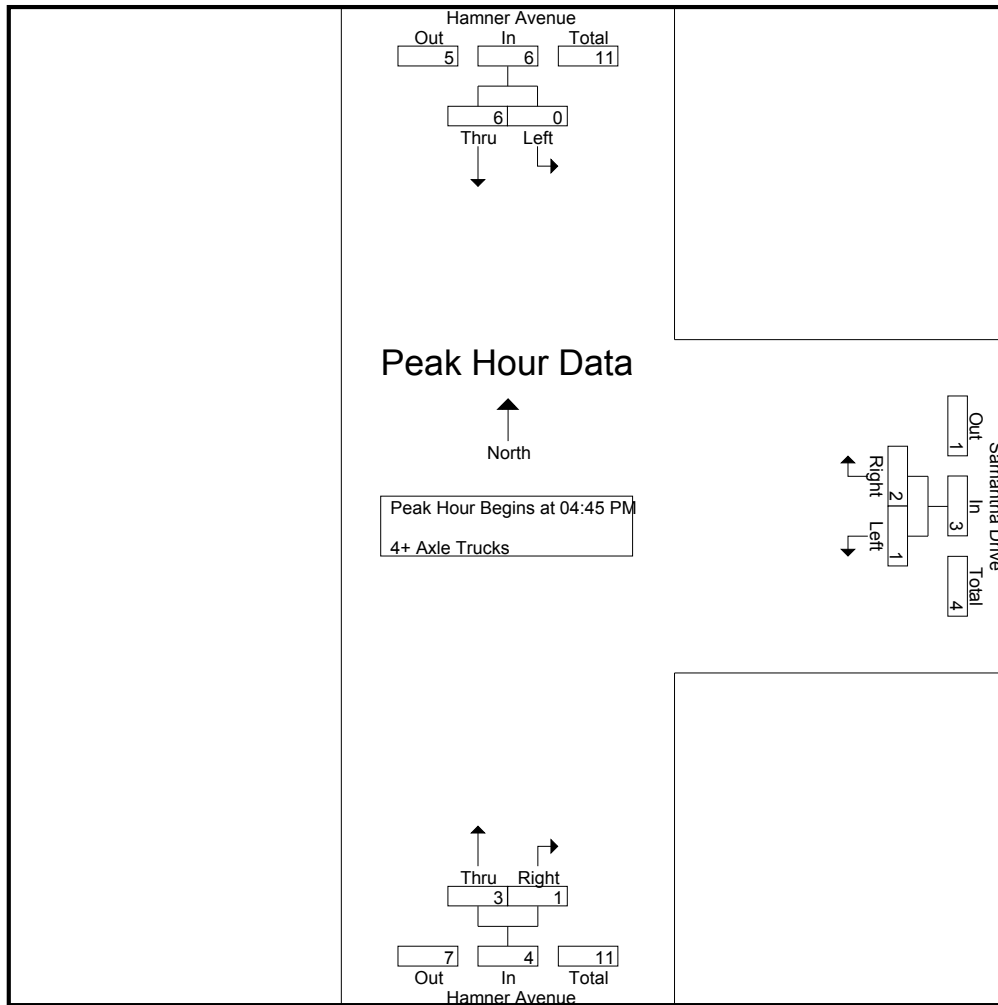
Groups Printed- 4+ Axle Trucks

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	1	0	0	0	3	0	3	4
04:15 PM	2	3	5	0	0	0	2	0	2	7
04:30 PM	1	2	3	0	2	2	1	0	1	6
04:45 PM	0	0	0	1	0	1	0	1	1	2
Total	3	6	9	1	2	3	6	1	7	19
05:00 PM	0	1	1	0	1	1	1	0	1	3
05:15 PM	0	3	3	0	0	0	0	0	0	3
05:30 PM	0	2	2	0	1	1	2	0	2	5
05:45 PM	0	1	1	1	0	1	0	2	2	4
Total	0	7	7	1	2	3	3	2	5	15
Grand Total	3	13	16	2	4	6	9	3	12	34
Apprch %	18.8	81.2		33.3	66.7		75	25		
Total %	8.8	38.2	47.1	5.9	11.8	17.6	26.5	8.8	35.3	

	Hamner Avenue Southbound			Samantha Drive Westbound			Hamner Avenue Northbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	1	0	1	0	1	1	2
05:00 PM	0	1	1	0	1	1	1	0	1	3
05:15 PM	0	3	3	0	0	0	0	0	0	3
05:30 PM	0	2	2	0	1	1	2	0	2	5
Total Volume	0	6	6	1	2	3	3	1	4	13
% App. Total	0	100		33.3	66.7		75	25		
PHF	.000	.500	.500	.250	.500	.750	.375	.250	.500	.650

County of Riverside  
N/S: Hamner Avenue  
E/W: Samantha Drive  
Weather: Sunny

File Name : CRVHASAPM  
Site Code : 9246083  
Start Date : 9/22/2009  
Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	1	0	1	0	1	1
+15 mins.	0	1	1	0	1	1	1	0	1
+30 mins.	0	3	3	0	0	0	0	0	0
+45 mins.	0	2	2	0	1	1	2	0	2
Total Volume	0	6	6	1	2	3	3	1	4
% App. Total	0	100		33.3	66.7		75	25	
PHF	.000	.500	.500	.250	.500	.750	.375	.250	.500



# **Appendix D**

## **TRAFFIX (HIGHWAY CAPACITY MANUAL) INTERSECTION LEVEL-OF-SERVICE ANALYSIS WORKSHEETS**

# **Appendix D-1**

## **EXISTING CONDITIONS-AM PEAK HOUR**

Tuscan Village Specific Plan  
Existing AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.435  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 18.9  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue						Riverside Drive					
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:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:	>> Count	Date:	18 Aug 2009	<< AM PEAK HOUR								
Base Vol:	104	404	21	204	228	111	144	73	103	17	83	162
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:	104	404	21	204	228	111	144	73	103	17	83	162
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:	104	404	21	204	228	111	144	73	103	17	83	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	104	404	21	204	228	111	144	73	103	17	83	162
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
Final Volume:	104	404	21	204	228	111	144	73	103	17	83	162

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.90	0.90	0.95	0.91	0.91	0.95	1.00	0.85
Lanes:	1.00	1.90	0.10	1.00	1.35	0.65	1.00	0.41	0.59	1.00	1.00	1.00
Final Sat.:	1805	3408	177	1805	2309	1124	1805	719	1014	1805	1900	1615

Capacity Analysis Module:												
Vol/Sat:	0.06	0.12	0.12	0.11	0.10	0.10	0.08	0.10	0.10	0.01	0.04	0.10
Crit Moves:	****			****			****			****		
Green/Cycle:	0.27	0.27	0.27	0.26	0.27	0.27	0.23	0.23	0.23	0.23	0.23	0.23
Volume/Cap:	0.22	0.43	0.43	0.43	0.37	0.37	0.34	0.43	0.43	0.04	0.19	0.43
Delay/Veh:	17.4	18.3	18.3	19.2	18.2	18.2	19.6	20.4	20.4	18.0	18.8	20.5
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:	17.4	18.3	18.3	19.2	18.2	18.2	19.6	20.4	20.4	18.0	18.8	20.5
LOS by Move:	B	B	B	B	B	B	B	C	C	B	B	C
HCM2k95thQ:	3	8	8	7	6	6	5	7	7	1	3	6

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

Tuscana Village Specific Plan  
Existing AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

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

\*\*\*\*\*  
Street Name: Milliken (Hamner) Avenue Industrial Dwy/Street "B" (Future  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
Rights: Include Include Include Include  
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 0 1! 0 0  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR  
Base Vol: 0 691 2 31 533 0 0 0 0 1 0 25  
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: 0 691 2 31 533 0 0 0 0 1 0 25  
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: 0 691 2 31 533 0 0 0 0 1 0 25  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 691 2 31 533 0 0 0 0 1 0 25  
-----|-----|-----|-----|

Critical Gap Module:  
Critical Gp:xxxxx xxxxx xxxxxx 4.1 xxxxx xxxxxx xxxxxx xxxxx xxxxxx 6.8 6.5 6.9  
FollowUpTim:xxxxx xxxxx xxxxxx 2.2 xxxxx xxxxxx xxxxxx xxxxx xxxxxx 3.5 4.0 3.3  
-----|-----|-----|-----|

Capacity Module:  
Cnflct Vol: xxxxx xxxxx xxxxxx 693 xxxxx xxxxxx xxxxx xxxxx xxxxxx 1021 1287 347  
Potent Cap.: xxxxx xxxxx xxxxxx 912 xxxxx xxxxxx xxxxx xxxxx xxxxxx 236 166 655  
Move Cap.: xxxxx xxxxx xxxxxx 912 xxxxx xxxxxx xxxxx xxxxx xxxxxx 230 160 655  
Volume/Cap: xxxxx xxxxx xxxxxx 0.03 xxxxx xxxxx xxxxx xxxxx xxxxxx 0.00 0.00 0.04  
-----|-----|-----|-----|

Level Of Service Module:  
2Way95thQ: xxxxx xxxxx xxxxxx 0.1 xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx  
Control Del:xxxxx xxxxx xxxxxx 9.1 xxxxx xxxxxx 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 612 xxxxx  
SharedQueue:xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx 0.1 xxxxxx  
Shrd ConDel:xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx 11.1 xxxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* B \*  
ApproachDel: xxxxxx xxxxxx xxxxxx 11.1  
ApproachLOS: \* \* \* B  
\*\*\*\*\*

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

\*\*\*\*\*

Tuscana Village Specific Plan  
Existing AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #3 Milllliken Avenue - SR-60 Eastbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.649  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 15.7  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken Avenue				SR-60 Eastbound Ramps															
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:	Include				Include				Include				Include							
Min. Green:	7		7		7	7		7		7	7		7		7	7		7		7
Lanes:	0	0	1	1	0	1	0	2	0	0	1	0	1	0	0	0	0	0	0	0

Volume Module: >> Count	Date: 18 Aug 2009 <<	AM PEAK HOUR
Base Vol:	0 651 77 72 233 0 497 2 301	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:	0 651 77 72 233 0 497 2 301	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:	0 651 77 72 233 0 497 2 301	0 0 0
Reduct Vol:	0 0 0 0 0 0 0 0 0	0 0 0
Reduced Vol:	0 651 77 72 233 0 497 2 301	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
Final Volume:	0 651 77 72 233 0 497 2 301	0 0 0

Saturation Flow Module:	
Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	1.00 0.93 0.93 0.95 0.95 1.00 0.86 0.86 0.86
Lanes:	0.00 1.79 0.21 1.00 2.00 0.00 1.45 0.01 0.54
Final Sat.:	0 3177 376 1805 3610 0 2360 6 888

Capacity Analysis Module:	
Vol/Sat:	0.00 0.20 0.20 0.04 0.06 0.00 0.21 0.34 0.34
Crit Moves:	**** **** ****
Green/Cycle:	0.00 0.30 0.30 0.12 0.41 0.00 0.49 0.49 0.49
Volume/Cap:	0.00 0.69 0.69 0.34 0.16 0.00 0.43 0.69 0.69
Delay/Veh:	0.0 20.8 20.8 25.4 11.1 0.0 10.1 13.7 13.7
User DelAdj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:	0.0 20.8 20.8 25.4 11.1 0.0 10.1 13.7 13.7
LOS by Move:	A C C C B A B B B A A A
HCM2k95thQ:	0 15 15 3 3 0 9 17 17

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



Tuscan Village Specific Plan  
Existing AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps

Cycle (sec): 60 Critical Vol./Cap.(X): 0.560  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 13.6  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner)						SR-60 Westbound Ramps					
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	2	0	0	2	0	0	0	0	1	0

Volume Module: >> Count Date:	18 Aug 2009 << AM PEAK HOUR											
Base Vol:	331	833	0	0	257	238	0	0	0	92	5	280
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:	331	833	0	0	257	238	0	0	0	92	5	280
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:	331	833	0	0	257	238	0	0	0	92	5	280
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	331	833	0	0	257	238	0	0	0	92	5	280
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
Final Volume:	331	833	0	0	257	238	0	0	0	92	5	280

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.95	0.85	1.00	1.00	1.00	0.96	0.96	0.85
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	0.95	0.05	1.00
Final Sat.:	1805	3610	0	0	3610	1615	0	0	0	1735	94	1615

Capacity Analysis Module:												
Vol/Sat:	0.18	0.23	0.00	0.00	0.07	0.15	0.00	0.00	0.00	0.05	0.05	0.17
Crit Moves:	****					****						****
Green/Cycle:	0.33	0.59	0.00	0.00	0.26	0.26	0.00	0.00	0.00	0.31	0.31	0.31
Volume/Cap:	0.56	0.39	0.00	0.00	0.27	0.56	0.00	0.00	0.00	0.17	0.17	0.56
Delay/Veh:	17.8	6.7	0.0	0.0	17.7	20.8	0.0	0.0	0.0	15.2	15.2	18.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.8	6.7	0.0	0.0	17.7	20.8	0.0	0.0	0.0	15.2	15.2	18.7
LOS by Move:	B	A	A	A	B	C	A	A	A	B	B	B
HCM2k95thQ:	11	9	0	0	4	9	0	0	0	3	3	10

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

Tuscana Village Specific Plan  
Existing AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.518  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 17.2  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Riverside						Mill Creek					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	0	1	0	1	0	1	1	0	1

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR	Riverside			Riverside			Mill Creek			Mill Creek		
Base Vol:	201	94	58	30	132	96	337	242	203	99	258	18
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:	201	94	58	30	132	96	337	242	203	99	258	18
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:	201	94	58	30	132	96	337	242	203	99	258	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	201	94	58	30	132	96	337	242	203	99	258	18
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:	201	94	58	30	132	96	337	242	203	99	258	18

Saturation Flow Module:	Riverside			Riverside			Mill Creek			Mill Creek		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.52	1.00	0.85	0.69	0.94	0.94	0.95	0.89	0.89	0.95	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	0.58	0.42	1.00	1.09	0.91	1.00	1.87	0.13
Final Sat.:	994	1900	1615	1319	1031	750	1805	1830	1535	1805	3341	233

Capacity Analysis Module:	Riverside			Riverside			Mill Creek			Mill Creek		
Vol/Sat:	0.20	0.05	0.04	0.02	0.13	0.13	0.19	0.13	0.13	0.05	0.08	0.08
Crit Moves:	****			****			****			****		
Green/Cycle:	0.39	0.39	0.39	0.39	0.39	0.39	0.36	0.27	0.27	0.24	0.15	0.15
Volume/Cap:	0.52	0.13	0.09	0.06	0.33	0.33	0.52	0.49	0.49	0.23	0.52	0.52
Delay/Veh:	15.2	11.8	11.6	11.5	13.1	13.1	15.8	18.8	18.8	18.7	24.4	24.4
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:	15.2	11.8	11.6	11.5	13.1	13.1	15.8	18.8	18.8	18.7	24.4	24.4
LOS by Move:	B	B	B	B	B	B	B	B	B	B	C	C
HCM2k95thQ:	7	2	1	1	6	6	11	8	8	3	6	6

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

Tuscana Village Specific Plan  
Existing AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #6 Riverside - Sharp

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: B[ 10.4]

\*\*\*\*\*

Street Name:	Sharp						Riverside					
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:	1	0	0	0	0	0	0	0	0	1	0	0

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR

Base Vol:	7	0	34	0	0	0	0	267	19	36	242	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:	7	0	34	0	0	0	0	267	19	36	242	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:	7	0	34	0	0	0	0	267	19	36	242	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	7	0	34	0	0	0	0	267	19	36	242	0

Critical Gap Module:

Critical Gp:	6.4	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	591	xxxx	277	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	286	xxxx	xxxxx
Potent Cap.:	473	xxxx	767	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1288	xxxx	xxxxx
Move Cap.:	463	xxxx	767	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1288	xxxx	xxxxx
Volume/Cap:	0.02	xxxx	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.0	xxxx	0.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx			
Control Del:	12.9	xxxx	9.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.9	xxxx	xxxxx			
LOS by Move:	B	*	A	*	*	*	*	*	*	A	*	*			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	10.4			xxxxxx			xxxxxx			xxxxxx					
ApproachLOS:	B			*			*			*					

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



Tuscan Village Specific Plan  
Existing AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.317  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 12.2  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner)						Cantu-Galleano Ranch					
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	1	1	0	1	0	0	0	1	0	0

Volume Module:	>> Count	Date:	18 Aug 2009	<< AM PEAK HOUR
Base Vol:	0	428	231	92 153 0
Growth Adj:	1.00	1.00	1.00	1.00 1.00 1.00
Initial Bse:	0	428	231	92 153 0
User Adj:	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
PHF Volume:	0	428	231	92 153 0
Reduct Vol:	0	0	0	0 0 0
Reduced Vol:	0	428	231	92 153 0
PCE Adj:	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
Final Volume:	0	428	231	92 153 0

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.90	0.90	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.85	
Lanes:	0.00	1.30	0.70	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	
Final Sat.:	0	2220	1198	1805	1900	0	0	0	0	1805	0	1615	

Capacity Analysis Module:	Vol/Sat:	0.00	0.19	0.19	0.05	0.08	0.00	0.00	0.00	0.00	0.04	0.00	0.10
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.00	0.61	0.61	0.16	0.77	0.00	0.00	0.00	0.00	0.13	0.00	0.13	0.13
Volume/Cap:	0.00	0.32	0.32	0.32	0.10	0.00	0.00	0.00	0.00	0.32	0.00	0.73	0.73
Delay/Veh:	0.0	5.8	5.8	22.9	1.8	0.0	0.0	0.0	0.0	24.4	0.0	37.4	37.4
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	1.00
AdjDel/Veh:	0.0	5.8	5.8	22.9	1.8	0.0	0.0	0.0	0.0	24.4	0.0	37.4	37.4
LOS by Move:	A	A	A	C	A	A	A	A	A	C	A	D	D
HCM2k95thQ:	0	7	7	4	2	0	0	0	0	3	0	9	9

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

Tuscana Village Specific Plan  
Existing AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.122  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 9.0  
Optimal Cycle: OPTIMIZED Level Of Service: A  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps						Cantu-Galleano Ranch					
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			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	0	2	0	0	0	0	3	0	0	2

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	0	0	0	251	0	153	0	217	62	0	93	43
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	251	0	153	0	217	62	0	93	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	251	0	153	0	217	0	0	93	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	251	0	153	0	217	0	0	93	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Volume:	0	0	0	251	0	153	0	217	0	0	93	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	1.00	0.91	1.00	1.00	0.95	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00	1.00	0.00	2.00	2.00
Final Sat.:	0	0	0	3502	0	1615	0	5187	1900	0	3610	3344

Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.09	0.00	0.04	0.00	0.00	0.03	0.00
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.59	0.00	0.59	0.00	0.34	0.00	0.00	0.34	0.00
Volume/Cap:	0.00	0.00	0.00	0.12	0.00	0.16	0.00	0.12	0.00	0.00	0.07	0.00
Delay/Veh:	0.0	0.0	0.0	5.5	0.0	5.7	0.0	13.5	0.0	0.0	13.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	5.5	0.0	5.7	0.0	13.5	0.0	0.0	13.3	0.0
LOS by Move:	A	A	A	A	A	A	A	B	A	A	B	A
HCM2k95thQ:	0	0	0	2	0	3	0	2	0	0	1	0

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

Tuscana Village Specific Plan  
Existing AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.156  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 12.4  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	I-15 Northbound Ramps				Cantu-Galleano Ranch				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Ovl		Include		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	1	0	0	1	1	0	0	0	0

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR	I-15 Northbound Ramps				Cantu-Galleano Ranch							
Base Vol:	74	0	123	0	0	0	0	213	260	203	95	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:	74	0	123	0	0	0	0	213	260	203	95	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:	74	0	123	0	0	0	0	213	260	203	95	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	74	0	123	0	0	0	0	213	260	203	95	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:	74	0	123	0	0	0	0	213	260	203	95	0

Saturation Flow Module:	I-15 Northbound Ramps				Cantu-Galleano Ranch							
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.91	0.85	0.92	0.91	1.00
Lanes:	1.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	2.00	3.00	0.00
Final Sat.:	1805	0	3230	0	0	0	0	5187	1615	3502	5187	0

Capacity Analysis Module:	I-15 Northbound Ramps				Cantu-Galleano Ranch							
Vol/Sat:	0.04	0.00	0.04	0.00	0.00	0.00	0.00	0.04	0.16	0.06	0.02	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.26	0.00	0.26	0.00	0.00	0.00	0.00	0.26	0.53	0.37	0.64	0.00
Volume/Cap:	0.16	0.00	0.14	0.00	0.00	0.00	0.00	0.16	0.31	0.16	0.03	0.00
Delay/Veh:	17.1	0.0	17.0	0.0	0.0	0.0	0.0	17.0	8.2	12.6	4.0	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:	17.1	0.0	17.0	0.0	0.0	0.0	0.0	17.0	8.2	12.6	4.0	0.0
LOS by Move:	B	A	B	A	A	A	A	B	A	B	A	A
HCM2k95thQ:	2	0	2	0	0	0	0	2	6	3	1	0

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



Tuscana Village Specific Plan  
Existing AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #10 Milliken (Hamner) - Samantha

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C[ 15.5]

Street Name: Milliken (Hamner)

Samantha

Approach: North Bound

South Bound

East Bound

West Bound

Movement: L - T - R

L - T - R

L - T - R

L - T - R

Control: Uncontrolled

Uncontrolled

Stop Sign

Stop Sign

Rights: Include

Include

Include

Include

Lanes: 0 0 1 1 0

1 0 1 0 0

0 0 0 0 0

1 0 0 0 1

Volume Module: >> Count Date: 22 Sep 2009 << AM PEAK HOUR

Base Vol: 0 726 31 13 338 0 0 0 0 12 0 14

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: 0 726 31 13 338 0 0 0 0 12 0 14

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: 0 726 31 13 338 0 0 0 0 12 0 14

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 726 31 13 338 0 0 0 0 12 0 14

Critical Gap Module:

Critical Gp:xxxxx xxxxx xxxxx 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx 6.4 xxxxx 6.2

FollowUpTim:xxxxx xxxxx xxxxx 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 xxxxx 3.3

Capacity Module:

Cnflct Vol: xxxxx xxxxx xxxxx 757 xxxxx xxxxx xxxxx xxxxx xxxxx 1106 xxxxx 379

Potent Cap.: xxxxx xxxxx xxxxx 863 xxxxx xxxxx xxxxx xxxxx xxxxx 235 xxxxx 673

Move Cap.: xxxxx xxxxx xxxxx 863 xxxxx xxxxx xxxxx xxxxx xxxxx 232 xxxxx 673

Volume/Cap: xxxxx xxxxx xxxxx 0.02 xxxxx xxxxx xxxxx xxxxx xxxxx 0.05 xxxxx 0.02

Level Of Service Module:

2Way95thQ: xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx 0.2 xxxxx 0.1

Control Del:xxxxx xxxxx xxxxx 9.2 xxxxx xxxxx xxxxx xxxxx xxxxx 21.3 xxxxx 10.5

LOS by Move: \* \* \* A \* \* \* \* \* C \* 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: xxxxxx xxxxxx xxxxxx 15.5

ApproachLOS: \* \* \* C

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

## **Appendix D-2**

### **EXISTING CONDITIONS-PM PEAK HOUR**

Tuscan Village Specific Plan  
Existing PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.523  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 18.8  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue						Riverside Drive					
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:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM PEAK HOUR
Base Vol:	154	322	12	113 514 93
Growth Adj:	1.00	1.00	1.00	1.00 1.00 1.00
Initial Bse:	154	322	12	113 514 93
User Adj:	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
PHF Volume:	154	322	12	113 514 93
Reduct Vol:	0	0	0	0 0 0
Reduced Vol:	154	322	12	113 514 93
PCE Adj:	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
Final Volume:	154	322	12	113 514 93

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.93	0.95	0.90	0.90	0.95	1.00	0.85	
Lanes:	1.00	1.93	0.07	1.00	1.69	0.31	1.00	0.30	0.70	1.00	1.00	1.00	
Final Sat.:	1805	3463	129	1805	2987	540	1805	508	1193	1805	1900	1615	

Capacity Analysis Module:	Vol/Sat:	0.09	0.09	0.09	0.06	0.17	0.17	0.04	0.17	0.17	0.01	0.03	0.09
Crit Moves:	****				****			****			****		
Green/Cycle:	0.16	0.25	0.25	0.25	0.33	0.33	0.32	0.32	0.32	0.17	0.17	0.17	
Volume/Cap:	0.52	0.38	0.38	0.25	0.52	0.52	0.11	0.52	0.52	0.04	0.15	0.52	
Delay/Veh:	24.7	19.1	19.1	18.5	16.7	16.7	14.3	17.4	17.4	20.7	21.2	24.3	
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:	24.7	19.1	19.1	18.5	16.7	16.7	14.3	17.4	17.4	20.7	21.2	24.3	
LOS by Move:	C	B	B	B	B	B	B	B	B	C	C	C	
HCM2k95thQ:	7	6	6	4	10	10	2	10	10	0	2	7	

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

Tuscana Village Specific Plan  
Existing PM Peak Hour  
(All volumes converted to pce's and PHF applied)

```

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)
*****
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)
*****
Average Delay (sec/veh):      0.3      Worst Case Level Of Service: B[ 11.0]
*****
Street Name:      Milliken (Hamner) Avenue      Industrial Dwy/Street "B" (Future
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|-----|
Control:      Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Rights:      Include      Include      Include      Include
Lanes:      0 0 1 1 0      1 0 2 0 0      0 0 0 0 0      0 0 1! 0 0
-----|-----|-----|-----|-----|
Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR
Base Vol:      0 570      0 25 766      0 0 0 0      1 0 11
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: 0 570      0 25 766      0 0 0 0      1 0 11
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: 0 570      0 25 766      0 0 0 0      1 0 11
Reduct Vol: 0 0      0 0 0 0      0 0 0 0      0 0 0 0
FinalVolume: 0 570      0 25 766      0 0 0 0      1 0 11
-----|-----|-----|-----|-----|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx 4.1 xxxx xxxxx xxxxx xxxx xxxxx 6.8 6.5 6.9
FollowUpTim:xxxxx xxxx xxxxx 2.2 xxxx xxxxx xxxxx xxxx xxxxx 3.5 4.0 3.3
-----|-----|-----|-----|-----|
Capacity Module:
Cnflct Vol: xxxx xxxx xxxxx 570 xxxx xxxxx xxxxx xxxx xxxxx 1003 1386 285
Potent Cap.: xxxx xxxx xxxxx 1013 xxxx xxxxx xxxxx xxxx xxxxx 242 144 718
Move Cap.: xxxx xxxx xxxxx 1013 xxxx xxxxx xxxxx xxxx xxxxx 238 141 718
Volume/Cap: xxxx xxxx xxxxx 0.02 xxxx xxxxx xxxxx xxxx xxxxx 0.00 0.00 0.02
-----|-----|-----|-----|-----|
Level Of Service Module:
2Way95thQ: xxxx xxxx xxxxx 0.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx
Control Del:xxxxx xxxx xxxxx 8.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx 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 614 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 0.1 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 11.0 xxxxx
Shared LOS: * * * * * * * * * * * B *
ApproachDel: xxxxxx xxxxxx xxxxxx 11.0
ApproachLOS: * * * B
*****
Note: Queue reported is the number of cars per lane.
*****

```



Tuscan Village Specific Plan  
Existing PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #3 Milliken Avenue - SR-60 Eastbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.509  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 14.4  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken Avenue						SR-60 Eastbound Ramps					
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	1	1	0	2	1	0	1	0	0	0

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM PEAK HOUR
Base Vol:	0	476	73	156 440 0
Growth Adj:	1.00	1.00	1.00	1.00 1.00 1.00
Initial Bse:	0	476	73	156 440 0
User Adj:	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
PHF Volume:	0	476	73	156 440 0
Reduct Vol:	0	0	0	0 0 0
Reduced Vol:	0	476	73	156 440 0
PCE Adj:	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
Final Volume:	0	476	73	156 440 0

Saturation Flow Module:	
Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	1.00 0.93 0.93 0.95 0.95 1.00 0.90 1.00 0.90 1.00 1.00 1.00
Lanes:	0.00 1.73 0.27 1.00 2.00 0.00 1.28 0.00 0.72 0.00 0.00 0.00
Final Sat.:	0 3067 470 1805 3610 0 2183 0 1221 0 0 0

Capacity Analysis Module:	
Vol/Sat:	0.00 0.16 0.16 0.09 0.12 0.00 0.10 0.00 0.22 0.00 0.00 0.00
Crit Moves:	**** **** ****
Green/Cycle:	0.00 0.31 0.31 0.17 0.47 0.00 0.43 0.00 0.43 0.00 0.00 0.00
Volume/Cap:	0.00 0.51 0.51 0.51 0.26 0.00 0.22 0.00 0.51 0.00 0.00 0.00
Delay/Veh:	0.0 17.6 17.6 24.0 9.5 0.0 11.0 0.0 13.1 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 17.6 17.6 24.0 9.5 0.0 11.0 0.0 13.1 0.0 0.0 0.0
LOS by Move:	A B B C A A B A B A A A
HCM2k95thQ:	0 10 10 7 5 0 4 0 11 0 0 0

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



Tuscana Village Specific Plan  
Existing PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.493  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 10.0  
Optimal Cycle: OPTIMIZED Level Of Service: A  
\*\*\*\*\*

Street Name: Milliken (Hamner)				SR-60 Westbound Ramps			
Approach: North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Protected	Protected	Protected	Protected	Protected	Protected	Protected
Rights:	Include	Include	Include	Include	Include	Include	Include
Min. Green:	7 7 7	7 7 7	7 7 7	7 7 7	7 7 7	7 7 7	7 7 7
Lanes:	1 0 2 0 0	0 0 2 0 1	0 0 0 0 0	0 0 0 0 0	0 1 0 0 1	0 1 0 0 1	0 1 0 0 1

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR	Base Vol:		Growth Adj:		Initial Bse:		User Adj:		PHF Adj:		PHF Volume:		Reduct Vol:		Reduced Vol:		PCE Adj:		MLF Adj:		Final Volume:			
	243	432	0	0	601	456	0	0	0	48	0	92	0	0	0	48	0	92	0	0	0	48	0	92
	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	243	432	0	0	601	456	0	0	0	48	0	92	0	0	0	48	0	92	0	0	0	48	0	92
	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	243	432	0	0	601	456	0	0	0	48	0	92	0	0	0	48	0	92	0	0	0	48	0	92
	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	243	432	0	0	601	456	0	0	0	48	0	92	0	0	0	48	0	92	0	0	0	48	0	92

Saturation Flow Module:	Sat/Lane:		Adjustment:		Lanes:		Final Sat.:	
	1900	1900	1900	1900	1900	1900	1900	1900
	0.95	0.95	1.00	1.00	0.95	0.85	1.00	1.00
	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00
	1805	3610	0	0	3610	1615	0	0

Capacity Analysis Module:	Vol/Sat:		Crit Moves:		Green/Cycle:		Volume/Cap:		Delay/Veh:		User DelAdj:		AdjDel/Veh:		LOS by Move:		HCM2k95thQ:	
	0.13	0.12	0.00	0.00	0.17	0.28	0.00	0.00	0.00	0.03	0.00	0.06	0.03	0.00	0.06	C	A	C
	****	****	0.25	0.78	0.00	0.00	0.53	0.53	0.00	0.00	0.00	0.12	0.00	0.12	0.23	0.00	0.49	
	0.53	0.15	0.00	0.00	0.31	0.53	0.00	0.00	0.00	24.6	0.0	26.8	24.6	0.0	26.8	C	A	C
	20.6	1.6	0.0	0.0	8.0	9.9	0.0	0.0	0.0	24.6	0.0	26.8	24.6	0.0	26.8	C	A	C
	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	1.00	1.00	C	A	C
	20.6	1.6	0.0	0.0	8.0	9.9	0.0	0.0	0.0	24.6	0.0	26.8	24.6	0.0	26.8	C	A	C
	9	2	0	0	7	12	0	0	0	2	0	5	2	0	5	C	A	C

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

Tuscana Village Specific Plan  
Existing PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek  
\*\*\*\*\*

Cycle (sec): 75 Critical Vol./Cap.(X): 0.150  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 13.3  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Riverside						Mill Creek					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	0	1	0	1	0	1	1	0	1

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR												
Base Vol:	34	5	7	40	4	46	102	321	49	5	222	53
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:	34	5	7	40	4	46	102	321	49	5	222	53
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:	34	5	7	40	4	46	102	321	49	5	222	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	34	5	7	40	4	46	102	321	49	5	222	53
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
Final Volume:	34	5	7	40	4	46	102	321	49	5	222	53

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.73	1.00	0.85	0.77	0.86	0.86	0.95	0.93	0.93	0.95	0.92	0.92
Lanes:	1.00	1.00	1.00	1.00	0.08	0.92	1.00	1.74	0.26	1.00	1.61	0.39
Final Sat.:	1381	1900	1615	1454	131	1507	1805	3069	469	1805	2830	676

Capacity Analysis Module:												
Vol/Sat:	0.02	0.00	0.00	0.03	0.03	0.03	0.06	0.10	0.10	0.00	0.08	0.08
Crit Moves:	****						****			****		
Green/Cycle:	0.19	0.19	0.19	0.19	0.19	0.19	0.37	0.64	0.64	0.09	0.37	0.37
Volume/Cap:	0.13	0.01	0.02	0.15	0.16	0.16	0.15	0.16	0.16	0.03	0.21	0.21
Delay/Veh:	25.7	24.9	24.9	25.8	25.8	25.8	16.1	5.5	5.5	31.0	16.4	16.4
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:	25.7	24.9	24.9	25.8	25.8	25.8	16.1	5.5	5.5	31.0	16.4	16.4
LOS by Move:	C	C	C	C	C	C	B	A	A	C	B	B
HCM2k95thQ:	2	0	0	2	2	2	3	4	4	0	5	5

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

Tuscana Village Specific Plan  
Existing PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #6 Riverside - Sharp

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[ 10.4]

\*\*\*\*\*  
Street Name: Sharp Riverside  
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: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 0 1 0 0  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR  
Base Vol: 17 0 15 0 0 0 0 196 17 21 174 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: 17 0 15 0 0 0 0 196 17 21 174 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: 17 0 15 0 0 0 0 196 17 21 174 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 17 0 15 0 0 0 0 196 17 21 174 0  
-----|-----|-----|-----|

Critical Gap Module:  
Critical Gp: 6.4 xxxx 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx  
FollowUpTim: 3.5 xxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx  
-----|-----|-----|-----|

Capacity Module:  
Cnflct Vol: 421 xxxx 205 xxxx xxxx xxxxx xxxx xxxx xxxxx 213 xxxx xxxxx  
Potent Cap.: 593 xxxx 841 xxxx xxxx xxxxx xxxx xxxx xxxxx 1369 xxxx xxxxx  
Move Cap.: 586 xxxx 841 xxxx xxxx xxxxx xxxx xxxx xxxxx 1369 xxxx xxxxx  
Volume/Cap: 0.03 xxxx 0.02 xxxx xxxx xxxxx xxxx xxxx xxxxx 0.02 xxxx xxxxx  
-----|-----|-----|-----|

Level Of Service Module:  
2Way95thQ: 0.1 xxxx 0.1 xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx  
Control Del: 11.3 xxxx 9.4 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.7 xxxx xxxxx  
LOS by Move: B \* 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: \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 10.4 xxxxxx xxxxxx xxxxxx  
ApproachLOS: B \* \* \*  
\*\*\*\*\*

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

\*\*\*\*\*



Tuscana Village Specific Plan  
Existing PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.492  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 12.8  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner)				Cantu-Galleano Ranch				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Include		Include		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	0	0	1	1	0	1	0	0	1

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM PEAK HOUR
Base Vol:	0	293	104	183 585
Growth Adj:	1.00	1.00	1.00	1.00 1.00 1.00
Initial Bse:	0	293	104	183 585
User Adj:	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
PHF Volume:	0	293	104	183 585
Reduct Vol:	0	0	0	0 0 0
Reduced Vol:	0	293	104	183 585
PCE Adj:	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
FinalVolume:	0	293	104	183 585

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Lanes:	0.00	1.48	0.52	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00
Final Sat.:	0	2560	909	1805	1900	0	0	0	0	1805	0

Capacity Analysis Module:	Vol/Sat:	0.00	0.11	0.11	0.10	0.31	0.00	0.00	0.00	0.00	0.13	0.00	0.04
Crit Moves:	****				****						****		
Green/Cycle:	0.00	0.31	0.31	0.31	0.63	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.27
Volume/Cap:	0.00	0.37	0.37	0.32	0.49	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.14
Delay/Veh:	0.0	16.2	16.2	16.1	6.4	0.0	0.0	0.0	0.0	0.0	19.1	0.0	16.6
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	1.00
AdjDel/Veh:	0.0	16.2	16.2	16.1	6.4	0.0	0.0	0.0	0.0	0.0	19.1	0.0	16.6
LOS by Move:	A	B	B	B	A	A	A	A	A	A	B	A	B
HCM2k95thQ:	0	7	7	6	12	0	0	0	0	0	9	0	2

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

Tuscana Village Specific Plan  
Existing PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.188  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 9.0  
Optimal Cycle: OPTIMIZED Level Of Service: A  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps						Cantu-Galleano Ranch					
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			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	0	2	0	0	0	0	3	0	0	2

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM	PEAK HOUR
Base Vol:	0	0	0	189	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	189	0
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	189	0
Reduct Vol:	0	0	0	0	0
Reduced Vol:	0	0	0	189	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	189	0

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	1.00	0.91	1.00	1.00	0.95	0.88	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00	1.00	0.00	2.00	2.00	
Final Sat.:	0	0	0	3502	0	1615	0	5187	1900	0	3610	3344	

Capacity Analysis Module:	Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.14	0.00	0.03	0.00	0.00	0.02	0.00
Crit Moves:							****		****				
Green/Cycle:	0.00	0.00	0.00	0.76	0.00	0.76	0.00	0.17	0.00	0.00	0.17	0.00	
Volume/Cap:	0.00	0.00	0.00	0.07	0.00	0.19	0.00	0.19	0.00	0.00	0.11	0.00	
Delay/Veh:	0.0	0.0	0.0	1.8	0.0	2.1	0.0	21.3	0.0	0.0	21.0	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	0.0	0.0	1.8	0.0	2.1	0.0	21.3	0.0	0.0	21.0	0.0	
LOS by Move:	A	A	A	A	A	A	A	C	A	A	C	A	
HCM2k95thQ:	0	0	0	1	0	3	0	2	0	0	1	0	

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

Tuscana Village Specific Plan  
Existing PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.141  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 11.9  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	I-15 Northbound Ramps				Cantu-Galleano Ranch				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Ovl		Include		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	1	0	0	1	1	0	0	0	0

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM PEAK HOUR
Base Vol:	43	0	109	0 0 0 0 203 151 189 152 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:	43	0	109	0 0 0 0 203 151 189 152 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:	43	0	109	0 0 0 0 203 151 189 152 0
Reduct Vol:	0	0	0	0 0 0 0 0 0 0 0 0
Reduced Vol:	43	0	109	0 0 0 0 203 151 189 152 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:	43	0	109	0 0 0 0 203 151 189 152 0

Saturation Flow Module:	
Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	0.95 1.00 0.85 1.00 1.00 1.00 1.00 0.91 0.85 0.92 0.91 1.00
Lanes:	1.00 0.00 2.00 0.00 0.00 0.00 0.00 3.00 1.00 2.00 3.00 0.00
Final Sat.:	1805 0 3230 0 0 0 0 5187 1615 3502 5187 0

Capacity Analysis Module:	
Vol/Sat:	0.02 0.00 0.03 0.00 0.00 0.00 0.00 0.04 0.09 0.05 0.03 0.00
Crit Moves:	**** **** ****
Green/Cycle:	0.24 0.00 0.24 0.00 0.00 0.00 0.00 0.28 0.52 0.38 0.66 0.00
Volume/Cap:	0.10 0.00 0.14 0.00 0.00 0.00 0.00 0.14 0.18 0.14 0.04 0.00
Delay/Veh:	17.9 0.0 18.0 0.0 0.0 0.0 0.0 16.3 7.8 12.1 3.6 0.0
User DelAdj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:	17.9 0.0 18.0 0.0 0.0 0.0 0.0 16.3 7.8 12.1 3.6 0.0
LOS by Move:	B A B A A A A B A B A A
HCM2k95thQ:	1 0 2 0 0 0 0 2 3 3 1 0

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



Tuscana Village Specific Plan  
Existing PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #10 Milliken (Hamner) - Samantha  
\*\*\*\*\*

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[ 12.9]  
\*\*\*\*\*

Street Name:	Milliken (Hamner)				Samantha				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled		Uncontrolled		Stop Sign		Stop Sign		
Rights:	Include		Include		Include		Include		
Lanes:	0	0	1	1	0	0	0	0	1

Volume Module:	>> Count	Date:	22 Sep 2009	<< PM PEAK HOUR
Base Vol:	0	403	8	4 724 0 0 0 0 9 0 23
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	403	8	4 724 0 0 0 0 9 0 23
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	403	8	4 724 0 0 0 0 9 0 23
Reduct Vol:	0	0	0	0 0 0 0 0 0 0 0 0
Final Volume:	0	403	8	4 724 0 0 0 0 9 0 23

Critical Gap Module:	Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	

Capacity Module:	Cnflct Vol:	xxxx	xxxx	xxxxx	411	xxxx	xxxxx	xxxx	xxxx	xxxxx	1139	xxxx	206
Potent Cap.:	xxxx	xxxx <td>xxxxx</td> <td>1159</td> <td>xxxx</td> <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>225</td> <td>xxxx</td> <td>840</td> </td>	xxxxx	1159	xxxx	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>225</td> <td>xxxx</td> <td>840</td>	xxxxx	225	xxxx	840	
Move Cap.:	xxxx	xxxx <td>xxxxx</td> <td>1159</td> <td>xxxx</td> <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>224</td> <td>xxxx</td> <td>840</td> </td>	xxxxx	1159	xxxx	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>224</td> <td>xxxx</td> <td>840</td>	xxxxx	224	xxxx	840	
Volume/Cap:	xxxx	xxxx <td>xxxx</td> <td>0.00</td> <td>xxxx</td> <td>xxxx</td> <td>xxxx</td> <td>xxxx <td>xxxx</td> <td>0.04</td> <td>xxxx</td> <td>0.03</td> </td>	xxxx	0.00	xxxx	xxxx	xxxx	xxxx <td>xxxx</td> <td>0.04</td> <td>xxxx</td> <td>0.03</td>	xxxx	0.04	xxxx	0.03	

Level Of Service Module:	2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	0.1
Control Del:	xxxxx	xxxx <td>xxxxx</td> <td>8.1</td> <td>xxxx</td> <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>21.7</td> <td>xxxx</td> <td>9.4</td> </td>	xxxxx	8.1	xxxx	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>21.7</td> <td>xxxx</td> <td>9.4</td>	xxxxx	21.7	xxxx	9.4	
LOS by Move:	*	*	*	A	*	*	*	*	*	C	*	A	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR
Shared Cap.:	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> </td></td></td>	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> </td></td>	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> </td>	xxxxx	xxxx	xxxx <td>xxxxx</td>	xxxxx	
Shared Queue:	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td></td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td>	xxxxx	xxxxx	xxxx <td>xxxxx</td>	xxxxx	
Shrd ConDel:	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td></td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td>	xxxxx	xxxxx	xxxx <td>xxxxx</td>	xxxxx	
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	
ApproachDel:	xxxxxx			xxxxxx				xxxxxx			12.9		
ApproachLOS:	*			*			*			B			

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

## **Appendix D-3**

**OPENING YEAR EXISTING-PLUS-AMBIENT  
NO-PROJECT CONDITIONS – AM PEAK  
HOUR**



Tuscan Village Specific Plan  
Opening Year (2012) Existing Plus Ambient (No Project) AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.461  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 19.1  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue						Riverside Drive					
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:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:	>> Count	Date:	18 Aug 2009	<< AM PEAK HOUR
Base Vol:	111	429	22	217 242 117 153 77 109 18 88 172
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:	111	429	22	217 242 117 153 77 109 18 88 172
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:	111	429	22	217 242 117 153 77 109 18 88 172
Reduct Vol:	0	0	0	0 0 0 0 0 0 0 0 0
Reduced Vol:	111	429	22	217 242 117 153 77 109 18 88 172
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
Final Volume:	111	429	22	217 242 117 153 77 109 18 88 172

Saturation Flow Module:	
Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	0.95 0.94 0.94 0.95 0.90 0.90 0.95 0.91 0.91 0.95 1.00 0.85
Lanes:	1.00 1.90 0.10 1.00 1.35 0.65 1.00 0.41 0.59 1.00 1.00 1.00
Final Sat.:	1805 3410 175 1805 2314 1119 1805 717 1015 1805 1900 1615

Capacity Analysis Module:	
Vol/Sat:	0.06 0.13 0.13 0.12 0.10 0.10 0.08 0.11 0.11 0.01 0.05 0.11
Crit Moves:	**** **** **** ****
Green/Cycle:	0.27 0.27 0.27 0.26 0.27 0.27 0.23 0.23 0.23 0.23 0.23 0.23
Volume/Cap:	0.23 0.46 0.46 0.46 0.39 0.39 0.36 0.46 0.46 0.04 0.20 0.46
Delay/Veh:	17.4 18.5 18.5 19.4 18.3 18.3 19.8 20.6 20.6 18.0 18.8 20.8
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:	17.4 18.5 18.5 19.4 18.3 18.3 19.8 20.6 20.6 18.0 18.8 20.8
LOS by Move:	B B B B B B B C C B B C
HCM2k95thQ:	4 8 8 8 6 6 5 7 7 1 3 7

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient (No Project) AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[ 11.4]  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue			Industrial Dwy/Street "B" (Future)		
Approach:	North Bound			South Bound		
Movement:	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled		
Rights:	Include			Include		
Lanes:	0	0	1	1	0	0

Volume Module:	>> Count	Date:	18 Aug 2009	<< AM PEAK HOUR
Base Vol:	0	734	2	33 565 0
Growth Adj:	1.00	1.00	1.00	1.00 1.00 1.00
Initial Bse:	0	734	2	33 565 0
User Adj:	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
PHF Volume:	0	734	2	33 565 0
Reduct Vol:	0	0	0	0 0 0
FinalVolume:	0	734	2	33 565 0

Critical Gap Module:	Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	

Capacity Module:	Cnflct Vol:	xxxx	xxxx	xxxxx	736	xxxx	xxxxx	xxxx	xxxx	xxxxx	1084	1366	368
Potent Cap.:	xxxx	xxxx <td>xxxxx</td> <td>879</td> <td>xxxx</td> <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>215</td> <td>149</td> <td>635</td> </td>	xxxxx	879	xxxx	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>215</td> <td>149</td> <td>635</td>	xxxxx	215	149	635	
Move Cap.:	xxxx	xxxx <td>xxxxx</td> <td>879</td> <td>xxxx</td> <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>209</td> <td>143</td> <td>635</td> </td>	xxxxx	879	xxxx	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>209</td> <td>143</td> <td>635</td>	xxxxx	209	143	635	
Volume/Cap:	xxxx	xxxx <td>xxxx</td> <td>0.04</td> <td>xxxx</td> <td>xxxx</td> <td>xxxx</td> <td>xxxx <td>xxxx</td> <td>0.00</td> <td>0.00</td> <td>0.04</td> </td>	xxxx	0.04	xxxx	xxxx	xxxx	xxxx <td>xxxx</td> <td>0.00</td> <td>0.00</td> <td>0.04</td>	xxxx	0.00	0.00	0.04	

Level Of Service Module:	2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx <td>xxxxx</td> <td>9.3</td> <td>xxxx</td> <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxxx</td> <td>xxxxx</td> <td>xxxxx</td> </td>	xxxxx	9.3	xxxx	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxxx</td> <td>xxxxx</td> <td>xxxxx</td>	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*	*
Movement:	LT	- LTR	- RT	LT	- LTR	- RT	LT	- LTR	- RT	LT	- LTR	- RT	
Shared Cap.:	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxx</td> <td>592</td> <td>xxxxx</td> <td></td> </td></td>	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxx</td> <td>592</td> <td>xxxxx</td> <td></td> </td>	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>592</td> <td>xxxxx</td> <td></td>	xxxxx	xxxx	592	xxxxx	
SharedQueue:	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>0.1</td> <td>xxxxx</td> <td></td> </td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>0.1</td> <td>xxxxx</td> <td></td> </td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>0.1</td> <td>xxxxx</td> <td></td>	xxxxx	xxxxx	0.1	xxxxx	
Shrd ConDel:	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>11.4</td> <td>xxxxx</td> <td></td> </td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>11.4</td> <td>xxxxx</td> <td></td> </td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>11.4</td> <td>xxxxx</td> <td></td>	xxxxx	xxxxx	11.4	xxxxx	
Shared LOS:	*	*	*	*	*	*	*	*	*	*	B	*	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx				11.4		
ApproachLOS:	*			*			*				B		

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient (No Project) AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3 Milliken Avenue - SR-60 Eastbound Ramps

\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 0.688  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 16.3  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: Milliken Avenue SR-60 Eastbound Ramps  
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: Include Include Include Include  
Min. Green: 7 7 7 7 7 7 7 7 7 7 7 7  
Lanes: 0 0 1 1 0 1 0 2 0 0 1 0 1 0 0 0 0 0 0 0  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR

Base Vol:	0	691	81	76	247	0	528	2	319	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	691	81	76	247	0	528	2	319	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	691	81	76	247	0	528	2	319	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	691	81	76	247	0	528	2	319	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	691	81	76	247	0	528	2	319	0	0	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.93	0.95	0.95	1.00	0.86	0.86	0.86	1.00	1.00	1.00
Lanes:	0.00	1.79	0.21	1.00	2.00	0.00	1.45	0.01	0.54	0.00	0.00	0.00
Final Sat.:	0	3180	373	1805	3610	0	2361	6	887	0	0	0

Capacity Analysis Module:

Vol/Sat:	0.00	0.22	0.22	0.04	0.07	0.00	0.22	0.36	0.36	0.00	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.00	0.30	0.30	0.12	0.41	0.00	0.49	0.49	0.49	0.00	0.00	0.00
Volume/Cap:	0.00	0.74	0.74	0.36	0.17	0.00	0.46	0.74	0.74	0.00	0.00	0.00
Delay/Veh:	0.0	21.8	21.8	25.5	11.2	0.0	10.3	14.8	14.8	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	21.8	21.8	25.5	11.2	0.0	10.3	14.8	14.8	0.0	0.0	0.0
LOS by Move:	A	C	C	C	B	A	B	B	B	A	A	A
HCM2k95thQ:	0	16	16	4	3	0	9	19	19	0	0	0

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



Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient (No Project) AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.594  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 14.0  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: Milliken (Hamner) SR-60 Westbound Ramps  
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: Include Include Include Include  
Min. Green: 7 7 7 7 7 7 7 7 7 7 7 7  
Lanes: 1 0 2 0 0 0 0 2 0 1 0 0 0 0 0 0 1 0 0 1  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR  
Base Vol: 351 884 0 0 273 252 0 0 0 97 5 297  
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: 351 884 0 0 273 252 0 0 0 97 5 297  
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: 351 884 0 0 273 252 0 0 0 97 5 297  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 351 884 0 0 273 252 0 0 0 97 5 297  
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: 351 884 0 0 273 252 0 0 0 97 5 297  
-----|-----|-----|-----|

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.95 0.95 1.00 1.00 0.95 0.85 1.00 1.00 1.00 0.96 0.96 0.85  
Lanes: 1.00 2.00 0.00 0.00 2.00 1.00 0.00 0.00 0.00 0.95 0.05 1.00  
Final Sat.: 1805 3610 0 0 3610 1615 0 0 0 1742 90 1615  
-----|-----|-----|-----|

Capacity Analysis Module:  
Vol/Sat: 0.19 0.24 0.00 0.00 0.08 0.16 0.00 0.00 0.00 0.06 0.06 0.18  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.33 0.59 0.00 0.00 0.26 0.26 0.00 0.00 0.00 0.31 0.31 0.31  
Volume/Cap: 0.59 0.41 0.00 0.00 0.29 0.59 0.00 0.00 0.00 0.18 0.18 0.59  
Delay/Veh: 18.5 6.8 0.0 0.0 17.8 21.6 0.0 0.0 0.0 15.3 15.3 19.4  
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: 18.5 6.8 0.0 0.0 17.8 21.6 0.0 0.0 0.0 15.3 15.3 19.4  
LOS by Move: B A A A B C A A A B B B  
HCM2k95thQ: 12 10 0 0 5 10 0 0 0 3 3 11  
\*\*\*\*\*

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

\*\*\*\*\*

Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient (No Project) AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek

Cycle (sec): 60 Critical Vol./Cap.(X): 0.556  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 17.5  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Riverside						Mill Creek					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	0	1	0	1	0	1	1	0	1

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	213	100	62	32	141	102	358	257	216	105	274	20
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:	213	100	62	32	141	102	358	257	216	105	274	20
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:	213	100	62	32	141	102	358	257	216	105	274	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	213	100	62	32	141	102	358	257	216	105	274	20
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:	213	100	62	32	141	102	358	257	216	105	274	20

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.51	1.00	0.85	0.69	0.94	0.94	0.95	0.88	0.88	0.95	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	0.58	0.42	1.00	1.09	0.91	1.00	1.86	0.14
Final Sat.:	967	1900	1615	1303	1033	747	1805	1826	1535	1805	3331	243

Capacity Analysis Module:												
Vol/Sat:	0.22	0.05	0.04	0.02	0.14	0.14	0.20	0.14	0.14	0.06	0.08	0.08
Crit Moves:	****						****					
Green/Cycle:	0.40	0.40	0.40	0.40	0.40	0.40	0.36	0.28	0.28	0.23	0.15	0.15
Volume/Cap:	0.56	0.13	0.10	0.06	0.34	0.34	0.56	0.51	0.51	0.25	0.56	0.56
Delay/Veh:	15.9	11.6	11.5	11.3	13.0	13.0	16.6	18.8	18.8	19.3	25.1	25.1
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:	15.9	11.6	11.5	11.3	13.0	13.0	16.6	18.8	18.8	19.3	25.1	25.1
LOS by Move:	B	B	B	B	B	B	B	B	B	B	C	C
HCM2k95thQ:	8	3	2	1	7	7	12	9	9	4	7	7

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient (No Project) AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #6 Riverside - Sharp

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: B[ 10.6]

\*\*\*\*\*  
Street Name: Sharp Riverside  
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: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 0 1 0 0  
-----|-----|-----|-----|  
Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR  
Base Vol: 8 0 36 0 0 0 0 283 20 38 257 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: 8 0 36 0 0 0 0 283 20 38 257 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: 8 0 36 0 0 0 0 283 20 38 257 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 8 0 36 0 0 0 0 283 20 38 257 0  
-----|-----|-----|-----|

Critical Gap Module:  
Critical Gp: 6.4 xxxx 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx  
FollowUpTim: 3.5 xxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx  
-----|-----|-----|-----|

Capacity Module:  
Cnflct Vol: 626 xxxx 293 xxxx xxxx xxxxx xxxx xxxx xxxxx 303 xxxx xxxxx  
Potent Cap.: 451 xxxx 751 xxxx xxxx xxxxx xxxx xxxx xxxxx 1269 xxxx xxxxx  
Move Cap.: 441 xxxx 751 xxxx xxxx xxxxx xxxx xxxx xxxxx 1269 xxxx xxxxx  
Volume/Cap: 0.02 xxxx 0.05 xxxx xxxx xxxxx xxxx xxxx xxxxx 0.03 xxxx xxxxx  
-----|-----|-----|-----|

Level Of Service Module:  
2Way95thQ: 0.1 xxxx 0.2 xxxx xxxx xxxxx xxxx xxxx xxxxx 0.1 xxxx xxxxx  
Control Del: 13.3 xxxx 10.0 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.9 xxxx xxxxx  
LOS by Move: B \* B \* \* \* \* \* \* \* 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: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 10.6 xxxxxx xxxxxx xxxxxx  
ApproachLOS: B \* \* \*  
-----|-----|-----|-----|

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



Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient (No Project) AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.337  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 12.8  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: Milliken (Hamner)				Cantu-Galleano Ranch											
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: Include				Include				Include				Include			
Min. Green: 7 7 7				7 7 7				7 7 7				7 7 7			
Lanes: 0 0 1 1 0				1 0 1 0 0				0 0 0 0 0				1 0 0 0 1			

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	0	454	245	98	163	0	0	0	0	80	0	164
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	454	245	98	163	0	0	0	0	80	0	164
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	454	245	98	163	0	0	0	0	80	0	164
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	454	245	98	163	0	0	0	0	80	0	164
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
Final Volume:	0	454	245	98	163	0	0	0	0	80	0	164

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.90	0.90	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.30	0.70	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	2220	1198	1805	1900	0	0	0	0	1805	0	1615

Capacity Analysis Module:												
Vol/Sat:	0.00	0.20	0.20	0.05	0.09	0.00	0.00	0.00	0.00	0.04	0.00	0.10
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.61	0.61	0.16	0.77	0.00	0.00	0.00	0.00	0.13	0.00	0.13
Volume/Cap:	0.00	0.34	0.34	0.34	0.11	0.00	0.00	0.00	0.00	0.34	0.00	0.77
Delay/Veh:	0.0	5.9	5.9	23.0	1.8	0.0	0.0	0.0	0.0	24.5	0.0	41.0
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	5.9	5.9	23.0	1.8	0.0	0.0	0.0	0.0	24.5	0.0	41.0
LOS by Move:	A	A	A	C	A	A	A	A	A	C	A	D
HCM2k95thQ:	0	7	7	4	2	0	0	0	0	3	0	10

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

Tuscan Village Specific Plan  
Opening Year (2012) Existing Plus Ambient (No Project) AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.129  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 9.0  
Optimal Cycle: OPTIMIZED Level Of Service: A  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps						Cantu-Galleano Ranch					
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:	Include			Include			Ignore			Ignore		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	0	0	0	0	0	0	0	0	0	0

Volume Module:	>> Count	Date:	18 Aug 2009	<< AM	PEAK HOUR
Base Vol:	0	0	0	266	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	266	0
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	266	0
Reduct Vol:	0	0	0	0	0
Reduced Vol:	0	0	0	266	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	266	0

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	1.00	0.91	1.00	1.00	0.95	0.88	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00	1.00	0.00	2.00	2.00	
Final Sat.:	0	0	0	3502	0	1615	0	5187	1900	0	3610	3344	

Capacity Analysis Module:	Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.10	0.00	0.04	0.00	0.00	0.03	0.00
Crit Moves:					****			****			****		
Green/Cycle:	0.00	0.00	0.00	0.59	0.00	0.59	0.00	0.34	0.00	0.00	0.34	0.00	
Volume/Cap:	0.00	0.00	0.00	0.13	0.00	0.17	0.00	0.13	0.00	0.00	0.08	0.00	
Delay/Veh:	0.0	0.0	0.0	5.5	0.0	5.7	0.0	13.5	0.0	0.0	13.3	0.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	0.0	0.0	0.0	5.5	0.0	5.7	0.0	13.5	0.0	0.0	13.3	0.0	
LOS by Move:	A	A	A	A	A	A	A	B	A	A	B	A	
HCM2k95thQ:	0	0	0	2	0	3	0	2	0	0	1	0	

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



Tuscan Village Specific Plan  
Opening Year (2012) Existing Plus Ambient (No Project) AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*

Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps

\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.165

Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 12.5

Optimal Cycle: OPTIMIZED Level Of Service: B

\*\*\*\*\*

Street Name:	I-15 Northbound Ramps				Cantu-Galleano Ranch															
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:	Include				Include				Ovl				Include							
Min. Green:	7		7		7	7		7		7	7		7		7	7		7		7
Lanes:	1	0	0	1	1	0	0	0	0	0	0	0	3	0	1	2	0	3	0	0

Volume Module:	>>	Count	Date:	18 Aug 2009	<<	AM	PEAK	HOUR
Base Vol:	78	0	130	0	0	0	0	226
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	78	0	130	0	0	0	0	226
User Adj:	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
PHF Volume:	78	0	130	0	0	0	0	226
Reduct Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	78	0	130	0	0	0	0	226
PCE Adj:	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
Final Volume:	78	0	130	0	0	0	0	226

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.91	0.85	0.92	0.91	1.00
Lanes:	1.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	2.00	3.00	0.00
Final Sat.:	1805	0	3230	0	0	0	0	5187	1615	3502	5187	0

Capacity Analysis Module:	Vol/Sat:	0.04	0.00	0.04	0.00	0.00	0.00	0.04	0.17	0.06	0.02	0.00
Crit Moves:	****							****				
Green/Cycle:	0.26	0.00	0.26	0.00	0.00	0.00	0.00	0.26	0.53	0.37	0.64	0.00
Volume/Cap:	0.16	0.00	0.15	0.00	0.00	0.00	0.00	0.16	0.32	0.16	0.03	0.00
Delay/Veh:	17.2	0.0	17.1	0.0	0.0	0.0	0.0	17.0	8.4	12.6	4.0	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:	17.2	0.0	17.1	0.0	0.0	0.0	0.0	17.0	8.4	12.6	4.0	0.0
LOS by Move:	B	A	B	A	A	A	A	B	A	B	A	A
HCM2k95thQ:	2	0	2	0	0	0	0	3	6	3	1	0

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient (No Project) AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #10 Milliken (Hamner) - Samantha

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C[ 16.1]  
\*\*\*\*\*

Street Name:		Milliken (Hamner)				Samantha			
Approach:	North Bound	South Bound			East Bound	West Bound			
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R		
Control:	Uncontrolled	Uncontrolled			Stop Sign	Stop Sign			
Rights:	Include	Include			Include	Include			
Lanes:	0 0 1 1 0	1 0 1 0 0	0 0 0 0 0	1 0 0 0 1					
Volume Module: >> Count Date: 22 Sep 2009 << AM PEAK HOUR									
Base Vol:	0 770 33	13 358 0	0 0 0 0	12 0 15					
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:	0 770 33	13 358 0	0 0 0 0	12 0 15					
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:	0 770 33	13 358 0	0 0 0 0	12 0 15					
Reduct Vol:	0 0 0	0 0 0	0 0 0 0	0 0 0					
Final Volume:	0 770 33	13 358 0	0 0 0 0	12 0 15					
Critical Gap Module:									
Critical Gp:xxxxx xxxxx xxxxx	4.1 xxxxx xxxxx xxxxx xxxxx xxxxx	6.4 xxxxx 6.2							
FollowUpTim:xxxxx xxxxx xxxxx	2.2 xxxxx xxxxx xxxxx xxxxx xxxxx	3.5 xxxxx 3.3							
Capacity Module:									
Cnflct Vol: xxxxx xxxxx xxxxx	803 xxxxx xxxxx xxxxx xxxxx xxxxx	1171 xxxxx 402							
Potent Cap.: xxxxx xxxxx xxxxx	830 xxxxx xxxxx xxxxx xxxxx xxxxx	215 xxxxx 653							
Move Cap.: xxxxx xxxxx xxxxx	830 xxxxx xxxxx xxxxx xxxxx xxxxx	212 xxxxx 653							
Volume/Cap: xxxxx xxxxx xxxxx	0.02 xxxxx xxxxx xxxxx xxxxx xxxxx	0.06 xxxxx 0.02							
Level Of Service Module:									
2Way95thQ: xxxxx xxxxx xxxxx	0.0 xxxxx xxxxx xxxxx xxxxx xxxxx	0.2 xxxxx 0.1							
Control Del:xxxxx xxxxx xxxxx	9.4 xxxxx xxxxx xxxxx xxxxx xxxxx	23.0 xxxxx 10.6							
LOS by Move: * * *	A * * * * *	C * B							
Movement: 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: xxxxxx	xxxxxx	xxxxxx							
ApproachLOS: *	*	*							

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

## **Appendix D-4**

**OPENING YEAR EXISTING-PLUS-AMBIENT  
WITH-PROJECT CONDITIONS – AM PEAK  
HOUR**

Tuscan Village Specific Plan  
Opening Year (2012) Existing Plus Ambient Plus Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.503  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 19.7  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue						Riverside Drive					
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:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module:	>> Count	Date:	18 Aug 2009	<< AM	PEAK HOUR
Base Vol:	153 403 22	221 255 175	263 81 122	18 93 172	
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:	153 403 22	221 255 175	263 81 122	18 93 172	
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:	153 403 22	221 255 175	263 81 122	18 93 172	
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0	
Reduced Vol:	153 403 22	221 255 175	263 81 122	18 93 172	
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	
Final Volume:	153 403 22	221 255 175	263 81 122	18 93 172	

Saturation Flow Module:	Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	0.95 0.94 0.94	0.95 0.95 0.85	0.95 0.91 0.91	0.95 1.00 0.85	
Lanes:	1.00 1.90 0.10	1.00 2.00 1.00	1.00 0.40 0.60	1.00 1.00 1.00	
Final Sat.:	1805 3396 185	1805 3610 1615	1805 690 1039	1805 1900 1615	

Capacity Analysis Module:	Vol/Sat:	0.08 0.12 0.12	0.12 0.07 0.11	0.15 0.12 0.12	0.01 0.05 0.11
Crit Moves:	****	****	****	****	
Green/Cycle:	0.24 0.24 0.24	0.24 0.24 0.24	0.29 0.29 0.29	0.21 0.21 0.21	
Volume/Cap:	0.35 0.50 0.50	0.50 0.29 0.45	0.50 0.41 0.41	0.05 0.23 0.50	
Delay/Veh:	19.4 20.3 20.3	20.5 18.8 20.3	18.5 17.7 17.7	18.9 19.9 22.0	
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:	19.4 20.3 20.3	20.5 18.8 20.3	18.5 17.7 17.7	18.9 19.9 22.0	
LOS by Move:	B C C	C B C	B B B	B B C	
HCM2k95thQ:	5 8 8	8 5 7	9 7 7	1 3 7	

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



Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient Plus Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[ 11.9]

\*\*\*\*\*  
Street Name: Milliken (Hamner) Avenue Industrial Dwy/Street "B" (Future)  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
Rights: Include Include Include Include  
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 1! 0 0  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR

Base Vol:	0	819	2	33	623	0	0	0	0	1	0	27
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	819	2	33	623	0	0	0	0	1	0	27
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	819	2	33	623	0	0	0	0	1	0	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	0	819	2	33	623	0	0	0	0	1	0	27

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	821	xxxx	xxxxx	xxxx	xxxx	xxxxx	1198	1509	411
Potent Cap.:	xxxx	xxxx	xxxxx	817	xxxx	xxxxx	xxxx	xxxx	xxxxx	181	122	596
Move Cap.:	xxxx	xxxx	xxxxx	817	xxxx	xxxxx	xxxx	xxxx	xxxxx	176	117	596
Volume/Cap:	xxxx	xxxx	xxxx	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.00	0.05

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	9.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	549	xxxxx
Shared Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	11.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	11.9	xxxxxx
ApproachLOS:	*	*	*	*	*	*	*	*	*	*	B	*

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient Plus Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3 Milllliken Avenue - SR-60 Eastbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.733  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 17.4  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milllliken Avenue				SR-60 Eastbound Ramps				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Include		Include		
Min. Green:	7	7	7	7	7	7	7	7	7
Lanes:	0	0	1 1 0	1	0	2 0 0	1	0	1! 0 0
	0	0	0 0 0	0	0	0 0 0	0	0	0 0 0

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	0	759	99	76	279	0	528	2	345	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	759	99	76	279	0	528	2	345	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	759	99	76	279	0	528	2	345	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	759	99	76	279	0	528	2	345	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	759	99	76	279	0	528	2	345	0	0	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.93	0.95	0.95	1.00	0.86	0.86	0.86	1.00	1.00	1.00
Lanes:	0.00	1.77	0.23	1.00	2.00	0.00	1.43	0.01	0.56	0.00	0.00	0.00
Final Sat.:	0	3139	409	1805	3610	0	2330	5	919	0	0	0

Capacity Analysis Module:												
Vol/Sat:	0.00	0.24	0.24	0.04	0.08	0.00	0.23	0.38	0.38	0.00	0.00	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.00	0.31	0.31	0.12	0.42	0.00	0.48	0.48	0.48	0.00	0.00	0.00
Volume/Cap:	0.00	0.79	0.79	0.36	0.18	0.00	0.48	0.79	0.79	0.00	0.00	0.00
Delay/Veh:	0.0	22.9	22.9	25.5	10.9	0.0	10.8	17.0	17.0	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	22.9	22.9	25.5	10.9	0.0	10.8	17.0	17.0	0.0	0.0	0.0
LOS by Move:	A	C	C	C	B	A	B	B	B	A	A	A
HCM2k95thQ:	0	18	18	4	4	0	10	21	21	0	0	0

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient Plus Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps

\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 0.617  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 14.2  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:		Milliken (Hamner)		SR-60 Westbound Ramps	
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:	Include	Include	Include	Include	
Min. Green:	7 7 7	7 7 7	7 7 7	7 7 7	
Lanes:	1 0 2 0 0	0 0 2 0 1	0 0 0 0 0	0 1 0 0 1	

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	389	914	0	0	293	252	0	0	0	109	5	297
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:	389	914	0	0	293	252	0	0	0	109	5	297
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:	389	914	0	0	293	252	0	0	0	109	5	297
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	389	914	0	0	293	252	0	0	0	109	5	297
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
Final Volume:	389	914	0	0	293	252	0	0	0	109	5	297

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.95	0.85	1.00	1.00	1.00	0.96	0.96	0.85
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	0.96	0.04	1.00
Final Sat.:	1805	3610	0	0	3610	1615	0	0	0	1744	80	1615

Capacity Analysis Module:												
Vol/Sat:	0.22	0.25	0.00	0.00	0.08	0.16	0.00	0.00	0.00	0.06	0.06	0.18
Crit Moves:	****					****						****
Green/Cycle:	0.35	0.60	0.00	0.00	0.25	0.25	0.00	0.00	0.00	0.30	0.30	0.30
Volume/Cap:	0.62	0.42	0.00	0.00	0.32	0.62	0.00	0.00	0.00	0.21	0.21	0.62
Delay/Veh:	18.1	6.5	0.0	0.0	18.4	22.7	0.0	0.0	0.0	16.0	16.0	20.5
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:	18.1	6.5	0.0	0.0	18.4	22.7	0.0	0.0	0.0	16.0	16.0	20.5
LOS by Move:	B	A	A	A	B	C	A	A	A	B	B	C
HCM2k95thQ:	13	10	0	0	5	10	0	0	0	3	3	11

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



Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient Plus Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.566  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 17.7  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Riverside						Mill Creek					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	0	1	0	1	0	1	1	0	1

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR

Base Vol:	213	100	64	36	141	102	358	271	216	107	295	25
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:	213	100	64	36	141	102	358	271	216	107	295	25
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:	213	100	64	36	141	102	358	271	216	107	295	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	213	100	64	36	141	102	358	271	216	107	295	25
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:	213	100	64	36	141	102	358	271	216	107	295	25

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.51	1.00	0.85	0.69	0.94	0.94	0.95	0.89	0.89	0.95	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	0.58	0.42	1.00	1.11	0.89	1.00	1.84	0.16
Final Sat.:	961	1900	1615	1302	1033	747	1805	1874	1494	1805	3288	279

Capacity Analysis Module:

Vol/Sat:	0.22	0.05	0.04	0.03	0.14	0.14	0.20	0.14	0.14	0.06	0.09	0.09
Crit Moves:	****						****					
Green/Cycle:	0.39	0.39	0.39	0.39	0.39	0.39	0.35	0.28	0.28	0.23	0.16	0.16
Volume/Cap:	0.57	0.13	0.10	0.07	0.35	0.35	0.57	0.51	0.51	0.26	0.57	0.57
Delay/Veh:	16.3	11.8	11.6	11.5	13.2	13.2	17.0	18.6	18.6	19.4	24.7	24.7
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:	16.3	11.8	11.6	11.5	13.2	13.2	17.0	18.6	18.6	19.4	24.7	24.7
LOS by Move:	B	B	B	B	B	B	B	B	B	B	C	C
HCM2k95thQ:	8	3	2	1	7	7	12	9	9	4	8	8

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



Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient Plus Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #6 Riverside - Sharp

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: B[ 10.7]

\*\*\*\*\*  
Street Name: Sharp Riverside  
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: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 0 0 0

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR  
Base Vol: 8 0 36 0 0 0 0 290 20 38 262 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: 8 0 36 0 0 0 0 290 20 38 262 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: 8 0 36 0 0 0 0 290 20 38 262 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Final Volume: 8 0 36 0 0 0 0 290 20 38 262 0

Critical Gap Module:  
Critical Gp: 6.4 xxxx 6.2 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 4.1 xxxx xxxxxx  
FollowUpTim: 3.5 xxxx 3.3 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 2.2 xxxx xxxxxx

Capacity Module:  
Cnflct Vol: 638 xxxx 300 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 310 xxxxxx xxxxxx  
Potent Cap.: 444 xxxx 744 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 1262 xxxxxx xxxxxx  
Move Cap.: 434 xxxx 744 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 1262 xxxxxx xxxxxx  
Volume/Cap: 0.02 xxxx 0.05 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.03 xxxxxx xxxxxx

Level Of Service Module:  
2Way95thQ: 0.1 xxxx 0.2 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.1 xxxxxx xxxxxx  
Control Del: 13.5 xxxx 10.1 xxxxxx xxxx xxxxxx xxxxxx xxxxxx xxxxxx 7.9 xxxxxx xxxxxx  
LOS by Move: B \* B \* \* \* \* \* \* \* A \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx  
SharedQueue: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx  
Shrd ConDel: xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 10.7 xxxxxxxx xxxxxxxx xxxxxxxx  
ApproachLOS: B \* \* \*

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient Plus Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch  
\*\*\*\*\*

Cycle (sec): 70 Critical Vol./Cap.(X): 0.412  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 13.9  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner)						Cantu-Galleano Ranch					
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	1	1	0	1	0	0	0	1	0	0

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	0	461	245	113	173	0	0	0	0	80	0	174
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	461	245	113	173	0	0	0	0	80	0	174
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	461	245	113	173	0	0	0	0	80	0	174
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	461	245	113	173	0	0	0	0	80	0	174
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	461	245	113	173	0	0	0	0	80	0	174

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.90	0.90	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.31	0.69	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	2235	1188	1805	1900	0	0	0	0	1805	0	1615

Capacity Analysis Module:												
Vol/Sat:	0.00	0.21	0.21	0.06	0.09	0.00	0.00	0.00	0.00	0.04	0.00	0.11
Crit Moves:	****			****						****		
Green/Cycle:	0.00	0.50	0.50	0.15	0.65	0.00	0.00	0.00	0.00	0.26	0.00	0.26
Volume/Cap:	0.00	0.41	0.41	0.41	0.14	0.00	0.00	0.00	0.00	0.17	0.00	0.41
Delay/Veh:	0.0	11.2	11.2	27.9	4.7	0.0	0.0	0.0	0.0	20.1	0.0	22.0
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	11.2	11.2	27.9	4.7	0.0	0.0	0.0	0.0	20.1	0.0	22.0
LOS by Move:	A	B	B	C	A	A	A	A	A	C	A	C
HCM2k95thQ:	0	10	10	5	3	0	0	0	0	3	0	7

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient Plus Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.130  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 9.1  
Optimal Cycle: OPTIMIZED Level Of Service: A  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps						Cantu-Galleano Ranch					
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			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	0	2	0	0	0	0	3	0	0	2

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	0	0	0	266	0	162	0	237	73	0	109	45
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	266	0	162	0	237	73	0	109	45
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	266	0	162	0	237	0	0	109	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	266	0	162	0	237	0	0	109	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Volume:	0	0	0	266	0	162	0	237	0	0	109	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	1.00	0.91	1.00	1.00	0.95	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00	1.00	0.00	2.00	2.00
Final Sat.:	0	0	0	3502	0	1615	0	5187	1900	0	3610	3344

Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.10	0.00	0.05	0.00	0.00	0.03	0.00
Crit Moves:				****				****				
Green/Cycle:	0.00	0.00	0.00	0.58	0.00	0.58	0.00	0.35	0.00	0.00	0.35	0.00
Volume/Cap:	0.00	0.00	0.00	0.13	0.00	0.17	0.00	0.13	0.00	0.00	0.09	0.00
Delay/Veh:	0.0	0.0	0.0	5.7	0.0	5.9	0.0	13.3	0.0	0.0	13.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	5.7	0.0	5.9	0.0	13.3	0.0	0.0	13.1	0.0
LOS by Move:	A	A	A	A	A	A	A	B	A	A	B	A
HCM2k95thQ:	0	0	0	2	0	3	0	2	0	0	2	0

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



Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient Plus Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.170  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 12.5  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	I-15 Northbound Ramps			Cantu-Galleano Ranch														
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:	Include			Include			Ovl			Include								
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7						
Lanes:	1	0	0	1	1	0	0	0	0	0	3	0	1	2	0	3	0	0

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR

Base Vol:	83	0	130	0	0	0	0	234	276	216	106	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:	83	0	130	0	0	0	0	234	276	216	106	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:	83	0	130	0	0	0	0	234	276	216	106	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	83	0	130	0	0	0	0	234	276	216	106	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:	83	0	130	0	0	0	0	234	276	216	106	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.91	0.85	0.92	0.91	1.00
Lanes:	1.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	2.00	3.00	0.00
Final Sat.:	1805	0	3230	0	0	0	0	5187	1615	3502	5187	0

Capacity Analysis Module:

Vol/Sat:	0.05	0.00	0.04	0.00	0.00	0.00	0.00	0.05	0.17	0.06	0.02	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.27	0.00	0.27	0.00	0.00	0.00	0.00	0.27	0.54	0.36	0.63	0.00
Volume/Cap:	0.17	0.00	0.15	0.00	0.00	0.00	0.00	0.17	0.32	0.17	0.03	0.00
Delay/Veh:	16.9	0.0	16.7	0.0	0.0	0.0	0.0	17.0	8.0	13.0	4.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.9	0.0	16.7	0.0	0.0	0.0	0.0	17.0	8.0	13.0	4.2	0.0
LOS by Move:	B	A	B	A	A	A	A	B	A	B	A	A
HCM2k95thQ:	3	0	2	0	0	0	0	3	6	3	1	0

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient Plus Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)
*****
Intersection #10 Milliken (Hamner) - Samantha
*****
Average Delay (sec/veh):      0.5      Worst Case Level Of Service: C[ 16.7]
*****
Street Name:      Milliken (Hamner)      Samantha
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Rights:      Include      Include      Include      Include
Lanes:      0 0 1 1 0      1 0 1 0 0      0 0 0 0 0      1 0 0 0 1
-----|-----|-----|-----|
Volume Module: >> Count Date: 22 Sep 2009 << AM PEAK HOUR
Base Vol:      0 787 33      13 383 0      0 0 0 0      12 0 15
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: 0 787 33      13 383 0      0 0 0 0      12 0 15
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: 0 787 33      13 383 0      0 0 0 0      12 0 15
Reduct Vol: 0 0 0 0      0 0 0 0      0 0 0 0      0 0 0 0
FinalVolume: 0 787 33      13 383 0      0 0 0 0      12 0 15
-----|-----|-----|-----|
Critical Gap Module:
Critical Gp:xxxxx xxxxx xxxxx      4.1 xxxxx xxxxx xxxxx xxxxx xxxxx      6.4 xxxxx 6.2
FollowUpTim:xxxxx xxxxx xxxxx      2.2 xxxxx xxxxx xxxxx xxxxx xxxxx      3.5 xxxxx 3.3
-----|-----|-----|-----|
Capacity Module:
Cnflct Vol: xxxxx xxxxx xxxxx      820 xxxxx xxxxx xxxxx xxxxx xxxxx      1213 xxxxx 410
Potent Cap.: xxxxx xxxxx xxxxx      818 xxxxx xxxxx xxxxx xxxxx xxxxx      203 xxxxx 646
Move Cap.: xxxxx xxxxx xxxxx      818 xxxxx xxxxx xxxxx xxxxx xxxxx      200 xxxxx 646
Volume/Cap: xxxxx xxxxx xxxxx      0.02 xxxxx xxxxx xxxxx xxxxx xxxxx      0.06 xxxxx 0.02
-----|-----|-----|-----|
Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx      0.0 xxxxx xxxxx xxxxx xxxxx xxxxx      0.2 xxxxx 0.1
Control Del:xxxxx xxxxx xxxxx      9.5 xxxxx xxxxx xxxxx xxxxx xxxxx      24.1 xxxxx 10.7
LOS by Move: * * *      A * *      * * *      C * 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: xxxxxx      xxxxxx      xxxxxx      16.7
ApproachLOS: *      *      *      C
*****
Note: Queue reported is the number of cars per lane.
*****

```

Tuscana Village Specific Plan  
Opening Year (2012) Existing Plus Ambient Plus Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #11 Riverside - Street A (future)  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.207  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 10.6  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: Riverside					Street A													
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:	Include			Include			Include			Include								
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7						
Lanes:	0	0	0	0	1	0	0	0	1	1	0	1	0	0	0	2	0	1

Volume Module:AM PEAK HOUR

Base Vol:	0	0	0	138	0	12	32	327	0	0	331	11
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	138	0	12	32	327	0	0	331	11
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	138	0	12	32	327	0	0	331	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	138	0	12	32	327	0	0	331	11
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	138	0	12	32	327	0	0	331	11

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	1.00	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1805	0	1615	1805	1900	0	0	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.01	0.02	0.17	0.00	0.00	0.09	0.01
Crit Moves:				****				****				****
Green/Cycle:	0.00	0.00	0.00	0.36	0.00	0.36	0.12	0.54	0.00	0.00	0.43	0.43
Volume/Cap:	0.00	0.00	0.00	0.21	0.00	0.02	0.15	0.32	0.00	0.00	0.21	0.02
Delay/Veh:	0.0	0.0	0.0	13.6	0.0	12.5	24.2	7.7	0.0	0.0	10.9	9.9
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:	0.0	0.0	0.0	13.6	0.0	12.5	24.2	7.7	0.0	0.0	10.9	9.9
LOS by Move:	A	A	A	B	A	B	C	A	A	A	B	A
HCM2k95thQ:	0	0	0	4	0	0	1	7	0	0	4	0

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

## **Appendix D-5**

**OPENING YEAR EXISTING-PLUS-AMBIENT  
NO-PROJECT CONDITIONS – PM PEAK  
HOUR**



Tuscan Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.554  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 19.2  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue						Riverside Drive					
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:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR	Milliken (Hamner) Avenue North Bound			Milliken (Hamner) Avenue South Bound			Riverside Drive East Bound			Riverside Drive West Bound		
Base Vol:	163	341	13	120	545	98	68	91	214	14	54	156
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:	163	341	13	120	545	98	68	91	214	14	54	156
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:	163	341	13	120	545	98	68	91	214	14	54	156
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	163	341	13	120	545	98	68	91	214	14	54	156
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	163	341	13	120	545	98	68	91	214	14	54	156

Saturation Flow Module:	Milliken (Hamner) Avenue North Bound			Milliken (Hamner) Avenue South Bound			Riverside Drive East Bound			Riverside Drive West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.93	0.93	0.95	0.90	0.90	0.95	1.00	0.85
Lanes:	1.00	1.93	0.07	1.00	1.70	0.30	1.00	0.30	0.70	1.00	1.00	1.00
Final Sat.:	1805	3457	132	1805	2989	538	1805	507	1193	1805	1900	1615

Capacity Analysis Module:	Milliken (Hamner) Avenue North Bound			Milliken (Hamner) Avenue South Bound			Riverside Drive East Bound			Riverside Drive West Bound		
Vol/Sat:	0.09	0.10	0.10	0.07	0.18	0.18	0.04	0.18	0.18	0.01	0.03	0.10
Crit Moves:	****			****			****			****		
Green/Cycle:	0.16	0.25	0.25	0.25	0.33	0.33	0.32	0.32	0.32	0.17	0.17	0.17
Volume/Cap:	0.55	0.40	0.40	0.27	0.55	0.55	0.12	0.55	0.55	0.04	0.16	0.55
Delay/Veh:	25.4	19.2	19.2	18.6	17.1	17.1	14.4	18.0	18.0	20.7	21.3	25.1
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:	25.4	19.2	19.2	18.6	17.1	17.1	14.4	18.0	18.0	20.7	21.3	25.1
LOS by Move:	C	B	B	B	B	B	B	B	B	C	C	C
HCM2k95thQ:	7	7	7	4	11	11	2	10	10	1	2	7

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



Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: B[ 11.2]  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue		Industrial Dwy/Street "B" (Future)	
Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Lanes:	0 0 1 1 0	1 0 2 0 0	0 0 0 0 0	0 0 1! 0 0

Volume Module: >> Count Date:	18 Aug 2009 << PM PEAK HOUR											
Base Vol:	0	605	0	26	813	0	0	0	0	1	0	12
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	605	0	26	813	0	0	0	0	1	0	12
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	605	0	26	813	0	0	0	0	1	0	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	605	0	26	813	0	0	0	0	1	0	12

Critical Gap Module:												
Critical Gp:xxxxx	xxxxx	xxxxx	xxxxx	4.1	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	6.8	6.5	6.9
FollowUpTim:xxxxx	xxxxx	xxxxx	xxxxx	2.2	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	3.5	4.0	3.3

Capacity Module:												
Cnflct Vol:	xxxxx	xxxxx	xxxxx	605	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	1064	1470	303
Potent Cap.:	xxxxx	xxxxx	xxxxx	983	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	221	129	700
Move Cap.:	xxxxx	xxxxx	xxxxx	983	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	217	125	700
Volume/Cap:	xxxxx	xxxxx	xxxxx	0.03	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.00	0.00	0.02

Level Of Service Module:												
2Way95thQ:	xxxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
Control Del:xxxxx	xxxxx	xxxxx	xxxxx	8.8	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	597	xxxxx
SharedQueue:xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	xxxxx	11.2	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	11.2	
ApproachLOS:	*	*	*	*	*	*	*	*	*	*	B	

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #3 Milliken Avenue - SR-60 Eastbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.540  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 14.7  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:		Milliken Avenue				SR-60 Eastbound Ramps			
Approach:	North Bound	South Bound		East Bound	West Bound				
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R				
Control:	Protected	Protected	Protected	Protected	Protected				
Rights:	Include	Include	Include	Include	Include				
Min. Green:	7 7 7	7 7 7	7 7 7	7 7 7	7 7 7				
Lanes:	0 0 1 1 0	1 0 2 0 0	1 0 1 0 0	0 0 0 0 0	0 0 0 0 0				

Volume Module: >> Count Date:	18 Aug 2009 << PM PEAK HOUR											
Base Vol:	0	505	78	166	467	0	221	0	280	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	505	78	166	467	0	221	0	280	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	505	78	166	467	0	221	0	280	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	505	78	166	467	0	221	0	280	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
Final Volume:	0	505	78	166	467	0	221	0	280	0	0	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.93	0.95	0.95	1.00	0.90	1.00	0.90	1.00	1.00	1.00
Lanes:	0.00	1.73	0.27	1.00	2.00	0.00	1.28	0.00	0.72	0.00	0.00	0.00
Final Sat.:	0	3064	473	1805	3610	0	2184	0	1220	0	0	0

Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.16	0.09	0.13	0.00	0.10	0.00	0.23	0.00	0.00	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.00	0.31	0.31	0.17	0.48	0.00	0.42	0.00	0.42	0.00	0.00	0.00
Volume/Cap:	0.00	0.54	0.54	0.54	0.27	0.00	0.24	0.00	0.54	0.00	0.00	0.00
Delay/Veh:	0.0	17.9	17.9	24.7	9.6	0.0	11.1	0.0	13.5	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	17.9	17.9	24.7	9.6	0.0	11.1	0.0	13.5	0.0	0.0	0.0
LOS by Move:	A	B	B	C	A	A	B	A	B	A	A	A
HCM2k95thQ:	0	10	10	7	6	0	4	0	12	0	0	0

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps

\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 0.523  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 10.2  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: Milliken (Hamner) SR-60 Westbound Ramps  
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: Include Include Include Include  
Min. Green: 7 7 7 7 7 7 7 7 7 7 7 7  
Lanes: 1 0 2 0 0 0 0 2 0 1 0 0 0 0 0 0 1 0 0 1  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR  
Base Vol: 258 459 0 0 638 484 0 0 0 51 0 98  
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: 258 459 0 0 638 484 0 0 0 51 0 98  
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: 258 459 0 0 638 484 0 0 0 51 0 98  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 258 459 0 0 638 484 0 0 0 51 0 98  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 258 459 0 0 638 484 0 0 0 51 0 98  
-----|-----|-----|-----|

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.95 0.95 1.00 1.00 0.95 0.85 1.00 1.00 1.00 0.95 1.00 0.85  
Lanes: 1.00 2.00 0.00 0.00 2.00 1.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 1805 3610 0 0 3610 1615 0 0 0 1809 0 1615  
-----|-----|-----|-----|

Capacity Analysis Module:  
Vol/Sat: 0.14 0.13 0.00 0.00 0.18 0.30 0.00 0.00 0.00 0.03 0.00 0.06  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.25 0.78 0.00 0.00 0.53 0.53 0.00 0.00 0.00 0.12 0.00 0.12  
Volume/Cap: 0.57 0.16 0.00 0.00 0.33 0.57 0.00 0.00 0.00 0.24 0.00 0.52  
Delay/Veh: 21.2 1.6 0.0 0.0 8.1 10.3 0.0 0.0 0.0 24.7 0.0 27.5  
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: 21.2 1.6 0.0 0.0 8.1 10.3 0.0 0.0 0.0 24.7 0.0 27.5  
LOS by Move: C A A A A B A A A C A C  
HCM2k95thQ: 10 2 0 0 7 13 0 0 0 2 0 5  
\*\*\*\*\*

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

\*\*\*\*\*



Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek

Cycle (sec): 70 Critical Vol./Cap. (X): 0.161  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 12.7  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Riverside						Mill Creek					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	0	1	0	1	0	1	1	0	1

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM PEAK HOUR								
Base Vol:	36	6	8	42	4	49	108	341	52	6	236	56
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:	36	6	8	42	4	49	108	341	52	6	236	56
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:	36	6	8	42	4	49	108	341	52	6	236	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	6	8	42	4	49	108	341	52	6	236	56
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
Final Volume:	36	6	8	42	4	49	108	341	52	6	236	56

Saturation Flow Module:	
Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	0.73 1.00 0.85 0.76 0.86 0.86 0.95 0.93 0.93 0.95 0.92 0.92
Lanes:	1.00 1.00 1.00 1.00 0.08 0.92 1.00 1.74 0.26 1.00 1.62 0.38
Final Sat.:	1378 1900 1615 1452 123 1512 1805 3070 468 1805 2833 672

Capacity Analysis Module:	
Vol/Sat:	0.03 0.00 0.00 0.03 0.03 0.03 0.06 0.11 0.11 0.00 0.08 0.08
Crit Moves:	****
Green/Cycle:	0.18 0.18 0.18 0.18 0.18 0.18 0.37 0.63 0.63 0.10 0.37 0.37
Volume/Cap:	0.14 0.02 0.03 0.16 0.18 0.18 0.16 0.18 0.18 0.03 0.23 0.23
Delay/Veh:	24.2 23.4 23.5 24.3 24.4 24.4 15.1 5.4 5.4 28.5 15.5 15.5
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:	24.2 23.4 23.5 24.3 24.4 24.4 15.1 5.4 5.4 28.5 15.5 15.5
LOS by Move:	C C C C C C B A A C B B
HCM2k95thQ:	2 0 0 2 2 2 3 4 4 0 5 5

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #6 Riverside - Sharp

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[ 10.6]

\*\*\*\*\*  
Street Name: Sharp Riverside  
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: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 0 0 0  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR  
Base Vol: 18 0 15 0 0 0 0 208 18 22 185 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: 18 0 15 0 0 0 0 208 18 22 185 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: 18 0 15 0 0 0 0 208 18 22 185 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Final Volume: 18 0 15 0 0 0 0 208 18 22 185 0  
-----|-----|-----|-----|

Critical Gap Module:  
Critical Gp: 6.4 xxxx 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx  
FollowUpTim: 3.5 xxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx  
-----|-----|-----|-----|

Capacity Module:  
Cnflct Vol: 446 xxxx 217 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 226 xxxx xxxxx  
Potent Cap.: 574 xxxx 828 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 1354 xxxx xxxxx  
Move Cap.: 567 xxxx 828 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 1354 xxxx xxxxx  
Volume/Cap: 0.03 xxxx 0.02 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 0.02 xxxx xxxxx  
-----|-----|-----|-----|

Level Of Service Module:  
2Way95thQ: 0.1 xxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 0.0 xxxx xxxxx  
Control Del: 11.6 xxxx 9.4 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.7 xxxx xxxxx  
LOS by Move: B \* A \* \* \* \* \* \* \* \* 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:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 10.6 xxxxxx xxxxxx xxxxxx  
ApproachLOS: B \* \* \*

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.522  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 13.0  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner)			Cantu-Galleano Ranch								
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	1	1	0	0	0	0	0	0	0	1

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR	Milliken (Hamner)			Cantu-Galleano Ranch								
Base Vol:	0	311	111	195	621	0	0	0	0	258	0	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:	0	311	111	195	621	0	0	0	0	258	0	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:	0	311	111	195	621	0	0	0	0	258	0	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	311	111	195	621	0	0	0	0	258	0	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:	0	311	111	195	621	0	0	0	0	258	0	67

Saturation Flow Module:	Milliken (Hamner)			Cantu-Galleano Ranch								
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.47	0.53	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	2557	913	1805	1900	0	0	0	0	1805	0	1615

Capacity Analysis Module:	Milliken (Hamner)			Cantu-Galleano Ranch								
Vol/Sat:	0.00	0.12	0.12	0.11	0.33	0.00	0.00	0.00	0.00	0.14	0.00	0.04
Crit Moves:	****			****			****					
Green/Cycle:	0.00	0.32	0.32	0.31	0.63	0.00	0.00	0.00	0.00	0.27	0.00	0.27
Volume/Cap:	0.00	0.38	0.38	0.35	0.52	0.00	0.00	0.00	0.00	0.52	0.00	0.15
Delay/Veh:	0.0	16.0	16.0	16.6	6.6	0.0	0.0	0.0	0.0	19.5	0.0	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:	0.0	16.0	16.0	16.6	6.6	0.0	0.0	0.0	0.0	19.5	0.0	16.7
LOS by Move:	A	B	B	B	A	A	A	A	A	B	A	B
HCM2k95thQ:	0	7	7	6	13	0	0	0	0	9	0	2

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



Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.200  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 9.0  
Optimal Cycle: OPTIMIZED Level Of Service: A  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps						Cantu-Galleano Ranch					
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			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	0	2	0	0	0	0	3	0	0	2

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM	PEAK HOUR
Base Vol:	0	0	0	201	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	201	0
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	201	0
Reduct Vol:	0	0	0	0	0
Reduced Vol:	0	0	0	201	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	201	0

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	1.00	0.91	1.00	1.00	0.95	0.88	
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00	1.00	0.00	2.00	2.00	
Final Sat.:	0	0	0	3502	0	1615	0	5187	1900	0	3610	3344	

Capacity Analysis Module:	Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.15	0.00	0.03	0.00	0.00	0.02	0.00
Crit Moves:							****		****				
Green/Cycle:	0.00	0.00	0.00	0.76	0.00	0.76	0.00	0.17	0.00	0.00	0.17	0.00	
Volume/Cap:	0.00	0.00	0.00	0.08	0.00	0.20	0.00	0.20	0.00	0.00	0.12	0.00	
Delay/Veh:	0.0	0.0	0.0	1.8	0.0	2.1	0.0	21.4	0.0	0.0	21.0	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	0.0	0.0	1.8	0.0	2.1	0.0	21.4	0.0	0.0	21.0	0.0	
LOS by Move:	A	A	A	A	A	A	A	C	A	A	C	A	
HCM2k95thQ:	0	0	0	1	0	3	0	2	0	0	1	0	

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

## Tuscana Village Specific Plan

Opening Year (2012) Existing-Plus-Ambient (No Project) PM Peak Hour

(All volumes converted to pce's and PHF applied)

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps

Cycle (sec): 60 Critical Vol./Cap.(X): 0.149

Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 11.9

Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: I-15 Northbound Ramps

Cantu-Galleano Ranch

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: Include

Include

Ovl

Include

Min. Green: 7 7 7

7 7 7

7 7 7

7 7 7

Lanes: 1 0 0 1 1

0 0 0 0 0

0 0 3 0 1

2 0 3 0 0

Volume Module: &gt;&gt; Count Date: 18 Aug 2009 &lt;&lt; PM PEAK HOUR

Base Vol: 46 0 115 0 0 0 0 215 161 200 162 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: 46 0 115 0 0 0 0 215 161 200 162 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: 46 0 115 0 0 0 0 215 161 200 162 0

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

Reduced Vol: 46 0 115 0 0 0 0 215 161 200 162 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

Final Volume: 46 0 115 0 0 0 0 215 161 200 162 0

Saturation Flow Module:

Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900

Adjustment: 0.95 1.00 0.85 1.00 1.00 1.00 1.00 0.91 0.85 0.92 0.91 1.00

Lanes: 1.00 0.00 2.00 0.00 0.00 0.00 0.00 3.00 1.00 2.00 3.00 0.00

Final Sat.: 1805 0 3230 0 0 0 0 5187 1615 3502 5187 0

Capacity Analysis Module:

Vol/Sat: 0.03 0.00 0.04 0.00 0.00 0.00 0.00 0.04 0.10 0.06 0.03 0.00

Crit Moves: \*\*\*\*

Green/Cycle: 0.24 0.00 0.24 0.00 0.00 0.00 0.00 0.28 0.52 0.38 0.66 0.00

Volume/Cap: 0.11 0.00 0.15 0.00 0.00 0.00 0.00 0.15 0.19 0.15 0.05 0.00

Delay/Veh: 17.9 0.0 18.1 0.0 0.0 0.0 0.0 16.4 7.9 12.2 3.6 0.0

User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00

AdjDel/Veh: 17.9 0.0 18.1 0.0 0.0 0.0 0.0 16.4 7.9 12.2 3.6 0.0

LOS by Move: B A B A A A A B A B A A

HCM2k95thQ: 1 0 2 0 0 0 0 2 3 3 1 0

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



Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #10 Milliken (Hamner) - Samantha  
\*\*\*\*\*

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[ 13.2]  
\*\*\*\*\*

Street Name:	Milliken (Hamner)					Samantha						
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1	1	0	0	1	0	0	0	0	1
Volume Module: >> Count Date:	22 Sep 2009 << PM PEAK HOUR											
Base Vol:	0	428	9	4	768	0	0	0	0	9	0	25
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	428	9	4	768	0	0	0	0	9	0	25
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	428	9	4	768	0	0	0	0	9	0	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	428	9	4	768	0	0	0	0	9	0	25

Critical Gap Module:	Milliken (Hamner)					Samantha				
Critical Gp:xxxxxx xxxxx xxxxxx	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	xxxx	6.2	
FollowUpTim:xxxxxx xxxxx xxxxxx	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	xxxx	3.3	

Capacity Module:	Milliken (Hamner)					Samantha				
Cnflct Vol: xxxxx xxxxx xxxxxx	437	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	1209	xxxx	219	
Potent Cap.: xxxxx xxxxx xxxxxx	1134	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	204	xxxx	826	
Move Cap.: xxxxx xxxxx xxxxxx	1134	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	203	xxxx	826	
Volume/Cap: xxxxx xxxxx xxxxxx	0.00	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.04	xxxx	0.03	

Level Of Service Module:	Milliken (Hamner)					Samantha				
2Way95thQ: xxxxx xxxxx xxxxxx	0.0	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.1	xxxx	0.1	
Control Del:xxxxxx xxxxx xxxxxx	8.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	23.5	xxxx	9.5	
LOS by Move: * * *	A	*	*	*	*	*	C	*	A	
Movement: LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap.: xxxxx xxxxx xxxxxx	xxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	
SharedQueue:xxxxxx xxxxx xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	
Shrd ConDel:xxxxxx xxxxx xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	
Shared LOS: * * *	*	*	*	*	*	*	*	*	*	
ApproachDel: xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	13.2			
ApproachLOS: *	*	*	*	*	*	*	B			

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

## **Appendix D-6**

**OPENING YEAR EXISTING-PLUS-AMBIENT  
WITH-PROJECT CONDITIONS – PM PEAK  
HOUR**

Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.571  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 19.8  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: Milliken (Hamner) Avenue Riverside Drive  
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: 7 7 7 7 7 7 7 7 7 7 7 7  
Lanes: 1 0 1 1 0 1 0 2 0 1 1 0 0 1 0 1 0 1 0 1

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR  
Base Vol: 223 315 13 123 562 199 164 92 221 14 59 156  
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: 223 315 13 123 562 199 164 92 221 14 59 156  
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: 223 315 13 123 562 199 164 92 221 14 59 156  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 223 315 13 123 562 199 164 92 221 14 59 156  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
FinalVolume: 223 315 13 123 562 199 164 92 221 14 59 156

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.95 0.94 0.94 0.95 0.95 0.85 0.95 0.89 0.89 0.95 1.00 0.85  
Lanes: 1.00 1.92 0.08 1.00 2.00 1.00 1.00 0.29 0.71 1.00 1.00 1.00  
Final Sat.: 1805 3446 142 1805 3610 1615 1805 499 1199 1805 1900 1615

Capacity Analysis Module:  
Vol/Sat: 0.12 0.09 0.09 0.07 0.16 0.12 0.09 0.18 0.18 0.01 0.03 0.10  
Crit Moves: \*\*\*\* \*  
Green/Cycle: 0.22 0.24 0.24 0.24 0.27 0.27 0.32 0.32 0.32 0.17 0.17 0.17  
Volume/Cap: 0.57 0.37 0.37 0.28 0.57 0.45 0.28 0.57 0.57 0.05 0.18 0.57  
Delay/Veh: 23.0 19.1 19.1 18.7 19.6 18.8 15.4 18.3 18.3 20.9 21.6 25.8  
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
AdjDel/Veh: 23.0 19.1 19.1 18.7 19.6 18.8 15.4 18.3 18.3 20.9 21.6 25.8  
LOS by Move: C B B B B B B B B C C C  
HCM2k95thQ: 9 6 6 4 11 7 5 11 11 1 2 7  
\*\*\*\*\*

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[ 11.7]

\*\*\*\*\*

Street Name: Milliken (Hamner) Avenue Industrial Dwy/Street "B" (Future

Approach: North Bound South Bound East Bound West Bound

Movement: L - T - R L - T - R L - T - R L - T - R

Control: Uncontrolled Uncontrolled Stop Sign Stop Sign

Rights: Include Include Include Include

Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 0 0 0 0 1! 0 0

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR

Base Vol: 0 678 0 26 914 0 0 0 0 1 0 12

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: 0 678 0 26 914 0 0 0 0 1 0 12

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: 0 678 0 26 914 0 0 0 0 1 0 12

Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0

FinalVolume: 0 678 0 26 914 0 0 0 0 1 0 12

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx 4.1 xxxx xxxxx xxxxx xxxx xxxxx 6.8 6.5 6.9

FollowUpTim:xxxxx xxxx xxxxx 2.2 xxxx xxxxx xxxxx xxxx xxxxx 3.5 4.0 3.3

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxx 678 xxxx xxxxx xxxxx xxxx xxxxx 1187 1644 339

Potent Cap.: xxxx xxxx xxxxx 923 xxxx xxxxx xxxxx xxxx xxxxx 184 101 663

Move Cap.: xxxx xxxx xxxxx 923 xxxx xxxxx xxxxx xxxx xxxxx 180 98 663

Volume/Cap: xxxx xxxx xxxxx 0.03 xxxx xxxxx xxxxx xxxx xxxxx 0.01 0.00 0.02

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx 0.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx

Control Del:xxxxx xxxx xxxxx 9.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx

LOS by Move: \* \* \* A \* \* \* \* \* \* \* \*

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx 550 xxxxx

SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx 0.1 xxxxx

Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx 11.7 xxxxx

Shared LOS: \* \* \* \* \* \* \* \* B \*

ApproachDel: xxxxxx xxxxxx xxxxxx 11.7

ApproachLOS: \* \* \* B

\*\*\*\*\*

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

\*\*\*\*\*



Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #3 Milliken Avenue - SR-60 Eastbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.590  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 15.1  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken Avenue						SR-60 Eastbound Ramps					
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	1	1	0	2	1	0	1	0	0	0

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR												
Base Vol:	0	559	96	166	527	0	221	0	320	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	559	96	166	527	0	221	0	320	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	559	96	166	527	0	221	0	320	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	559	96	166	527	0	221	0	320	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	559	96	166	527	0	221	0	320	0	0	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.93	0.95	0.95	1.00	0.89	1.00	0.89	1.00	1.00	1.00
Lanes:	0.00	1.71	0.29	1.00	2.00	0.00	1.26	0.00	0.74	0.00	0.00	0.00
Final Sat.:	0	3013	517	1805	3610	0	2132	0	1261	0	0	0

Capacity Analysis Module:												
Vol/Sat:	0.00	0.19	0.19	0.09	0.15	0.00	0.10	0.00	0.25	0.00	0.00	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.00	0.31	0.31	0.16	0.47	0.00	0.43	0.00	0.43	0.00	0.00	0.00
Volume/Cap:	0.00	0.59	0.59	0.59	0.31	0.00	0.24	0.00	0.59	0.00	0.00	0.00
Delay/Veh:	0.0	18.2	18.2	26.8	10.0	0.0	10.9	0.0	14.1	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	18.2	18.2	26.8	10.0	0.0	10.9	0.0	14.1	0.0	0.0	0.0
LOS by Move:	A	B	B	C	A	A	B	A	B	A	A	A
HCM2k95thQ:	0	12	12	8	7	0	4	0	13	0	0	0

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps

Cycle (sec): 60 Critical Vol./Cap.(X): 0.556  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 10.9  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner)				SR-60 Westbound Ramps								
Approach:	North Bound		South Bound		East Bound		West Bound						
Movement:	L	-	T	-	R	L	-	T	-	R			
Control:	Protected				Protected		Protected		Protected				
Rights:	Include				Include		Include		Include				
Min. Green:	7	7	7		7	7	7		7	7			
Lanes:	1	0	2	0	0	0	2	0	1	0	0	0	1

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR													
Base Vol:	287	484	0	0	673	484	0	0	0	76	0	98	
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:	287	484	0	0	673	484	0	0	0	76	0	98	
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:	287	484	0	0	673	484	0	0	0	76	0	98	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	287	484	0	0	673	484	0	0	0	76	0	98	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Final Volume:	287	484	0	0	673	484	0	0	0	76	0	98	

Saturation Flow Module:													
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Adjustment:	0.95	0.95	1.00	1.00	0.95	0.85	1.00	1.00	1.00	0.95	1.00	0.85	
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00	
Final Sat.:	1805	3610	0	0	3610	1615	0	0	0	1809	0	1615	

Capacity Analysis Module:													
Vol/Sat:	0.16	0.13	0.00	0.00	0.19	0.30	0.00	0.00	0.00	0.04	0.00	0.06	
Crit Moves:	***					***				***			
Green/Cycle:	0.27	0.78	0.00	0.00	0.51	0.51	0.00	0.00	0.00	0.12	0.00	0.12	
Volume/Cap:	0.59	0.17	0.00	0.00	0.36	0.59	0.00	0.00	0.00	0.36	0.00	0.52	
Delay/Veh:	20.8	1.7	0.0	0.0	8.9	11.3	0.0	0.0	0.0	25.5	0.0	27.5	
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:	20.8	1.7	0.0	0.0	8.9	11.3	0.0	0.0	0.0	25.5	0.0	27.5	
LOS by Move:	C	A	A	A	A	B	A	A	A	C	A	C	
HCM2k95thQ:	11	3	0	0	8	13	0	0	0	4	0	5	

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek  
\*\*\*\*\*

Cycle (sec): 65 Critical Vol./Cap.(X): 0.179  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 12.3  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Riverside						Mill Creek								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Permitted			Permitted			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7			
Lanes:	1	0	1	0	1	1	0	0	1	0	1	0	1	1	0

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR

Base Vol:	36	6	13	53	4	49	108	368	52	13	255	60
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:	36	6	13	53	4	49	108	368	52	13	255	60
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:	36	6	13	53	4	49	108	368	52	13	255	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	6	13	53	4	49	108	368	52	13	255	60
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:	36	6	13	53	4	49	108	368	52	13	255	60

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.73	1.00	0.85	0.76	0.86	0.86	0.95	0.93	0.93	0.95	0.92	0.92
Lanes:	1.00	1.00	1.00	1.00	0.08	0.92	1.00	1.75	0.25	1.00	1.62	0.38
Final Sat.:	1378	1900	1615	1452	123	1512	1805	3103	438	1805	2841	668

Capacity Analysis Module:

Vol/Sat:	0.03	0.00	0.01	0.04	0.03	0.03	0.06	0.12	0.12	0.01	0.09	0.09
Crit Moves:				****				****				****
Green/Cycle:	0.19	0.19	0.19	0.19	0.19	0.19	0.36	0.61	0.61	0.11	0.36	0.36
Volume/Cap:	0.14	0.02	0.04	0.19	0.17	0.17	0.17	0.19	0.19	0.07	0.25	0.25
Delay/Veh:	22.2	21.5	21.6	22.6	22.4	22.4	14.3	5.6	5.6	26.2	14.7	14.7
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:	22.2	21.5	21.6	22.6	22.4	22.4	14.3	5.6	5.6	26.2	14.7	14.7
LOS by Move:	C	C	C	C	C	C	B	A	A	C	B	B
HCM2k95thQ:	1	0	0	2	2	2	3	4	4	1	5	5

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



Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #6 Riverside - Sharp

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[ 10.6]

\*\*\*\*\*  
Street Name: Sharp Riverside  
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: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 0 0 0  
-----|-----|-----|-----|  
Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR  
Base Vol: 18 0 15 0 0 0 0 0 212 18 22 190 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: 18 0 15 0 0 0 0 0 212 18 22 190 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: 18 0 15 0 0 0 0 0 212 18 22 190 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 18 0 15 0 0 0 0 0 212 18 22 190 0  
-----|-----|-----|-----|

Critical Gap Module:  
Critical Gp: 6.4 xxxx 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx  
FollowUpTim: 3.5 xxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx  
-----|-----|-----|-----|

Capacity Module:  
Cnflct Vol: 455 xxxx 221 xxxx xxxx xxxxx xxxx xxxx xxxxx 230 xxxx xxxxx  
Potent Cap.: 567 xxxx 824 xxxx xxxx xxxxx xxxx xxxx xxxxx 1350 xxxx xxxxx  
Move Cap.: 560 xxxx 824 xxxx xxxx xxxxx xxxx xxxx xxxxx 1350 xxxx xxxxx  
Volume/Cap: 0.03 xxxx 0.02 xxxx xxxx xxxxx xxxx xxxx xxxxx 0.02 xxxx xxxxx  
-----|-----|-----|-----|

Level Of Service Module:  
2Way95thQ: 0.1 xxxx 0.1 xxxx xxxx xxxxx xxxx xxxx xxxxx 0.0 xxxx xxxxx  
Control Del: 11.6 xxxx 9.5 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.7 xxxx xxxxx  
LOS by Move: B \* A \* \* \* \* \* \* \* \* 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: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 10.6 xxxxxx xxxxxx xxxxxx  
ApproachLOS: B \* \* \*

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



Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.528  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 13.0  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: Milliken (Hamner)				Cantu-Galleano Ranch											
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: Include				Include				Include				Include			
Min. Green: 7 7 7				7 7 7				7 7 7				7 7 7			
Lanes: 0 0 1 1 0				1 0 1 0 0				0 0 0 0 0				1 0 0 0 1			

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR

Base Vol:	0	325	111	208	632	0	0	0	0	258	0	85
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	325	111	208	632	0	0	0	0	258	0	85
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	325	111	208	632	0	0	0	0	258	0	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	325	111	208	632	0	0	0	0	258	0	85
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	325	111	208	632	0	0	0	0	258	0	85

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	0.00	1.49	0.51	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	2589	884	1805	1900	0	0	0	0	1805	0	1615

Capacity Analysis Module:

Vol/Sat:	0.00	0.13	0.13	0.12	0.33	0.00	0.00	0.00	0.00	0.14	0.00	0.05
Crit Moves:	****				****					****		
Green/Cycle:	0.00	0.33	0.33	0.30	0.63	0.00	0.00	0.00	0.00	0.27	0.00	0.27
Volume/Cap:	0.00	0.38	0.38	0.38	0.53	0.00	0.00	0.00	0.00	0.53	0.00	0.19
Delay/Veh:	0.0	15.8	15.8	16.9	6.6	0.0	0.0	0.0	0.0	19.7	0.0	17.1
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:	0.0	15.8	15.8	16.9	6.6	0.0	0.0	0.0	0.0	19.7	0.0	17.1
LOS by Move:	A	B	B	B	A	A	A	A	A	B	A	B
HCM2k95thQ:	0	7	7	7	13	0	0	0	0	9	0	3

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.201  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 9.4  
Optimal Cycle: OPTIMIZED Level Of Service: A  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps						Cantu-Galleano Ranch					
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:	Include			Include			Ignore			Ignore		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	0	2	0	0	0	0	3	0	0	2

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR												
Base Vol:	0	0	0	201	0	245	0	186	131	0	93	122
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	201	0	245	0	186	131	0	93	122
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	201	0	245	0	186	0	0	93	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	201	0	245	0	186	0	0	93	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Volume:	0	0	0	201	0	245	0	186	0	0	93	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	1.00	0.91	1.00	1.00	0.95	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00	1.00	0.00	2.00	2.00
Final Sat.:	0	0	0	3502	0	1615	0	5187	1900	0	3610	3344

Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.06	0.00	0.15	0.00	0.04	0.00	0.00	0.03	0.00
Crit Moves:				****			****			****		
Green/Cycle:	0.00	0.00	0.00	0.75	0.00	0.75	0.00	0.18	0.00	0.00	0.18	0.00
Volume/Cap:	0.00	0.00	0.00	0.08	0.00	0.20	0.00	0.20	0.00	0.00	0.14	0.00
Delay/Veh:	0.0	0.0	0.0	1.9	0.0	2.2	0.0	21.1	0.0	0.0	20.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	1.9	0.0	2.2	0.0	21.1	0.0	0.0	20.9	0.0
LOS by Move:	A	A	A	A	A	A	A	C	A	A	C	A
HCM2k95thQ:	0	0	0	1	0	3	0	3	0	0	2	0

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.151  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 11.9  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	I-15 Northbound Ramps						Cantu-Galleano Ranch					
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:	Include			Include			Ovl			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	0	1	1	0	0	0	3	0	1	2

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR												
Base Vol:	55	0	115	0	0	0	0	222	161	200	171	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:	55	0	115	0	0	0	0	222	161	200	171	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:	55	0	115	0	0	0	0	222	161	200	171	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	0	115	0	0	0	0	222	161	200	171	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
Final Volume:	55	0	115	0	0	0	0	222	161	200	171	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.91	0.85	0.92	0.91	1.00
Lanes:	1.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	2.00	3.00	0.00
Final Sat.:	1805	0	3230	0	0	0	0	5187	1615	3502	5187	0

Capacity Analysis Module:												
Vol/Sat:	0.03	0.00	0.04	0.00	0.00	0.00	0.00	0.04	0.10	0.06	0.03	0.00
Crit Moves:	****						****			****		
Green/Cycle:	0.24	0.00	0.24	0.00	0.00	0.00	0.00	0.28	0.52	0.38	0.66	0.00
Volume/Cap:	0.13	0.00	0.15	0.00	0.00	0.00	0.00	0.15	0.19	0.15	0.05	0.00
Delay/Veh:	18.2	0.0	18.2	0.0	0.0	0.0	0.0	16.1	7.8	12.3	3.5	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:	18.2	0.0	18.2	0.0	0.0	0.0	0.0	16.1	7.8	12.3	3.5	0.0
LOS by Move:	B	A	B	A	A	A	A	B	A	B	A	A
HCM2k95thQ:	2	0	2	0	0	0	0	2	3	3	1	0

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



Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #10 Milliken (Hamner) - Samantha  
\*\*\*\*\*

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[ 13.7]  
\*\*\*\*\*

Street Name:		Milliken (Hamner)				Samantha			
Approach:		North Bound		South Bound		East Bound		West Bound	
Movement:		L	T - R	L	T - R	L	T - R	L	T - R
Control:		Uncontrolled		Uncontrolled		Stop Sign		Stop Sign	
Rights:		Include		Include		Include		Include	
Lanes:		0	0 1 1 0	1	0 1 0 0	0	0 0 0 0	1	0 0 0 1
Volume Module: >> Count Date: 22 Sep 2009 << PM PEAK HOUR									
Base Vol:		0	461 9	4	792 0	0	0 0 0	9	0 25
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	461 9	4	792 0	0	0 0 0	9	0 25
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	461 9	4	792 0	0	0 0 0	9	0 25
Reduct Vol:		0	0 0	0	0 0	0	0 0 0	0	0 0
Final Volume:		0	461 9	4	792 0	0	0 0 0	9	0 25

Critical Gap Module:

Critical Gap:xxxxx xxxx xxxxx	4.1 xxxx xxxxx xxxxx xxxx xxxxx	6.4 xxxx	6.2
FollowUpTim:xxxxx xxxx xxxxx	2.2 xxxx xxxxx xxxxx xxxx xxxxx	3.5 xxxx	3.3

Capacity Module:

Cnflct Vol: xxxx xxxx xxxxx	470 xxxx xxxxx xxxx xxxx xxxxx	1266 xxxx	235
Potent Cap.: xxxx xxxx xxxxx	1102 xxxx xxxxx xxxx xxxx xxxxx	188 xxxx	809
Move Cap.: xxxx xxxx xxxxx	1102 xxxx xxxxx xxxx xxxx xxxxx	188 xxxx	809
Volume/Cap: xxxx xxxx xxxxx	0.00 xxxx xxxxx xxxx xxxx xxxxx	0.05 xxxx	0.03

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx	0.0 xxxx xxxxx xxxx xxxx xxxxx	0.1 xxxx	0.1
Control Del:xxxxx xxxx xxxxx	8.3 xxxx xxxxx xxxxx xxxx xxxxx	25.1 xxxx	9.6
LOS by Move: * * *	A * *	D *	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: * * *	* * *	* *	*
ApproachDel: xxxxxx	xxxxxx	xxxxxx	13.7
ApproachLOS: *	*	*	B

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

Tuscana Village Specific Plan  
Opening Year (2012) Existing-Plus-Ambient With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #11 Riverside - Street A (future)  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.218  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 10.3  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Riverside						Street A						
North Bound			South Bound			East Bound			West Bound			
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	0	0	0	0	1	0	1	0	0	0

Volume Module: PM PEAK HOUR

Base Vol:	0	0	0	119	0	10	62	356	0	0	346	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:	0	0	0	119	0	10	62	356	0	0	346	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:	0	0	0	119	0	10	62	356	0	0	346	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	119	0	10	62	356	0	0	346	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
Final Volume:	0	0	0	119	0	10	62	356	0	0	346	42

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	1.00	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1805	0	1615	1805	1900	0	0	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.01	0.03	0.19	0.00	0.00	0.10	0.03
Crit Moves:				****				****				****
Green/Cycle:	0.00	0.00	0.00	0.30	0.00	0.30	0.16	0.60	0.00	0.00	0.44	0.44
Volume/Cap:	0.00	0.00	0.00	0.22	0.00	0.02	0.22	0.31	0.00	0.00	0.22	0.06
Delay/Veh:	0.0	0.0	0.0	15.8	0.0	14.7	22.4	6.1	0.0	0.0	10.5	9.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	15.8	0.0	14.7	22.4	6.1	0.0	0.0	10.5	9.7
LOS by Move:	A	A	A	B	A	B	C	A	A	A	B	A
HCM2k95thQ:	0	0	0	4	0	0	2	7	0	0	4	1

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

## **Appendix D-7**

### **CUMULATIVE NO-PROJECT CONDITIONS – AM PEAK HOUR**

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative No Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.566  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 20.3  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue						Riverside Drive					
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:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	129	505	40	235	275	123	221	117	154	26	98	174
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:	129	505	40	235	275	123	221	117	154	26	98	174
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:	129	505	40	235	275	123	221	117	154	26	98	174
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	129	505	40	235	275	123	221	117	154	26	98	174
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
Final Volume:	129	505	40	235	275	123	221	117	154	26	98	174

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.91	0.91	0.95	0.92	0.92	0.95	1.00	0.85
Lanes:	1.00	1.85	0.15	1.00	1.38	0.62	1.00	0.43	0.57	1.00	1.00	1.00
Final Sat.:	1805	3308	262	1805	2380	1064	1805	751	988	1805	1900	1615

Capacity Analysis Module:												
Vol/Sat:	0.07	0.15	0.15	0.13	0.12	0.12	0.12	0.16	0.16	0.01	0.05	0.11
Crit Moves:	****			****			****			****		
Green/Cycle:	0.25	0.27	0.27	0.23	0.25	0.25	0.28	0.28	0.28	0.19	0.19	0.19
Volume/Cap:	0.29	0.57	0.57	0.57	0.46	0.46	0.44	0.57	0.57	0.08	0.27	0.57
Delay/Veh:	18.5	19.7	19.7	22.3	19.5	19.5	18.6	20.2	20.2	20.0	21.1	24.5
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:	18.5	19.7	19.7	22.3	19.5	19.5	18.6	20.2	20.2	20.0	21.1	24.5
LOS by Move:	B	B	B	C	B	B	B	C	C	C	C	C
HCM2k95thQ:	4	10	10	9	8	8	8	10	10	1	4	8

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



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative No Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[ 12.3]

\*\*\*\*\*  
Street Name: Milliken (Hamner) Avenue Industrial Dwy/Street "B" (Future  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
Rights: Include Include Include Include  
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 1! 0 0  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR  
Base Vol: 0 877 2 33 622 0 0 0 0 1 0 27  
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: 0 877 2 33 622 0 0 0 0 1 0 27  
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: 0 877 2 33 622 0 0 0 0 1 0 27  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 0 877 2 33 622 0 0 0 0 1 0 27  
-----|-----|-----|-----|

Critical Gap Module:  
Critical Gp:xxxxx xxxxx xxxxxx 4.1 xxxxx xxxxxx xxxxxx xxxxx xxxxxx 6.8 6.5 6.9  
FollowUpTim:xxxxx xxxxx xxxxxx 2.2 xxxxx xxxxxx xxxxxx xxxxx xxxxxx 3.5 4.0 3.3  
-----|-----|-----|-----|

Capacity Module:  
Cnflct Vol: xxxxx xxxxx xxxxxx 879 xxxxx xxxxxx xxxxx xxxxx xxxxxx 1255 1566 440  
Potent Cap.: xxxxx xxxxx xxxxxx 777 xxxxx xxxxxx xxxxx xxxxx xxxxxx 166 112 571  
Move Cap.: xxxxx xxxxx xxxxxx 777 xxxxx xxxxxx xxxxx xxxxx xxxxxx 161 108 571  
Volume/Cap: xxxxx xxxxx xxxxxx 0.04 xxxxx xxxxx xxxxx xxxxx xxxxxx 0.01 0.00 0.05  
-----|-----|-----|-----|

Level Of Service Module:  
2Way95thQ: xxxxx xxxxx xxxxxx 0.1 xxxxx xxxxxx xxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx  
Control Del:xxxxx xxxxx xxxxxx 9.8 xxxxx xxxxxx 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 523 xxxxx  
SharedQueue:xxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx 0.2 xxxxx  
Shrd ConDel:xxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx xxxxx xxxxxx xxxxxx 12.3 xxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* B \*  
ApproachDel: xxxxxx xxxxxx xxxxxx 12.3  
ApproachLOS: \* \* \* B  
\*\*\*\*\*

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

\*\*\*\*\*



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative No Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3 Milliken Avenue - SR-60 Eastbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.744  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 17.7  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:		Milliken Avenue				SR-60 Eastbound Ramps			
Approach:	North Bound	South Bound			East Bound	West Bound			
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R		
Control:	Protected	Protected			Protected	Protected			
Rights:	Include	Include			Include	Include			
Min. Green:	7 7 7	7 7 7	7 7 7	7 7 7	7 7 7	7 7 7	7 7 7		
Lanes:	0 0 1 1 0	1 0 2 0 0	1 0 1 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0		

Volume Module:	>> Count	Date:	18 Aug 2009	<< AM	PEAK HOUR
Base Vol:	0 807 109	76 288	0 528 2 335	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	1.00 1.00 1.00
Initial Bse:	0 807 109	76 288	0 528 2 335	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 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 1.00 1.00
PHF Volume:	0 807 109	76 288	0 528 2 335	0 0 0	
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0	
Reduced Vol:	0 807 109	76 288	0 528 2 335	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 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 1.00 1.00
FinalVolume:	0 807 109	76 288	0 528 2 335	0 0 0	

Saturation Flow Module:	Sat/Lane:	1900 1900 1900	1900 1900 1900	1900 1900 1900	1900 1900 1900
Adjustment:	1.00 0.93 0.93	0.95 0.95 1.00	0.86 0.86 0.86	1.00 1.00 1.00	
Lanes:	0.00 1.76 0.24	1.00 2.00 0.00	1.44 0.01 0.55	0.00 0.00 0.00	
Final Sat.:	0 3123 422	1805 3610	0 2342 5 907	0 0 0	

Capacity Analysis Module:	Vol/Sat:	0.00 0.26 0.26	0.04 0.08 0.00	0.23 0.37 0.37	0.00 0.00 0.00
Crit Moves:	****	****	****	****	
Green/Cycle:	0.00 0.32 0.32	0.12 0.44 0.00	0.46 0.46 0.46	0.00 0.00 0.00	
Volume/Cap:	0.00 0.80 0.80	0.36 0.18 0.00	0.49 0.80 0.80	0.00 0.00 0.00	
Delay/Veh:	0.0 22.7 22.7	25.5 10.3 0.0	11.5 18.2 18.2	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 22.7 22.7	25.5 10.3 0.0	11.5 18.2 18.2	0.0 0.0 0.0	
LOS by Move:	A C C	C B A	B B B	A A A	
HCM2k95thQ:	0 20 20	4 4 0	10 22 22	0 0 0	

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative No Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.611  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 14.0  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: Milliken (Hamner) SR-60 Westbound Ramps  
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: Include Include Include Include  
Min. Green: 7 7 7 7 7 7 7 7 7 7 7 7  
Lanes: 1 0 2 0 0 0 0 2 0 1 0 0 0 0 0 0 1 0 0 1  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR  
Base Vol: 379 972 0 0 303 252 0 0 0 108 5 297  
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: 379 972 0 0 303 252 0 0 0 108 5 297  
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: 379 972 0 0 303 252 0 0 0 108 5 297  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 379 972 0 0 303 252 0 0 0 108 5 297  
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: 379 972 0 0 303 252 0 0 0 108 5 297  
-----|-----|-----|-----|

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.95 0.95 1.00 1.00 0.95 0.85 1.00 1.00 1.00 0.96 0.96 0.85  
Lanes: 1.00 2.00 0.00 0.00 2.00 1.00 0.00 0.00 0.00 0.96 0.04 1.00  
Final Sat.: 1805 3610 0 0 3610 1615 0 0 0 1745 81 1615  
-----|-----|-----|-----|

Capacity Analysis Module:  
Vol/Sat: 0.21 0.27 0.00 0.00 0.08 0.16 0.00 0.00 0.00 0.06 0.06 0.18  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.34 0.60 0.00 0.00 0.26 0.26 0.00 0.00 0.00 0.30 0.30 0.30  
Volume/Cap: 0.61 0.45 0.00 0.00 0.33 0.61 0.00 0.00 0.00 0.21 0.21 0.61  
Delay/Veh: 18.2 6.8 0.0 0.0 18.4 22.4 0.0 0.0 0.0 15.8 15.8 20.2  
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: 18.2 6.8 0.0 0.0 18.4 22.4 0.0 0.0 0.0 15.8 15.8 20.2  
LOS by Move: B A A A B C A A A B B C  
HCM2k95thQ: 13 11 0 0 5 10 0 0 0 3 3 11  
\*\*\*\*\*

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

## Tuscana Village Specific Plan

Opening Year (2012) Cumulative No Project AM Peak Hour

(All volumes converted to pce's and PHF applied)

## Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek

Cycle (sec): 60 Critical Vol./Cap.(X): 0.582  
 Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 17.9  
 Optimal Cycle: OPTIMIZED Level Of Service: B  
 \*\*\*\*\*

Street Name:	Riverside						Mill Creek								
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Permitted			Permitted			Protected			Protected					
Rights:	Include			Include			Include			Include					
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7			
Lanes:	1	0	1	0	1	1	0	0	1	0	1	0	1	1	0

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR

Base Vol:	220	100	79	36	141	106	360	282	222	108	316	21
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:	220	100	79	36	141	106	360	282	222	108	316	21
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:	220	100	79	36	141	106	360	282	222	108	316	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	220	100	79	36	141	106	360	282	222	108	316	21
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:	220	100	79	36	141	106	360	282	222	108	316	21

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.50	1.00	0.85	0.69	0.94	0.94	0.95	0.89	0.89	0.95	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	0.57	0.43	1.00	1.12	0.88	1.00	1.88	0.12
Final Sat.:	956	1900	1615	1303	1015	763	1805	1887	1485	1805	3355	223

Capacity Analysis Module:

Vol/Sat:	0.23	0.05	0.05	0.03	0.14	0.14	0.20	0.15	0.15	0.06	0.09	0.09
Crit Moves:	****						****			****		
Green/Cycle:	0.40	0.40	0.40	0.40	0.40	0.40	0.34	0.28	0.28	0.22	0.16	0.16
Volume/Cap:	0.58	0.13	0.12	0.07	0.35	0.35	0.58	0.53	0.53	0.27	0.58	0.58
Delay/Veh:	16.5	11.7	11.6	11.3	13.0	13.0	17.6	18.7	18.7	19.7	24.8	24.8
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:	16.5	11.7	11.6	11.3	13.0	13.0	17.6	18.7	18.7	19.7	24.8	24.8
LOS by Move:	B	B	B	B	B	B	B	B	B	B	C	C
HCM2k95thQ:	8	3	2	1	7	7	12	9	9	4	8	8

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



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative No Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #6 Riverside - Sharp

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[ 11.2]

\*\*\*\*\*  
Street Name: Sharp Riverside  
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: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 0 1 0 0  
-----|-----|-----|-----|  
Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR  
Base Vol: 8 0 36 0 0 0 0 342 20 38 278 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: 8 0 36 0 0 0 0 342 20 38 278 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: 8 0 36 0 0 0 0 342 20 38 278 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 8 0 36 0 0 0 0 342 20 38 278 0  
-----|-----|-----|-----|

Critical Gap Module:  
Critical Gp: 6.4 xxxx 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx  
FollowUpTim: 3.5 xxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx  
-----|-----|-----|-----|

Capacity Module:  
Cnflct Vol: 706 xxxx 352 xxxx xxxx xxxxx xxxx xxxx xxxxx 362 xxxx xxxxx  
Potent Cap.: 405 xxxx 696 xxxx xxxx xxxxx xxxx xxxx xxxxx 1208 xxxx xxxxx  
Move Cap.: 395 xxxx 696 xxxx xxxx xxxxx xxxx xxxx xxxxx 1208 xxxx xxxxx  
Volume/Cap: 0.02 xxxx 0.05 xxxx xxxx xxxxx xxxx xxxx xxxxx 0.03 xxxx xxxxx  
-----|-----|-----|-----|

Level Of Service Module:  
2Way95thQ: 0.1 xxxx 0.2 xxxx xxxx xxxxx xxxx xxxx xxxxx 0.1 xxxx xxxxx  
Control Del: 14.3 xxxx 10.5 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.1 xxxx xxxxx  
LOS by Move: B \* B \* \* \* \* \* \* \* 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: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 11.2 xxxxxx xxxxxx xxxxxx  
ApproachLOS: B \* \* \*  
\*\*\*\*\*

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

\*\*\*\*\*

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative No Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.517  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 19.6  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner)						Cantu-Galleano Ranch											
Approach:	North Bound			South Bound			East Bound			West Bound								
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R			
Control:	Protected						Protected						Protected					
Rights:	Include						Include						Include					
Min. Green:	7		7		7	7		7		7	7		7		7			
Lanes:	0	1	0	1	0	1	0	0	1	0	1	0	0	1	0			

Volume Module:	>>	Count	Date:	18 Aug 2009	<<	AM	PEAK HOUR
Base Vol:	13	475	245	143	198	8	17 0 12 99 0 187
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:	13	475	245	143	198	8	17 0 12 99 0 187
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:	13	475	245	143	198	8	17 0 12 99 0 187
Reduct Vol:	0	0	0	0	0	0	0 0 0 0 0 0
Reduced Vol:	13	475	245	143	198	8	17 0 12 99 0 187
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
Final Volume:	13	475	245	143	198	8	17 0 12 99 0 187

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.90	0.90	0.95	0.99	0.99	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	0.03	1.30	0.67	1.00	0.96	0.04	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	61	2220	1145	1805	1815	73	1805	0	1615	1805	0	1615

Capacity Analysis Module:	Vol/Sat:	0.21	0.21	0.21	0.08	0.11	0.11	0.01	0.00	0.01	0.05	0.00	0.12
Crit Moves:	****				****			****					****
Green/Cycle:	0.37	0.36	0.36	0.19	0.19	0.19	0.12	0.00	0.02	0.30	0.00	0.20	
Volume/Cap:	0.59	0.60	0.60	0.41	0.59	0.59	0.08	0.00	0.39	0.19	0.00	0.59	
Delay/Veh:	16.1	16.6	16.6	21.9	24.8	24.8	23.8	0.0	37.3	15.9	0.0	24.6	
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:	16.1	16.6	16.6	21.9	24.8	24.8	23.8	0.0	37.3	15.9	0.0	24.6	
LOS by Move:	B	B	B	C	C	C	C	A	D	B	A	C	
HCM2k95thQ:	13	13	13	6	9	9	1	0	2	3	0	8	

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative No Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.179  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 9.3  
Optimal Cycle: OPTIMIZED Level Of Service: A  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps				Cantu-Galleano Ranch				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Permitted		Permitted		
Rights:	Include		Include		Ignore		Ignore		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	0	0	0	0	2	0	0	1	

Volume Module: >> Count	Date: 18 Aug 2009 << AM	PEAK HOUR
Base Vol:	0 0 0 392 0 167 0 288 87 0 140 228	
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 0 392 0 167 0 288 87 0 140 228	
User Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00	
PHF Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00	
PHF Volume:	0 0 0 392 0 167 0 288 0 0 140 0	
Reduct Vol:	0 0 0 0 0 0 0 0 0 0 0 0	
Reduced Vol:	0 0 0 392 0 167 0 288 0 0 140 0	
PCE Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00	
MLF Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 0.00 1.00 1.00 0.00	
FinalVolume:	0 0 0 392 0 167 0 288 0 0 140 0	

Saturation Flow Module:	
Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	1.00 1.00 1.00 0.92 1.00 0.85 1.00 0.91 1.00 1.00 0.95 0.88
Lanes:	0.00 0.00 0.00 2.00 0.00 1.00 0.00 3.00 1.00 0.00 2.00 2.00
Final Sat.:	0 0 0 3502 0 1615 0 5187 1900 0 3610 3344

Capacity Analysis Module:	
Vol/Sat:	0.00 0.00 0.00 0.11 0.00 0.10 0.00 0.06 0.00 0.00 0.04 0.00
Crit Moves:	****
Green/Cycle:	0.00 0.00 0.00 0.62 0.00 0.62 0.00 0.31 0.00 0.00 0.31 0.00
Volume/Cap:	0.00 0.00 0.00 0.18 0.00 0.17 0.00 0.18 0.00 0.00 0.13 0.00
Delay/Veh:	0.0 0.0 0.0 4.8 0.0 4.8 0.0 15.2 0.0 0.0 14.9 0.0
User DelAdj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:	0.0 0.0 0.0 4.8 0.0 4.8 0.0 15.2 0.0 0.0 14.9 0.0
LOS by Move:	A A A A A A A B A A B A
HCM2k95thQ:	0 0 0 3 0 3 0 3 0 0 2 0

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



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative No Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.305  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 12.9  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	I-15 Northbound Ramps				Cantu-Galleano Ranch				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Ovl		Include		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	1	0	0	1	1	0	0	0	0

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	85	0	286	0	0	0	0	390	296	389	318	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:	85	0	286	0	0	0	0	390	296	389	318	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:	85	0	286	0	0	0	0	390	296	389	318	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	0	286	0	0	0	0	390	296	389	318	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:	85	0	286	0	0	0	0	390	296	389	318	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.91	0.85	0.92	0.91	1.00
Lanes:	1.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	2.00	3.00	0.00
Final Sat.:	1805	0	3230	0	0	0	0	5187	1615	3502	5187	0

Capacity Analysis Module:												
Vol/Sat:	0.05	0.00	0.09	0.00	0.00	0.00	0.00	0.08	0.18	0.11	0.06	0.00
Crit Moves:	****						****			****		
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.25	0.54	0.36	0.61	0.00
Volume/Cap:	0.16	0.00	0.31	0.00	0.00	0.00	0.00	0.31	0.34	0.31	0.10	0.00
Delay/Veh:	16.0	0.0	16.8	0.0	0.0	0.0	0.0	18.6	8.1	13.8	4.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.0	0.0	16.8	0.0	0.0	0.0	0.0	18.6	8.1	13.8	4.9	0.0
LOS by Move:	B	A	B	A	A	A	A	B	A	B	A	A
HCM2k95thQ:	3	0	5	0	0	0	0	5	7	6	2	0

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative No Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #10 Milliken (Hamner) - Samantha  
\*\*\*\*\*

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C[ 18.6]  
\*\*\*\*\*

Street Name:	Milliken (Hamner)					Samantha						
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1	1	0	1	0	0	0	1	0	0

Volume Module:	>> Count	Date:	22 Sep 2009	<< AM	PEAK HOUR
Base Vol:	0	873	33	13	421
Growth Adj:	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	873	33	13	421
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	873	33	13	421
Reduct Vol:	0	0	0	0	0
Final Volume:	0	873	33	13	421

Critical Gap Module:	Critical Gp:	xxxxx	xxxx	xxxxxx	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.4	xxxx	6.2
FollowUpTim:	xxxxxx	xxxx	xxxxxx	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	xxxx	3.3	

Capacity Module:	Cnflict Vol:	xxxx	xxxx	xxxxxx	906	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	1337	xxxx	453
Potent Cap.:	xxxx	xxxx	xxxxxx	759	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	171	xxxx	611	
Move Cap.:	xxxx	xxxx	xxxxxx	759	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	169	xxxx	611	
Volume/Cap:	xxxx	xxxx	xxxx	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	0.07	xxxx	0.02	

Level Of Service Module:	2Way95thQ:	xxxx	xxxx	xxxxxx	0.1	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0.2	xxxx	0.1
Control Del:	xxxxxx	xxxx	xxxxxx	9.8	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	28.0	xxxx	11.0	
LOS by Move:	*	*	*	A	*	*	*	*	*	D	*	B	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	
SharedQueue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			18.6			
ApproachLOS:	*			*			*			C			

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



## **Appendix D-8**

### **CUMULATIVE WITH-PROJECT CONDITIONS – AM PEAK HOUR**

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.595  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 20.8  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue						Riverside Drive					
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:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module: >> Count Date:	18 Aug 2009 << AM PEAK HOUR											
Base Vol:	172	479	40	239	288	181	332	121	167	26	103	174
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:	172	479	40	239	288	181	332	121	167	26	103	174
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:	172	479	40	239	288	181	332	121	167	26	103	174
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	172	479	40	239	288	181	332	121	167	26	103	174
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
Final Volume:	172	479	40	239	288	181	332	121	167	26	103	174

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	0.85	0.95	0.91	0.91	0.95	1.00	0.85
Lanes:	1.00	1.85	0.15	1.00	2.00	1.00	1.00	0.42	0.58	1.00	1.00	1.00
Final Sat.:	1805	3292	275	1805	3610	1615	1805	729	1006	1805	1900	1615

Capacity Analysis Module:												
Vol/Sat:	0.10	0.15	0.15	0.13	0.08	0.11	0.18	0.17	0.17	0.01	0.05	0.11
Crit Moves:	****			****			****			****		
Green/Cycle:	0.23	0.24	0.24	0.22	0.23	0.23	0.31	0.31	0.31	0.18	0.18	0.18
Volume/Cap:	0.41	0.60	0.60	0.60	0.34	0.48	0.60	0.54	0.54	0.08	0.30	0.60
Delay/Veh:	20.1	21.2	21.2	23.3	19.4	20.8	19.3	18.3	18.3	20.5	21.8	25.9
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:	20.1	21.2	21.2	23.3	19.4	20.8	19.3	18.3	18.3	20.5	21.8	25.9
LOS by Move:	C	C	C	C	B	C	B	B	B	C	C	C
HCM2k95thQ:	6	11	11	10	5	7	12	10	10	1	4	8

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[ 12.9]

\*\*\*\*\*  
Street Name: Milliken (Hamner) Avenue Industrial Dwy/Street "B" (Future  
Approach: North Bound South Bound East Bound West Bound  
Movement: L - T - R L - T - R L - T - R L - T - R  
-----|-----|-----|-----|  
Control: Uncontrolled Uncontrolled Stop Sign Stop Sign  
Rights: Include Include Include Include  
Lanes: 0 0 1 1 0 1 0 2 0 0 0 0 0 0 0 1 0 0  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR

Base Vol:	0	963	2	33	680	0	0	0	0	1	0	27
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	963	2	33	680	0	0	0	0	1	0	27
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	963	2	33	680	0	0	0	0	1	0	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	0	963	2	33	680	0	0	0	0	1	0	27

Critical Gap Module:

Critical Gp:xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9
FollowUpTim:xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	965	xxxx	xxxxx	xxxx	xxxx	xxxxx	1370	1710	483
Potent Cap.:	xxxx	xxxx	xxxxx	722	xxxx	xxxxx	xxxx	xxxx	xxxxx	140	92	535
Move Cap.:	xxxx	xxxx	xxxxx	722	xxxx	xxxxx	xxxx	xxxx	xxxxx	135	88	535
Volume/Cap:	xxxx	xxxx	xxxx	0.05	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.00	0.05

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:xxxxx	xxxx	xxxx	xxxxx	10.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	B	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	484	xxxxx
SharedQueue:xxxxx	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.2	xxxxx
Shrd ConDel:xxxxx	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	12.9	
ApproachLOS:	*	*	*	*	*	*	*	*	*	*	B	

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3 Milliken Avenue - SR-60 Eastbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.790  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 19.4  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:		Milliken Avenue				SR-60 Eastbound Ramps					
Approach:		North Bound		South Bound		East Bound		West Bound			
Movement:		L	T	R	L	T	R	L	T	R	
Control:		Protected		Protected		Protected		Protected			
Rights:		Include		Include		Include		Include			
Min. Green:		7	7	7	7	7	7	7	7	7	
Lanes:		0	0	1	1	0	1	0	2	0	0

Volume Module:	>>	Count	Date:	18 Aug 2009	<<	AM	PEAK HOUR
Base Vol:	0	875	127	76	320	0	528
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	875	127	76	320	0	528
User Adj:	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
PHF Volume:	0	875	127	76	320	0	528
Reduct Vol:	0	0	0	0	0	0	0
Reduced Vol:	0	875	127	76	320	0	528
PCE Adj:	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
Final Volume:	0	875	127	76	320	0	528

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.93	0.95	0.95	1.00	0.86	0.86	0.86	1.00	1.00	1.00
Lanes:	0.00	1.75	0.25	1.00	2.00	0.00	1.42	0.01	0.57	0.00	0.00	0.00
Final Sat.:	0	3093	449	1805	3610	0	2310	5	936	0	0	0

Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.28	0.04	0.09	0.00	0.23	0.39	0.39	0.00	0.00	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.00	0.33	0.33	0.12	0.45	0.00	0.45	0.45	0.45	0.00	0.00	0.00
Volume/Cap:	0.00	0.85	0.85	0.36	0.20	0.00	0.51	0.85	0.85	0.00	0.00	0.00
Delay/Veh:	0.0	25.0	25.0	25.5	10.1	0.0	11.9	21.6	21.6	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	25.0	25.0	25.5	10.1	0.0	11.9	21.6	21.6	0.0	0.0	0.0
LOS by Move:	A	C	C	C	B	A	B	C	C	A	A	A
HCM2k95thQ:	0	22	22	4	4	0	11	24	24	0	0	0

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



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.635  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 14.2  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:		Milliken (Hamner)				SR-60 Westbound Ramps			
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Include		Include		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	1	0	2	0	0	0	2	0	1

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	418	1001	0	0	323	252	0	0	0	120	5	297
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:	418	1001	0	0	323	252	0	0	0	120	5	297
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:	418	1001	0	0	323	252	0	0	0	120	5	297
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	418	1001	0	0	323	252	0	0	0	120	5	297
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
Final Volume:	418	1001	0	0	323	252	0	0	0	120	5	297

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.95	0.85	1.00	1.00	1.00	0.96	0.96	0.85
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	0.96	0.04	1.00
Final Sat.:	1805	3610	0	0	3610	1615	0	0	0	1746	73	1615

Capacity Analysis Module:												
Vol/Sat:	0.23	0.28	0.00	0.00	0.09	0.16	0.00	0.00	0.00	0.07	0.07	0.18
Crit Moves:	****					****			****			
Green/Cycle:	0.36	0.61	0.00	0.00	0.25	0.25	0.00	0.00	0.00	0.29	0.29	0.29
Volume/Cap:	0.64	0.45	0.00	0.00	0.36	0.64	0.00	0.00	0.00	0.24	0.24	0.64
Delay/Veh:	17.8	6.5	0.0	0.0	19.0	23.6	0.0	0.0	0.0	16.5	16.5	21.4
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:	17.8	6.5	0.0	0.0	19.0	23.6	0.0	0.0	0.0	16.5	16.5	21.4
LOS by Move:	B	A	A	A	B	C	A	A	A	B	B	C
HCM2k95thQ:	14	11	0	0	6	10	0	0	0	4	4	11

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.592  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 18.0  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:		Riverside						Mill Creek											
Approach:		North Bound			South Bound			East Bound			West Bound								
Movement:		L	-	T	-	R	L	-	T	-	R	L	-	T	-	R			
Control:		Permitted						Permitted						Protected					
Rights:		Include						Include						Include					
Min. Green:		7		7		7	7		7		7	7		7		7			
Lanes:		1	0	1	0	1	1	0	0	1	0	1	0	1	1	0			

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	220	100	81	40	141	106	360	296	222	111	337	27
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:	220	100	81	40	141	106	360	296	222	111	337	27
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:	220	100	81	40	141	106	360	296	222	111	337	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	220	100	81	40	141	106	360	296	222	111	337	27
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
Final Volume:	220	100	81	40	141	106	360	296	222	111	337	27

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.50	1.00	0.85	0.69	0.94	0.94	0.95	0.89	0.89	0.95	0.94	0.94
Lanes:	1.00	1.00	1.00	1.00	0.57	0.43	1.00	1.14	0.86	1.00	1.85	0.15
Final Sat.:	952	1900	1615	1302	1015	763	1805	1931	1448	1805	3305	265

Capacity Analysis Module:												
Vol/Sat:	0.23	0.05	0.05	0.03	0.14	0.14	0.20	0.15	0.15	0.06	0.10	0.10
Crit Moves:	****						****			****		
Green/Cycle:	0.39	0.39	0.39	0.39	0.39	0.39	0.34	0.29	0.29	0.22	0.17	0.17
Volume/Cap:	0.59	0.13	0.13	0.08	0.36	0.36	0.59	0.53	0.53	0.28	0.59	0.59
Delay/Veh:	17.0	11.8	11.8	11.6	13.3	13.3	18.0	18.5	18.5	19.8	24.4	24.4
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:	17.0	11.8	11.8	11.6	13.3	13.3	18.0	18.5	18.5	19.8	24.4	24.4
LOS by Move:	B	B	B	B	B	B	B	B	B	B	C	C
HCM2k95thQ:	8	3	2	1	7	7	12	10	10	4	8	8

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #6 Riverside - Sharp

Average Delay (sec/veh): 1.1 Worst Case Level Of Service: B[ 11.2]

\*\*\*\*\*  
Street Name: Sharp Riverside  
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: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 0 1 0 0  
-----|-----|-----|-----|  
Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR  
Base Vol: 8 0 36 0 0 0 0 349 20 38 283 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: 8 0 36 0 0 0 0 349 20 38 283 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: 8 0 36 0 0 0 0 349 20 38 283 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 8 0 36 0 0 0 0 349 20 38 283 0  
-----|-----|-----|-----|

Critical Gap Module:  
Critical Gp: 6.4 xxxx 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx  
FollowUpTim: 3.5 xxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx  
-----|-----|-----|-----|

Capacity Module:  
Cnflct Vol: 718 xxxx 359 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 369 xxxxx xxxxx  
Potent Cap.: 399 xxxx 690 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1201 xxxxx xxxxx  
Move Cap.: 389 xxxx 690 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 1201 xxxxx xxxxx  
Volume/Cap: 0.02 xxxx 0.05 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.03 xxxxx xxxxx  
-----|-----|-----|-----|

Level Of Service Module:  
2Way95thQ: 0.1 xxxx 0.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.1 xxxxx xxxxx  
Control Del: 14.4 xxxx 10.5 xxxxx xxxx xxxxx xxxxx xxxxx xxxxx 8.1 xxxx xxxxx  
LOS by Move: B \* B \* \* \* \* \* 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: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 11.2 xxxxxx xxxxxx xxxxxx  
ApproachLOS: B \* \* \*  
-----|-----|-----|-----|

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



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.533  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 19.9  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:		Milliken (Hamner)				Cantu-Galleano Ranch				
Approach:		North Bound		South Bound		East Bound		West Bound		
Movement:		L	T	R	L	T	R	L	T	R
Control:		Protected		Protected		Protected		Protected		
Rights:		Include		Include		Include		Include		
Min. Green:		7	7	7	7	7	7	7	7	7
Lanes:		0	1	0	1	0	1	0	1	0

Volume Module:	>> Count	Date:	18 Aug 2009	<< AM	PEAK HOUR
Base Vol:	13 482 245	158 209	8	17	0 12 99 0 197
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 1.00 1.00 1.00
Initial Bse:	13 482 245	158 209	8	17	0 12 99 0 197
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 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 1.00 1.00
PHF Volume:	13 482 245	158 209	8	17	0 12 99 0 197
Reduct Vol:	0 0 0	0 0 0	0	0 0 0	0 0 0 0 0
Reduced Vol:	13 482 245	158 209	8	17	0 12 99 0 197
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 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 1.00 1.00
FinalVolume:	13 482 245	158 209	8	17	0 12 99 0 197

Saturation Flow Module:	
Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	0.90 0.90 0.90 0.95 0.99 0.99 0.95 1.00 0.85 0.95 1.00 0.85
Lanes:	0.04 1.30 0.66 1.00 0.96 0.04 1.00 0.00 1.00 1.00 0.00 1.00
Final Sat.:	60 2232 1134 1805 1819 70 1805 0 1615 1805 0 1615

Capacity Analysis Module:	
Vol/Sat:	0.22 0.22 0.22 0.09 0.11 0.11 0.01 0.00 0.01 0.05 0.00 0.12
Crit Moves:	**** **** ****
Green/Cycle:	0.36 0.36 0.36 0.19 0.19 0.19 0.12 0.00 0.02 0.30 0.00 0.20
Volume/Cap:	0.60 0.61 0.61 0.46 0.60 0.60 0.08 0.00 0.39 0.18 0.00 0.60
Delay/Veh:	16.6 16.8 16.8 22.4 25.1 25.1 23.8 0.0 37.0 15.7 0.0 24.9
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:	16.6 16.8 16.8 22.4 25.1 25.1 23.8 0.0 37.0 15.7 0.0 24.9
LOS by Move:	B B B C C C C A D B A C
HCM2k95thQ:	13 13 13 6 9 9 1 0 1 3 0 9

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



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.181  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 9.4  
Optimal Cycle: OPTIMIZED Level Of Service: A  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps				Cantu-Galleano Ranch				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Permitted		Permitted		
Rights:	Include		Include		Ignore		Ignore		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	0	0	0	0	2	0	0	0	

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR	I-15 Southbound Ramps				Cantu-Galleano Ranch			
Base Vol:	0	0	0	392	0	167	0	295
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	392	0	167	0	295
User Adj:	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
PHF Volume:	0	0	0	392	0	167	0	295
Reduct Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	392	0	167	0	295
PCE Adj:	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
FinalVolume:	0	0	0	392	0	167	0	295

Saturation Flow Module:	I-15 Southbound Ramps				Cantu-Galleano Ranch			
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	1.00	0.91
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00
Final Sat.:	0	0	0	3502	0	1615	0	5187

Capacity Analysis Module:	I-15 Southbound Ramps				Cantu-Galleano Ranch			
Vol/Sat:	0.00	0.00	0.00	0.11	0.00	0.10	0.00	0.06
Crit Moves:	****				****			
Green/Cycle:	0.00	0.00	0.00	0.62	0.00	0.62	0.00	0.31
Volume/Cap:	0.00	0.00	0.00	0.18	0.00	0.17	0.00	0.18
Delay/Veh:	0.0	0.0	0.0	4.9	0.0	4.9	0.0	15.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	4.9	0.0	4.9	0.0	15.0
LOS by Move:	A	A	A	A	A	A	A	A
HCM2k95thQ:	0	0	0	3	0	3	0	3

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.307  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 12.9  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	I-15 Northbound Ramps						Cantu-Galleano Ranch						
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:	Include			Include			Ovl			Include			
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7	
Lanes:	1	0	0	1	1	0	0	0	0	0	3	0	1

Volume Module:	>> Count	Date:	18 Aug 2009	<< AM	PEAK HOUR
Base Vol:	90	0	286	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00
Initial Bse:	90	0	286	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	90	0	286	0	0
Reduct Vol:	0	0	0	0	0
Reduced Vol:	90	0	286	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	0	286	0	0

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.91	0.85	0.92	0.91	1.00
Lanes:	1.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	2.00	3.00	0.00
Final Sat.:	1805	0	3230	0	0	0	0	5187	1615	3502	5187	0

Capacity Analysis Module:	Vol/Sat:	0.05	0.00	0.09	0.00	0.00	0.00	0.08	0.18	0.11	0.06	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.25	0.54	0.36	0.61	0.00
Volume/Cap:	0.17	0.00	0.31	0.00	0.00	0.00	0.00	0.31	0.34	0.31	0.10	0.00
Delay/Veh:	16.1	0.0	16.9	0.0	0.0	0.0	0.0	18.4	8.1	13.9	4.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.1	0.0	16.9	0.0	0.0	0.0	0.0	18.4	8.1	13.9	4.8	0.0
LOS by Move:	B	A	B	A	A	A	A	B	A	B	A	A
HCM2k95thQ:	3	0	5	0	0	0	0	5	7	6	2	0

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #10 Milliken (Hamner) - Samantha  
\*\*\*\*\*

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: C[ 19.3]  
\*\*\*\*\*

Street Name:	Milliken (Hamner)	Samantha	
Approach:	North Bound	South Bound	East Bound West Bound
Movement:	L - T - R	L - T - R	L - T - R L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign Stop Sign
Rights:	Include	Include	Include Include
Lanes:	0 0 1 1 0	1 0 1 0 0	0 0 0 0 0 1 0 0 0 1

Volume Module: >> Count Date: 22 Sep 2009 << AM PEAK HOUR			
Base Vol:	0 890 33	13 446 0	0 0 0 12 0 15
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:	0 890 33	13 446 0	0 0 0 12 0 15
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:	0 890 33	13 446 0	0 0 0 12 0 15
Reduct Vol:	0 0 0	0 0 0	0 0 0 0 0 0
FinalVolume:	0 890 33	13 446 0	0 0 0 12 0 15

Critical Gap Module:			
Critical Gp:xxxxx xxxxx xxxxx	4.1 xxxxx xxxxx xxxxx xxxxx xxxxx	6.4 xxxxx 6.2	
FollowUpTim:xxxxx xxxxx xxxxx	2.2 xxxxx xxxxx xxxxx xxxxx xxxxx	3.5 xxxxx 3.3	

Capacity Module:			
Cnflct Vol: xxxxx xxxxx xxxxx	923 xxxxx xxxxx xxxxx xxxxx xxxxx	1379 xxxxx 462	
Potent Cap.: xxxxx xxxxx xxxxx	748 xxxxx xxxxx xxxxx xxxxx xxxxx	161 xxxxx 604	
Move Cap.: xxxxx xxxxx xxxxx	748 xxxxx xxxxx xxxxx xxxxx xxxxx	159 xxxxx 604	
Volume/Cap: xxxxx xxxxx xxxxx	0.02 xxxxx xxxxx xxxxx xxxxx xxxxx	0.08 xxxxx 0.02	

Level Of Service Module:			
2Way95thQ: xxxxx xxxxx xxxxx	0.1 xxxxx xxxxx xxxxx xxxxx xxxxx	0.2 xxxxx 0.1	
Control Del:xxxxx xxxxx xxxxx	9.9 xxxxx xxxxx xxxxx xxxxx xxxxx	29.5 xxxxx 11.1	
LOS by Move: * * *	A * * * * *	D * 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: xxxxxx	xxxxxx xxxxxx	19.3	
ApproachLOS: *	* *	C	

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



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #11 Riverside - Street A (future)  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.218  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 10.2  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Riverside					Street A							
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: Include					Include			Include		Include		
Min. Green: 7 7 7					7 7 7			7 7 7		7 7 7		
Lanes: 0 0 0 0 0					1 0 0 0 1			1 0 1 0 0		0 0 2 0 1		

Volume Module: AM PEAK HOUR

Base Vol:	0	0	0	138	0	12	32	420	0	0	369	11
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	138	0	12	32	420	0	0	369	11
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	138	0	12	32	420	0	0	369	11
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	138	0	12	32	420	0	0	369	11
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
Final Volume:	0	0	0	138	0	12	32	420	0	0	369	11

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	1.00	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1805	0	1615	1805	1900	0	0	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.01	0.02	0.22	0.00	0.00	0.10	0.01
Crit Moves:				****				****				****
Green/Cycle:	0.00	0.00	0.00	0.34	0.00	0.34	0.12	0.56	0.00	0.00	0.45	0.45
Volume/Cap:	0.00	0.00	0.00	0.23	0.00	0.02	0.15	0.39	0.00	0.00	0.23	0.02
Delay/Veh:	0.0	0.0	0.0	14.5	0.0	13.4	24.2	7.5	0.0	0.0	10.2	9.2
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	14.5	0.0	13.4	24.2	7.5	0.0	0.0	10.2	9.2
LOS by Move:	A	A	A	B	A	B	C	A	A	A	B	A
HCM2k95thQ:	0	0	0	4	0	0	1	9	0	0	5	0

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

## **Appendix D-9**

### **CUMULATIVE NO-PROJECT CONDITIONS – PM PEAK HOUR**

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.674  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 21.4  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue						Riverside Drive					
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:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	1	0	1	1	0	0	1	0	1

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR	201		417		27		141		618		163		90		115		231		36		90		161	
Base Vol:	201	417	27	141	618	163	90	115	231	36	90	161												
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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	201	417	27	141	618	163	90	115	231	36	90	161												
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	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
PHF Volume:	201	417	27	141	618	163	90	115	231	36	90	161												
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0												
Reduced Vol:	201	417	27	141	618	163	90	115	231	36	90	161												
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	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
FinalVolume:	201	417	27	141	618	163	90	115	231	36	90	161												

Saturation Flow Module:	1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900		1900	
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.92	0.92	0.95	0.90	0.90	0.95	1.00	0.85												
Lanes:	1.00	1.88	0.12	1.00	1.58	0.42	1.00	0.33	0.67	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	1.00	
Final Sat.:	1805	3360	218	1805	2768	730	1805	568	1142	1805	1900	1615												

Capacity Analysis Module:	0.11		0.12		0.12		0.08		0.22		0.22		0.05		0.20		0.20		0.02		0.05		0.10	
Vol/Sat:	0.11	0.12	0.12	0.08	0.22	0.22	0.05	0.20	0.20	0.02	0.05	0.10												
Crit Moves:	****			****			****			****														
Green/Cycle:	0.17	0.26	0.26	0.24	0.33	0.33	0.30	0.30	0.30	0.15	0.15	0.15												
Volume/Cap:	0.67	0.49	0.49	0.32	0.67	0.67	0.17	0.67	0.67	0.13	0.32	0.67												
Delay/Veh:	29.5	19.4	19.4	19.2	18.9	18.9	15.6	22.0	22.0	22.5	23.5	31.6												
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:	29.5	19.4	19.4	19.2	18.9	18.9	15.6	22.0	22.0	22.5	23.5	31.6												
LOS by Move:	C	B	B	B	B	B	B	C	C	C	C	C												
HCM2k95thQ:	10	8	8	5	15	15	3	13	13	1	4	8												

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[ 12.0]  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue			Industrial Dwy/Street "B" (Future)		
Approach:	North Bound			South Bound		
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled			Uncontrolled		
Rights:	Include			Include		
Lanes:	0 0 1 1 0	1 0 2 0 0	0 0 0 0 0	0 0 0 0 0	0 0 1! 0 0	0 0 1! 0 0

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM	PEAK HOUR	
Base Vol:	0 707	0	26 971	0	0 0 0 0 1 0 12	
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	1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	0 707	0	26 971	0	0 0 0 0 1 0 12	
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 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 1.00 1.00	1.00 1.00 1.00
PHF Volume:	0 707	0	26 971	0	0 0 0 0 1 0 12	
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0 0	0 0 0 0
FinalVolume:	0 707	0	26 971	0	0 0 0 0 1 0 12	

Critical Gap Module:	Critical Gp:	xxxxx xxxx xxxxx	4.1 xxxx xxxxx xxxxx xxxx xxxxx	6.8 6.5 6.9
FollowUpTim:	xxxxx xxxx xxxxx	2.2 xxxx xxxxx xxxxx xxxx xxxxx	3.5 4.0 3.3	

Capacity Module:	Cnflct Vol:	xxxx xxxx xxxxx	707 xxxx xxxxx xxxxx xxxx xxxxx	1245 1730 354
Potent Cap.:	xxxx xxxx xxxxx	901 xxxx xxxxx xxxxx xxxx xxxxx	169 89 649	
Move Cap.:	xxxx xxxx xxxxx	901 xxxx xxxxx xxxxx xxxx xxxxx	165 87 649	
Volume/Cap:	xxxx xxxx xxxxx	0.03 xxxx xxxxx xxxxx xxxx xxxxx	0.01 0.00 0.02	

Level Of Service Module:	2Way95thQ:	xxxx xxxx xxxxx	0.1 xxxx xxxxx xxxxx xxxx xxxxx	xxxx xxxx xxxxx
Control Del:	xxxxx xxxx xxxxx	9.1 xxxx xxxxx xxxxx xxxx xxxxx	xxxxx xxxx xxxxx	xxxxx xxxx xxxxx
LOS by Move:	* * *	A * *	* * *	* * *
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx xxxx xxxxx	xxxx xxxx xxxxx	xxxx xxxx xxxxx	xxxx 530 xxxxx
SharedQueue:	xxxxx xxxx xxxxx	xxxxx xxxx xxxxx	xxxxx xxxx xxxxx	xxxxx 0.1 xxxxx
Shrd ConDel:	xxxxx xxxx xxxxx	xxxxx xxxx xxxxx	xxxxx xxxx xxxxx	xxxxx 12.0 xxxxx
Shared LOS:	* * *	* * *	* * *	* B *
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	12.0
ApproachLOS:	*	*	*	B

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



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #3 Milllliken Avenue - SR-60 Eastbound Ramps

\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap. (X): 0.596  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 14.9  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: Milliken Avenue SR-60 Eastbound Ramps  
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: Include Include Include Include  
Min. Green: 7 7 7 7 7 7 7 7 7 7 7 7  
Lanes: 0 0 1 1 0 1 0 2 0 0 1 0 1 0 0 0 0 0 0 0  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR  
Base Vol: 0 578 107 166 591 0 221 0 314 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: 0 578 107 166 591 0 221 0 314 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: 0 578 107 166 591 0 221 0 314 0 0 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 0 578 107 166 591 0 221 0 314 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: 0 578 107 166 591 0 221 0 314 0 0 0  
-----|-----|-----|-----|

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 1.00 0.93 0.93 0.95 0.95 1.00 0.89 1.00 0.89 1.00 1.00 1.00  
Lanes: 0.00 1.69 0.31 1.00 2.00 0.00 1.26 0.00 0.74 0.00 0.00 0.00  
Final Sat.: 0 2976 551 1805 3610 0 2140 0 1256 0 0 0  
-----|-----|-----|-----|

Capacity Analysis Module:  
Vol/Sat: 0.00 0.19 0.19 0.09 0.16 0.00 0.10 0.00 0.25 0.00 0.00 0.00  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.00 0.33 0.33 0.15 0.48 0.00 0.42 0.00 0.42 0.00 0.00 0.00  
Volume/Cap: 0.00 0.60 0.60 0.60 0.34 0.00 0.25 0.00 0.60 0.00 0.00 0.00  
Delay/Veh: 0.0 17.8 17.8 27.1 9.8 0.0 11.3 0.0 14.6 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 17.8 17.8 27.1 9.8 0.0 11.3 0.0 14.6 0.0 0.0 0.0  
LOS by Move: A B B C A A B A B A A A  
HCM2k95thQ: 0 12 12 8 7 0 5 0 13 0 0 0  
\*\*\*\*\*

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



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps

\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap.(X): 0.554  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 10.6  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: Milliken (Hamner) SR-60 Westbound Ramps  
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: Include Include Include Include  
Min. Green: 7 7 7 7 7 7 7 7 7 7 7 7  
Lanes: 1 0 2 0 0 0 0 2 0 1 0 0 0 0 0 0 1 0 0 1  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR  
Base Vol: 275 515 0 0 728 484 0 0 0 85 0 98  
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: 275 515 0 0 728 484 0 0 0 85 0 98  
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: 275 515 0 0 728 484 0 0 0 85 0 98  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 275 515 0 0 728 484 0 0 0 85 0 98  
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00  
Final Volume: 275 515 0 0 728 484 0 0 0 85 0 98  
-----|-----|-----|-----|

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.95 0.95 1.00 1.00 0.95 0.85 1.00 1.00 1.00 0.95 1.00 0.85  
Lanes: 1.00 2.00 0.00 0.00 2.00 1.00 0.00 0.00 0.00 1.00 0.00 1.00  
Final Sat.: 1805 3610 0 0 3610 1615 0 0 0 1809 0 1615  
-----|-----|-----|-----|

Capacity Analysis Module:  
Vol/Sat: 0.15 0.14 0.00 0.00 0.20 0.30 0.00 0.00 0.00 0.05 0.00 0.06  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.26 0.78 0.00 0.00 0.52 0.52 0.00 0.00 0.00 0.12 0.00 0.12  
Volume/Cap: 0.58 0.18 0.00 0.00 0.39 0.58 0.00 0.00 0.00 0.40 0.00 0.52  
Delay/Veh: 20.9 1.7 0.0 0.0 8.8 10.9 0.0 0.0 0.0 25.8 0.0 27.5  
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: 20.9 1.7 0.0 0.0 8.8 10.9 0.0 0.0 0.0 25.8 0.0 27.5  
LOS by Move: C A A A A B A A A C A C  
HCM2k95thQ: 10 3 0 0 9 13 0 0 0 4 0 5  
\*\*\*\*\*

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.195  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 11.5  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Riverside						Mill Creek					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	0	1	0	1	0	1	1	0	1

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM	PEAK HOUR							
Base Vol:	42	6	18	45	4	52	113	385	65	25	280	62
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:	42	6	18	45	4	52	113	385	65	25	280	62
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:	42	6	18	45	4	52	113	385	65	25	280	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	6	18	45	4	52	113	385	65	25	280	62
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
Final Volume:	42	6	18	45	4	52	113	385	65	25	280	62

Saturation Flow Module:	
Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	0.72 1.00 0.85 0.76 0.86 0.86 0.95 0.93 0.93 0.95 0.92 0.92
Lanes:	1.00 1.00 1.00 1.00 0.07 0.93 1.00 1.71 0.29 1.00 1.64 0.36
Final Sat.:	1374 1900 1615 1452 117 1519 1805 3021 510 1805 2876 637

Capacity Analysis Module:	
Vol/Sat:	0.03 0.00 0.01 0.03 0.03 0.03 0.06 0.13 0.13 0.01 0.10 0.10
Crit Moves:	****
Green/Cycle:	0.17 0.17 0.17 0.17 0.17 0.17 0.37 0.62 0.62 0.12 0.37 0.37
Volume/Cap:	0.18 0.02 0.07 0.19 0.21 0.21 0.17 0.21 0.21 0.12 0.27 0.27
Delay/Veh:	21.9 21.0 21.2 21.9 22.0 22.0 12.9 5.1 5.1 24.0 13.4 13.4
User DelAdj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:	21.9 21.0 21.2 21.9 22.0 22.0 12.9 5.1 5.1 24.0 13.4 13.4
LOS by Move:	C C C C C C B A A C B B
HCM2k95thQ:	2 0 1 2 2 2 3 4 4 1 5 5

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #6 Riverside - Sharp

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: B[ 11.2]

\*\*\*\*\*  
Street Name: Sharp Riverside  
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: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 0 1 0 0  
-----|-----|-----|-----|  
Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR  
Base Vol: 18 0 15 0 0 0 0 241 18 22 249 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: 18 0 15 0 0 0 0 241 18 22 249 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: 18 0 15 0 0 0 0 241 18 22 249 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 18 0 15 0 0 0 0 241 18 22 249 0  
-----|-----|-----|-----|

Critical Gap Module:  
Critical Gp: 6.4 xxxx 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx  
FollowUpTim: 3.5 xxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx  
-----|-----|-----|-----|

Capacity Module:  
Cnflct Vol: 543 xxxx 250 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 259 xxxxx xxxxx  
Potent Cap.: 504 xxxx 794 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 1317 xxxxx xxxxx  
Move Cap.: 498 xxxx 794 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 1317 xxxxx xxxxx  
Volume/Cap: 0.04 xxxx 0.02 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 0.02 xxxxx xxxxx  
-----|-----|-----|-----|

Level Of Service Module:  
2Way95thQ: 0.1 xxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 0.1 xxxxx xxxxx  
Control Del: 12.5 xxxx 9.6 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.8 xxxxx xxxxx  
LOS by Move: B \* A \* \* \* \* \* \* \* 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:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 11.2 xxxxxx xxxxxx xxxxxx  
ApproachLOS: B \* \* \*  
-----|-----|-----|-----|

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



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch

\*\*\*\*\*  
Cycle (sec): 60 Critical Vol./Cap. (X): 0.751  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 25.1  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name: Milliken (Hamner)				Cantu-Galleano Ranch											
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: Include				Include				Include				Include			
Min. Green: 7 7 7				7 7 7				7 7 7				7 7 7			
Lanes: 0 1 0 1 0				1 0 0 1 0				1 0 0 1 0				1 0 0 1 0			

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR												
Base Vol:	20	352	111	244	653	13	18	10	12	267	10	118
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:	20	352	111	244	653	13	18	10	12	267	10	118
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:	20	352	111	244	653	13	18	10	12	267	10	118
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	352	111	244	653	13	18	10	12	267	10	118
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
Final Volume:	20	352	111	244	653	13	18	10	12	267	10	118

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.92	0.92	0.95	1.00	1.00	0.95	0.92	0.92	0.95	0.86	0.86
Lanes:	0.08	1.46	0.46	1.00	0.98	0.02	1.00	0.45	0.55	1.00	0.08	0.92
Final Sat.:	144	2536	800	1805	1857	37	1805	793	951	1805	128	1510

Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.14	0.14	0.35	0.35	0.01	0.01	0.01	0.15	0.08	0.08
Crit Moves:	****			****			****			****		
Green/Cycle:	0.16	0.29	0.29	0.28	0.41	0.41	0.15	0.12	0.12	0.17	0.15	0.15
Volume/Cap:	0.85	0.48	0.48	0.48	0.85	0.85	0.07	0.11	0.11	0.85	0.54	0.54
Delay/Veh:	36.1	17.8	17.8	18.5	24.8	24.8	22.3	23.9	23.9	43.4	26.2	26.2
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:	36.1	17.8	17.8	18.5	24.8	24.8	22.3	23.9	23.9	43.4	26.2	26.2
LOS by Move:	D	B	B	B	C	C	C	C	C	D	C	C
HCM2k95thQ:	14	9	9	8	26	26	1	1	1	15	6	6

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.225  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 8.9  
Optimal Cycle: OPTIMIZED Level Of Service: A  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps				Cantu-Galleano Ranch				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Permitted		Permitted		
Rights:	Include		Include		Ignore		Ignore		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	0	0	0	0	0	1	0	0	

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR

Base Vol:	0	0	0	400	0	266	0	234	137	0	145	333
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	400	0	266	0	234	137	0	145	333
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	400	0	266	0	234	0	0	145	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	400	0	266	0	234	0	0	145	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Volume:	0	0	0	400	0	266	0	234	0	0	145	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	1.00	0.91	1.00	1.00	0.95	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00	1.00	0.00	2.00	2.00
Final Sat.:	0	0	0	3502	0	1615	0	5187	1900	0	3610	3344

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.11	0.00	0.16	0.00	0.05	0.00	0.00	0.04	0.00
Crit Moves:				****			****					
Green/Cycle:	0.00	0.00	0.00	0.73	0.00	0.73	0.00	0.20	0.00	0.00	0.20	0.00
Volume/Cap:	0.00	0.00	0.00	0.16	0.00	0.22	0.00	0.22	0.00	0.00	0.20	0.00
Delay/Veh:	0.0	0.0	0.0	2.4	0.0	2.7	0.0	20.2	0.0	0.0	20.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	2.4	0.0	2.7	0.0	20.2	0.0	0.0	20.1	0.0
LOS by Move:	A	A	A	A	A	A	A	C	A	A	C	A
HCM2k95thQ:	0	0	0	3	0	3	0	3	0	0	3	0

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

Tuscan Village Specific Plan  
Opening Year (2012) Cumulative (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.331  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 13.0  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	I-15 Northbound Ramps				Cantu-Galleano Ranch				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Ovl		Include		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	1	0	0	1	1	0	0	0	0

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR

Base Vol:	69	0	327	0	0	0	0	458	172	378	420	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:	69	0	327	0	0	0	0	458	172	378	420	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:	69	0	327	0	0	0	0	458	172	378	420	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	0	327	0	0	0	0	458	172	378	420	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
Final Volume:	69	0	327	0	0	0	0	458	172	378	420	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.91	0.85	0.92	0.91	1.00
Lanes:	1.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	2.00	3.00	0.00
Final Sat.:	1805	0	3230	0	0	0	0	5187	1615	3502	5187	0

Capacity Analysis Module:

Vol/Sat:	0.04	0.00	0.10	0.00	0.00	0.00	0.00	0.09	0.11	0.11	0.08	0.00
Crit Moves:	****			****			****			****		
Green/Cycle:	0.31	0.00	0.31	0.00	0.00	0.00	0.00	0.27	0.57	0.33	0.59	0.00
Volume/Cap:	0.12	0.00	0.33	0.00	0.00	0.00	0.00	0.33	0.19	0.33	0.14	0.00
Delay/Veh:	15.1	0.0	16.3	0.0	0.0	0.0	0.0	17.8	6.2	15.4	5.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.1	0.0	16.3	0.0	0.0	0.0	0.0	17.8	6.2	15.4	5.4	0.0
LOS by Move:	B	A	B	A	A	A	A	B	A	B	A	A
HCM2k95thQ:	2	0	5	0	0	0	0	6	3	6	3	0

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



Tuscan Village Specific Plan  
Opening Year (2012) Cumulative (No Project) PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #10 Milliken (Hamner) - Samantha

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: C [ 15.3]  
\*\*\*\*\*

Street Name:	Milliken (Hamner)						Samantha					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	1	1	0	1	0	0	0	1	0	0
Volume Module: >> Count Date:	22 Sep 2009 << PM PEAK HOUR											
Base Vol:	0	525	9	4	888	0	0	0	0	9	0	25
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	525	9	4	888	0	0	0	0	9	0	25
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	525	9	4	888	0	0	0	0	9	0	25
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	525	9	4	888	0	0	0	0	9	0	25

Critical Gap Module:

Critical Gap:xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	xxxx	6.2
FollowUpTim:xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	534	xxxx	xxxxx	xxxx	xxxx	xxxxx	1426	xxxx	267
Potent Cap.:	xxxx	xxxx	xxxxx	1044	xxxx	xxxxx	xxxx	xxxx	xxxxx	151	xxxx	777
Move Cap.:	xxxx	xxxx	xxxxx	1044	xxxx	xxxxx	xxxx	xxxx	xxxxx	150	xxxx	777
Volume/Cap:	xxxx	xxxx	xxxxx	0.00	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.06	xxxx	0.03

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.2	xxxx	0.1	
Control Del:xxxxx	xxxx	xxxx	xxxxx	8.5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	30.5	xxxx	9.8	
LOS by Move:	*	*	*	A	*	*	*	*	*	D	*	A	
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	
SharedQueue:xxxxx	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
Shrd ConDel:xxxxx	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			15.3			
ApproachLOS:	*			*			*			C			

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

# **Appendix D-10**

## **CUMULATIVE WITH-PROJECT CONDITIONS – PM PEAK HOUR**



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.667  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 21.9  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue						Riverside Drive					
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:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	1	0	1	1	0	1	1	0	1

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR	Milliken (Hamner) Avenue North Bound			Milliken (Hamner) Avenue South Bound			Riverside Drive East Bound			Riverside Drive West Bound		
Base Vol:	261	390	27	144	635	263	186	117	238	36	95	161
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:	261	390	27	144	635	263	186	117	238	36	95	161
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:	261	390	27	144	635	263	186	117	238	36	95	161
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	261	390	27	144	635	263	186	117	238	36	95	161
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
Final Volume:	261	390	27	144	635	263	186	117	238	36	95	161

Saturation Flow Module:	Milliken (Hamner) Avenue North Bound			Milliken (Hamner) Avenue South Bound			Riverside Drive East Bound			Riverside Drive West Bound		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.95	0.85	0.95	0.90	0.90	0.95	1.00	0.85
Lanes:	1.00	1.87	0.13	1.00	2.00	1.00	1.00	0.33	0.67	1.00	1.00	1.00
Final Sat.:	1805	3342	231	1805	3610	1615	1805	564	1146	1805	1900	1615

Capacity Analysis Module:	Milliken (Hamner) Avenue North Bound			Milliken (Hamner) Avenue South Bound			Riverside Drive East Bound			Riverside Drive West Bound		
Vol/Sat:	0.14	0.12	0.12	0.08	0.18	0.16	0.10	0.21	0.21	0.02	0.05	0.10
Crit Moves:	****			****			****			****		
Green/Cycle:	0.22	0.24	0.24	0.24	0.26	0.26	0.31	0.31	0.31	0.15	0.15	0.15
Volume/Cap:	0.67	0.49	0.49	0.33	0.67	0.62	0.33	0.67	0.67	0.13	0.33	0.67
Delay/Veh:	25.9	20.0	20.0	19.3	21.6	22.2	16.2	21.2	21.2	22.4	23.5	31.1
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:	25.9	20.0	20.0	19.3	21.6	22.2	16.2	21.2	21.2	22.4	23.5	31.1
LOS by Move:	C	C	C	B	C	C	B	C	C	C	C	C
HCM2k95thQ:	11	8	8	5	13	10	6	13	13	1	4	8

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: B[ 12.6]  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue			Industrial Dwy/Street "B" (Future)		
Approach:	North Bound		South Bound		East Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled		Uncontrolled		Stop Sign	
Rights:	Include		Include		Include	
Lanes:	0 0 1 1 0	1 0 2 0 0	0 0 0 0 0	0 0 1! 0 0		

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR

Base Vol:	0	781	0	26	1072	0	0	0	0	1	0	12
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	781	0	26	1072	0	0	0	0	1	0	12
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	781	0	26	1072	0	0	0	0	1	0	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	781	0	26	1072	0	0	0	0	1	0	12

Critical Gap Module:

Critical Gp:xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	6.5	6.9
FollowUpTim:xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxxx	781	xxxx	xxxxx	xxxx	xxxx	xxxxx	1369	1905	391
Potent Cap.:	xxxx	xxxx	xxxxx	845	xxxx	xxxxx	xxxx	xxxx	xxxxx	140	69	614
Move Cap.:	xxxx	xxxx	xxxxx	845	xxxx	xxxxx	xxxx	xxxx	xxxxx	137	67	614
Volume/Cap:	xxxx	xxxx	xxxx	0.03	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.00	0.02

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:xxxxx	xxxx	xxxx	xxxxx	9.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	484	xxxxx
SharedQueue:xxxxx	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:xxxxx	xxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	12.6	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	B	*
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	12.6	
ApproachLOS:	*	*	*	*	*	*	*	*	*	*	B	

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #3 Milllken Avenue - SR-60 Eastbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.646  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 15.5  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:		Milllken Avenue				SR-60 Eastbound Ramps			
Approach:	North Bound	South Bound			East Bound	West Bound			
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R		
Control:	Protected	Protected			Protected	Protected			
Rights:	Include	Include			Include	Include			
Min. Green:	7 7 7	7 7 7	7 7 7	7 7 7	7 7 7	7 7 7	7 7 7		
Lanes:	0 0 1 1 0	1 0 2 0 0	1 0 1 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0		

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM	PEAK HOUR
Base Vol:	0 632 126	166 651	0 221 0	354	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	1.00 1.00 1.00
Initial Bse:	0 632 126	166 651	0 221 0	354	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 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 1.00 1.00
PHF Volume:	0 632 126	166 651	0 221 0	354	0 0 0
Reduct Vol:	0 0 0	0 0 0	0 0 0	0	0 0 0
Reduced Vol:	0 632 126	166 651	0 221 0	354	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 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 1.00 1.00
FinalVolume:	0 632 126	166 651	0 221 0	354	0 0 0

Saturation Flow Module:	
Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	1.00 0.93 0.93 0.95 0.95 1.00 0.89 1.00 0.89 1.00 1.00 1.00
Lanes:	0.00 1.67 0.33 1.00 2.00 0.00 1.24 0.00 0.76 0.00 0.00 0.00
Final Sat.:	0 2935 585 1805 3610 0 2095 0 1290 0 0 0

Capacity Analysis Module:	
Vol/Sat:	0.00 0.22 0.22 0.09 0.18 0.00 0.11 0.00 0.27 0.00 0.00 0.00
Crit Moves:	**** **** ****
Green/Cycle:	0.00 0.33 0.33 0.14 0.48 0.00 0.42 0.00 0.42 0.00 0.00 0.00
Volume/Cap:	0.00 0.65 0.65 0.65 0.38 0.00 0.25 0.00 0.65 0.00 0.00 0.00
Delay/Veh:	0.0 18.3 18.3 29.9 10.2 0.0 11.2 0.0 15.4 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 18.3 18.3 29.9 10.2 0.0 11.2 0.0 15.4 0.0 0.0 0.0
LOS by Move:	A B B C B A B A B A A A
HCM2k95thQ:	0 14 14 8 8 0 5 0 15 0 0 0

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



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.588  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 11.3  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:		Milliken (Hamner)		SR-60 Westbound Ramps	
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:	Include	Include	Include	Include	
Min. Green:	7 7 7	7 7 7	7 7 7	7 7 7	
Lanes:	1 0 2 0 0	0 0 2 0 1	0 0 0 0 0	0 1 0 0 1	

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR												
Base Vol:	304	540	0	0	763	484	0	0	0	111	0	98
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:	304	540	0	0	763	484	0	0	0	111	0	98
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:	304	540	0	0	763	484	0	0	0	111	0	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	304	540	0	0	763	484	0	0	0	111	0	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	304	540	0	0	763	484	0	0	0	111	0	98

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.95	0.85	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	1805	3610	0	0	3610	1615	0	0	0	1809	0	1615

Capacity Analysis Module:												
Vol/Sat:	0.17	0.15	0.00	0.00	0.21	0.30	0.00	0.00	0.00	0.06	0.00	0.06
Crit Moves:	****					****				****		
Green/Cycle:	0.28	0.78	0.00	0.00	0.50	0.50	0.00	0.00	0.00	0.12	0.00	0.12
Volume/Cap:	0.60	0.19	0.00	0.00	0.42	0.60	0.00	0.00	0.00	0.53	0.00	0.52
Delay/Veh:	20.6	1.7	0.0	0.0	9.6	11.9	0.0	0.0	0.0	27.4	0.0	27.5
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:	20.6	1.7	0.0	0.0	9.6	11.9	0.0	0.0	0.0	27.4	0.0	27.5
LOS by Move:	C	A	A	A	A	B	A	A	A	C	A	C
HCM2k95thQ:	11	3	0	0	10	14	0	0	0	6	0	5

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.213  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 11.8  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Riverside						Mill Creek					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	0	1	0	1	0	1	1	0	1

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR

Base Vol:	42	6	24	56	4	52	113	412	65	33	300	66
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:	42	6	24	56	4	52	113	412	65	33	300	66
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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:	42	6	24	56	4	52	113	412	65	33	300	66
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	6	24	56	4	52	113	412	65	33	300	66
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	42	6	24	56	4	52	113	412	65	33	300	66

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.72	1.00	0.85	0.76	0.86	0.86	0.95	0.93	0.93	0.95	0.92	0.92
Lanes:	1.00	1.00	1.00	1.00	0.07	0.93	1.00	1.73	0.27	1.00	1.64	0.36
Final Sat.:	1374	1900	1615	1452	117	1519	1805	3056	482	1805	2879	633

Capacity Analysis Module:

Vol/Sat:	0.03	0.00	0.01	0.04	0.03	0.03	0.06	0.13	0.13	0.02	0.10	0.10
Crit Moves:				****				****				****
Green/Cycle:	0.17	0.17	0.17	0.17	0.17	0.17	0.36	0.61	0.61	0.12	0.36	0.36
Volume/Cap:	0.18	0.02	0.09	0.22	0.20	0.20	0.17	0.22	0.22	0.16	0.29	0.29
Delay/Veh:	21.5	20.5	20.9	21.7	21.5	21.5	13.1	5.4	5.4	24.2	13.7	13.7
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:	21.5	20.5	20.9	21.7	21.5	21.5	13.1	5.4	5.4	24.2	13.7	13.7
LOS by Move:	C	C	C	C	C	C	B	A	A	C	B	B
HCM2k95thQ:	2	0	1	2	2	2	3	4	4	1	5	5

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #6 Riverside - Sharp  
\*\*\*\*\*

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: B[ 11.3]

\*\*\*\*\*  
Street Name: Sharp Riverside  
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: 1 0 0 0 1 0 0 0 0 0 0 0 1 0 1 0 0 0  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR  
Base Vol: 18 0 15 0 0 0 0 245 18 22 254 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: 18 0 15 0 0 0 0 245 18 22 254 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: 18 0 15 0 0 0 0 245 18 22 254 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 18 0 15 0 0 0 0 245 18 22 254 0  
-----|-----|-----|-----|

Critical Gap Module:  
Critical Gp: 6.4 xxxx 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx  
FollowUpTim: 3.5 xxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx  
-----|-----|-----|-----|

Capacity Module:  
Cnflct Vol: 552 xxxx 254 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 263 xxxx xxxxx  
Potent Cap.: 498 xxxx 790 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 1313 xxxx xxxxx  
Move Cap.: 492 xxxx 790 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 1313 xxxx xxxxx  
Volume/Cap: 0.04 xxxx 0.02 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 0.02 xxxx xxxxx  
-----|-----|-----|-----|

Level Of Service Module:  
2Way95thQ: 0.1 xxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxx xxxxx 0.1 xxxx xxxxx  
Control Del: 12.6 xxxx 9.6 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.8 xxxx xxxxx  
LOS by Move: B \* A \* \* \* \* \* \* \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
Shared Cap.: xxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  
SharedQueue:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 11.3 xxxxxx xxxxxx xxxxxx  
ApproachLOS: B \* \* \*  
-----|-----|-----|-----|

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



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch  
\*\*\*\*\*

Cycle (sec): 65 Critical Vol./Cap.(X): 0.748  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 26.3  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	Milliken (Hamner)						Cantu-Galleano Ranch					
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	1	0	1	0	0	1	0	0	1	0	0

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM PEAK HOUR
Base Vol:	20 367 111	244 664 13	18 0 12	267 0 136
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:	20 367 111	244 664 13	18 0 12	267 0 136
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:	20 367 111	244 664 13	18 0 12	267 0 136
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	20 367 111	244 664 13	18 0 12	267 0 136
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
Final Volume:	20 367 111	244 664 13	18 0 12	267 0 136

Saturation Flow Module:	
Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	0.92 0.92 0.92 0.95 1.00 1.00 0.95 1.00 0.85 0.95 1.00 0.85
Lanes:	0.08 1.47 0.45 1.00 0.98 0.02 1.00 0.00 1.00 1.00 0.00 1.00
Final Sat.:	140 2567 777 1805 1858 36 1805 0 1615 1805 0 1615

Capacity Analysis Module:	
Vol/Sat:	0.14 0.14 0.14 0.14 0.36 0.36 0.01 0.00 0.01 0.15 0.00 0.08
Crit Moves:	**** **** **** ****
Green/Cycle:	0.17 0.31 0.31 0.29 0.42 0.42 0.16 0.00 0.11 0.18 0.00 0.12
Volume/Cap:	0.84 0.47 0.47 0.47 0.84 0.84 0.06 0.00 0.07 0.84 0.00 0.68
Delay/Veh:	36.8 18.6 18.6 19.7 24.8 24.8 23.3 0.0 26.2 44.1 0.0 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:	36.8 18.6 18.6 19.7 24.8 24.8 23.3 0.0 26.2 44.1 0.0 36.2
LOS by Move:	D B B B C C C A C D A D
HCM2k95thQ:	15 9 9 9 27 27 1 0 1 15 0 8

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.226  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 9.2  
Optimal Cycle: OPTIMIZED Level Of Service: A  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps				Cantu-Galleano Ranch				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Permitted		Permitted		
Rights:	Include		Include		Ignore		Ignore		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	0	0	0	0	2	0	0	1	

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM	PEAK HOUR
Base Vol:	0	0	0	400	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	400	0
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	0	400	0
Reduct Vol:	0	0	0	0	0
Reduced Vol:	0	0	0	400	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00
Final Volume:	0	0	0	400	0

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	1.00	0.91	1.00	1.00	0.95	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	3.00	1.00	0.00	2.00	2.00
Final Sat.:	0	0	0	3502	0	1615	0	5187	1900	0	3610	3344

Capacity Analysis Module:	Vol/Sat:	0.00	0.00	0.00	0.11	0.00	0.16	0.00	0.05	0.00	0.00	0.05	0.00
Crit Moves:							****		****				
Green/Cycle:	0.00	0.00	0.00	0.73	0.00	0.73	0.00	0.21	0.00	0.00	0.21	0.00	
Volume/Cap:	0.00	0.00	0.00	0.16	0.00	0.23	0.00	0.23	0.00	0.00	0.22	0.00	
Delay/Veh:	0.0	0.0	0.0	2.5	0.0	2.8	0.0	20.0	0.0	0.0	20.0	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	0.0	0.0	2.5	0.0	2.8	0.0	20.0	0.0	0.0	20.0	0.0	
LOS by Move:	A	A	A	A	A	A	A	B	A	A	B	A	
HCM2k95thQ:	0	0	0	3	0	4	0	3	0	0	3	0	

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



Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.332  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 13.0  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	I-15 Northbound Ramps				Cantu-Galleano Ranch				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Ovl		Include		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	1	0	0	1	1	0	0	0	0

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM	PEAK HOUR
Base Vol:	78	0	327	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00
Initial Bse:	78	0	327	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	78	0	327	0	0
Reduct Vol:	0	0	0	0	0
Reduced Vol:	78	0	327	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00
Final Volume:	78	0	327	0	0

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.91	0.85	0.92	0.91	1.00
Lanes:	1.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	2.00	3.00	0.00
Final Sat.:	1805	0	3230	0	0	0	0	5187	1615	3502	5187	0

Capacity Analysis Module:	Vol/Sat:	0.04	0.00	0.10	0.00	0.00	0.00	0.00	0.09	0.11	0.11	0.08	0.00
Crit Moves:			****						****		****		
Green/Cycle:	0.30	0.00	0.30	0.00	0.00	0.00	0.00	0.27	0.57	0.33	0.60	0.00	
Volume/Cap:	0.14	0.00	0.33	0.00	0.00	0.00	0.00	0.33	0.19	0.33	0.14	0.00	
Delay/Veh:	15.3	0.0	16.3	0.0	0.0	0.0	0.0	17.7	6.2	15.5	5.4	0.0	
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
AdjDel/Veh:	15.3	0.0	16.3	0.0	0.0	0.0	0.0	17.7	6.2	15.5	5.4	0.0	
LOS by Move:	B	A	B	A	A	A	A	B	A	B	A	A	
HCM2k95thQ:	2	0	5	0	0	0	0	6	3	6	3	0	

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #10 Milliken (Hamner) - Samantha  
\*\*\*\*\*

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: C[ 15.9]  
\*\*\*\*\*

Street Name:	Milliken (Hamner)	Samantha	
Approach:	North Bound	South Bound	East Bound West Bound
Movement:	L - T - R	L - T - R	L - T - R L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign Stop Sign
Rights:	Include	Include	Include Include
Lanes:	0 0 1 1 0	1 0 1 0 0	0 0 0 0 0 1 0 0 0 1

Volume Module: >> Count Date: 22 Sep 2009 << PM PEAK HOUR			
Base Vol:	0 558 9	4 912 0	0 0 0 9 0 25
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:	0 558 9	4 912 0	0 0 0 9 0 25
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:	0 558 9	4 912 0	0 0 0 9 0 25
Reduct Vol:	0 0 0	0 0 0	0 0 0 0 0 0
FinalVolume:	0 558 9	4 912 0	0 0 0 9 0 25

Critical Gap Module:			
Critical Gp:xxxxx xxxxx xxxxxx	4.1 xxxxx xxxxxx xxxxxx xxxxx xxxxxx	6.4 xxxxx	6.2
FollowUpTim:xxxxx xxxxx xxxxxx	2.2 xxxxx xxxxxx xxxxxx xxxxx xxxxxx	3.5 xxxxx	3.3

Capacity Module:			
Cnflct Vol: xxxxx xxxxx xxxxxx	567 xxxxx xxxxxx xxxxx xxxxx xxxxxx	1483 xxxxx	284
Potent Cap.: xxxxx xxxxx xxxxxx	1015 xxxxx xxxxxx xxxxx xxxxx xxxxxx	139 xxxxx	760
Move Cap.: xxxxx xxxxx xxxxxx	1015 xxxxx xxxxxx xxxxx xxxxx xxxxxx	139 xxxxx	760
Volume/Cap: xxxxx xxxxx xxxxxx	0.00 xxxxx xxxxx xxxxx xxxxx xxxxxx	0.06 xxxxx	0.03

Level Of Service Module:			
2Way95thQ: xxxxx xxxxx xxxxxx	0.0 xxxxx xxxxxx xxxxx xxxxx xxxxxx	0.2 xxxxx	0.1
Control Del:xxxxx xxxxx xxxxxx	8.6 xxxxx xxxxxx xxxxxx xxxxx xxxxxx	32.7 xxxxx	9.9
LOS by Move: * * *	A * *	D *	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 xxxxx xxxxx xxxxxx	xxxxxx xxxxx	xxxxxx
Shrd ConDel:xxxxxx xxxxx xxxxxx	xxxxxx xxxxx xxxxxx xxxxx xxxxx xxxxxx	xxxxxx xxxxx	xxxxxx
Shared LOS: * * *	* * *	* * *	* * *
ApproachDel: xxxxxx	xxxxxxx	xxxxxxx	15.9
ApproachLOS: *	*	*	C

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

Tuscana Village Specific Plan  
Opening Year (2012) Cumulative With Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #11 Riverside - Street A (future)  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.259  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 9.0  
Optimal Cycle: OPTIMIZED Level Of Service: A  
\*\*\*\*\*

Street Name:	Riverside						Street A					
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	0	0	0	0	1	0	1	0	0	1

Volume Module: PM PEAK HOUR

Base Vol:	0	0	0	119	0	10	62	422	0	0	478	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:	0	0	0	119	0	10	62	422	0	0	478	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:	0	0	0	119	0	10	62	422	0	0	478	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	119	0	10	62	422	0	0	478	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
Final Volume:	0	0	0	119	0	10	62	422	0	0	478	42

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.95	1.00	0.85	0.95	1.00	1.00	1.00	0.95	0.85
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	2.00	1.00
Final Sat.:	0	0	0	1805	0	1615	1805	1900	0	0	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.07	0.00	0.01	0.03	0.22	0.00	0.00	0.13	0.03
Crit Moves:				****				****				****
Green/Cycle:	0.00	0.00	0.00	0.26	0.00	0.26	0.13	0.65	0.00	0.00	0.51	0.51
Volume/Cap:	0.00	0.00	0.00	0.26	0.00	0.02	0.26	0.34	0.00	0.00	0.26	0.05
Delay/Veh:	0.0	0.0	0.0	18.1	0.0	16.8	23.9	5.0	0.0	0.0	8.3	7.4
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	18.1	0.0	16.8	23.9	5.0	0.0	0.0	8.3	7.4
LOS by Move:	A	A	A	B	A	B	C	A	A	A	A	A
HCM2k95thQ:	0	0	0	4	0	0	3	7	0	0	5	1

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

# **Appendix D-11**

## **GENERAL PLAN NO-PROJECT CONDITIONS– AM PEAK HOUR**



Tuscana Village Specific Plan  
General Plan No-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.751  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 20.2  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue				Riverside Drive					
Approach:	North Bound		South Bound		East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	
Control:	Protected		Protected		Protected		Protected			
Rights:	Include		Include		Include		Include			
Min. Green:	7	7	7	7	7	7	7	7		
Lanes:	1	0	3	1	0	2	0	2	1	0

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR	Milliken (Hamner) Avenue				Riverside Drive							
Base Vol:	177	2247	125	199	1754	428	534	280	51	153	184	30
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:	177	2247	125	199	1754	428	534	280	51	153	184	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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:	177	2247	125	199	1754	428	534	280	51	153	184	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	177	2247	125	199	1754	428	534	280	51	153	184	30
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:	177	2247	125	199	1754	428	534	280	51	153	184	30

Saturation Flow Module:	Milliken (Hamner) Avenue				Riverside Drive							
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.88	0.88	0.92	0.89	0.89	0.95	0.89	0.89
Lanes:	1.00	3.79	0.21	1.00	3.22	0.78	2.00	2.54	0.46	1.00	2.58	0.42
Final Sat.:	1805	6499	362	1805	5398	1317	3502	4287	781	1805	4366	712

Capacity Analysis Module:	Milliken (Hamner) Avenue				Riverside Drive							
Vol/Sat:	0.10	0.35	0.35	0.11	0.32	0.32	0.15	0.07	0.07	0.08	0.04	0.04
Crit Moves:	****		****		****		****		****		****	
Green/Cycle:	0.15	0.43	0.43	0.14	0.41	0.41	0.19	0.15	0.15	0.15	0.12	0.12
Volume/Cap:	0.66	0.81	0.81	0.81	0.79	0.79	0.81	0.43	0.43	0.56	0.36	0.36
Delay/Veh:	30.1	16.9	16.9	43.3	16.8	16.8	30.9	23.4	23.4	26.1	24.8	24.8
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:	30.1	16.9	16.9	43.3	16.8	16.8	30.9	23.4	23.4	26.1	24.8	24.8
LOS by Move:	C	B	B	D	B	B	C	C	C	C	C	C
HCM2k95thQ:	9	24	24	12	21	21	14	5	5	7	4	4

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

Tuscana Village Specific Plan  
General Plan No-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

Average Delay (sec/veh): 8.4 Worst Case Level Of Service: F[680.7]  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue					Industrial Dwy/Street "B" (Future)				
Approach:	North Bound		South Bound		East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	
Control:	Uncontrolled		Uncontrolled		Stop Sign		Stop Sign			
Rights:	Include		Include		Include		Include			
Lanes:	0	0	3	1	0	1	0	0	0	1

Volume Module:	>> Count	Date:	18 Aug 2009	<< AM	PEAK HOUR
Base Vol:	0	2529	59	106	1788
Growth Adj:	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	2529	59	106	1788
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	2529	59	106	1788
Reduct Vol:	0	0	0	0	0
Final Volume:	0	2529	59	106	1788

Critical Gap Module:	Critical Gp:	xxxxx	xxxx	xxxxxx	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.8	xxxx	6.9
FollowUpTim:	xxxxxx	xxxx	xxxxxx	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	xxxx	3.3	

Capacity Module:	Cnflict Vol:	xxxx	xxxx	xxxxxx	2588	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	3218	xxxx	662
Potent Cap.:	xxxx	xxxx <td>xxxxxx</td> <td>171</td> <td>xxxx</td> <td>xxxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxxx</td> <td>8</td> <td>xxxx</td> <td>409</td> </td>	xxxxxx	171	xxxx	xxxxxx	xxxx	xxxx <td>xxxxxx</td> <td>8</td> <td>xxxx</td> <td>409</td>	xxxxxx	8	xxxx	409	
Move Cap.:	xxxx	xxxx <td>xxxxxx</td> <td>171</td> <td>xxxx</td> <td>xxxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxxx</td> <td>4</td> <td>xxxx</td> <td>409</td> </td>	xxxxxx	171	xxxx	xxxxxx	xxxx	xxxx <td>xxxxxx</td> <td>4</td> <td>xxxx</td> <td>409</td>	xxxxxx	4	xxxx	409	
Volume/Cap:	xxxx	xxxx <td>xxxxxx</td> <td>0.62</td> <td>xxxx</td> <td>xxxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxxx</td> <td>3.08</td> <td>xxxx</td> <td>0.09</td> </td>	xxxxxx	0.62	xxxx	xxxxxx	xxxx	xxxx <td>xxxxxx</td> <td>3.08</td> <td>xxxx</td> <td>0.09</td>	xxxxxx	3.08	xxxx	0.09	

Level Of Service Module:	2Way95thQ:	xxxx	xxxx	xxxxxx	3.4	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	2.7	xxxx	0.3
Control Del:	xxxxxx	xxxx <td>xxxxxx</td> <td>55.4</td> <td>xxxx</td> <td>xxxxxx</td> <td>xxxxxx</td> <td>xxxx <td>xxxxxx</td> <td>2624</td> <td>xxxx</td> <td>14.6</td> </td>	xxxxxx	55.4	xxxx	xxxxxx	xxxxxx	xxxx <td>xxxxxx</td> <td>2624</td> <td>xxxx</td> <td>14.6</td>	xxxxxx	2624	xxxx	14.6	
LOS by Move:	*	*	*	F	*	*	*	*	*	F	*	B	
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	
Shared Cap.:	xxxx	xxxx <td>xxxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxxx</td> </td></td></td>	xxxxxx	xxxx	xxxx <td>xxxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxxx</td> </td></td>	xxxxxx	xxxx	xxxx <td>xxxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxxx</td> </td>	xxxxxx	xxxx	xxxx <td>xxxxxx</td>	xxxxxx	
Shared Queue:	xxxxxx	xxxx <td>xxxxxx</td> <td>xxxxxx</td> <td>xxxx <td>xxxxxx</td> <td>xxxxxx</td> <td>xxxx <td>xxxxxx</td> <td>xxxxxx</td> <td>xxxx <td>xxxxxx</td> </td></td></td>	xxxxxx	xxxxxx	xxxx <td>xxxxxx</td> <td>xxxxxx</td> <td>xxxx <td>xxxxxx</td> <td>xxxxxx</td> <td>xxxx <td>xxxxxx</td> </td></td>	xxxxxx	xxxxxx	xxxx <td>xxxxxx</td> <td>xxxxxx</td> <td>xxxx <td>xxxxxx</td> </td>	xxxxxx	xxxxxx	xxxx <td>xxxxxx</td>	xxxxxx	
Shrd ConDel:	xxxxxx	xxxx <td>xxxxxx</td> <td>xxxxxx</td> <td>xxxx <td>xxxxxx</td> <td>xxxxxx</td> <td>xxxx <td>xxxxxx</td> <td>xxxxxx</td> <td>xxxx <td>xxxxxx</td> </td></td></td>	xxxxxx	xxxxxx	xxxx <td>xxxxxx</td> <td>xxxxxx</td> <td>xxxx <td>xxxxxx</td> <td>xxxxxx</td> <td>xxxx <td>xxxxxx</td> </td></td>	xxxxxx	xxxxxx	xxxx <td>xxxxxx</td> <td>xxxxxx</td> <td>xxxx <td>xxxxxx</td> </td>	xxxxxx	xxxxxx	xxxx <td>xxxxxx</td>	xxxxxx	
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			680.7			
ApproachLOS:	*			*			*			F			

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

Tuscana Village Specific Plan  
General Plan No-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #3 Milllliken Avenue - SR-60 Eastbound Ramps  
\*\*\*\*\*

Cycle (sec): 65 Critical Vol./Cap.(X): 0.795  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 19.4  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milllliken Avenue						SR-60 Eastbound Ramps					
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	3	0	1	2	0	3	0	0	1	2

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR	Base Vol:			Growth Adj:			Initial Bse:			User Adj:			PHF Adj:			PHF Volume:			Reduct Vol:			Reduced Vol:			PCE Adj:			MLF Adj:			Final Volume:		
	0	2149	415	53	1064	0	495	0	830	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	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
	0	2149	415	53	1064	0	495	0	830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	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	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	1.00	1.00	1.00	1.00			
	0	2149	415	53	1064	0	495	0	830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	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	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	1.00	1.00	1.00	1.00			
	0	2149	415	53	1064	0	495	0	830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			

Saturation Flow Module:	Sat/Lane:			Adjustment:			Lanes:			Final Sat.:		
	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
	1.00	0.91	0.85	0.92	0.91	1.00	0.95	1.00	0.75	1.00	1.00	1.00
	0.00	3.00	1.00	2.00	3.00	0.00	1.00	0.00	2.00	0.00	0.00	0.00
	0	5187	1615	3502	5187	0	1805	0	2842	0	0	0

Capacity Analysis Module:	Vol/Sat:			Crit Moves:			Green/Cycle:			Volume/Cap:			Delay/Veh:			User DelAdj:			AdjDel/Veh:			LOS by Move:			HCM2k95thQ:											
	0.00	0.41	0.26	0.02	0.21	0.00	0.27	0.00	0.29	0.00	0.00	0.00	0.00	0.47	0.47	0.11	0.58	0.00	0.33	0.00	0.33	0.00	0.00	0.00	0.00	0.88	0.55	0.14	0.36	0.00	0.83	0.00	0.88	0.00	0.00	0.00
	0.0	19.8	13.2	26.4	7.4	0.0	29.5	0.0	30.4	0.0	0.0	0.0	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	A	B	B	C	A	A	C	A	C	A	A	A
	0	31	13	1	8	0	22	0	23	0	0	0																								

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



Tuscana Village Specific Plan  
General Plan No-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps

Cycle (sec): 60 Critical Vol./Cap.(X): 0.799  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 18.6  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: Milliken (Hamner) SR-60 Westbound Ramps  
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: Include Include Include Include  
Min. Green: 7 7 7 7 7 7 7 7 7 7 7 7  
Lanes: 2 0 3 0 0 0 0 3 0 1 0 0 0 0 0 1 0 0 1 1  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR  
Base Vol: 684 1962 0 0 634 332 0 0 0 482 0 1029  
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: 684 1962 0 0 634 332 0 0 0 482 0 1029  
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: 684 1962 0 0 634 332 0 0 0 482 0 1029  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
Reduced Vol: 684 1962 0 0 634 332 0 0 0 482 0 1029  
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  
Final Volume: 684 1962 0 0 634 332 0 0 0 482 0 1029  
-----|-----|-----|-----|

Saturation Flow Module:  
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900  
Adjustment: 0.92 0.91 1.00 1.00 0.91 0.85 1.00 1.00 1.00 0.95 1.00 0.85  
Lanes: 2.00 3.00 0.00 0.00 3.00 1.00 0.00 0.00 0.00 1.00 0.00 2.00  
Final Sat.: 3502 5187 0 0 5187 1615 0 0 0 1805 0 3230  
-----|-----|-----|-----|

Capacity Analysis Module:  
Vol/Sat: 0.20 0.38 0.00 0.00 0.12 0.21 0.00 0.00 0.00 0.27 0.00 0.32  
Crit Moves: \*\*\*\* \*\*\*\* \*\*\*\*  
Green/Cycle: 0.24 0.50 0.00 0.00 0.26 0.26 0.00 0.00 0.00 0.40 0.00 0.40  
Volume/Cap: 0.80 0.75 0.00 0.00 0.48 0.80 0.00 0.00 0.00 0.67 0.00 0.80  
Delay/Veh: 26.7 13.3 0.0 0.0 19.1 31.3 0.0 0.0 0.0 17.3 0.0 19.6  
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: 26.7 13.3 0.0 0.0 19.1 31.3 0.0 0.0 0.0 17.3 0.0 19.6  
LOS by Move: C B A A B C A A A B A B  
HCM2k95thQ: 16 22 0 0 8 16 0 0 0 16 0 20  
\*\*\*\*\*

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

\*\*\*\*\*



Tuscana Village Specific Plan  
General Plan No-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.391  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 16.1  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Riverside						Mill Creek					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	0	1	0	1	0	2	1	0	2

Volume Module:	>> Count	Date:	18 Aug 2009	<< AM	PEAK HOUR
Base Vol:	39	199	87	107	180
Growth Adj:	1.00	1.00	1.00	1.00	1.00
Initial Bse:	39	199	87	107	180
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	39	199	87	107	180
Reduct Vol:	0	0	0	0	0
Reduced Vol:	39	199	87	107	180
PCE Adj:	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00
FinalVolume:	39	199	87	107	180

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.47	1.00	0.85	0.57	0.94	0.94	0.95	0.90	0.90	0.90	0.95	0.90	0.90
Lanes:	1.00	1.00	1.00	1.00	0.61	0.39	1.00	2.85	0.15	1.00	2.83	0.17	
Final Sat.:	884	1900	1615	1081	1087	701	1805	4880	266	1805	4848	293	

Capacity Analysis Module:	Vol/Sat:	0.04	0.10	0.05	0.10	0.17	0.17	0.09	0.07	0.07	0.02	0.10	0.10
Crit Moves:					****		****					****	
Green/Cycle:	0.42	0.42	0.42	0.42	0.42	0.42	0.23	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.10	0.25	0.13	0.23	0.39	0.39	0.39	0.30	0.30	0.30	0.07	0.39	0.39
Delay/Veh:	10.6	11.3	10.6	11.3	12.3	12.3	20.1	18.9	18.9	17.8	19.1	19.1	
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	1.00
AdjDel/Veh:	10.6	11.3	10.6	11.3	12.3	12.3	20.1	18.9	18.9	17.8	19.1	19.1	
LOS by Move:	B	B	B	B	B	B	C	B	B	B	B	B	B
HCM2k95thQ:	1	5	2	3	8	8	6	5	5	1	6	6	

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

Tuscana Village Specific Plan  
General Plan No-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #6 Riverside - Sharp  
\*\*\*\*\*

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[ 11.4]  
\*\*\*\*\*

Street Name:	Sharp				Riverside					
Approach:	North Bound		South Bound		East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	
Control:	Stop Sign		Stop Sign		Uncontrolled		Uncontrolled			
Rights:	Include		Include		Include		Include			
Lanes:	1	0	0	0	1	0	0	2	1	0

Volume Module:	>> Count	Date:	18 Aug 2009	<< AM	PEAK HOUR
Base Vol:	10	0	30	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	0	30	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	0	30	0	0
Reduct Vol:	0	0	0	0	0
Final Volume:	10	0	30	0	0

Critical Gap Module:	Critical Gp:	6.8	xxxx	6.9	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	

Capacity Module:	Cnflct Vol:	791	xxxx	205	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	604	xxxx	xxxxx
Potent Cap.:	331	xxxx	807	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx</td> <td>xxxxx</td> <td>984</td> <td>xxxx</td> <td>xxxxx</td>	xxxxx	xxxx	xxxx	xxxxx	984	xxxx	xxxxx	
Move Cap.:	321	xxxx	807	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx</td> <td>xxxxx</td> <td>984</td> <td>xxxx</td> <td>xxxxx</td>	xxxxx	xxxx	xxxx	xxxxx	984	xxxx	xxxxx	
Volume/Cap:	0.03	xxxx	0.04	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx</td> <td>xxxxx</td> <td>0.04</td> <td>xxxx</td> <td>xxxxx</td>	xxxxx	xxxx	xxxx	xxxxx	0.04	xxxx	xxxxx	

Level Of Service Module:	2Way95thQ:	0.1	xxxx	0.1	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx		
Control Del:	16.6	xxxx	9.6	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxx	xxxxx	8.8	xxxx	xxxxx		
LOS by Move:	C	*	A	*	*	*	*	*	*	*	A	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx			
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*			
ApproachDel:	11.4		xxxxxx		xxxxxx		xxxxxx		xxxxxx		xxxxxx				
ApproachLOS:	B		*		*		*		*		*				

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

Tuscana Village Specific Plan  
General Plan No-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch  
\*\*\*\*\*

Cycle (sec): 85 Critical Vol./Cap. (X): 0.958  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 43.4  
Optimal Cycle: OPTIMIZED Level Of Service: D  
\*\*\*\*\*

Street Name:	Milliken (Hamner)					Cantu-Galleano Ranch														
Approach:	North Bound		South Bound		East Bound		West Bound													
Movement:	L	T	R	L	T	R	L	T	R											
Control:	Protected		Protected		Protected		Protected													
Rights:	Include		Include		Include		Ovl													
Min. Green:	7	7	7	7	7	7	7	7	7											
Lanes:	1	0	3	1	0	2	0	3	1	0	1	0	3	1	0	1	0	3	0	1

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR

Base Vol:	440	983	88	831	919	101	134	672	162	410	892	1029
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:	440	983	88	831	919	101	134	672	162	410	892	1029
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:	440	983	88	831	919	101	134	672	162	410	892	1029
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	440	983	88	831	919	101	134	672	162	410	892	1029
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
Final Volume:	440	983	88	831	919	101	134	672	162	410	892	1029

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.92	0.90	0.90	0.95	0.88	0.88	0.95	0.91	0.85
Lanes:	1.00	3.67	0.33	2.00	3.60	0.40	1.00	3.22	0.78	1.00	3.00	1.00
Final Sat.:	1805	6272	561	3502	6138	675	1805	5411	1304	1805	5187	1615

Capacity Analysis Module:

Vol/Sat:	0.24	0.16	0.16	0.24	0.15	0.15	0.07	0.12	0.12	0.23	0.17	0.64
Crit Moves:	****			****			****			****		
Green/Cycle:	0.25	0.16	0.16	0.25	0.16	0.16	0.08	0.18	0.18	0.32	0.41	0.66
Volume/Cap:	0.96	0.96	0.96	0.96	0.96	0.96	0.90	0.71	0.71	0.71	0.41	0.96
Delay/Veh:	63.9	54.2	54.2	53.9	54.9	54.9	84.5	35.0	35.0	29.3	17.7	32.8
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:	63.9	54.2	54.2	53.9	54.9	54.9	84.5	35.0	35.0	29.3	17.7	32.8
LOS by Move:	E	D	D	D	D	D	F	C	C	C	B	C
HCM2k95thQ:	29	22	22	29	21	21	12	14	14	20	12	51

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



Tuscana Village Specific Plan  
General Plan No-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.614  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 12.1  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps				Cantu-Galleano Ranch				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Permitted		Permitted		
Rights:	Include		Include		Ignore		Ignore		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	0	0	0	0	2	0	0	0	

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR	I-15 Southbound Ramps				Cantu-Galleano Ranch							
Base Vol:	0	0	0	991	0	700	0	1329	751	0	1505	965
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	991	0	700	0	1329	751	0	1505	965
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	991	0	700	0	1329	0	0	1505	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	991	0	700	0	1329	0	0	1505	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Volume:	0	0	0	991	0	700	0	1329	0	0	1505	0

Saturation Flow Module:	I-15 Southbound Ramps				Cantu-Galleano Ranch							
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.75	1.00	0.91	1.00	1.00	0.91	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	0.00	3.00	1.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	2842	0	5187	1900	0	5187	1900

Capacity Analysis Module:	I-15 Southbound Ramps				Cantu-Galleano Ranch							
Vol/Sat:	0.00	0.00	0.00	0.28	0.00	0.25	0.00	0.26	0.00	0.00	0.29	0.00
Crit Moves:	****				****							
Green/Cycle:	0.00	0.00	0.00	0.46	0.00	0.46	0.00	0.47	0.00	0.00	0.47	0.00
Volume/Cap:	0.00	0.00	0.00	0.61	0.00	0.53	0.00	0.54	0.00	0.00	0.61	0.00
Delay/Veh:	0.0	0.0	0.0	12.9	0.0	12.0	0.0	11.5	0.0	0.0	12.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	12.9	0.0	12.0	0.0	11.5	0.0	0.0	12.2	0.0
LOS by Move:	A	A	A	B	A	B	A	B	A	A	B	A
HCM2k95thQ:	0	0	0	15	0	11	0	13	0	0	16	0

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

Tuscana Village Specific Plan  
General Plan No-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.950  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 21.7  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	I-15 Northbound Ramps				Cantu-Galleano Ranch				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Ovl		Include		Ovl		Include		
Min. Green:	7	7	7	7	7	7	7	7	7
Lanes:	1	0	0	1	1	0	0	0	0

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR	I-15 Northbound Ramps				Cantu-Galleano Ranch							
Base Vol:	518	0	1562	0	0	0	0	1653	647	874	1956	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:	518	0	1562	0	0	0	0	1653	647	874	1956	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:	518	0	1562	0	0	0	0	1653	647	874	1956	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	518	0	1562	0	0	0	0	1653	647	874	1956	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
Final Volume:	518	0	1562	0	0	0	0	1653	647	874	1956	0

Saturation Flow Module:	I-15 Northbound Ramps				Cantu-Galleano Ranch							
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.91	0.85	0.92	0.91	1.00
Lanes:	1.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	2.00	3.00	0.00
Final Sat.:	1805	0	3230	0	0	0	0	5187	1615	3502	5187	0

Capacity Analysis Module:	I-15 Northbound Ramps				Cantu-Galleano Ranch							
Vol/Sat:	0.29	0.00	0.48	0.00	0.00	0.00	0.00	0.32	0.40	0.25	0.38	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.30	0.00	0.56	0.00	0.00	0.00	0.00	0.34	0.64	0.26	0.60	0.00
Volume/Cap:	0.95	0.00	0.86	0.00	0.00	0.00	0.00	0.95	0.63	0.95	0.63	0.00
Delay/Veh:	47.1	0.0	15.3	0.0	0.0	0.0	0.0	31.3	7.8	40.5	8.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.1	0.0	15.3	0.0	0.0	0.0	0.0	31.3	7.8	40.5	8.2	0.0
LOS by Move:	D	A	B	A	A	A	A	C	A	D	A	A
HCM2k95thQ:	26	0	27	0	0	0	0	29	15	24	17	0

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

Tuscana Village Specific Plan  
General Plan No-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #10 Milliken (Hamner) - Samantha  
\*\*\*\*\*

Average Delay (sec/veh): 1.5 Worst Case Level Of Service: F[399.4]  
\*\*\*\*\*

Street Name:	Milliken (Hamner)					Samantha						
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0	0	3	1	0	0	1	0	0	0	0	1
Volume Module: >> Count Date:	22 Sep 2009 << AM PEAK HOUR											
Base Vol:	0	2541	42	16	1942	0	0	0	0	8	0	8
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	2541	42	16	1942	0	0	0	0	8	0	8
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	2541	42	16	1942	0	0	0	0	8	0	8
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	2541	42	16	1942	0	0	0	0	8	0	8

Critical Gap Module:	Milliken (Hamner)					Samantha				
Critical Gp:xxxxx xxxxx xxxxxx	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.8	xxxx	6.9	
FollowUpTim:xxxxx xxxxx xxxxxx	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	xxxx	3.3	

Capacity Module:	Milliken (Hamner)					Samantha				
Cnflct Vol: xxxxx xxxxx xxxxxx	2583	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3080	xxxx	656	
Potent Cap.: xxxxx xxxxx xxxxxx	172	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	10	xxxx	413	
Move Cap.: xxxxx xxxxx xxxxxx	172	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	9	xxxx	413	
Volume/Cap: xxxxx xxxxx xxxxxx	0.09	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.89	xxxx	0.02	

Level Of Service Module:	Milliken (Hamner)					Samantha				
2Way95thQ: xxxxx xxxxx xxxxxx	0.3	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	1.7	xxxx	0.1	
Control Del:xxxxxx xxxxx xxxxxx	28.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	784.9	xxxx	13.9	
LOS by Move: * * *	D	*	*	*	*	*	F	*	B	
Movement: LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap.: xxxxx xxxxx xxxxxx	xxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	
SharedQueue:xxxxxx xxxxx xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	
Shrd ConDel:xxxxxx xxxxx xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	
Shared LOS: * * *	*	*	*	*	*	*	*	*	*	
ApproachDel: xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	399.4			
ApproachLOS: *	*	*	*	*	*	*	F			

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



Tuscana Village Specific Plan  
General Plan No-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #11 Riverside - Street A (future)  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.620  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 19.4  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Riverside						Street A						
North Bound			South Bound			East Bound			West Bound			
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1

Volume Module:												
Base Vol:	15	9	26	225	5	87	208	614	16	28	314	447
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:	15	9	26	225	5	87	208	614	16	28	314	447
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:	15	9	26	225	5	87	208	614	16	28	314	447
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	9	26	225	5	87	208	614	16	28	314	447
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
Final Volume:	15	9	26	225	5	87	208	614	16	28	314	447

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.89	0.89	0.95	0.86	0.86	0.95	0.95	0.95	0.95	0.95	0.85
Lanes:	1.00	0.26	0.74	1.00	0.05	0.95	1.00	1.95	0.05	1.00	2.00	1.00
Final Sat.:	1805	434	1255	1805	89	1542	1805	3504	91	1805	3610	1615

Capacity Analysis Module:												
Vol/Sat:	0.01	0.02	0.02	0.12	0.06	0.06	0.12	0.18	0.18	0.02	0.09	0.28
Crit Moves:	****			****			****			****		
Green/Cycle:	0.15	0.12	0.12	0.18	0.15	0.15	0.17	0.34	0.34	0.23	0.40	0.40
Volume/Cap:	0.06	0.18	0.18	0.69	0.38	0.38	0.69	0.51	0.51	0.07	0.22	0.69
Delay/Veh:	22.0	24.3	24.3	29.1	24.0	24.0	30.1	16.1	16.1	18.3	11.8	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:	22.0	24.3	24.3	29.1	24.0	24.0	30.1	16.1	16.1	18.3	11.8	18.0
LOS by Move:	C	C	C	C	C	C	C	B	B	B	B	B
HCM2k95thQ:	1	2	2	11	4	4	10	11	11	1	4	15

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

## **Appendix D-12**

### **GENERAL PLAN WITH-PROJECT CONDITIONS– AM PEAK HOUR**



Tuscana Village Specific Plan  
General Plan With-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.716  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 18.3  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue						Riverside Drive					
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	3	1	0	3	2	0	2	1	0	2

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR

Base Vol:	194	2277	125	194	1784	52	409	286	45	153	183	50
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:	194	2277	125	194	1784	52	409	286	45	153	183	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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:	194	2277	125	194	1784	52	409	286	45	153	183	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	194	2277	125	194	1784	52	409	286	45	153	183	50
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
Final Volume:	194	2277	125	194	1784	52	409	286	45	153	183	50

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.91	0.91	0.92	0.89	0.89	0.95	0.88	0.88
Lanes:	1.00	3.79	0.21	1.00	3.89	0.11	2.00	2.59	0.41	1.00	2.36	0.64
Final Sat.:	1805	6504	357	1805	6693	195	3502	4392	691	1805	3944	1077

Capacity Analysis Module:

Vol/Sat:	0.11	0.35	0.35	0.11	0.27	0.27	0.12	0.07	0.07	0.08	0.05	0.05
Crit Moves:	****			****			****			****		
Green/Cycle:	0.18	0.46	0.46	0.14	0.42	0.42	0.15	0.13	0.13	0.13	0.12	0.12
Volume/Cap:	0.59	0.77	0.77	0.77	0.64	0.64	0.77	0.48	0.48	0.63	0.40	0.40
Delay/Veh:	25.3	14.8	14.8	37.9	14.5	14.5	31.0	24.6	24.6	29.8	25.0	25.0
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:	25.3	14.8	14.8	37.9	14.5	14.5	31.0	24.6	24.6	29.8	25.0	25.0
LOS by Move:	C	B	B	D	B	B	C	C	C	C	C	C
HCM2k95thQ:	8	22	22	11	16	16	11	6	6	8	4	4

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

Tuscana Village Specific Plan  
General Plan With-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

Cycle (sec): 65 Critical Vol./Cap. (X): 0.559  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 13.4  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue				Industrial Dwy/Street "B" (Future)					
Approach:	North Bound		South Bound		East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	
Control:	Protected		Protected		Protected		Protected			
Rights:	Include		Include		Include		Include			
Min. Green:	7	7	7	7	7	7	7	7	7	
Lanes:	1	0	3	1	0	1	0	0	1	0

Volume Module:	>> Count	Date:	18 Aug 2009	<< AM	PEAK HOUR
Base Vol:	165	2291	59	106	1482
Growth Adj:	1.00	1.00	1.00	1.00	1.00
Initial Bse:	165	2291	59	106	1482
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	165	2291	59	106	1482
Reduct Vol:	0	0	0	0	0
Reduced Vol:	165	2291	59	106	1482
PCE Adj:	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00
Final Volume:	165	2291	59	106	1482

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.88	0.88	0.92	0.86	0.86	0.95	0.86	0.86
Lanes:	1.00	3.90	0.10	1.00	3.20	0.80	2.00	0.10	0.90	1.00	0.05	0.95
Final Sat.:	1805	6715	173	1805	5371	1337	3502	156	1485	1805	88	1542

Capacity Analysis Module:	Vol/Sat:	0.09	0.34	0.34	0.06	0.28	0.28	0.07	0.01	0.01	0.01	0.02	0.02
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.19	0.55	0.55	0.11	0.47	0.47	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Volume/Cap:	0.49	0.62	0.62	0.55	0.58	0.58	0.62	0.12	0.12	0.12	0.06	0.21	0.21
Delay/Veh:	24.9	10.2	10.2	30.7	12.7	12.7	30.7	26.5	26.5	26.5	26.1	27.1	27.1
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	1.00
AdjDel/Veh:	24.9	10.2	10.2	30.7	12.7	12.7	30.7	26.5	26.5	26.5	26.1	27.1	27.1
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	C	C
HCM2k95thQ:	7	18	18	6	15	15	7	1	1	1	2	2	2

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

Tuscana Village Specific Plan  
General Plan With-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #3 Milliken Avenue - SR-60 Eastbound Ramps  
\*\*\*\*\*

Cycle (sec): 70 Critical Vol./Cap.(X): 0.828  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 21.5  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	Milliken Avenue						SR-60 Eastbound Ramps					
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	3	0	1	2	0	0	0	2	0	0

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	0	2158	417	53	1183	0	495	0	926	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	2158	417	53	1183	0	495	0	926	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	2158	417	53	1183	0	495	0	926	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2158	417	53	1183	0	495	0	926	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
Final Volume:	0	2158	417	53	1183	0	495	0	926	0	0	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.85	0.92	0.91	1.00	0.95	1.00	0.75	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	2.00	3.00	0.00	1.00	0.00	2.00	0.00	0.00	0.00
Final Sat.:	0	5187	1615	3502	5187	0	1805	0	2842	0	0	0

Capacity Analysis Module:												
Vol/Sat:	0.00	0.42	0.26	0.02	0.23	0.00	0.27	0.00	0.33	0.00	0.00	0.00
Crit Moves:	****			****			****					
Green/Cycle:	0.00	0.46	0.46	0.10	0.56	0.00	0.36	0.00	0.36	0.00	0.00	0.00
Volume/Cap:	0.00	0.91	0.57	0.15	0.41	0.00	0.77	0.00	0.91	0.00	0.00	0.00
Delay/Veh:	0.0	23.5	15.0	29.0	9.0	0.0	25.4	0.0	33.4	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	23.5	15.0	29.0	9.0	0.0	25.4	0.0	33.4	0.0	0.0	0.0
LOS by Move:	A	C	B	C	A	A	C	A	C	A	A	A
HCM2k95thQ:	0	35	14	1	11	0	21	0	27	0	0	0

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



Tuscana Village Specific Plan  
General Plan With-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.801  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 18.9  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Milliken (Hamner)				SR-60 Westbound Ramps															
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:	Include			Include			Include			Include										
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7								
Lanes:	2	0	3	0	0	0	0	3	0	1	0	0	0	0	0	1	0	0	1	1

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR

Base Vol:	689	1966	0	0	708	332	0	0	0	527	0	1029
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:	689	1966	0	0	708	332	0	0	0	527	0	1029
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:	689	1966	0	0	708	332	0	0	0	527	0	1029
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	689	1966	0	0	708	332	0	0	0	527	0	1029
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
Final Volume:	689	1966	0	0	708	332	0	0	0	527	0	1029

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.91	1.00	1.00	0.91	0.85	1.00	1.00	1.00	0.95	1.00	0.85
Lanes:	2.00	3.00	0.00	0.00	3.00	1.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	3502	5187	0	0	5187	1615	0	0	0	1805	0	3230

Capacity Analysis Module:

Vol/Sat:	0.20	0.38	0.00	0.00	0.14	0.21	0.00	0.00	0.00	0.29	0.00	0.32
Crit Moves:	****					****						****
Green/Cycle:	0.25	0.50	0.00	0.00	0.26	0.26	0.00	0.00	0.00	0.40	0.00	0.40
Volume/Cap:	0.80	0.75	0.00	0.00	0.53	0.80	0.00	0.00	0.00	0.73	0.00	0.80
Delay/Veh:	26.7	13.3	0.0	0.0	19.6	31.5	0.0	0.0	0.0	19.3	0.0	19.7
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:	26.7	13.3	0.0	0.0	19.6	31.5	0.0	0.0	0.0	19.3	0.0	19.7
LOS by Move:	C	B	A	A	B	C	A	A	A	B	A	B
HCM2k95thQ:	16	22	0	0	9	16	0	0	0	18	0	20

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

Tuscan Village Specific Plan  
General Plan With-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.393  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 16.1  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Riverside						Mill Creek						
Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Permitted			Permitted			Protected			Protected			
Rights:	Include			Include			Include			Include			
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7	
Lanes:	1	0	1	0	1	0	1	0	2	1	0	1	0

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR

Base Vol:	39	199	113	122	180	116	164	397	19	9	472	29
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:	39	199	113	122	180	116	164	397	19	9	472	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	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:	39	199	113	122	180	116	164	397	19	9	472	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	39	199	113	122	180	116	164	397	19	9	472	29
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:	39	199	113	122	180	116	164	397	19	9	472	29

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.46	1.00	0.85	0.57	0.94	0.94	0.95	0.90	0.90	0.95	0.90	0.90
Lanes:	1.00	1.00	1.00	1.00	0.61	0.39	1.00	2.86	0.14	1.00	2.83	0.17
Final Sat.:	882	1900	1615	1079	1087	701	1805	4915	235	1805	4843	298

Capacity Analysis Module:

Vol/Sat:	0.04	0.10	0.07	0.11	0.17	0.17	0.09	0.08	0.08	0.00	0.10	0.10
Crit Moves:				****			****			****		
Green/Cycle:	0.42	0.42	0.42	0.42	0.42	0.42	0.23	0.24	0.24	0.24	0.25	0.25
Volume/Cap:	0.11	0.25	0.17	0.27	0.39	0.39	0.39	0.34	0.34	0.02	0.39	0.39
Delay/Veh:	10.6	11.4	10.9	11.7	12.4	12.4	20.1	19.0	19.0	17.5	19.0	19.0
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:	10.6	11.4	10.9	11.7	12.4	12.4	20.1	19.0	19.0	17.5	19.0	19.0
LOS by Move:	B	B	B	B	B	B	C	B	B	B	B	B
HCM2k95thQ:	1	5	3	3	8	8	6	5	5	0	6	6

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

Tuscana Village Specific Plan  
General Plan With-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #6 Riverside - Sharp

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: B[ 11.4]

\*\*\*\*\*  
Street Name: Sharp Riverside  
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: 1 0 0 0 1 0 0 0 0 0 0 0 2 1 0 1 0 2 1 0  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR  
Base Vol: 10 0 30 0 0 0 0 581 24 40 376 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: 10 0 30 0 0 0 0 581 24 40 376 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: 10 0 30 0 0 0 0 581 24 40 376 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 10 0 30 0 0 0 0 581 24 40 376 0  
-----|-----|-----|-----|

Critical Gap Module:  
Critical Gp: 6.8 xxxx 6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx  
FollowUpTim: 3.5 xxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx  
-----|-----|-----|-----|

Capacity Module:  
Cnflct Vol: 798 xxxx 206 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 605 xxxx xxxxx  
Potent Cap.: 327 xxxx 807 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 983 xxxx xxxxx  
Move Cap.: 317 xxxx 807 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 983 xxxx xxxxx  
Volume/Cap: 0.03 xxxx 0.04 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 0.04 xxxx xxxxx  
-----|-----|-----|-----|

Level Of Service Module:  
2Way95thQ: 0.1 xxxx 0.1 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 0.1 xxxx xxxxx  
Control Del: 16.7 xxxx 9.6 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 8.8 xxxx xxxxx  
LOS by Move: C \* 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:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  
Shrd ConDel:xxxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 11.4 xxxxxxx xxxxxxx xxxxxxx  
ApproachLOS: B \* \* \*  
-----|-----|-----|-----|

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



Tuscana Village Specific Plan  
General Plan With-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch  
\*\*\*\*\*

Cycle (sec): 90 Critical Vol./Cap.(X): 0.975  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 46.2  
Optimal Cycle: OPTIMIZED Level Of Service: D  
\*\*\*\*\*

Street Name:	Milliken (Hamner)						Cantu-Galleano Ranch					
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:	Include			Include			Include			Ovl		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	3	1	0	3	1	0	3	1	0	3

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	440	1002	88	846	929	99	135	672	162	410	892	1056
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:	440	1002	88	846	929	99	135	672	162	410	892	1056
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:	440	1002	88	846	929	99	135	672	162	410	892	1056
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	440	1002	88	846	929	99	135	672	162	410	892	1056
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
Final Volume:	440	1002	88	846	929	99	135	672	162	410	892	1056

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.92	0.90	0.90	0.95	0.88	0.88	0.95	0.91	0.85
Lanes:	1.00	3.68	0.32	2.00	3.61	0.39	1.00	3.22	0.78	1.00	3.00	1.00
Final Sat.:	1805	6281	552	3502	6162	657	1805	5411	1304	1805	5187	1615

Capacity Analysis Module:												
Vol/Sat:	0.24	0.16	0.16	0.24	0.15	0.15	0.07	0.12	0.12	0.23	0.17	0.65
Crit Moves:	****			****			****			****		
Green/Cycle:	0.25	0.16	0.16	0.25	0.16	0.16	0.08	0.18	0.18	0.32	0.42	0.67
Volume/Cap:	0.96	0.98	0.98	0.98	0.96	0.96	0.96	0.70	0.70	0.70	0.41	0.98
Delay/Veh:	65.0	58.7	58.7	58.3	56.2	56.2	105.4	36.7	36.7	30.5	18.3	35.8
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:	65.0	58.7	58.7	58.3	56.2	56.2	105.4	36.7	36.7	30.5	18.3	35.8
LOS by Move:	E	E	E	E	E	E	F	D	D	C	B	D
HCM2k95thQ:	30	23	23	30	22	22	14	14	14	20	12	56

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

Tuscana Village Specific Plan  
General Plan With-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.620  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 12.1  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps						Cantu-Galleano Ranch					
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			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	0	2	0	0	0	0	3	0	0	3

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR

Base Vol:	0	0	0	991	0	700	0	1337	757	0	1532	965
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	991	0	700	0	1337	757	0	1532	965
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	991	0	700	0	1337	0	0	1532	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	991	0	700	0	1337	0	0	1532	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Volume:	0	0	0	991	0	700	0	1337	0	0	1532	0

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.75	1.00	0.91	1.00	1.00	0.91	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	0.00	3.00	1.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	2842	0	5187	1900	0	5187	1900

Capacity Analysis Module:

Vol/Sat:	0.00	0.00	0.00	0.28	0.00	0.25	0.00	0.26	0.00	0.00	0.30	0.00
Crit Moves:	****						****					
Green/Cycle:	0.00	0.00	0.00	0.46	0.00	0.46	0.00	0.48	0.00	0.00	0.48	0.00
Volume/Cap:	0.00	0.00	0.00	0.62	0.00	0.54	0.00	0.54	0.00	0.00	0.62	0.00
Delay/Veh:	0.0	0.0	0.0	13.1	0.0	12.2	0.0	11.3	0.0	0.0	12.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	13.1	0.0	12.2	0.0	11.3	0.0	0.0	12.1	0.0
LOS by Move:	A	A	A	B	A	B	A	B	A	A	B	A
HCM2k95thQ:	0	0	0	15	0	11	0	13	0	0	16	0

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



Tuscana Village Specific Plan  
General Plan With-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.961  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 22.6  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	I-15 Northbound Ramps						Cantu-Galleano Ranch						
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:	7	7	7	7	7	7	7	7	7	7	7	7	
Lanes:	1	0	0	1	1	0	0	0	0	0	3	0	1

Volume Module:	>>	Count	Date:	18 Aug 2009	<<	AM	PEAK HOUR
Base Vol:	532	0	1562	0	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	532	0	1562	0	0	0	0
User Adj:	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
PHF Volume:	532	0	1562	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0
Reduced Vol:	532	0	1562	0	0	0	0
PCE Adj:	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
Final Volume:	532	0	1562	0	0	0	0

Saturation Flow Module:	Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.91	0.85	0.92	0.91	1.00
Lanes:	1.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	2.00	3.00	0.00
Final Sat.:	1805	0	3230	0	0	0	0	5187	1615	3502	5187	0

Capacity Analysis Module:	Vol/Sat:	0.29	0.00	0.48	0.00	0.00	0.00	0.32	0.40	0.25	0.38	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.31	0.00	0.57	0.00	0.00	0.00	0.00	0.33	0.64	0.26	0.59	0.00
Volume/Cap:	0.96	0.00	0.85	0.00	0.00	0.00	0.00	0.96	0.63	0.96	0.64	0.00
Delay/Veh:	48.9	0.0	15.0	0.0	0.0	0.0	0.0	33.1	7.7	42.7	8.5	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:	48.9	0.0	15.0	0.0	0.0	0.0	0.0	33.1	7.7	42.7	8.5	0.0
LOS by Move:	D	A	B	A	A	A	A	C	A	D	A	A
HCM2k95thQ:	27	0	27	0	0	0	0	30	15	25	18	0

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

Tuscana Village Specific Plan  
General Plan With-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #10 Milliken (Hamner) - Samantha  
\*\*\*\*\*

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: F[445.7]  
\*\*\*\*\*

Street Name:	Milliken (Hamner)				Samantha				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled		Uncontrolled		Stop Sign		Stop Sign		
Rights:	Include		Include		Include		Include		
Lanes:	0	0	3	1	0	1	0	0	1

Volume Module:	>> Count	Date:	22 Sep 2009	<< AM	PEAK HOUR
Base Vol:	0	2588	42	16	1965
Growth Adj:	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	2588	42	16	1965
User Adj:	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	2588	42	16	1965
Reduct Vol:	0	0	0	0	0
FinalVolume:	0	2588	42	16	1965

Critical Gap Module:	Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	

Capacity Module:	Cnflict Vol:	xxxx	xxxx	xxxxx	2630	xxxx	xxxxx	xxxx	xxxx	xxxxx	3132	xxxx	668
Potent Cap.:	xxxx	xxxx <td>xxxxx</td> <td>165</td> <td>xxxx</td> <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>9</td> <td>xxxx</td> <td>405</td> </td>	xxxxx	165	xxxx	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>9</td> <td>xxxx</td> <td>405</td>	xxxxx	9	xxxx	405	
Move Cap.:	xxxx	xxxx <td>xxxxx</td> <td>165</td> <td>xxxx</td> <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>8</td> <td>xxxx</td> <td>405</td> </td>	xxxxx	165	xxxx	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>8</td> <td>xxxx</td> <td>405</td>	xxxxx	8	xxxx	405	
Volume/Cap:	xxxx	xxxx <td>xxxx</td> <td>0.10</td> <td>xxxx</td> <td>xxxx</td> <td>xxxx</td> <td>xxxx <td>xxxx</td> <td>0.98</td> <td>xxxx</td> <td>0.02</td> </td>	xxxx	0.10	xxxx	xxxx	xxxx	xxxx <td>xxxx</td> <td>0.98</td> <td>xxxx</td> <td>0.02</td>	xxxx	0.98	xxxx	0.02	

Level Of Service Module:	2Way95thQ:	xxxx	xxxx	xxxxx	0.3	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.7	xxxx	0.1
Control Del:	xxxxx	xxxx <td>xxxxx</td> <td>29.2</td> <td>xxxx</td> <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>877.3</td> <td>xxxx</td> <td>14.1</td> </td>	xxxxx	29.2	xxxx	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>877.3</td> <td>xxxx</td> <td>14.1</td>	xxxxx	877.3	xxxx	14.1	
LOS by Move:	*	*	*	D	*	*	*	*	*	F	*	B	
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	
Shared Cap.:	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> </td></td></td>	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> </td></td>	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> </td>	xxxxx	xxxx	xxxx <td>xxxxx</td>	xxxxx	
SharedQueue:	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td></td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td>	xxxxx	xxxxx	xxxx <td>xxxxx</td>	xxxxx	
Shrd ConDel:	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td></td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td>	xxxxx	xxxxx	xxxx <td>xxxxx</td>	xxxxx	
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			445.7			
ApproachLOS:	*			*			*			F			

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

Tuscana Village Specific Plan  
General Plan With-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #11 Riverside - Street A (future)  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.293  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 13.9  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: Riverside				Street A											
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: Include				Include				Include				Include			
Min. Green: 7 7 7				7 7 7				7 7 7				7 7 7			
Lanes: 1 0 0 1 0				1 0 0 1 0				1 0 1 1 0				1 0 2 0 1			

Volume Module: AM PEAK HOUR

Base Vol:	15	8	26	53	1	67	243	659	16	28	323	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:	15	8	26	53	1	67	243	659	16	28	323	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:	15	8	26	53	1	67	243	659	16	28	323	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	8	26	53	1	67	243	659	16	28	323	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
Final Volume:	15	8	26	53	1	67	243	659	16	28	323	42

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.89	0.89	0.95	0.85	0.85	0.95	0.95	0.95	0.95	0.95	0.85
Lanes:	1.00	0.24	0.76	1.00	0.01	0.99	1.00	1.95	0.05	1.00	2.00	1.00
Final Sat.:	1805	396	1286	1805	24	1595	1805	3510	85	1805	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.01	0.02	0.02	0.03	0.04	0.04	0.13	0.19	0.19	0.02	0.09	0.03
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.12	0.12	0.12	0.12	0.12	0.34	0.52	0.52	0.12	0.29	0.29
Volume/Cap:	0.07	0.17	0.17	0.25	0.36	0.36	0.40	0.36	0.36	0.13	0.30	0.09
Delay/Veh:	23.7	24.3	24.3	24.7	25.6	25.6	15.6	8.7	8.7	24.1	16.6	15.4
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:	23.7	24.3	24.3	24.7	25.6	25.6	15.6	8.7	8.7	24.1	16.6	15.4
LOS by Move:	C	C	C	C	C	C	B	A	A	C	B	B
HCM2k95thQ:	1	1	1	2	3	3	7	8	8	1	5	1

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



Tuscana Village Specific Plan  
General Plan With-Project AM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #12 Milliken (Hamner) - Hartford Street  
\*\*\*\*\*

Average Delay (sec/veh): 0.0 Worst Case Level Of Service: B[ 12.7]  
\*\*\*\*\*

Street Name:	Milliken (Hamner)					Hartford				
Approach:	North Bound		South Bound		East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	
Control:	Uncontrolled		Uncontrolled		Stop Sign		Stop Sign			
Rights:	Include		Include		Include		Include			
Lanes:	0	0	4	0	0	0	3	1	0	

Volume Module: AM PEAK HOUR

Base Vol:	0	2575	0	0	1942	167	0	0	3	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	2575	0	0	1942	167	0	0	3	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	2575	0	0	1942	167	0	0	3	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	0	2575	0	0	1942	167	0	0	3	0	0	0

Critical Gap Module:

Critical Gp:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	569	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	470	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	470	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	12.7	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	B	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shared Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx					12.7	xxxxxx		
ApproachLOS:	*			*					B	*		

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

# **Appendix D-13**

## **GENERAL PLAN NO-PROJECT CONDITIONS– PM PEAK HOUR**

Tuscana Village Specific Plan  
General Plan No-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 75 Critical Vol./Cap.(X): 0.850  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 26.3  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue						Riverside Drive					
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	3	1	0	3	2	0	2	1	0	2

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR

Base Vol:	61	2160	279	64	2597	526	532	527	179	189	401	150
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:	61	2160	279	64	2597	526	532	527	179	189	401	150
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:	61	2160	279	64	2597	526	532	527	179	189	401	150
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	2160	279	64	2597	526	532	527	179	189	401	150
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	61	2160	279	64	2597	526	532	527	179	189	401	150

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.89	0.89	0.95	0.89	0.89	0.92	0.88	0.88	0.95	0.87	0.87
Lanes:	1.00	3.54	0.46	1.00	3.33	0.67	2.00	2.24	0.76	1.00	2.18	0.82
Final Sat.:	1805	6021	778	1805	5607	1136	3502	3725	1265	1805	3620	1354

Capacity Analysis Module:

Vol/Sat:	0.03	0.36	0.36	0.04	0.46	0.46	0.15	0.14	0.14	0.10	0.11	0.11
Crit Moves:	****			****			****			****		
Green/Cycle:	0.09	0.48	0.48	0.12	0.51	0.51	0.17	0.17	0.17	0.12	0.12	0.12
Volume/Cap:	0.36	0.75	0.75	0.28	0.91	0.91	0.91	0.85	0.85	0.85	0.91	0.91
Delay/Veh:	33.2	16.9	16.9	30.5	20.7	20.7	48.6	38.7	38.7	57.6	49.9	49.9
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:	33.2	16.9	16.9	30.5	20.7	20.7	48.6	38.7	38.7	57.6	49.9	49.9
LOS by Move:	C	B	B	C	C	C	D	D	D	E	D	D
HCM2k95thQ:	4	25	25	3	38	38	18	16	16	13	15	15

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

Tuscana Village Specific Plan  
General Plan No-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

Average Delay (sec/veh): 53.8 Worst Case Level Of Service: F[2579.1]  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue			Industrial Dwy/Street "B" (Future)		
Approach:	North Bound			South Bound		
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled			Uncontrolled		
Rights:	Include			Include		
Lanes:	0 0 3 1 0	1 0 3 1 0	0 0 0 0 0	1 0 0 0 1		

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM PEAK HOUR
Base Vol:	0 2558 15	36 3094	0	0 0 0 0 52 0 69
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 1.00 1.00 1.00 1.00
Initial Bse:	0 2558 15	36 3094	0	0 0 0 0 52 0 69
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 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 1.00 1.00 1.00
PHF Volume:	0 2558 15	36 3094	0	0 0 0 0 52 0 69
Reduct Vol:	0 0 0	0 0 0	0	0 0 0 0 0 0 0
Final Volume:	0 2558 15	36 3094	0	0 0 0 0 52 0 69

Critical Gap Module:	Critical Gp:	xxxxx xxxx xxxxx	4.1 xxxx xxxxx xxxxx xxxx xxxxx	6.8 xxxx 6.9
FollowUpTim:	xxxxx xxxx xxxxx	2.2 xxxx xxxxx xxxxx xxxx xxxxx	3.5 xxxx 3.3	

Capacity Module:	Cnflct Vol:	xxxx xxxx xxxxx	2573 xxxx xxxxx xxxxx xxxx xxxxx	3411 xxxx 647
Potent Cap.:	xxxx xxxx xxxxx	173 xxxx xxxxx xxxxx xxxx xxxxx	6 xxxx 418	
Move Cap.:	xxxx xxxx xxxxx	173 xxxx xxxxx xxxxx xxxx xxxxx	5 xxxx 418	
Volume/Cap:	xxxx xxxx xxxxx	0.21 xxxx xxxxx xxxxx xxxx xxxxx	10.99 xxxx 0.16	

Level Of Service Module:	2Way95thQ:	xxxx xxxx xxxxx	0.8 xxxx xxxxx xxxxx xxxx xxxxx	8.3 xxxx 0.6
Control Del:	xxxxx xxxx xxxxx	31.1 xxxx xxxxx xxxxx xxxx xxxxx	5981 xxxx 15.3	
LOS by Move:	* * *	D * *	* * *	F * C
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx xxxx xxxxx	xxxx xxxx xxxxx xxxxx xxxx xxxxx	xxxx xxxx xxxxx xxxxx xxxx xxxxx	
Shared Queue:	xxxxx xxxx xxxxx	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 xxxxx xxxx xxxxx	
Shared LOS:	* * *	* * *	* * *	* * *
ApproachDel:	xxxxxx	xxxxxx	xxxxxx	2579.1
ApproachLOS:	*	*	*	F

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



Tuscana Village Specific Plan  
General Plan No-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #3 Milliken Avenue - SR-60 Eastbound Ramps  
\*\*\*\*\*

Cycle (sec): 65 Critical Vol./Cap.(X): 0.945  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 25.0  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:		Milliken Avenue				SR-60 Eastbound Ramps					
Approach:		North Bound		South Bound		East Bound		West Bound			
Movement:		L	T	R	L	T	R	L	T	R	
Control:		Protected		Protected		Protected		Protected			
Rights:		Include		Include		Include		Include			
Min. Green:		7	7	7	7	7	7	7	7	7	
Lanes:		0	0	2	1	1	2	0	3	0	0

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM PEAK HOUR
Base Vol:	0 1834 793	326 2086	0 421 0 1044	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 1834 793	326 2086	0 421 0 1044	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 1834 793	326 2086	0 421 0 1044	0 0 0
Reduct Vol:	0 0 0	0 0 0	0 0 0	0 0 0
Reduced Vol:	0 1834 793	326 2086	0 421 0 1044	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
Final Volume:	0 1834 793	326 2086	0 421 0 1044	0 0 0

Saturation Flow Module:	
Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	1.00 0.87 0.87 0.92 0.91 1.00 0.95 1.00 0.75 1.00 1.00 1.00
Lanes:	0.00 2.79 1.21 2.00 3.00 0.00 1.00 0.00 2.00 0.00 0.00 0.00
Final Sat.:	0 4611 1994 3502 5187 0 1805 0 2842 0 0 0

Capacity Analysis Module:	
Vol/Sat:	0.00 0.40 0.40 0.09 0.40 0.00 0.23 0.00 0.37 0.00 0.00 0.00
Crit Moves:	**** **** ****
Green/Cycle:	0.00 0.42 0.42 0.11 0.52 0.00 0.38 0.00 0.38 0.00 0.00 0.00
Volume/Cap:	0.00 0.96 0.96 0.86 0.77 0.00 0.61 0.00 0.96 0.00 0.00 0.00
Delay/Veh:	0.0 27.5 27.5 46.9 13.7 0.0 17.6 0.0 37.2 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 27.5 27.5 46.9 13.7 0.0 17.6 0.0 37.2 0.0 0.0 0.0
LOS by Move:	A C C D B A B A D A A A
HCM2k95thQ:	0 34 34 12 25 0 14 0 30 0 0 0

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



Tuscana Village Specific Plan  
General Plan No-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.989  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 23.5  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:		Milliken (Hamner)				SR-60 Westbound Ramps			
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Include		Include		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	2	0	3	0	0	0	3	0	1

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM PEAK HOUR
Base Vol:	782 1517	0	0 2040	825
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00
Initial Bse:	782 1517	0	0 2040	825
User Adj:	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
PHF Volume:	782 1517	0	0 2040	825
Reduct Vol:	0 0	0	0 0	0
Reduced Vol:	782 1517	0	0 2040	825
PCE Adj:	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
Final Volume:	782 1517	0	0 2040	825

Saturation Flow Module:	Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900
Adjustment:	0.92 0.91	1.00	1.00 0.91	0.85	1.00 1.00	1.00	0.95 1.00	0.85			
Lanes:	2.00 3.00	0.00	0.00 3.00	1.00	0.00 0.00	0.00	2.00 0.00	1.00			
Final Sat.:	3502 5187	0	0 5187	1615	0 0	0	3618 0	1615			

Capacity Analysis Module:	Vol/Sat:	0.22 0.29	0.00	0.00 0.39	0.51	0.00 0.00	0.00	0.09 0.00	0.16
Crit Moves:	****			****				****	
Green/Cycle:	0.23 0.74	0.00	0.00 0.52	0.52	0.00 0.00	0.00	0.16 0.00	0.16	
Volume/Cap:	0.99 0.39	0.00	0.00 0.76	0.99	0.00 0.00	0.00	0.57 0.00	0.99	
Delay/Veh:	52.4 2.9	0.0	0.0 12.9	42.7	0.0 0.0	0.0	24.7 0.0	78.4	
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:	52.4 2.9	0.0	0.0 12.9	42.7	0.0 0.0	0.0	24.7 0.0	78.4	
LOS by Move:	D A	A	A B	D	A A	A	C A	E	
HCM2k95thQ:	24 8	0	0 23	39	0 0	0	7 0	18	

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

Tuscana Village Specific Plan  
General Plan No-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.367  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 14.9  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Riverside						Mill Creek					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	0	1	0	1	0	2	1	0	2

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR

Base Vol:	61	19	64	118	14	181	270	844	60	64	535	112
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:	61	19	64	118	14	181	270	844	60	64	535	112
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:	61	19	64	118	14	181	270	844	60	64	535	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	19	64	118	14	181	270	844	60	64	535	112
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
Final Volume:	61	19	64	118	14	181	270	844	60	64	535	112

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.53	1.00	0.85	0.75	0.86	0.86	0.95	0.90	0.90	0.95	0.89	0.89
Lanes:	1.00	1.00	1.00	1.00	0.07	0.93	1.00	2.80	0.20	1.00	2.48	0.52
Final Sat.:	1005	1900	1615	1431	117	1518	1805	4794	341	1805	4178	875

Capacity Analysis Module:

Vol/Sat:	0.06	0.01	0.04	0.08	0.12	0.12	0.15	0.18	0.18	0.04	0.13	0.13
Crit Moves:				****			****			****		
Green/Cycle:	0.32	0.32	0.32	0.32	0.32	0.32	0.31	0.47	0.47	0.12	0.27	0.27
Volume/Cap:	0.19	0.03	0.13	0.26	0.38	0.38	0.48	0.38	0.38	0.30	0.48	0.48
Delay/Veh:	15.2	14.2	14.7	15.6	16.4	16.4	17.2	10.4	10.4	25.1	18.6	18.6
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:	15.2	14.2	14.7	15.6	16.4	16.4	17.2	10.4	10.4	25.1	18.6	18.6
LOS by Move:	B	B	B	B	B	B	B	B	B	C	B	B
HCM2k95thQ:	2	1	2	4	6	6	9	8	8	3	8	8

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

Tuscana Village Specific Plan  
General Plan No-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #6 Riverside - Sharp  
\*\*\*\*\*

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: C[ 20.2]

\*\*\*\*\*  
Street Name: Sharp Riverside  
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: 1 0 0 0 1 0 0 0 0 0 0 0 2 1 0 1 0 2 1 0  
-----|-----|-----|-----|  
Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR  
Base Vol: 30 0 24 0 0 0 0 870 14 22 740 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: 30 0 24 0 0 0 0 870 14 22 740 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: 30 0 24 0 0 0 0 870 14 22 740 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 30 0 24 0 0 0 0 870 14 22 740 0  
-----|-----|-----|-----|

Critical Gap Module:  
Critical Gp: 6.8 xxxx 6.9 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 4.1 xxxx xxxxxx  
FollowUpTim: 3.5 xxxx 3.3 xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx 2.2 xxxx xxxxxx  
-----|-----|-----|-----|

Capacity Module:  
Cnflct Vol: 1168 xxxx 297 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 884 xxxx xxxxxx  
Potent Cap.: 190 xxxx 705 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 774 xxxx xxxxxx  
Move Cap.: 185 xxxx 705 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 774 xxxx xxxxxx  
Volume/Cap: 0.16 xxxx 0.03 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.03 xxxx xxxxxx  
-----|-----|-----|-----|

Level Of Service Module:  
2Way95thQ: 0.6 xxxx 0.1 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx 0.1 xxxx xxxxxx  
Control Del: 28.1 xxxx 10.3 xxxxxx xxxx xxxxxx xxxxxx xxxxxx xxxxxx 9.8 xxxx xxxxxx  
LOS by Move: D \* B \* \* \* \* \* \* \* \* A \* \*  
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT  
SharedCap.: xxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx  
SharedQueue:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx  
Shrd ConDel:xxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx xxxx xxxxxx xxxxxx  
Shared LOS: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 20.2 xxxxxx xxxxxx xxxxxx  
ApproachLOS: C \* \* \*

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



Tuscana Village Specific Plan  
General Plan No-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch  
\*\*\*\*\*

Cycle (sec): 65 Critical Vol./Cap. (X): 0.977  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 35.4  
Optimal Cycle: OPTIMIZED Level Of Service: D  
\*\*\*\*\*

Street Name:	Milliken (Hamner)					Cantu-Galleano Ranch						
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:	Include			Include			Include			Ovl		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	3	1	0	3	1	0	3	1	0	3

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR												
Base Vol:	217	988	354	997	1023	130	122	781	136	403	851	735
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:	217	988	354	997	1023	130	122	781	136	403	851	735
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:	217	988	354	997	1023	130	122	781	136	403	851	735
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	217	988	354	997	1023	130	122	781	136	403	851	735
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
Final Volume:	217	988	354	997	1023	130	122	781	136	403	851	735

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.92	0.89	0.89	0.95	0.89	0.89	0.95	0.91	0.85
Lanes:	1.00	3.00	1.00	2.00	3.55	0.45	1.00	3.41	0.59	1.00	3.00	1.00
Final Sat.:	1805	4980	1660	3502	6032	767	1805	5761	1003	1805	5187	1615

Capacity Analysis Module:												
Vol/Sat:	0.12	0.20	0.21	0.28	0.17	0.17	0.07	0.14	0.14	0.22	0.16	0.46
Crit Moves:	****			****			****			****		
Green/Cycle:	0.21	0.22	0.22	0.29	0.30	0.30	0.14	0.14	0.14	0.23	0.23	0.52
Volume/Cap:	0.57	0.91	0.98	0.98	0.57	0.57	0.48	0.98	0.98	0.98	0.73	0.88
Delay/Veh:	25.0	33.4	44.2	45.5	19.7	19.7	27.0	51.7	51.7	63.1	25.7	24.7
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:	25.0	33.4	44.2	45.5	19.7	19.7	27.0	51.7	51.7	63.1	25.7	24.7
LOS by Move:	C	C	D	D	B	B	C	D	D	E	C	C
HCM2k95thQ:	9	20	24	29	12	12	6	18	18	24	14	29

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

Tuscana Village Specific Plan  
General Plan No-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.630  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 12.2  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps						Cantu-Galleano Ranch					
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			Permitted			Permitted		
Rights:	Include			Include			Ignore			Ignore		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	0	2	0	0	0	0	3	0	0	3

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR												
Base Vol:	0	0	0	904	0	816	0	1561	649	0	1268	1032
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	904	0	816	0	1561	649	0	1268	1032
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	904	0	816	0	1561	0	0	1268	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	904	0	816	0	1561	0	0	1268	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	904	0	816	0	1561	0	0	1268	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.75	1.00	0.91	1.00	1.00	0.91	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	0.00	3.00	1.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	2842	0	5187	1900	0	5187	1900

Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.26	0.00	0.29	0.00	0.30	0.00	0.00	0.24	0.00
Crit Moves:				****			****					
Green/Cycle:	0.00	0.00	0.00	0.46	0.00	0.46	0.00	0.48	0.00	0.00	0.48	0.00
Volume/Cap:	0.00	0.00	0.00	0.57	0.00	0.63	0.00	0.63	0.00	0.00	0.51	0.00
Delay/Veh:	0.0	0.0	0.0	12.5	0.0	13.5	0.0	12.2	0.0	0.0	11.0	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	0.0	0.0	12.5	0.0	13.5	0.0	12.2	0.0	0.0	11.0	0.0
LOS by Move:	A	A	A	B	A	B	A	B	A	A	B	A
HCM2k95thQ:	0	0	0	13	0	14	0	16	0	0	12	0

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

Tuscana Village Specific Plan  
General Plan No-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps  
\*\*\*\*\*

Cycle (sec): 80 Critical Vol./Cap. (X): 1.088  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 45.3  
Optimal Cycle: OPTIMIZED Level Of Service: D  
\*\*\*\*\*

Street Name:	I-15 Northbound Ramps				Cantu-Galleano Ranch				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Ovl		Include		Ovl		Include		
Min. Green:	7	7	7	7	7	7	7	7	7
Lanes:	1	0	0	1	1	0	0	0	0

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR												
Base Vol:	480	0	1045	0	0	0	0	1778	692	1391	1829	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:	480	0	1045	0	0	0	0	1778	692	1391	1829	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:	480	0	1045	0	0	0	0	1778	692	1391	1829	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	480	0	1045	0	0	0	0	1778	692	1391	1829	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
Final Volume:	480	0	1045	0	0	0	0	1778	692	1391	1829	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	1.00	1.00	1.00	1.00	0.91	0.85	0.92	0.91	1.00
Lanes:	1.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	2.00	3.00	0.00
Final Sat.:	1805	0	3230	0	0	0	0	5187	1615	3502	5187	0

Capacity Analysis Module:												
Vol/Sat:	0.27	0.00	0.32	0.00	0.00	0.00	0.00	0.34	0.43	0.40	0.35	0.00
Crit Moves:	****						****			****		
Green/Cycle:	0.24	0.00	0.61	0.00	0.00	0.00	0.00	0.32	0.56	0.37	0.68	0.00
Volume/Cap:	1.09	0.00	0.53	0.00	0.00	0.00	0.00	1.09	0.77	1.09	0.52	0.00
Delay/Veh:	98.7	0.0	9.3	0.0	0.0	0.0	0.0	77.5	17.5	77.9	6.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	98.7	0.0	9.3	0.0	0.0	0.0	0.0	77.5	17.5	77.9	6.4	0.0
LOS by Move:	F	A	A	A	A	A	A	E	B	E	A	A
HCM2k95thQ:	36	0	15	0	0	0	0	45	26	48	16	0

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



Tuscana Village Specific Plan  
General Plan No-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #10 Milliken (Hamner) - Samantha  
\*\*\*\*\*

Average Delay (sec/veh): 2.8 Worst Case Level Of Service: F[316.7]  
\*\*\*\*\*

Street Name:	Milliken (Hamner)					Samantha				
Approach:	North Bound		South Bound		East Bound		West Bound			
Movement:	L	T	R	L	T	R	L	T	R	
Control:	Uncontrolled		Uncontrolled		Stop Sign		Stop Sign			
Rights:	Include		Include		Include		Include			
Lanes:	0	0	3	1	0	1	0	0	0	

Volume Module:	>>	Count	Date:	22 Sep 2009	<<	PM	PEAK HOUR
Base Vol:	0	2464	10	6	2959	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	2464	10	6	2959	0	0
User Adj:	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
PHF Volume:	0	2464	10	6	2959	0	0
Reduct Vol:	0	0	0	0	0	0	0
Final Volume:	0	2464	10	6	2959	0	0

Critical Gap Module:	Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.8	xxxx	6.9
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	xxxx	3.3	

Capacity Module:	Cnflct Vol:	xxxx	xxxx	xxxxx	2474	xxxx	xxxxx	xxxx	xxxx	xxxxx	3221	xxxx	621
Potent Cap.:	xxxx	xxxx <td>xxxxx</td> <td>190</td> <td>xxxx</td> <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>8</td> <td>xxxx</td> <td>435</td> </td>	xxxxx	190	xxxx	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>8</td> <td>xxxx</td> <td>435</td>	xxxxx	8	xxxx	435	
Move Cap.:	xxxx	xxxx <td>xxxxx</td> <td>190</td> <td>xxxx</td> <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>7</td> <td>xxxx</td> <td>435</td> </td>	xxxxx	190	xxxx	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>7</td> <td>xxxx</td> <td>435</td>	xxxxx	7	xxxx	435	
Volume/Cap:	xxxx	xxxx <td>xxxxx</td> <td>0.03</td> <td>xxxx</td> <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>1.60</td> <td>xxxx</td> <td>0.08</td> </td>	xxxxx	0.03	xxxx	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>1.60</td> <td>xxxx</td> <td>0.08</td>	xxxxx	1.60	xxxx	0.08	

Level Of Service Module:	2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	2.4	xxxx	0.3
Control Del:	xxxxx	xxxx <td>xxxxx</td> <td>24.6</td> <td>xxxx</td> <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>1225</td> <td>xxxx</td> <td>14.0</td> </td>	xxxxx	24.6	xxxx	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>1225</td> <td>xxxx</td> <td>14.0</td>	xxxxx	1225	xxxx	14.0	
LOS by Move:	*	*	*	C	*	*	*	*	*	F	*	B	
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	
Shared Cap.:	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> </td></td></td>	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> </td></td>	xxxxx	xxxx	xxxx <td>xxxxx</td> <td>xxxx</td> <td>xxxx <td>xxxxx</td> </td>	xxxxx	xxxx	xxxx <td>xxxxx</td>	xxxxx	
Shared Queue:	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td></td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td>	xxxxx	xxxxx	xxxx <td>xxxxx</td>	xxxxx	
Shrd ConDel:	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td></td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td></td>	xxxxx	xxxxx	xxxx <td>xxxxx</td> <td>xxxxx</td> <td>xxxx <td>xxxxx</td> </td>	xxxxx	xxxxx	xxxx <td>xxxxx</td>	xxxxx	
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*	
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			316.7			
ApproachLOS:	*			*			*			F			

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

Tuscana Village Specific Plan  
General Plan No-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #11 Riverside - Street A (future)  
\*\*\*\*\*

Cycle (sec): 80 Critical Vol./Cap.(X): 0.898  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 36.9  
Optimal Cycle: OPTIMIZED Level Of Service: D  
\*\*\*\*\*

Street Name: Riverside				Street A											
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: Include				Include				Include				Include			
Min. Green: 7 7 7				7 7 7				7 7 7				7 7 7			
Lanes: 1 0 0 1 0				1 0 0 1 0				1 0 1 1 0				1 0 2 0 1			

Volume Module: PM PEAK HOUR

Base Vol:	52	7	88	629	10	320	226	531	54	91	458	446
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:	52	7	88	629	10	320	226	531	54	91	458	446
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:	52	7	88	629	10	320	226	531	54	91	458	446
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	7	88	629	10	320	226	531	54	91	458	446
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
Final Volume:	52	7	88	629	10	320	226	531	54	91	458	446

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.86	0.86	0.95	0.86	0.86	0.95	0.94	0.94	0.95	0.95	0.85
Lanes:	1.00	0.07	0.93	1.00	0.03	0.97	1.00	1.82	0.18	1.00	2.00	1.00
Final Sat.:	1805	121	1515	1805	49	1575	1805	3231	329	1805	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.03	0.06	0.06	0.35	0.20	0.20	0.13	0.16	0.16	0.05	0.13	0.28
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green/Cycle:	0.14	0.09	0.09	0.38	0.33	0.33	0.14	0.28	0.28	0.15	0.30	0.30
Volume/Cap:	0.21	0.66	0.66	0.92	0.62	0.62	0.92	0.58	0.58	0.33	0.42	0.92
Delay/Veh:	30.9	46.5	46.5	42.0	25.2	25.2	71.4	25.4	25.4	31.1	22.8	50.5
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:	30.9	46.5	46.5	42.0	25.2	25.2	71.4	25.4	25.4	31.1	22.8	50.5
LOS by Move:	C	D	D	D	C	C	E	C	C	C	C	D
HCM2k95thQ:	3	7	7	33	15	15	17	14	14	5	10	27

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



## **Appendix D-14**

### **GENERAL PLAN WITH-PROJECT CONDITIONS– PM PEAK HOUR**

Tuscana Village Specific Plan  
General Plan With-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #1 Milliken Avenue/Hamner - Riverside Drive  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.787  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 20.7  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	Milliken (Hamner) Avenue						Riverside Drive					
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	3	1	0	3	2	0	2	1	0	2

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR

Base Vol:	67	2153	279	92	2625	158	228	502	167	189	383	164
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:	67	2153	279	92	2625	158	228	502	167	189	383	164
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:	67	2153	279	92	2625	158	228	502	167	189	383	164
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	2153	279	92	2625	158	228	502	167	189	383	164
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
Final Volume:	67	2153	279	92	2625	158	228	502	167	189	383	164

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.89	0.89	0.95	0.90	0.90	0.92	0.88	0.88	0.95	0.87	0.87
Lanes:	1.00	3.54	0.46	1.00	3.77	0.23	2.00	2.25	0.75	1.00	2.10	0.90
Final Sat.:	1805	6019	780	1805	6465	389	3502	3748	1247	1805	3468	1485

Capacity Analysis Module:

Vol/Sat:	0.04	0.36	0.36	0.05	0.41	0.41	0.07	0.13	0.13	0.10	0.11	0.11
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.44	0.44	0.14	0.47	0.47	0.14	0.16	0.16	0.12	0.14	0.14
Volume/Cap:	0.32	0.81	0.81	0.35	0.86	0.86	0.47	0.86	0.86	0.86	0.80	0.80
Delay/Veh:	25.2	16.1	16.1	23.9	16.6	16.6	24.5	34.2	34.2	53.0	31.4	31.4
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:	25.2	16.1	16.1	23.9	16.6	16.6	24.5	34.2	34.2	53.0	31.4	31.4
LOS by Move:	C	B	B	C	B	B	C	C	C	D	C	C
HCM2k95thQ:	3	24	24	4	28	28	5	14	14	12	12	12

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

Tuscan Village Specific Plan  
General Plan With-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

Cycle (sec): 75 Critical Vol./Cap.(X): 0.807  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 21.7  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name: Milliken (Hamner) Avenue Industrial Dwy/Street "B" (Future  
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	3	1	0	3	2	0	0	1	0	0

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR	Base Vol:			Growth Adj:			Initial Bse:			User Adj:			PHF Adj:			PHF Volume:			Reduct Vol:			Reduced Vol:			PCE Adj:			MLF Adj:			Final Volume:		
	105	1973	15	36	2764	196	649	5	79	52	5	69	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	1.00	1.00	1.00	1.00	1.00			
	105	1973	15	36	2764	196	649	5	79	52	5	69	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	1.00	1.00	1.00	1.00	1.00			
	105	1973	15	36	2764	196	649	5	79	52	5	69	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	1.00	1.00	1.00	1.00	1.00			
	105	1973	15	36	2764	196	649	5	79	52	5	69	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	1.00	1.00	1.00	1.00	1.00			
	105	1973	15	36	2764	196	649	5	79	52	5	69	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	1.00	1.00	1.00	1.00	1.00			
	105	1973	15	36	2764	196	649	5	79	52	5	69	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	1.00	1.00	1.00	1.00	1.00			
	105	1973	15	36	2764	196	649	5	79	52	5	69	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	1.00	1.00	1.00	1.00	1.00			
	105	1973	15	36	2764	196	649	5	79	52	5	69	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	1.00	1.00	1.00	1.00	1.00			
	105	1973	15	36	2764	196	649	5	79	52	5	69	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	1.00	1.00	1.00	1.00	1.00			
	105	1973	15	36	2764	196	649	5	79	52	5	69	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	1.00	1.00	1.00	1.00	1.00			

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.90	0.90	0.92	0.86	0.86	0.95	0.86	0.86
Lanes:	1.00	3.97	0.03	1.00	3.74	0.26	2.00	0.06	0.94	1.00	0.07	0.93
Final Sat.:	1805	6857	52	1805	6393	453	3502	97	1535	1805	110	1524

Capacity Analysis Module:

Vol/Sat:	0.06	0.29	0.29	0.02	0.43	0.43	0.19	0.05	0.05	0.03	0.05	0.05
Crit Moves:	****			****			****			****		
Green/Cycle:	0.09	0.44	0.44	0.14	0.49	0.49	0.21	0.15	0.15	0.15	0.09	0.09
Volume/Cap:	0.62	0.65	0.65	0.14	0.87	0.87	0.87	0.34	0.34	0.19	0.49	0.49
Delay/Veh:	39.8	16.8	16.8	28.3	19.7	19.7	39.8	29.2	29.2	28.1	34.7	34.7
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:	39.8	16.8	16.8	28.3	19.7	19.7	39.8	29.2	29.2	28.1	34.7	34.7
LOS by Move:	D	B	B	C	B	B	D	C	C	C	C	C
HCM2k95thQ:	7	19	19	2	34	34	20	4	4	2	5	5

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

Tuscana Village Specific Plan  
General Plan With-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #3 Milllliken Avenue - SR-60 Eastbound Ramps  
\*\*\*\*\*

Cycle (sec): 65 Critical Vol./Cap.(X): 0.943  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 24.4  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	Milliken Avenue				SR-60 Eastbound Ramps														
Approach:	North Bound		South Bound		East Bound		West Bound												
Movement:	L	T	R	L	T	R	L	T	R										
Control:	Protected		Protected		Protected		Protected												
Rights:	Include		Include		Include		Include												
Min. Green:	7	7	7	7	7	7	7	7											
Lanes:	0	0	2	1	1	2	0	3	0	0	1	0	0	0	2	0	0	0	0

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR	North Bound		South Bound		East Bound		West Bound					
Base Vol:	0	1882	810	326	2035	0	421	0	1010	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	1882	810	326	2035	0	421	0	1010	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	1882	810	326	2035	0	421	0	1010	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1882	810	326	2035	0	421	0	1010	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	1882	810	326	2035	0	421	0	1010	0	0	0

Saturation Flow Module:	North Bound		South Bound		East Bound		West Bound	
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.87	0.87	0.92	0.91	1.00	0.95	1.00
Lanes:	0.00	2.80	1.20	2.00	3.00	0.00	1.00	0.00
Final Sat.:	0	4617	1987	3502	5187	0	1805	0

Capacity Analysis Module:	North Bound		South Bound		East Bound		West Bound	
Vol/Sat:	0.00	0.41	0.41	0.09	0.39	0.00	0.23	0.00
Crit Moves:	****		****		****		****	
Green/Cycle:	0.00	0.43	0.43	0.11	0.54	0.00	0.37	0.00
Volume/Cap:	0.00	0.95	0.95	0.86	0.73	0.00	0.63	0.00
Delay/Veh:	0.0	26.6	26.6	46.9	12.6	0.0	18.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	26.6	26.6	46.9	12.6	0.0	18.6	0.0
LOS by Move:	A	C	C	D	B	A	B	A
HCM2k95thQ:	0	35	35	12	23	0	15	0

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



Tuscana Village Specific Plan  
General Plan With-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #4 Milliken (Hamner) - SR-60 Westbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap.(X): 0.997  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 24.3  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	Milliken (Hamner)				SR-60 Westbound Ramps				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Control:	Protected		Protected		Protected		Protected		
Rights:	Include		Include		Include		Include		
Min. Green:	7	7	7	7	7	7	7	7	
Lanes:	2	0	3	0	0	0	3	0	1

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM PEAK HOUR
Base Vol:	808 1539	0	0 2011	825
Growth Adj:	1.00 1.00	1.00	1.00 1.00	1.00
Initial Bse:	808 1539	0	0 2011	825
User Adj:	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
PHF Volume:	808 1539	0	0 2011	825
Reduct Vol:	0 0	0	0 0	0
Reduced Vol:	808 1539	0	0 2011	825
PCE Adj:	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
Final Volume:	808 1539	0	0 2011	825

Saturation Flow Module:	Sat/Lane:	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900	1900 1900	1900
Adjustment:	0.92 0.91	1.00	1.00 0.91	0.85	1.00 1.00	1.00	0.95 1.00	0.85			
Lanes:	2.00 3.00	0.00	0.00 3.00	1.00	0.00 0.00	0.00	2.00 0.00	1.00			
Final Sat.:	3502 5187	0	0 5187	1615	0 0	0	3618 0	1615			

Capacity Analysis Module:	Vol/Sat:	0.23 0.30	0.00	0.00 0.39	0.51	0.00 0.00	0.00	0.08 0.00	0.16
Crit Moves:	****			****				****	
Green/Cycle:	0.23 0.74	0.00	0.00 0.51	0.51	0.00 0.00	0.00	0.16 0.00	0.16	
Volume/Cap:	1.00 0.40	0.00	0.00 0.76	1.00	0.00 0.00	0.00	0.53 0.00	1.00	
Delay/Veh:	54.0 2.9	0.0	0.0 13.0	45.2	0.0 0.0	0.0	24.3 0.0	81.1	
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:	54.0 2.9	0.0	0.0 13.0	45.2	0.0 0.0	0.0	24.3 0.0	81.1	
LOS by Move:	D A A	A B D	A A A	C A F					
HCM2k95thQ:	25 8	0	0 23	39	0 0	0	7 0	18	

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

Tuscana Village Specific Plan  
General Plan With-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #5 Riverside - Mill Creek  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.357  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 14.9  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	Riverside						Mill Creek					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	1	0	1	0	1	0	2	1	0	2

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR

Base Vol:	61	19	15	109	14	181	270	829	60	53	555	119
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:	61	19	15	109	14	181	270	829	60	53	555	119
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:	61	19	15	109	14	181	270	829	60	53	555	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	19	15	109	14	181	270	829	60	53	555	119
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
Final Volume:	61	19	15	109	14	181	270	829	60	53	555	119

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.53	1.00	0.85	0.75	0.86	0.86	0.95	0.90	0.90	0.95	0.89	0.89
Lanes:	1.00	1.00	1.00	1.00	0.07	0.93	1.00	2.80	0.20	1.00	2.47	0.53
Final Sat.:	1009	1900	1615	1431	117	1518	1805	4789	347	1805	4156	891

Capacity Analysis Module:

Vol/Sat:	0.06	0.01	0.01	0.08	0.12	0.12	0.15	0.17	0.17	0.03	0.13	0.13
Crit Moves:				****			****			****		
Green/Cycle:	0.32	0.32	0.32	0.32	0.32	0.32	0.31	0.46	0.46	0.12	0.27	0.27
Volume/Cap:	0.19	0.03	0.03	0.24	0.37	0.37	0.49	0.37	0.37	0.25	0.49	0.49
Delay/Veh:	15.1	14.1	14.0	15.3	16.2	16.2	17.6	10.5	10.5	24.7	18.5	18.5
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:	15.1	14.1	14.0	15.3	16.2	16.2	17.6	10.5	10.5	24.7	18.5	18.5
LOS by Move:	B	B	B	B	B	B	B	B	B	C	B	B
HCM2k95thQ:	2	1	0	3	6	6	9	8	8	2	9	9

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

Tuscana Village Specific Plan  
General Plan With-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #6 Riverside - Sharp

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: C[ 20.3]

\*\*\*\*\*  
Street Name: Sharp Riverside  
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: 1 0 0 0 1 0 0 0 0 0 0 0 2 1 0 1 0 2 1 0  
-----|-----|-----|-----|

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR  
Base Vol: 30 0 24 0 0 0 0 874 14 22 735 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: 30 0 24 0 0 0 0 874 14 22 735 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: 30 0 24 0 0 0 0 874 14 22 735 0  
Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0  
FinalVolume: 30 0 24 0 0 0 0 874 14 22 735 0  
-----|-----|-----|-----|

Critical Gap Module:  
Critical Gp: 6.8 xxxx 6.9 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx  
FollowUpTim: 3.5 xxxx 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx  
-----|-----|-----|-----|

Capacity Module:  
Cnflct Vol: 1170 xxxx 298 xxxx xxxx xxxxx xxxx xxxx xxxxx 888 xxxx xxxxx  
Potent Cap.: 189 xxxx 704 xxxx xxxx xxxxx xxxx xxxx xxxxx 771 xxxx xxxxx  
Move Cap.: 185 xxxx 704 xxxx xxxx xxxxx xxxx xxxx xxxxx 771 xxxx xxxxx  
Volume/Cap: 0.16 xxxx 0.03 xxxx xxxx xxxxx xxxx xxxx xxxxx 0.03 xxxx xxxxx  
-----|-----|-----|-----|

Level Of Service Module:  
2Way95thQ: 0.6 xxxx 0.1 xxxx xxxx xxxxx xxxx xxxx xxxxx 0.1 xxxx xxxxx  
Control Del: 28.2 xxxx 10.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 9.8 xxxx xxxxx  
LOS by Move: D \* B \* \* \* \* \* \* \* 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: \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \*  
ApproachDel: 20.3 xxxxxx xxxxxx xxxxxx  
ApproachLOS: C \* \* \*  
-----|-----|-----|-----|

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



Tuscana Village Specific Plan  
General Plan With-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #7 Milliken (Hamner) - Cantu-Galleano Ranch  
\*\*\*\*\*

Cycle (sec): 65 Critical Vol./Cap. (X): 0.967  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 34.0  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Street Name:	Milliken (Hamner)						Cantu-Galleano Ranch					
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			Include			Ovl		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	3	1	0	3	1	0	3	1	0	3

Volume Module: >> Count Date:	18 Aug 2009 << PM PEAK HOUR											
Base Vol:	217	988	354	1018	1038	129	118	781	136	403	851	748
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:	217	988	354	1018	1038	129	118	781	136	403	851	748
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:	217	988	354	1018	1038	129	118	781	136	403	851	748
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	217	988	354	1018	1038	129	118	781	136	403	851	748
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
Final Volume:	217	988	354	1018	1038	129	118	781	136	403	851	748

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.87	0.87	0.92	0.89	0.89	0.95	0.89	0.89	0.95	0.91	0.85
Lanes:	1.00	3.00	1.00	2.00	3.56	0.44	1.00	3.41	0.59	1.00	3.00	1.00
Final Sat.:	1805	4980	1660	3502	6047	751	1805	5761	1003	1805	5187	1615

Capacity Analysis Module:												
Vol/Sat:	0.12	0.20	0.21	0.29	0.17	0.17	0.07	0.14	0.14	0.22	0.16	0.46
Crit Moves:	****			****			****			****		
Green/Cycle:	0.21	0.21	0.44	0.30	0.30	0.30	0.14	0.14	0.14	0.23	0.23	0.53
Volume/Cap:	0.58	0.97	0.49	0.97	0.58	0.58	0.46	0.97	0.97	0.97	0.72	0.88
Delay/Veh:	25.4	42.5	13.3	42.5	19.8	19.8	26.9	49.3	49.3	60.2	25.3	23.5
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:	25.4	42.5	13.3	42.5	19.8	19.8	26.9	49.3	49.3	60.2	25.3	23.5
LOS by Move:	C	D	B	D	B	B	C	D	D	E	C	C
HCM2k95thQ:	9	22	12	29	12	12	6	18	18	24	14	29

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



Tuscana Village Specific Plan  
General Plan With-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #8 Cantu-Galleano Ranch - I-15 Southbound Ramps  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.632  
Loss Time (sec): 4 (Y+R=4.0 sec) Average Delay (sec/veh): 12.2  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name:	I-15 Southbound Ramps						Cantu-Galleano Ranch					
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:	Include			Include			Ignore			Ignore		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	0	0	0	2	0	0	0	0	3	0	0	3

Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR												
Base Vol:	0	0	0	904	0	816	0	1572	659	0	1281	1032
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	904	0	816	0	1572	659	0	1281	1032
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	904	0	816	0	1572	0	0	1281	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	904	0	816	0	1572	0	0	1281	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Volume:	0	0	0	904	0	816	0	1572	0	0	1281	0

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.75	1.00	0.91	1.00	1.00	0.91	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	0.00	3.00	1.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	2842	0	5187	1900	0	5187	1900

Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.26	0.00	0.29	0.00	0.30	0.00	0.00	0.25	0.00
Crit Moves:				****			****			****		
Green/Cycle:	0.00	0.00	0.00	0.45	0.00	0.45	0.00	0.48	0.00	0.00	0.48	0.00
Volume/Cap:	0.00	0.00	0.00	0.57	0.00	0.63	0.00	0.63	0.00	0.00	0.52	0.00
Delay/Veh:	0.0	0.0	0.0	12.5	0.0	13.6	0.0	12.2	0.0	0.0	11.0	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	0.0	0.0	12.5	0.0	13.6	0.0	12.2	0.0	0.0	11.0	0.0
LOS by Move:	A	A	A	B	A	B	A	B	A	A	B	A
HCM2k95thQ:	0	0	0	13	0	14	0	16	0	0	12	0

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

Tuscana Village Specific Plan  
General Plan With-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #9 Cantu-Galleano Ranch - I-15 Northbound Ramps  
\*\*\*\*\*

Cycle (sec): 85 Critical Vol./Cap. (X): 1.087  
Loss Time (sec): 6 (Y+R=4.5 sec) Average Delay (sec/veh): 46.3  
Optimal Cycle: OPTIMIZED Level Of Service: D  
\*\*\*\*\*

Street Name:	I-15 Northbound Ramps						Cantu-Galleano Ranch					
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:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	0	1	1	0	0	0	3	0	1	2

Volume Module:	>> Count	Date:	18 Aug 2009	<< PM PEAK HOUR
Base Vol:	484	0	1045	0 0 0 0 1789 692 1391 1837 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:	484	0	1045	0 0 0 0 1789 692 1391 1837 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:	484	0	1045	0 0 0 0 1789 692 1391 1837 0
Reduct Vol:	0	0	0	0 0 0 0 0 0 0 0 0
Reduced Vol:	484	0	1045	0 0 0 0 1789 692 1391 1837 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:	484	0	1045	0 0 0 0 1789 692 1391 1837 0

Saturation Flow Module:	
Sat/Lane:	1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment:	0.95 1.00 0.85 1.00 1.00 1.00 1.00 0.91 0.85 0.92 0.91 1.00
Lanes:	1.00 0.00 2.00 0.00 0.00 0.00 0.00 3.00 1.00 2.00 3.00 0.00
Final Sat.:	1805 0 3230 0 0 0 0 5187 1615 3502 5187 0

Capacity Analysis Module:	
Vol/Sat:	0.27 0.00 0.32 0.00 0.00 0.00 0.00 0.34 0.43 0.40 0.35 0.00
Crit Moves:	**** **** ****
Green/Cycle:	0.25 0.00 0.61 0.00 0.00 0.00 0.00 0.32 0.56 0.37 0.68 0.00
Volume/Cap:	1.09 0.00 0.53 0.00 0.00 0.00 0.00 1.09 0.76 1.09 0.52 0.00
Delay/Veh:	100.2 0.0 9.7 0.0 0.0 0.0 0.0 78.9 17.9 79.3 6.8 0.0
User DelAdj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh:	100.2 0.0 9.7 0.0 0.0 0.0 0.0 78.9 17.9 79.3 6.8 0.0
LOS by Move:	F A A A A A A E B E A A
HCM2k95thQ:	37 0 15 0 0 0 0 46 27 49 17 0

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

Tuscana Village Specific Plan  
General Plan With-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #10 Milliken (Hamner) - Samantha  
\*\*\*\*\*

Average Delay (sec/veh): 2.9 Worst Case Level Of Service: F[330.3]  
\*\*\*\*\*

Street Name:	Milliken (Hamner)				Samantha						
Approach:	North Bound		South Bound		East Bound		West Bound				
Movement:	L	T	R	L	T	R	L	T	R		
Control:	Uncontrolled		Uncontrolled		Stop Sign		Stop Sign				
Rights:	Include		Include		Include		Include				
Lanes:	0	0	3	1	0	0	0	0	1		
Volume Module: >> Count Date:	22 Sep 2009 << PM PEAK HOUR										
Base Vol:	0	2477	10	6	2994	0	0	0	12	0	36
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	2477	10	6	2994	0	0	0	12	0	36
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	2477	10	6	2994	0	0	0	12	0	36
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	0	2477	10	6	2994	0	0	0	12	0	36

Critical Gap Module:	Milliken (Hamner)				Samantha				
Critical Gap:xxxxx xxxxx xxxxx	4.1	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	6.8	xxxx	6.9
FollowUpTim:xxxxx xxxxx xxxxx	2.2	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	3.5	xxxx	3.3

Capacity Module:	Milliken (Hamner)				Samantha			
Cnflict Vol: xxxxx xxxxx xxxxx	2487	xxxx	xxxxxx	xxxx	xxxxxx	3243	xxxx	624
Potent Cap.: xxxxx xxxxx xxxxx	187	xxxx	xxxxxx	xxxx	xxxxxx	7	xxxx	433
Move Cap.: xxxxx xxxxx xxxxx	187	xxxx	xxxxxx	xxxx	xxxxxx	7	xxxx	433
Volume/Cap: xxxxx xxxxx xxxxx	0.03	xxxx	xxxxxx	xxxx	xxxxxx	1.66	xxxx	0.08

Level Of Service Module:	Milliken (Hamner)				Samantha			
2Way95thQ: xxxxx xxxxx xxxxx	0.1	xxxx	xxxxxx	xxxx	xxxxxx	2.4	xxxx	0.3
Control Del:xxxxx xxxxx xxxxx	24.8	xxxx	xxxxxx	xxxxxx	xxxxxx	1279	xxxx	14.1
LOS by Move: * * *	C	*	*	*	*	F	*	B
Movement: LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
SharedQueue:xxxxx xxxxx xxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shrd ConDel:xxxxx xxxxx xxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shared LOS: * * *	*	*	*	*	*	*	*	*
ApproachDel: xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx	330.3		
ApproachLOS: *	*	*	*	*	*	F		

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



Tuscana Village Specific Plan  
General Plan With-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

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

\*\*\*\*\*  
Intersection #11 Riverside - Street A (future)  
\*\*\*\*\*

Cycle (sec): 60 Critical Vol./Cap. (X): 0.505  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 20.4  
Optimal Cycle: OPTIMIZED Level Of Service: C  
\*\*\*\*\*

Riverside					Street A							
North Bound			South Bound			East Bound			West Bound			
Approach:	L	T	R	L	T	R	L	T	R	L	T	R
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	0	1	0	0	1	0	1	1	0	1

Volume Module: PM PEAK HOUR

Base Vol:	52	3	88	90	8	308	151	530	54	91	485	22
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:	52	3	88	90	8	308	151	530	54	91	485	22
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:	52	3	88	90	8	308	151	530	54	91	485	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	3	88	90	8	308	151	530	54	91	485	22
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
Final Volume:	52	3	88	90	8	308	151	530	54	91	485	22

Saturation Flow Module:

Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.86	0.86	0.95	0.85	0.85	0.95	0.94	0.94	0.95	0.95	0.85
Lanes:	1.00	0.03	0.97	1.00	0.03	0.97	1.00	1.82	0.18	1.00	2.00	1.00
Final Sat.:	1805	54	1571	1805	41	1582	1805	3230	329	1805	3610	1615

Capacity Analysis Module:

Vol/Sat:	0.03	0.06	0.06	0.05	0.19	0.19	0.08	0.16	0.16	0.05	0.13	0.01
Crit Moves:	****			****			****			****		
Green/Cycle:	0.12	0.23	0.23	0.23	0.34	0.34	0.19	0.29	0.29	0.12	0.22	0.22
Volume/Cap:	0.25	0.24	0.24	0.22	0.57	0.57	0.44	0.57	0.57	0.43	0.62	0.06
Delay/Veh:	24.7	19.2	19.2	19.0	17.4	17.4	22.5	18.9	18.9	26.1	22.7	18.7
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:	24.7	19.2	19.2	19.0	17.4	17.4	22.5	18.9	18.9	26.1	22.7	18.7
LOS by Move:	C	B	B	B	B	B	C	B	B	C	C	B
HCM2k95thQ:	2	3	3	3	11	11	6	11	11	4	10	1

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

Tuscana Village Specific Plan  
General Plan With-Project PM Peak Hour  
(All volumes converted to pce's and PHF applied)

Level Of Service Computation Report

2000 HCM Unsignalized Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #12 Milliken (Hamner) - Hartford Street  
\*\*\*\*\*

Average Delay (sec/veh): 0.1 Worst Case Level Of Service: C[ 16.2]  
\*\*\*\*\*

Street Name:	Milliken (Hamner)						Hartford									
Approach:	North Bound			South Bound			East Bound			West Bound						
Movement:	L	T	R	L	T	R	L	T	R	L	T	R				
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign						
Rights:	Include			Include			Include			Include						
Lanes:	0	0	4	0	0	3	1	0	0	0	0	1	0	0	0	0
Volume Module: PM PEAK HOUR																
Base Vol:	0	2943	0	0	2969	76	0	0	22	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	2943	0	0	2969	76	0	0	22	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	2943	0	0	2969	76	0	0	22	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Final Volume:	0	2943	0	0	2969	76	0	0	22	0	0	0				

Critical Gap Module:

Critical Gap:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.9	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	780	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	342	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	342	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.06	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.2	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	16.2	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	C	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Shared Queue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			16.2			xxxxxx		
ApproachLOS:	*			*			C			*		

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

# **Appendix E**

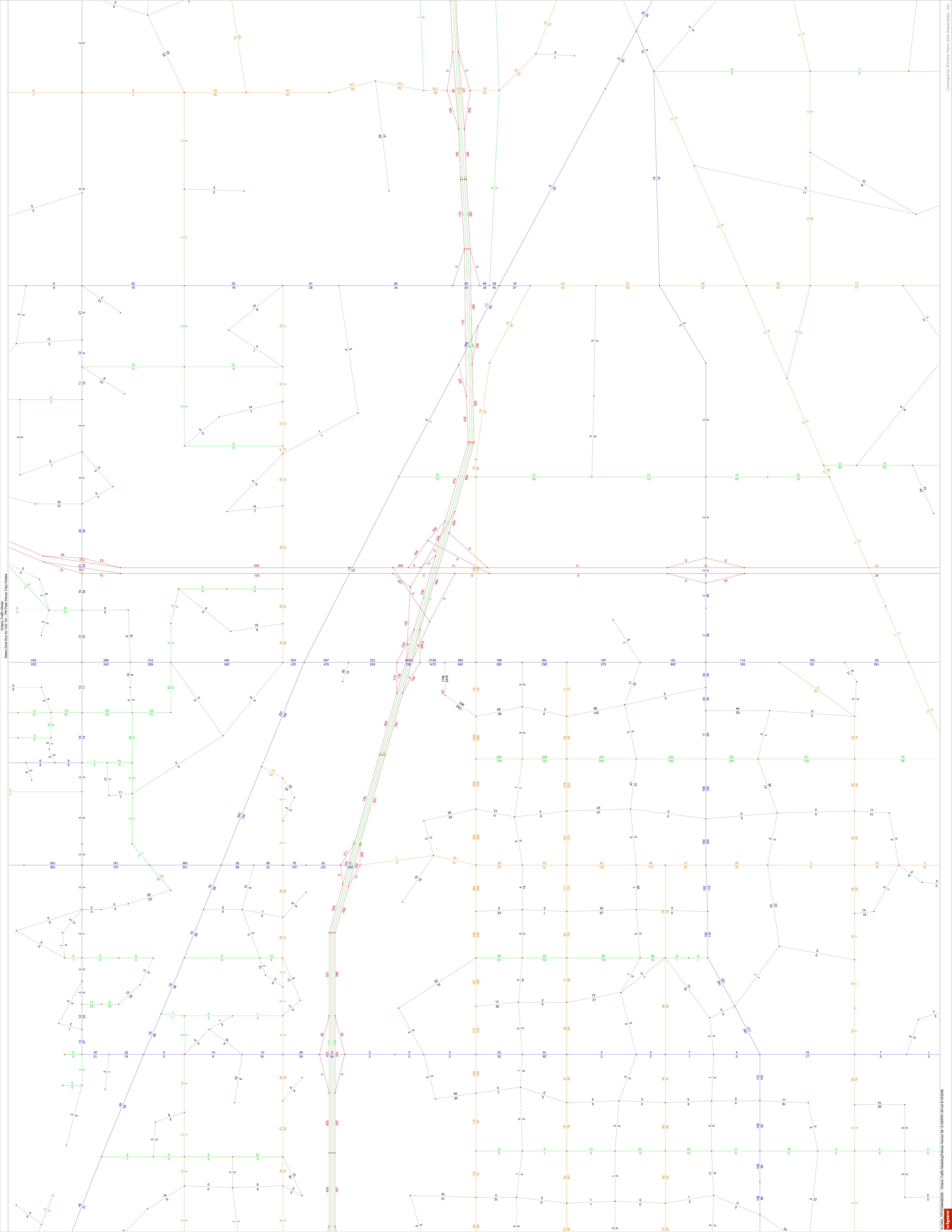
**ONTARIO TRAFFIC FORECASTING MODEL  
SELECT ZONE RUN PLOTS**

**LOCAL TRIP DISTRIBUTION FOR INDIVIDUAL  
PHASE I PARCELS**

**LOCAL TRIP DISTRIBUTION FOR GALLEANO  
AND RIBOLI PARCELS AT BUILDOUT**



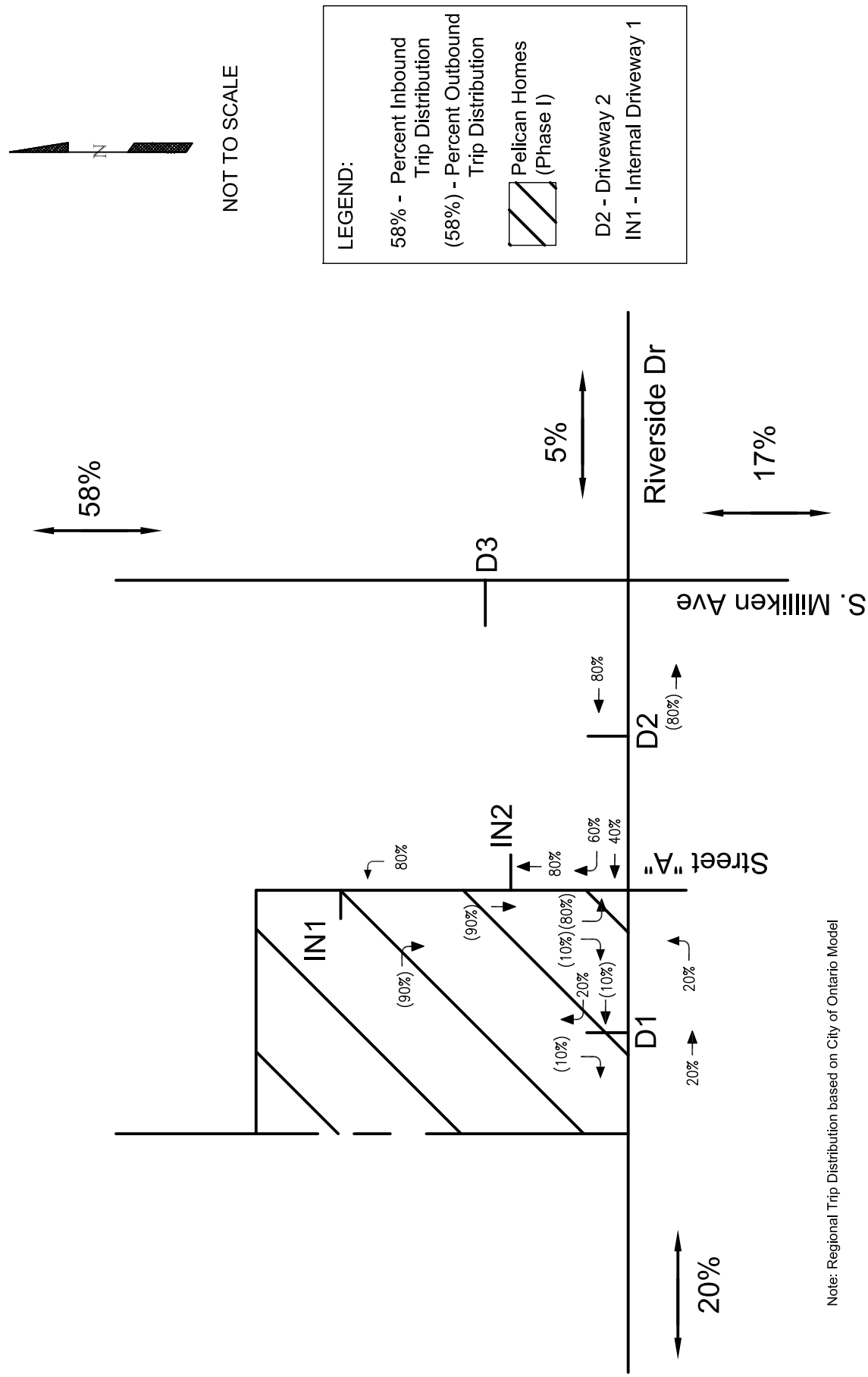




Scale: 1" = 100' (Horizontal)  
Scale: 1" = 50' (Vertical)  
Sheet: 1 of 1







NOT TO SCALE

LEGEND:

58% - Percent Inbound Trip Distribution  
(58%) - Percent Outbound Trip Distribution

(58%) - Percent Outbound  
Trip Distribution



Pelican Homes  
(Phase I)

## D2 - Driveway 2

## IN1 - Internal Driveway 1

Note: Regional Trip Distribution based on City of Ontario Model

**PELICAN HOMES PARCEL PHASE I  
AM PEAK HOUR TRIP DISTRIBUTION**

## AM PEAK HOUR TRIP DISTRIBUTION

**TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA**

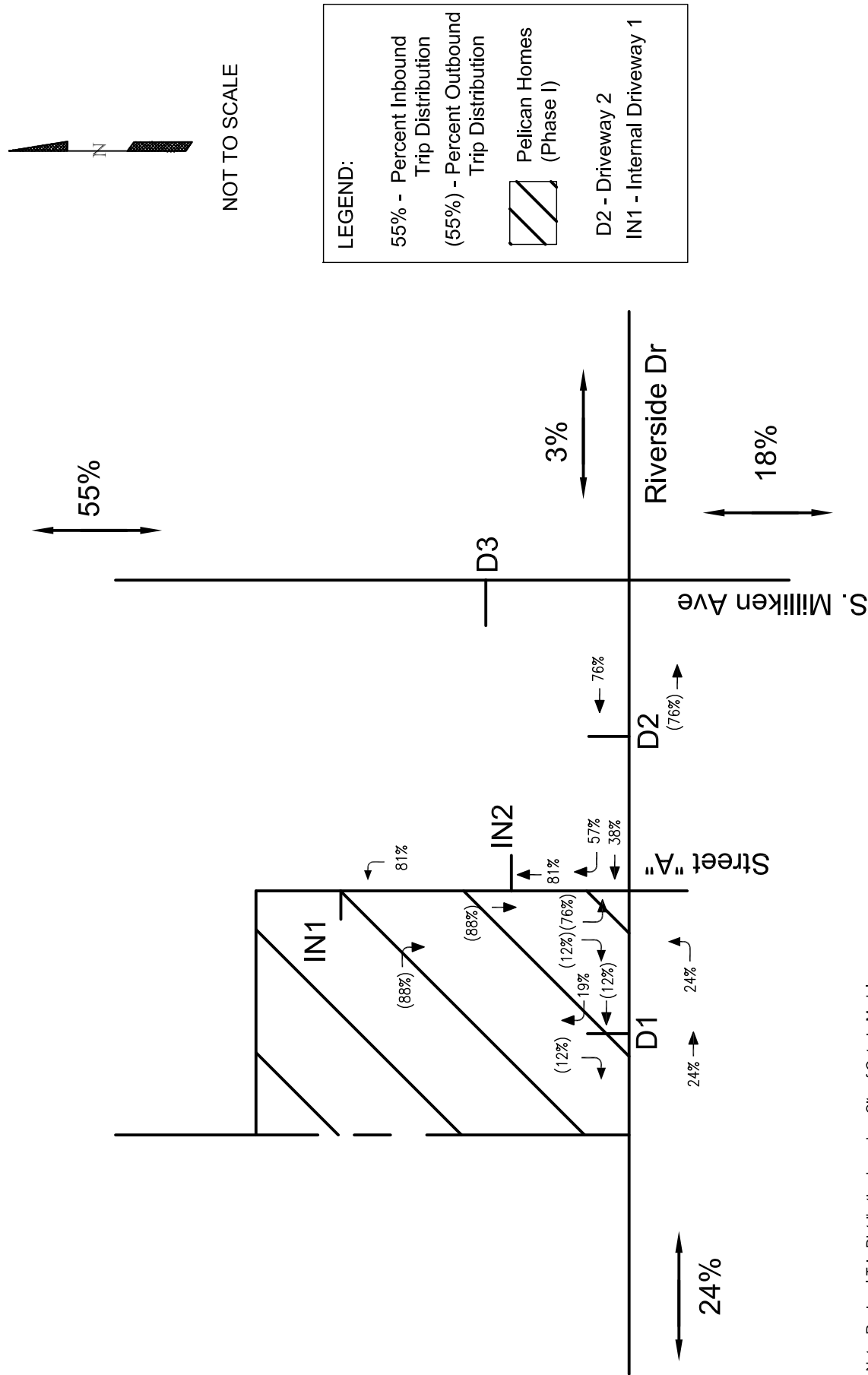


**Mountain Pacific, Inc.**  
Civil/Transportation Engineers  
P.O. Box 4266 Laguna Beach, CA 92652 (949) 437-8127  
[www.mountainpacificusa.com](http://www.mountainpacificusa.com)

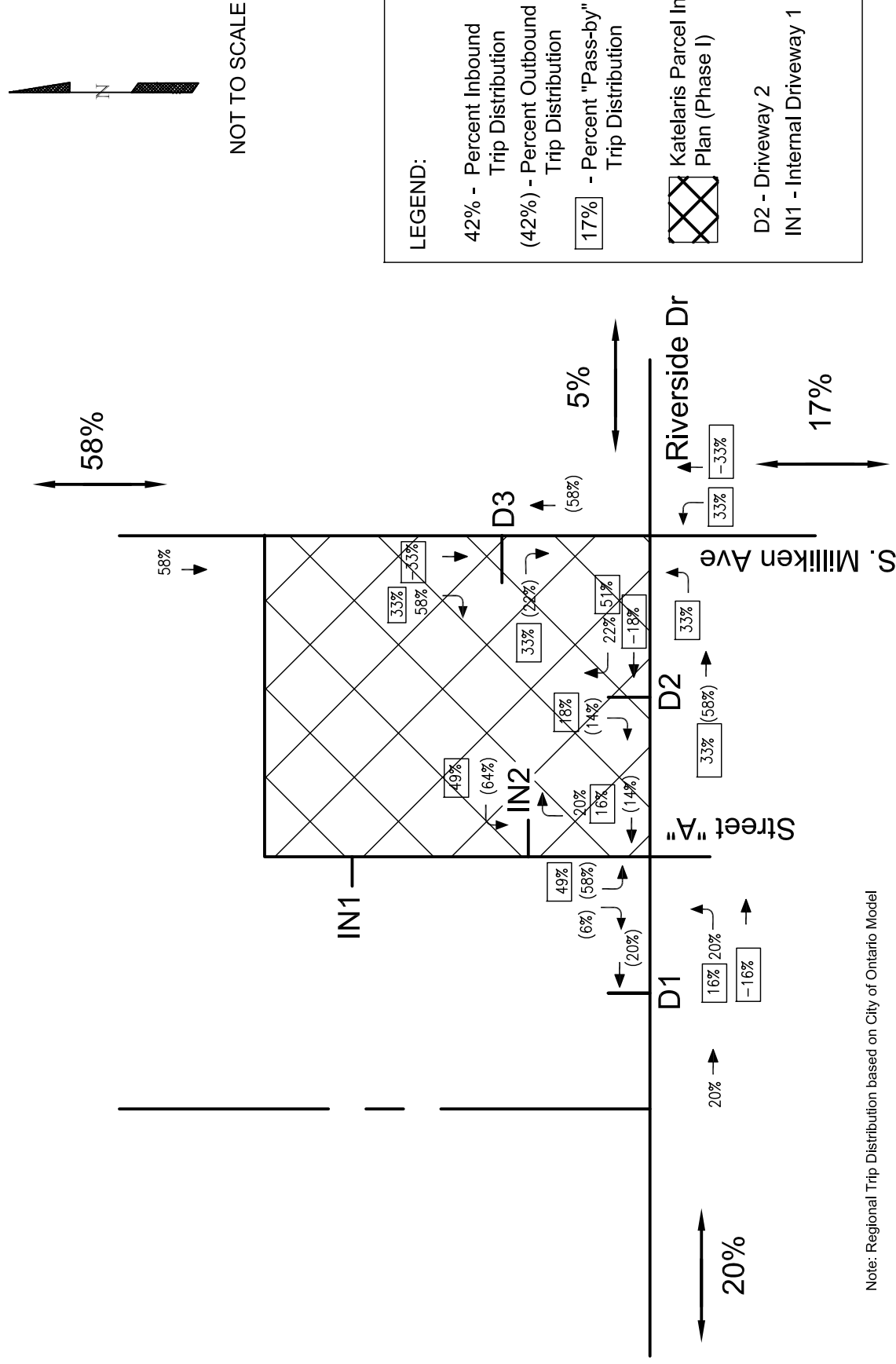
P.O. Box 4266 Laguna Beach, CA 92652 (949) 497-8127

Laguna Beach, CA 92652 (949) 491-1111  
www.mountainpacflcusa.com

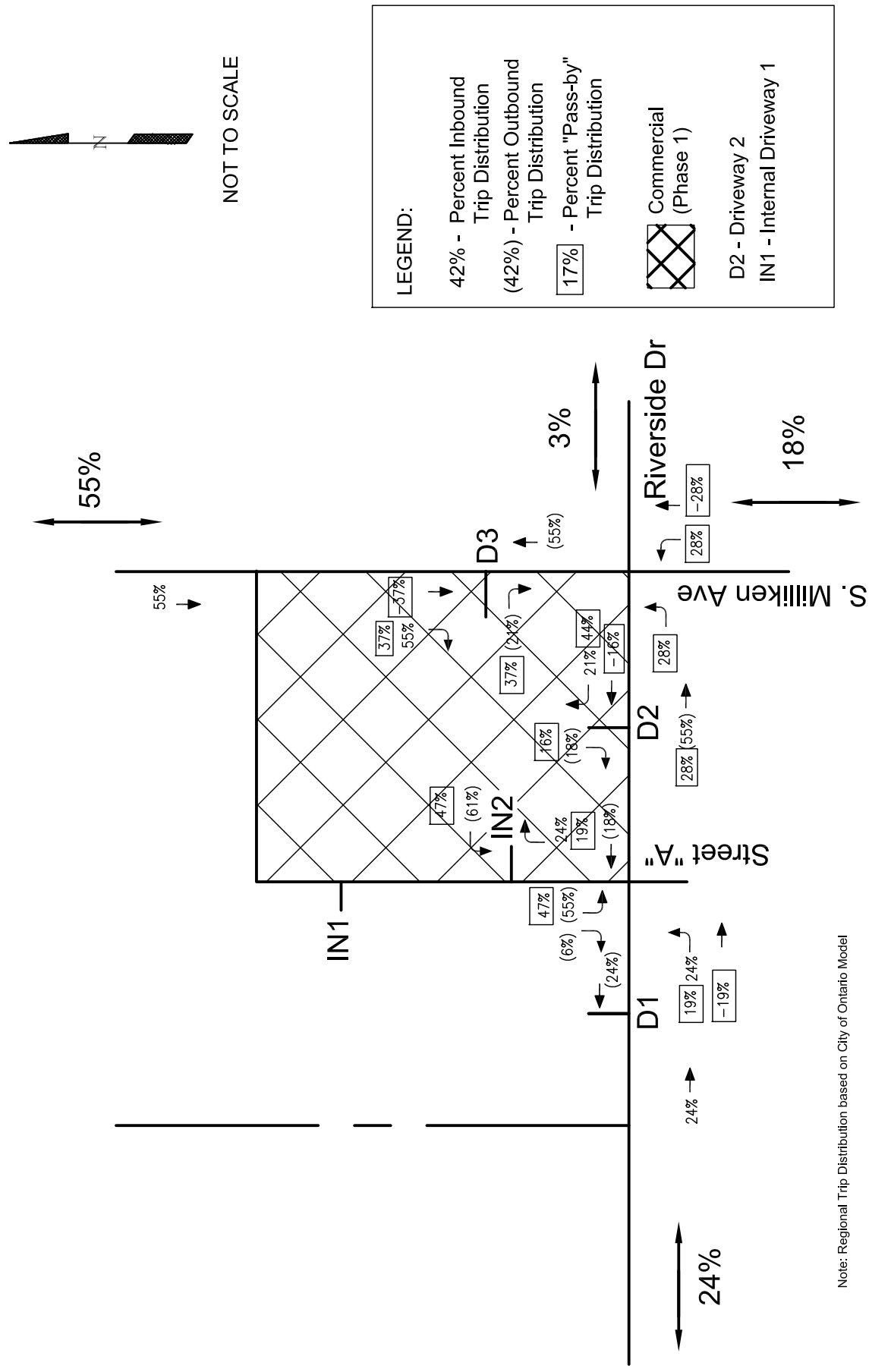
## Figure E1



Note: Regional Trip Distribution based on City of Ontario Model



Note: Regional Trip Distribution based on City of Ontario Model



NOT TO SCALE

LEGEND:

42% - Percent Inbound Trip Distribution

(42%) - Percent Outbound Trip Distribution

17% - Percent "Pass-by" Trip Distribution

(42%) - Percent Outbound Trip Distribution

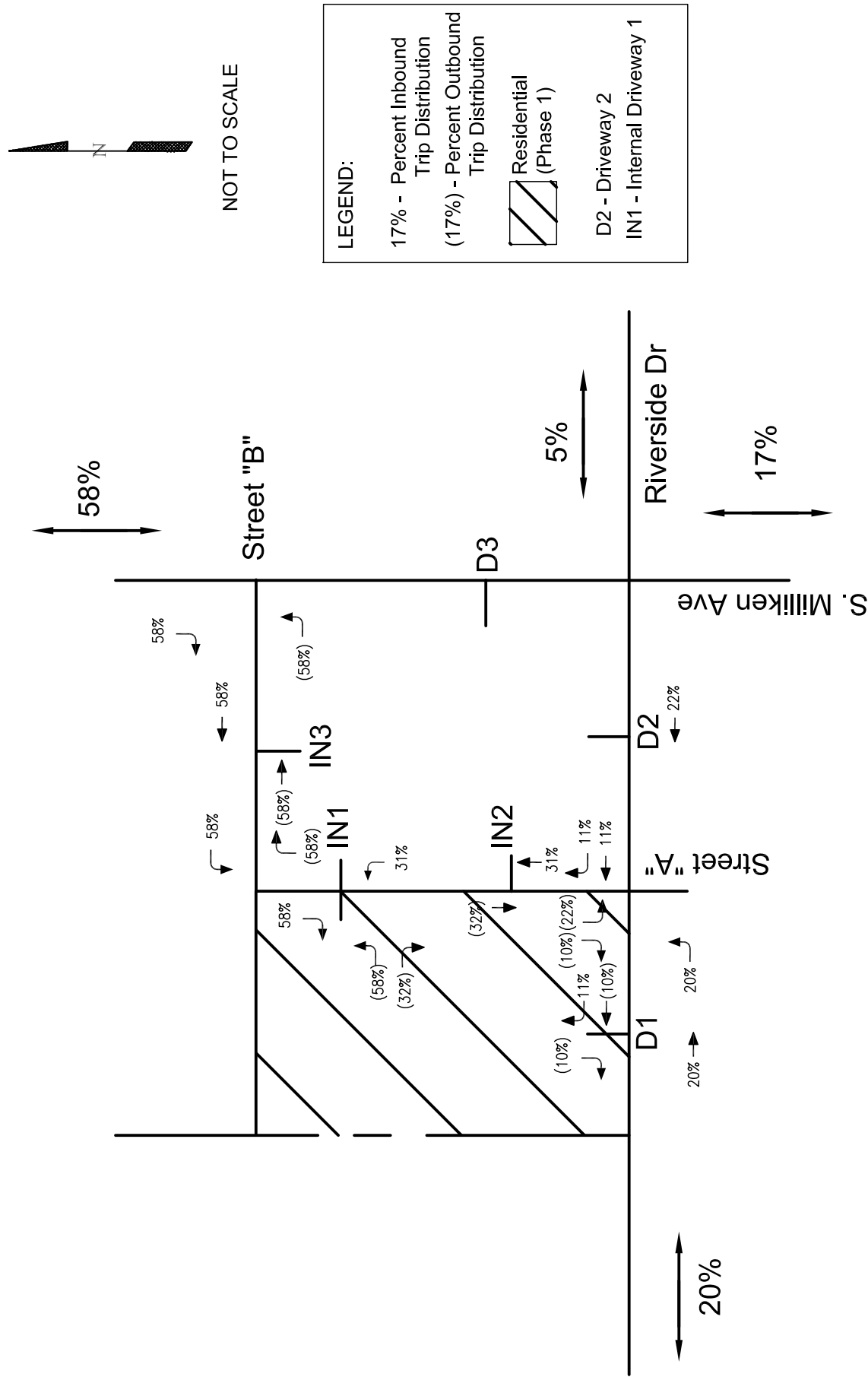
17% - Percent "Pass-by"  
Trip Distribution

Commercial  
(Phase 1)

D2 - Driveway 2

## IN1 - Internal Driveway 1

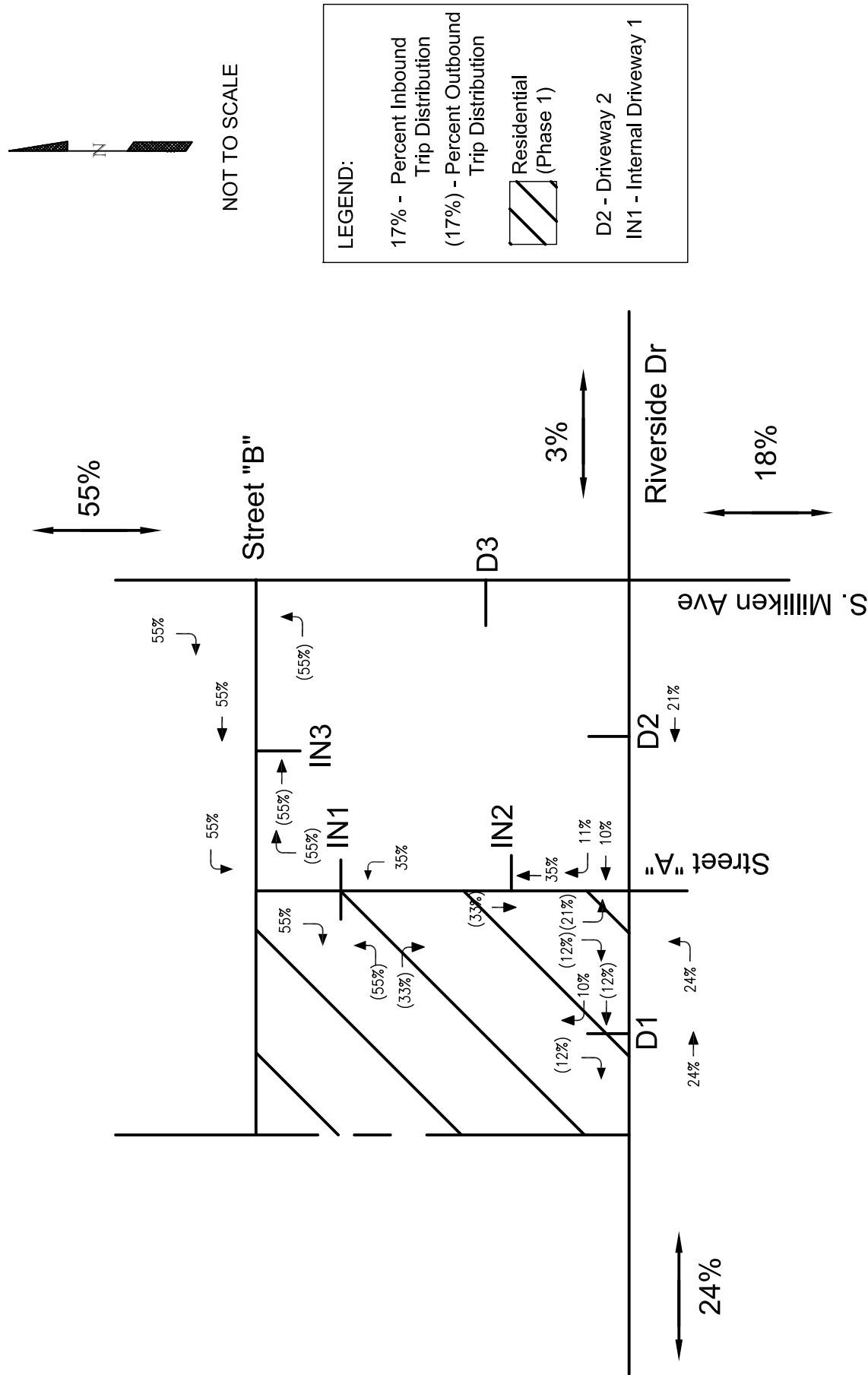
Note: Regional Trip Distribution based on City of Ontario Model



# **RESIDENTIAL PARCEL TRIP DISTRIBUTION AT BUILDOUT AM PEAK HOUR**

**TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA**

**Figure E5**

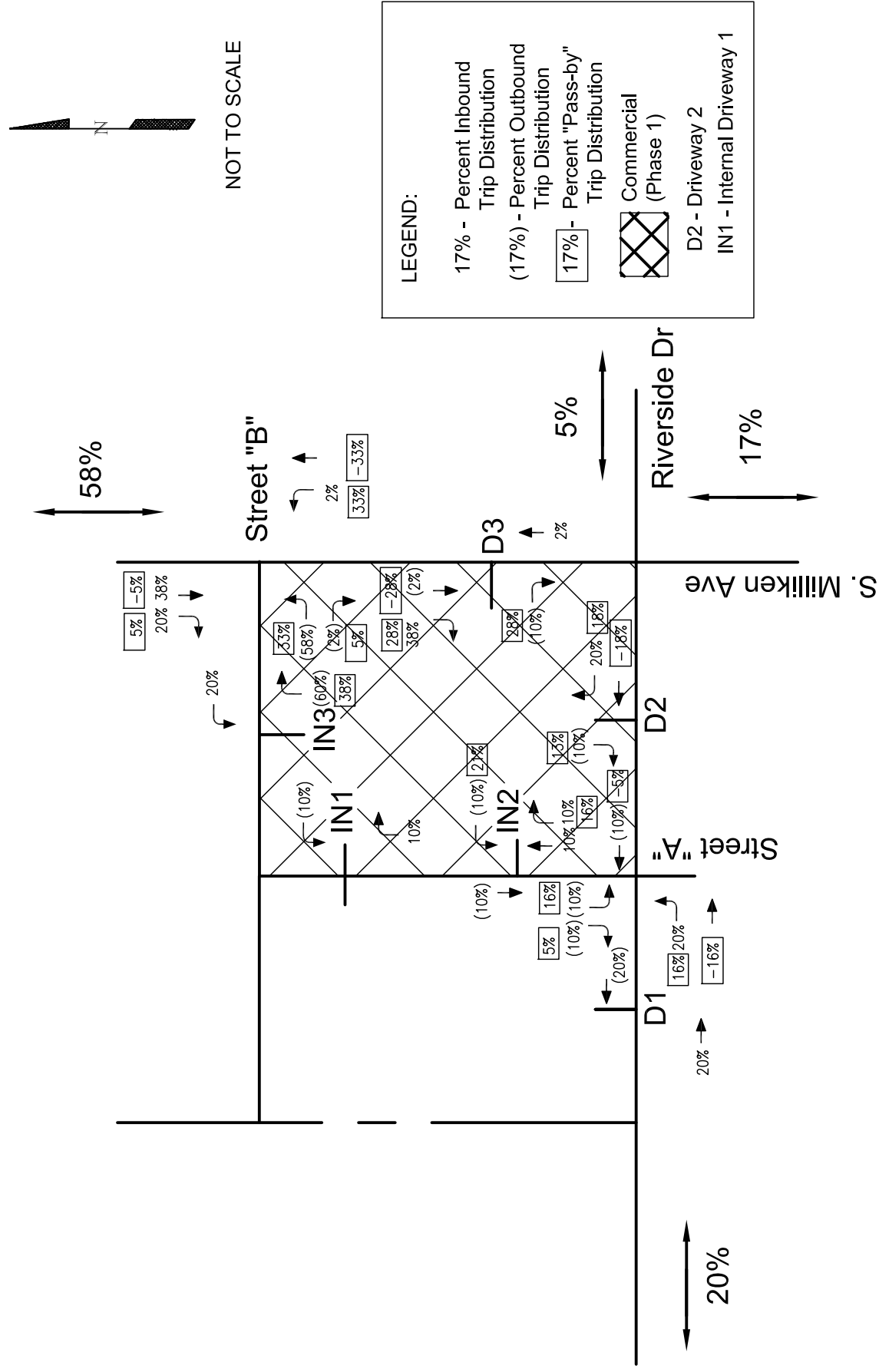


# **RESIDENTIAL PARCEL TRIP DISTRIBUTION AT BUILDOUT** **PM PEAK HOUR**

**TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA**

**Figure E6**





NOT TO SCALE

LEGEND:

17% - Percent Inbound Trip Distribution  
(17%) - Percent Outbound Trip Distribution  
17% - Percent "Pass-by" Trip Distribution

(17%) - Percent Outbound Trip Distribution

17% - Percent "Pass-by" Trip Distribution

Commercial  
(Phase 1)

## D2 - Driveway 2

## IN1 - Internal Driveway 1

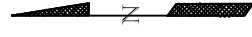
# KATELARIS COMMERCIAL PARCEL TRIP DISTRIBUTION AT BUILDOUT AM PEAK HOUR

## AM PEAK HOUR

**TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA**

### Figure E7





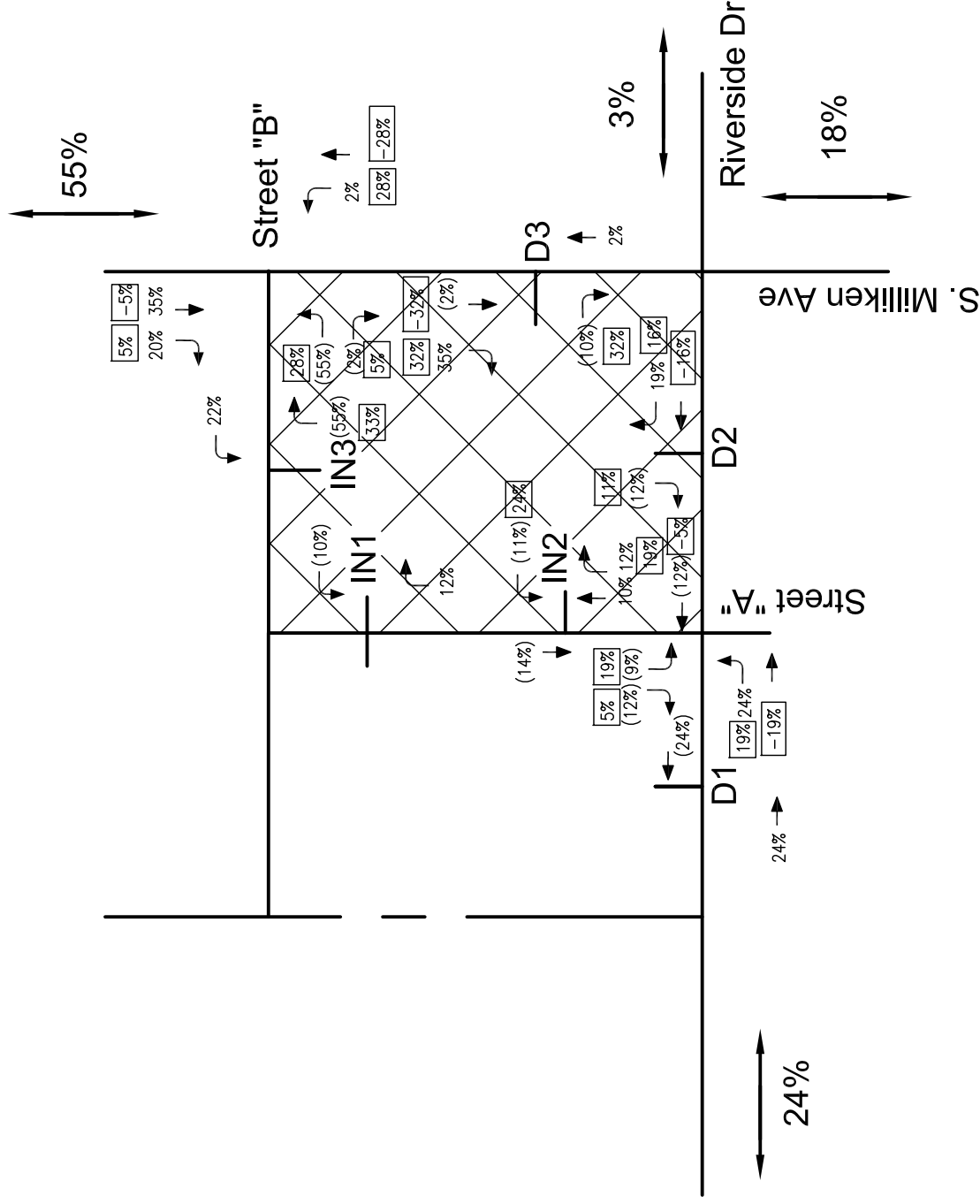
NOT TO SCALE

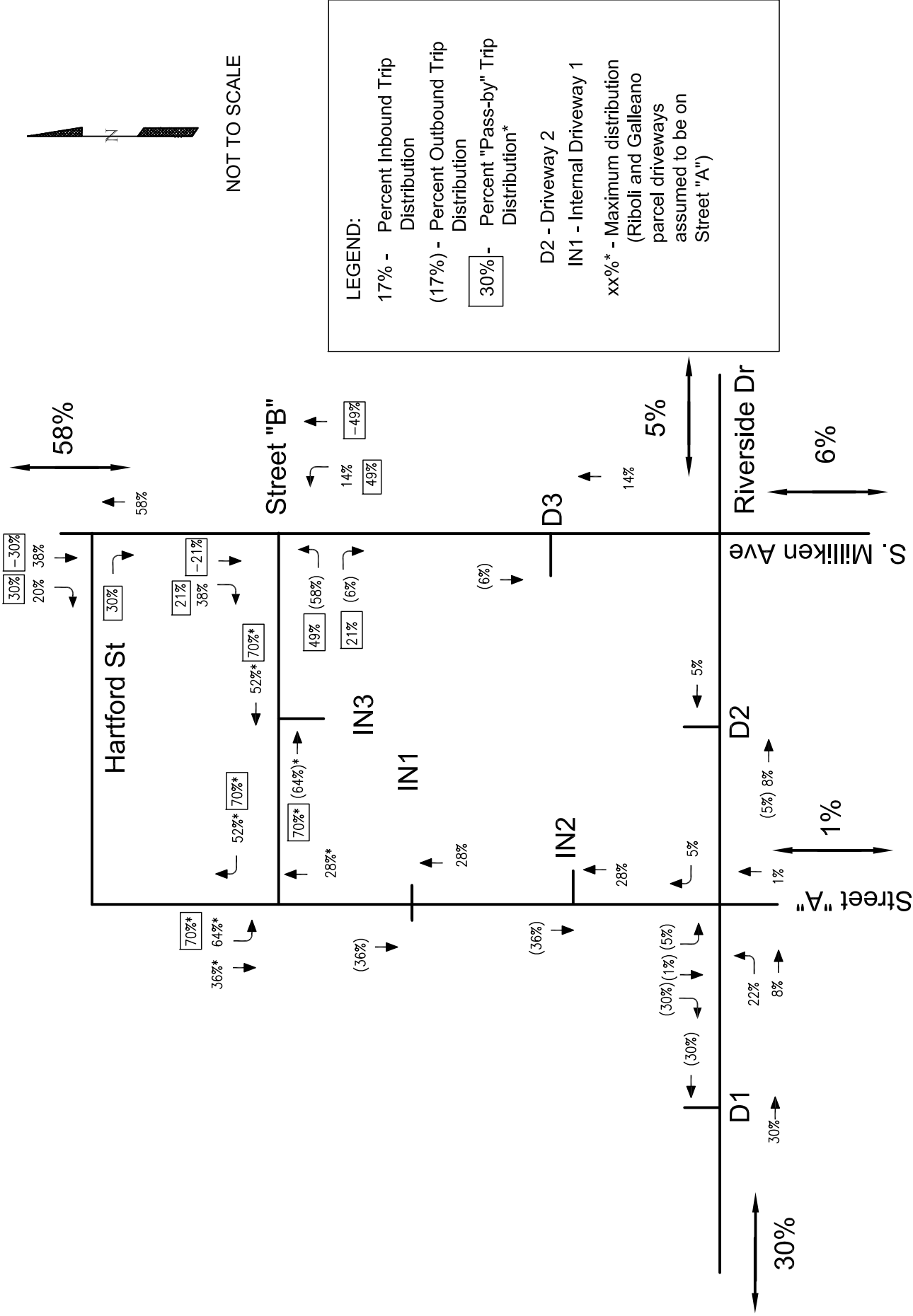
LEGEND:

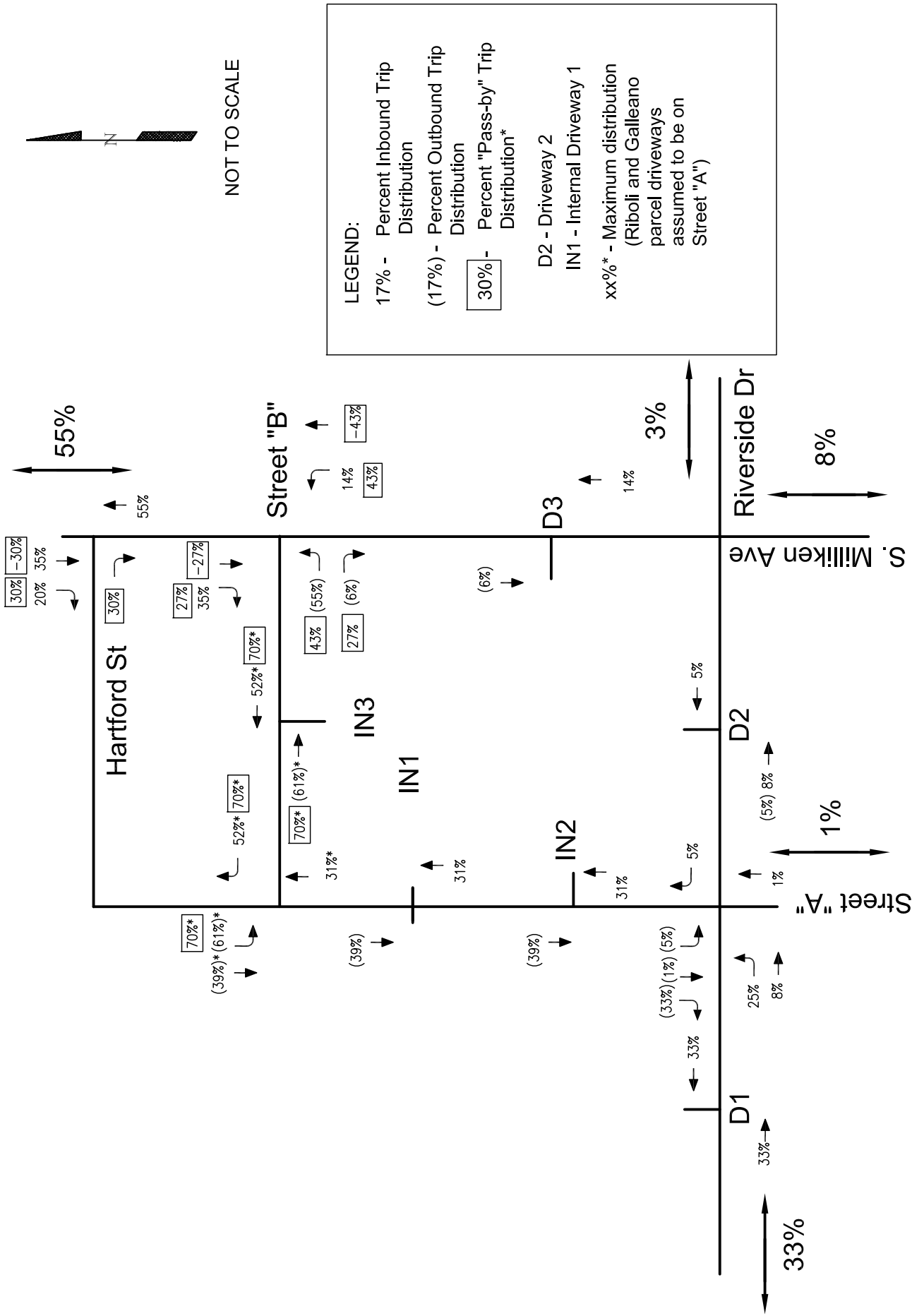
- 17% - Percent Inbound Trip Distribution
- (17%) - Percent Outbound Trip Distribution
- 17% - Percent "Pass-by" Trip Distribution



- D2 - Driveway 2
- IN1 - Internal Driveway 1



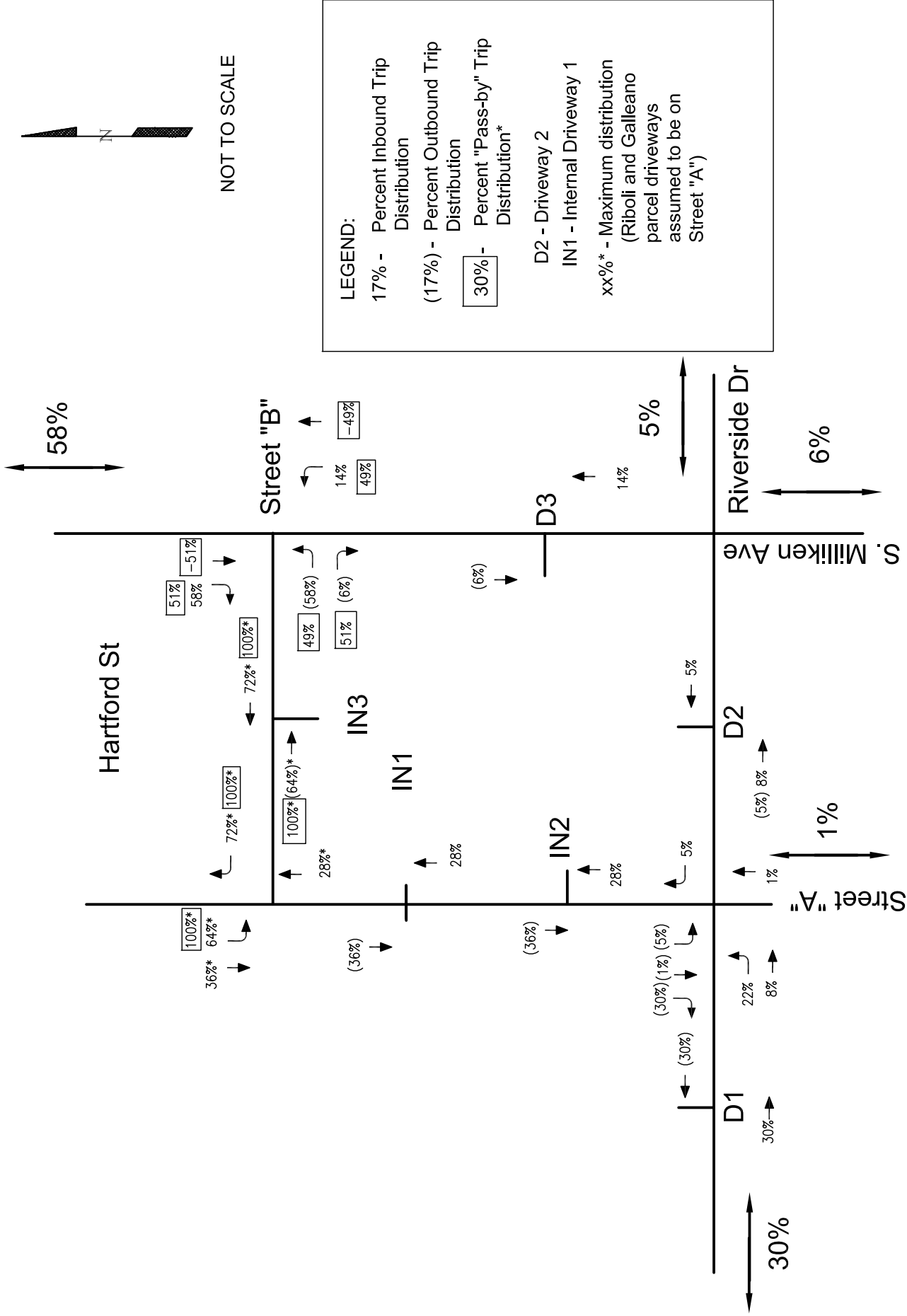


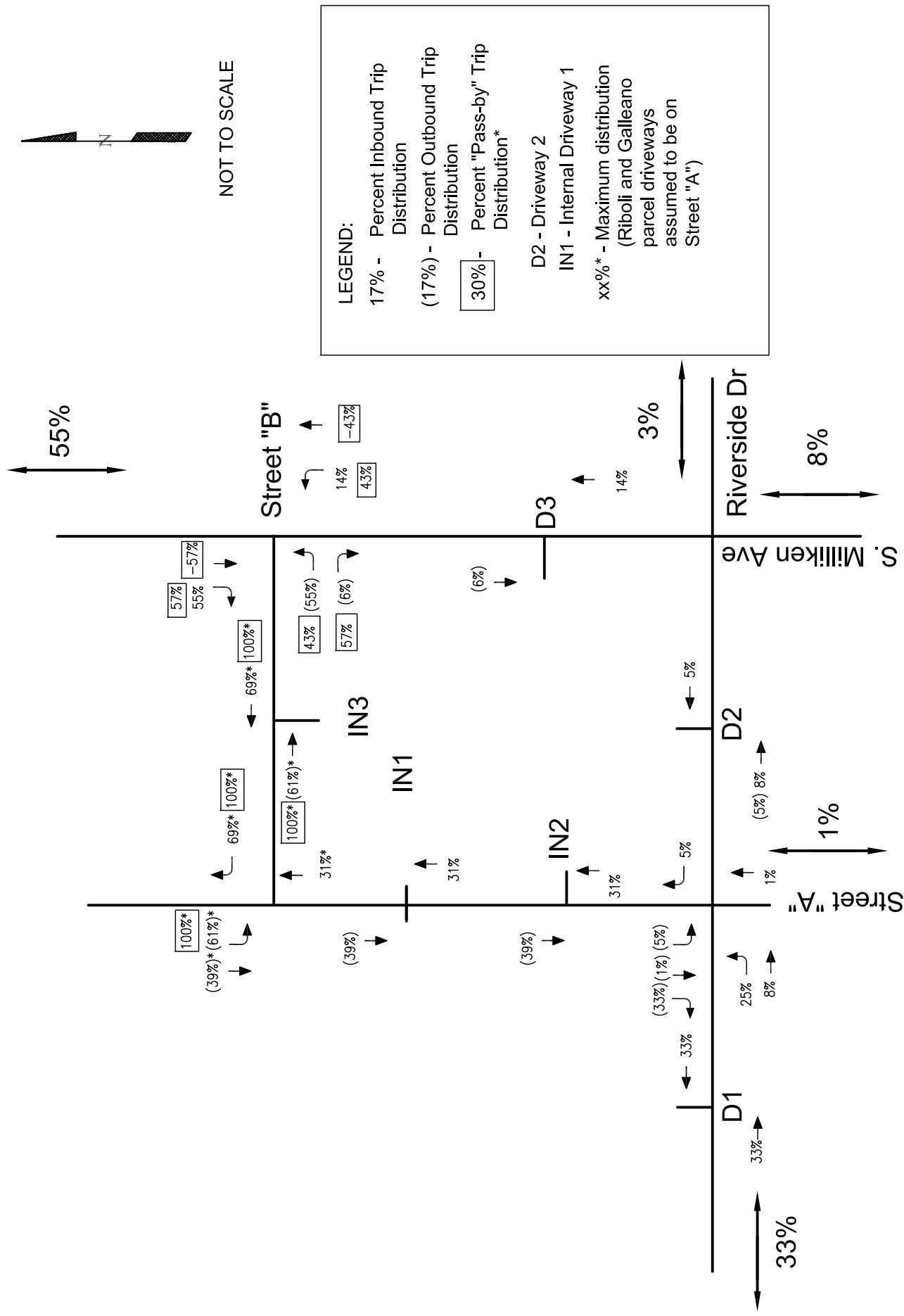


**ALTERNATIVE 1 - RIBOLI AND GALLEANO EVENING (PM) PEAK HOUR PROJECT TRIP DISTRIBUTION AT DRIVEWAYS AND INTERNAL STREETS WITH HARTFORD ST**

**TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA**

**Figure E10**





NOT TO SCALE

LEGEND:

17% - Percent Inbound Trip Distribution

(17%) - Percent Outbound Trip Distribution

30% - Percent "Pass-by" Trip Distribution\*

## D2 - Driveway 2

## IN1 - Internal Driveway 1

xx%\* - Maximum distribution  
(Riboli and Galleano  
parcel driveways  
assumed to be on  
Street "A")

**ALTERNATIVE 2 - RIBOLI AND GALLEANO EVENING (PM) PEAK HOUR PROJECT TRIP DISTRIBUTION AT DRIVEWAYS AND INTERNAL STREETS WITH NO HARTFORD ST**

**TUSCANA VILLAGE SPECIFIC PLAN, ONTARIO, CA**

**Figure E12**



# **Appendix F**

## **CUMULATIVE (“RELATED”) PROJECTS DATA**



## TRIP GENERATION - RELATED PROJECTS FOR TUSCANA VILLAGE - 2012

DISTRIBUTION RELATED PROJECT ZONE			Size	Unit	Daily 2-Way	AM Peak Hour			PM Peak Hour			
		Project				In	Out	Total	In	Out	Total	
ZONE 1												
O-1	NMC EdenGlen Residential	ITE 210			9.57	0.25	0.75	0.75	0.63	0.37	1.01	
		Single Family Residential	310 dus	2967	58	174	233	197	116	313		
		ITE 230		5.81	0.17	0.83	0.44	0.67	0.33	0.52		
		Condominiums/Townhomes	274 dus	1592	20	100	121	95	47	142		
		O-1 NEW		4559	79	274	353	293	163	456		
1 - TOTAL					4559	79	274	353	293	163	456	
ZONE 2												
RC-1	Gas Station w/ Convenience store SE Corner Riverside and Hamner	ITE 945			162.78	0.50	0.50	10.16	0.50	0.50	13.38	
		PP23480	12 fp	1953	61	61	122	80	80	161		
		pass-by(50%, 62%, 56%)		-977	-38	-38	-76	-45	-45	-90		
		RC-1 NEW		977	23	23	46	35	35	71		
2 - TOTAL					977	23	23	46	35	35	71	
ZONE 3												
O-2	RV Storage	ITE 150 (warehousing)			57.23	0.72	0.28	10.03	0.35	0.65	8.69	
		PDET08-003/PCUO07-036	23 acr	1316	166	65	231	70	130	200		
		Passenger Car (92% of total)		1,211	153	59	212	64	120	184		
		Truck - 2 axle (25%)		26	3	1	5	1	3	4		
		Truck - 3 axle (21%)		22	3	1	4	1	2	3		
		Truck - 4 axle (54%)		57	7	3	10	3	6	9		
		O-2 NEW		1465	185	72	257	78	145	222		
O-3	Commercial retail	ITE 820			42.94	0.61	0.39	1	0.49	0.51	3.73	
		PDEV07-048	177500 sf	7622	108	69	178	324	338	662		
		pass-by(34%)		-2591	-37	-24	-60	-110	-115	-225		
		net new		5030	71	46	117	214	223	437		
	hotel	ITE 310		8.17	0.61	0.39	0.56	0.53	0.47	0.59		
		PCUP07-040	118 rms	964	40	26	66	37	33	70		
		PCUP07-041	122 rms	997	42	27	68	38	34	72		
O-3 NEW			6991	153	98	252	289	289	579			
O-4	fast food restaurant	ITE 934			496.12	0.51	0.49	49.35	0.52	0.48	33.84	
		APN:0218-061-45	3000 sf	1488	76	73	148	53	49	102		
		pass-by(50, 49, 50%)		-744	-37	-36	-73	-26	-24	-51		
		O-4 NEW		744	39	37	76	26	24	51		
		3 - TOTAL					9201	377	207	584	393	458
ZONE 4												
RC-2	Condos/Townhomes	ITE 230			5.81	0.17	0.83	0.44	0.67	0.33	0.52	
		TT34420	116 dus	674	9	42	51	40	20	60		
		4 - TOTAL					674	9	42	51	40	20
ZONE 5												
RC-3	S.F. Residential	ITE 210			9.57	0.25	0.75	0.75	0.63	0.37	1.01	
		TR31778	88 dus	842	17	50	66	56	33	89		
		RC-4	S.F. Residential	TR31768	189 dus	1809	35	106	142	120	71	191
		RC-5	S.F. Residential	TR33461	203 dus	1943	38	114	152	129	76	205
		RC-6	S.F. Residential	TR31644	429 dus	4106	80	241	322	273	160	433
RC-7	Warehouse	ITE 150			3.56	0.79	0.21	0.3	0.25	0.75	0.32	
		PP16686	945570 s.f.	3366	224	60	284	76	227	303		
		Passenger Car (92% of total)		3,097	206	55	261	70	209	278		
		Truck - 2 axle (25%)		67	4	1	6	2	5	6		
		Truck - 3 axle (21%)		57	4	1	5	1	4	5		
		Truck - 4 axle (54%)		145	10	3	12	3	10	13		
		RC-7 NEW		3747	249	66	316	84	253	337		
5- TOTAL					12446	420	578	998	663	592	1255	

## TRIP GENERATION - RELATED PROJECTS FOR TUSCANA VILLAGE - 2012

DISTRIBUTION RELATED PROJECT ZONE		Size	Unit	Daily 2-Way	AM Peak Hour			PM Peak Hour		
Project				In	Out	Total	In	Out	Total	
ZONE 6										
RC-8	Light Industrial	ITE 110		6.97	0.88	0.12	0.92	0.12	0.88	0.97
		PP23390	78323 s.f.	546	63	9	72	9	67	76
RC-9	Warehouse	ITE 150		3.56	0.79	0.21	0.3	0.25	0.75	0.32
		PP16379	236708 s.f.	843	56	15	71	19	57	76
		Passenger Car (92% of total)		775	52	14	65	17	52	70
		Truck - 2 axle (25%)		17	1	0	1	0	1	2
		Truck - 3 axle (21%)		14	1	0	1	0	1	1
		Truck - 4 axle (54%)		36	2	1	3	1	2	3
		RC-9 NEW		938	62	17	79	21	63	84
RC-13	Gas station with Convenience store	ITE 945		162.78	0.50	0.50	10.16	0.50	0.50	13.38
		CUP03607	12 fp	1953	61	61	122	80	80	161
		pass-by(50%, 62%, 56%)		-977	-38	-38	-76	-45	-45	-90
		RC-13 NEW		977	23	23	46	35	35	71
6- TOTAL				2461	149	48	197	66	165	231
ZONE 7										
RC-10	Warehouse	ITE 150		3.56	0.79	0.21	0.3	0.25	0.75	0.32
		PP17788	426212 s.f.	1517	101	27	128	34	102	136
		Passenger Car (92% of total)		1,396	93	25	118	31	94	125
		Truck - 2 axle (25%)		30	2	1	3	1	2	3
		Truck - 3 axle (21%)		25	2	0	2	1	2	2
		Truck - 4 axle (54%)		66	4	1	6	1	4	6
		RC-10 NEW		1689	112	30	142	38	114	152
RC-11	Warehouse	ITE 150		3.56	0.79	0.21	0.3	0.25	0.75	0.32
		PP14130R1	126000 s.f.	449	30	8	38	10	30	40
		Passenger Car (92% of total)		413	27	7	35	9	28	37
		Truck - 2 axle (25%)		9	1	0	1	0	1	1
		Truck - 3 axle (21%)		8	1	0	1	0	1	1
		Truck - 4 axle (54%)		19	1	0	2	0	1	2
		RC-11 NEW		499	33	9	42	11	34	45
RC-12	Warehouse	ITE 150		3.56	0.79	0.21	0.3	0.25	0.75	0.32
		PP22718	159800 s.f.	569	38	10	48	13	38	51
		Passenger Car (92% of total)		523	35	9	44	12	35	47
		Truck - 2 axle (25%)		11	1	0	1	0	1	1
		Truck - 3 axle (21%)		10	1	0	1	0	1	1
		Truck - 4 axle (54%)		25	2	0	2	1	2	2
		RC-12 NEW		633	42	11	53	14	43	57
7- TOTAL				2822	188	50	238	63	190	254
TOTAL ALL RELATED PROJECTS				33139	1244	1223	2467	1553	1624	3178

# **Appendix G**

## **GENERAL PLAN NO-PROJECT TRAFFIC VOLUME DATA**

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	←	←	←	←	←	←	←	←	←	←	←
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Util. Factor	0.97	0.91	1.00	0.91	1.00	0.91	1.00	0.95	1.00	0.91	1.00	0.91
Frt	1.00	1.00	1.00	1.00	0.92	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3433	5083	1770	4693	1770	4693	1770	3536	1770	4833	1770	4833
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3433	5083	1770	4693	1770	4693	1770	3536	1770	4833	1770	4833
Volume (vph)	451	384	1	7	297	315	1	891	5	143	487	241
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	451	384	1	7	297	315	1	891	5	143	487	241
RTOR Reduction (vph)	0	0	0	0	214	0	0	1	0	0	0	90
Lane Group Flow (vph)	451	385	0	7	398	0	1	895	0	143	638	0
Turn Type	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.8	29.7		1.1	16.0		1.1	30.6		10.6	40.1	
Effective Green, g (s)	17.3	32.2		3.6	18.5		3.6	33.1		13.1	42.6	
Actuated g/C Ratio	0.19	0.36		0.04	0.21		0.04	0.37		0.15	0.47	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	660	1819		71	965		71	1300		258	2288	
v/s Ratio Prot	c0.13	0.08		0.00	c0.13		0.00	c0.25		c0.08	0.15	
v/s Ratio Perm												
v/c Ratio	0.68	0.21		0.10	0.41		0.01	0.69		0.55	0.28	
Uniform Delay, d1	33.8	20.1		41.6	31.0		41.5	24.1		35.7	14.4	
Progression Factor	1.00	1.00		1.00	1.00		0.80	0.85		0.55	0.39	
Incremental Delay, d2	2.9	0.1		0.6	0.3		0.1	2.4		2.4	0.3	
Delay (s)	36.7	20.1		42.2	31.3		33.4	22.9		22.2	5.9	
Level of Service	D	C		D	C		C	C		C	A	
Approach Delay (s)	29.1			31.4			22.9			8.5		
Approach LOS	C			C			C			A		
Intersection Summary												
HCM Average Control Delay	22.3											
HCM Volume to Capacity ratio	0.64											
Actuated Cycle Length (s)	90.0									8.0		
Intersection Capacity Utilization	71.7%											
Analysis Period (min)	15											
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	←	←	←	←	←	←	←	←	←	←	←
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Util. Factor	0.97	0.91	1.00	0.91	1.00	0.91	1.00	0.86	1.00	0.86	1.00	0.86
Frt	1.00	0.98	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.97	1.00	0.97
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3433	4968	1770	4978	1770	4978	1770	6357	1770	6219	1770	6219
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3433	4968	1770	4978	1770	4978	1770	6357	1770	6219	1770	6219
Volume (vph)	534	280	51	153	184	30	177	2247	125	199	1754	428
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	534	280	51	153	184	30	177	2247	125	199	1754	428
RTOR Reduction (vph)	0	31	0	0	26	0	0	8	0	0	43	0
Lane Group Flow (vph)	534	300	0	153	188	0	177	2364	0	199	2139	0
Turn Type	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.5	11.1		11.3	9.9		7.5	41.1		8.5	42.1	
Effective Green, g (s)	15.0	13.6		13.8	12.4		10.0	43.6		11.0	44.6	
Actuated g/C Ratio	0.17	0.15		0.15	0.14		0.11	0.48		0.12	0.50	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	572	751		271	686		197	3080		216	3082	
v/s Ratio Prot	c0.16	c0.07		0.09	0.04		0.10	c0.37		c0.11	0.35	
v/s Ratio Perm												
v/c Ratio	0.93	0.40		0.56	0.27		0.90	0.77		0.92	0.69	
Uniform Delay, d1	37.0	34.5		35.3	34.8		39.5	19.0		39.1	17.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.14	1.29	
Incremental Delay, d2	22.4	0.3		2.7	0.2		36.9	1.9		38.1	1.2	
Delay (s)	59.4	34.9		38.0	35.0		76.4	20.9		82.6	23.7	
Level of Service	E	C		D	C		E	C		F	C	
Approach Delay (s)	50.0			36.2			24.8			28.6		
Approach LOS	D			D			C			C		
Intersection Summary												
HCM Average Control Delay	30.5											
HCM Volume to Capacity ratio	0.71											
Actuated Cycle Length (s)	90.0									4.0		
Intersection Capacity Utilization	78.5%											
Analysis Period (min)	15											
c Critical Lane Group												



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Util. Factor	1.00	0.88	1.00	0.88	1.00	0.91	1.00	0.91	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1770	2787	2787	1770	5085	5085	1770	5085	1770	5085	1770	5085
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1770	2787	2787	1770	5085	5085	1770	5085	1770	5085	1770	5085
Volume (vph)	421	0	1044	0	0	0	0	1834	793	326	2086	0
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	421	0	1044	0	0	0	0	1834	793	326	2086	0
RTOR Reduction (vph)	0	0	10	0	0	0	0	87	0	0	0	0
Lane Group Flow (vph)	421	0	1034	0	0	0	0	2540	0	326	2086	0

Turn Type	Prot	custom	Prot
Protected Phases	7		2
Permitted Phases	4		1
Actuated Green, G (s)	29.5	29.5	34.5
Effective Green, g (s)	32.0	32.0	37.0
Actuated g/C Ratio	0.36	0.36	0.41
Clearance Time (s)	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0
Lane Grp Cap (vph)	629	991	2515
v/s Ratio Prot	0.24		60.43
v/s Ratio Perm	0.67	1.04	1.06dr
Uniform Delay, d1	24.5	29.0	26.5
Progression Factor	1.00	1.00	1.00
Incremental Delay, d2	2.7	40.5	20.5
Delay (s)	27.2	69.5	47.0
Level of Service	C	E	D
Approach Delay (s)	57.3	0.0	47.0
Approach LOS	E	A	D

Intersection Summary		
HCM Average Control Delay	38.3	HCM Level of Service
HCM Volume to Capacity ratio	1.04	D
Actuated Cycle Length (s)	90.0	Sum of lost time (s)
Intersection Capacity Utilization	94.9%	6.0
Analysis Period (min)	15	ICU Level of Service
dr Defacto Right Lane. Recode with 1 though lane as a right lane.		F
c Critical Lane Group		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Util. Factor	0.91	1.00	0.85	0.91	1.00	0.85	1.00	0.85	1.00	0.95	0.91	0.95
Flt Protected	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	5085	5085	5085	5085	5085	5085	5085	5085	5085	5085	5085	5085
Flt Permitted	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	5085	5085	5085	5085	5085	5085	5085	5085	5085	5085	5085	5085
Volume (vph)	0	2835	1704	0	1274	912	0	0	0	1043	0	1664
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	2835	1704	0	1274	912	0	0	0	1043	0	1664
RTOR Reduction (vph)	0	0	352	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2835	1352	0	1274	912	0	0	0	522	521	1664

Turn Type	Prot	Free	Prot
Protected Phases	4	8	1
Permitted Phases	4	Free	6
Actuated Green, G (s)	58.5	58.5	22.5
Effective Green, g (s)	61.0	61.0	25.0
Actuated g/C Ratio	0.68	0.68	0.28
Clearance Time (s)	4.5	4.5	4.5
Vehicle Extension (s)	3.0	3.0	3.0
Lane Grp Cap (vph)	3447	1073	467
v/s Ratio Prot	0.56	0.25	0.31
v/s Ratio Perm	0.82	0.37	1.12
Uniform Delay, d1	10.6	14.5	32.5
Progression Factor	1.00	1.00	1.00
Incremental Delay, d2	1.7	124.8	77.9
Delay (s)	12.2	139.3	110.4
Level of Service	B	A	F
Approach Delay (s)	60.0	1.3	109.5
Approach LOS	E	A	F

Intersection Summary		
HCM Average Control Delay	60.6	HCM Level of Service
HCM Volume to Capacity ratio	1.43	E
Actuated Cycle Length (s)	90.0	Sum of lost time (s)
Intersection Capacity Utilization	158.0%	2.0
Analysis Period (min)	15	ICU Level of Service
c Critical Lane Group		H

NOTE: WBL turning movement removed to reflect the addition of a proposed loop ramp onto I-15 SB using a WBR turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Util. Factor	0.97	1.00	0.85	1.00	0.95	0.91	1.00	0.97	0.91	1.00	0.97	0.91
Flt Protected	1.00	1.00	0.85	1.00	0.95	0.91	1.00	0.97	0.91	1.00	0.97	0.91
Satd. Flow (prot)	3433	1583	1583	3433	5085	5085	1583	3433	5085	1583	3433	5085
Flt Permitted	0.95	1.00	0.85	1.00	0.95	0.91	1.00	0.97	0.91	1.00	0.97	0.91
Satd. Flow (perm)	3433	1583	1583	3433	5085	5085	1583	3433	5085	1583	3433	5085
Volume (vph)	844	0	442	0	0	0	0	1389	468	1569	2340	0
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	844	0	442	0	0	0	0	1389	468	1569	2340	0
RTOR Reduction (vph)	0	0	9	0	0	0	0	0	287	0	0	0
Lane Group Flow (vph)	844	0	433	0	0	0	0	1389	181	1569	2340	0
Turn Type	Prot	custom	custom	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot
Protected Phases	7			4			2	2	1	6		
Permitted Phases												
Actuated Green, G (s)	19.5	19.5	19.5	22.5	22.5	22.5	22.5	22.5	34.5	61.5		
Effective Green, g (s)	22.0	22.0	22.0	25.0	25.0	25.0	25.0	25.0	37.0	64.0		
Actuated g/C Ratio	0.24	0.24	0.24	0.28	0.28	0.28	0.28	0.28	0.41	0.71		
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	839		387	1413	440	1411	3616					
v/s Ratio Prot	0.25		0.28	0.27			0.30			0.46		
v/s Ratio Perm	1.01	1.12	1.12	0.98	0.41	1.11	0.65					
Uniform Delay, d1	34.0	34.0	34.0	32.3	26.5	26.5	7.0					
Progression Factor	1.00	1.00	1.00	1.00	1.00	0.72	0.26					
Incremental Delay, d2	32.5	82.0	82.0	20.2	2.8	58.0	0.6					
Delay (s)	66.5	116.0	116.0	52.5	29.3	77.1	2.4					
Level of Service	E	F	F	D	C	E	A					
Approach Delay (s)	83.5		0.0	46.7		32.4						
Approach LOS	F		A	D		C						
Intersection Summary												
HCM Average Control Delay	45.5			HCM Level of Service	D							
HCM Volume to Capacity ratio	1.09											
Actuated Cycle Length (s)	90.0			Sum of lost time (s)	6.0							
Intersection Capacity Utilization	149.4%			ICU Level of Service	H							
Analysis Period (min)	15											
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Util. Factor	0.95	0.91	0.95	0.97	0.91	0.95	1.00	0.95	0.91	1.00	0.95	0.91
Flt Protected	1.00	0.95	0.96	1.00	0.95	0.91	1.00	0.95	0.91	1.00	0.95	0.91
Satd. Flow (prot)	1681	1570	1504	3433	5085	5085	1681	1570	1504	3433	5085	1583
Flt Permitted	0.95	0.96	1.00	0.95	0.91	0.95	1.00	0.95	0.91	1.00	0.95	0.91
Satd. Flow (perm)	1681	1570	1504	3433	5085	5085	1681	1570	1504	3433	5085	1583
Volume (vph)	0	0	0	324	0	252	782	1517	0	0	2040	825
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	324	0	252	782	1517	0	0	2040	825
RTOR Reduction (vph)	0	0	0	15	61	0	0	0	0	0	0	248
Lane Group Flow (vph)	0	0	0	179	182	139	782	1517	0	0	2040	577
Turn Type	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot
Protected Phases				8			5	2			6	
Permitted Phases												
Actuated Green, G (s)	13.8	13.8	13.8	13.8	21.9	67.2	40.8					
Effective Green, g (s)	16.3	16.3	16.3	16.3	24.4	69.7	43.3					
Actuated g/C Ratio	0.18	0.18	0.18	0.18	0.27	0.77	0.48					
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0					
Lane Grp Cap (vph)	304	284	272	931	3938		2446					
v/s Ratio Prot	0.11	0.13	0.13	0.13	0.13	0.52	0.40					
v/s Ratio Perm	0.59	0.64	0.51	0.84	0.39	0.76						
Uniform Delay, d1	33.8	34.1	33.3	31.0	3.3	20.2	19.1					
Progression Factor	1.00	1.00	1.00	1.35	0.07	1.00	1.00					
Incremental Delay, d2	2.9	4.9	1.6	2.6	0.1	3.5	7.0					
Delay (s)	36.7	39.0	34.9	44.3	0.3	23.8	26.0					
Level of Service	D	D	C	D	A	C	C					
Approach Delay (s)	0.0		36.9		15.3	24.4						
Approach LOS	A		D		B	C						
Intersection Summary												
HCM Average Control Delay	22.0			HCM Level of Service	C							
HCM Volume to Capacity ratio	0.93											
Actuated Cycle Length (s)	90.0			Sum of lost time (s)	6.0							
Intersection Capacity Utilization	94.9%			ICU Level of Service	F							
Analysis Period (min)	15											
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	↑	→	←	↑	→	←	↑	→	←	↑	→
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Util. Factor	0.97	0.91	1.00	0.91	1.00	0.91	1.00	0.95	1.00	0.91	1.00	0.91
Frt	1.00	1.00	1.00	0.97	1.00	0.97	1.00	0.99	1.00	0.94	1.00	0.94
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3433	5084	1770	4914	1770	4914	1770	3509	1770	4795	1770	4795
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3433	5084	1770	4914	1770	4914	1770	3509	1770	4795	1770	4795
Volume (vph)	574	710	1	27	589	171	1	843	51	393	952	585
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	574	710	1	27	589	171	1	843	51	393	952	585
RTOR Reduction (vph)	0	0	0	0	60	0	0	5	0	0	111	0
Lane Group Flow (vph)	574	711	0	27	700	0	1	889	0	393	1426	0
Turn Type	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.2	29.5	2.2	15.5	2.2	15.5	1.1	26.6	19.4	44.9		
Effective Green, g (s)	18.7	32.0	4.7	18.0	4.7	18.0	3.6	29.1	21.9	47.4		
Actuated g/C Ratio	0.20	0.33	0.05	0.19	0.05	0.19	0.04	0.30	0.23	0.50		
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	671	1700	87	924	67	1067	67	1067	405	2375		
v/s Ratio Prot	c0.17	0.14		0.02	c0.15		0.00	c0.25	c0.22	0.32		
v/s Ratio Perm												
v/c Ratio	0.86	0.42	0.31	0.76	0.31	0.76	0.01	0.83	0.97	0.60		
Uniform Delay, d1	37.2	24.6	43.9	36.8	43.9	36.8	44.3	31.0	36.6	17.3		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	10.4	0.2	2.0	3.6	2.0	3.6	0.1	7.7	36.8	1.1		
Delay (s)	47.6	24.8	46.0	40.4	46.0	40.4	44.4	38.7	73.4	18.5		
Level of Service	D	C	D	D	D	D	D	D	E	B		
Approach Delay (s)		35.0		40.6		38.7		29.7		C		
Approach LOS		C		D		D		C				
Intersection Summary												
HCM Average Control Delay		34.5				HCM Level of Service		C				
HCM Volume to Capacity ratio		0.85										
Actuated Cycle Length (s)		95.7				Sum of lost time (s)		8.0				
Intersection Capacity Utilization		91.6%				ICU Level of Service		F				
Analysis Period (min)		15										
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	↑	→	←	↑	→	←	↑	→	←	↑	→
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Util. Factor	0.97	0.91	1.00	0.91	1.00	0.91	1.00	0.86	1.00	0.86	1.00	0.86
Frt	1.00	0.96	1.00	0.96	1.00	0.96	1.00	0.98	1.00	0.97	1.00	0.97
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3433	4892	1770	4878	1770	4878	1770	6298	1770	6246	1770	6246
Flt Permitted	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3433	4892	1770	4878	1770	4878	1770	6298	1770	6246	1770	6246
Volume (vph)	532	527	179	189	401	150	61	2160	279	64	2597	526
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	532	527	179	189	401	150	61	2160	279	64	2597	526
RTOR Reduction (vph)	0	69	0	0	77	0	0	25	0	0	39	0
Lane Group Flow (vph)	532	637	0	189	474	0	61	2414	0	64	3084	0
Turn Type	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	11.8	14.9	10.1	13.2	4.2	40.3	4.2	40.3	4.2	40.3		
Effective Green, g (s)	14.3	17.4	12.6	15.7	6.7	42.8	6.7	42.8	6.7	42.8		
Actuated g/C Ratio	0.16	0.20	0.14	0.18	0.08	0.49	0.08	0.49	0.08	0.49		
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	561	973	255	875	136	3081	136	3081	136	3055		
v/s Ratio Prot	c0.15	0.14		c0.11	c0.11	0.03	0.39		c0.04	c0.50		
v/s Ratio Perm												
v/c Ratio	0.95	0.65	0.74	0.54	0.45	0.78	0.47	1.01				
Uniform Delay, d1	36.2	32.3	35.9	32.6	38.6	18.5	38.7	22.4				
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Incremental Delay, d2	25.4	1.6	11.0	0.7	2.3	2.1	2.6	18.6				
Delay (s)	61.7	33.9	46.9	33.3	41.0	20.6	41.3	41.0				
Level of Service	E	C	D	C	D	C	D	D				
Approach Delay (s)		45.8		36.8		21.1		41.0				
Approach LOS		D		D		C		D				
Intersection Summary												
HCM Average Control Delay		34.9				HCM Level of Service		C				
HCM Volume to Capacity ratio		0.88										
Actuated Cycle Length (s)		87.5				Sum of lost time (s)		8.0				
Intersection Capacity Utilization		89.4%				ICU Level of Service		E				
Analysis Period (min)		15										
c Critical Lane Group												





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Total Lost time (s)	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fit Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	2787	2787	1770	2787	1770	2787	1770	2787	1770	2787	2787
Fit Permitted	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	2787	2787	1770	2787	1770	2787	1770	2787	1770	2787	2787
Volume (vph)	495	0	830	0	0	0	0	2149	415	53	1064	0
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	495	0	830	0	0	0	0	2149	415	53	1064	0
RTOR Reduction (vph)	0	0	117	0	0	0	0	35	0	0	0	0
Lane Group Flow (vph)	495	0	713	0	0	0	0	2529	0	53	1064	0
Turn Type	Prot	custom	custom	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot	Prot
Protected Phases	7	4	4	2	2	1	6					
Permitted Phases	27.5	27.5	27.5	44.6	44.6	4.4	53.5					
Actuated Green, G (s)	30.0	30.0	30.0	47.1	47.1	6.9	56.0					
Effective Green, g (s)	0.33	0.33	0.33	0.52	0.52	0.08	0.62					
Actuated g/C Ratio	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0					
Vehicle Extension (s)	590	929	929	3272	3272	136	3164					
Lane Grp Cap (vph)	0.28	0.30	0.30	0.77	0.77	0.39	0.34					
v/s Ratio Prot	0.84	0.77	0.77	17.2	17.2	39.5	8.1					
v/s Ratio Perm	27.8	26.9	26.9	1.25	1.25	1.19	1.14					
Uniform Delay, d1	1.00	1.00	1.00	1.1	1.1	1.6	0.2					
Progression Factor	37.9	30.7	30.7	22.5	22.5	48.7	9.5					
Incremental Delay, d2	D	C	C	C	C	D	A					
Delay (s)	33.4	33.4	33.4	22.5	22.5	11.4	B					
Level of Service	C	C	C	A	A	C	B					
Approach Delay (s)												
Approach LOS												

Intersection Summary												
HCM Average Control Delay	22.9	HCM Level of Service	C									
HCM Volume to Capacity ratio	0.77											
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	4.0									
Intersection Capacity Utilization	87.1%	ICU Level of Service	E									
Analysis Period (min)	15											
c Critical Lane Group												



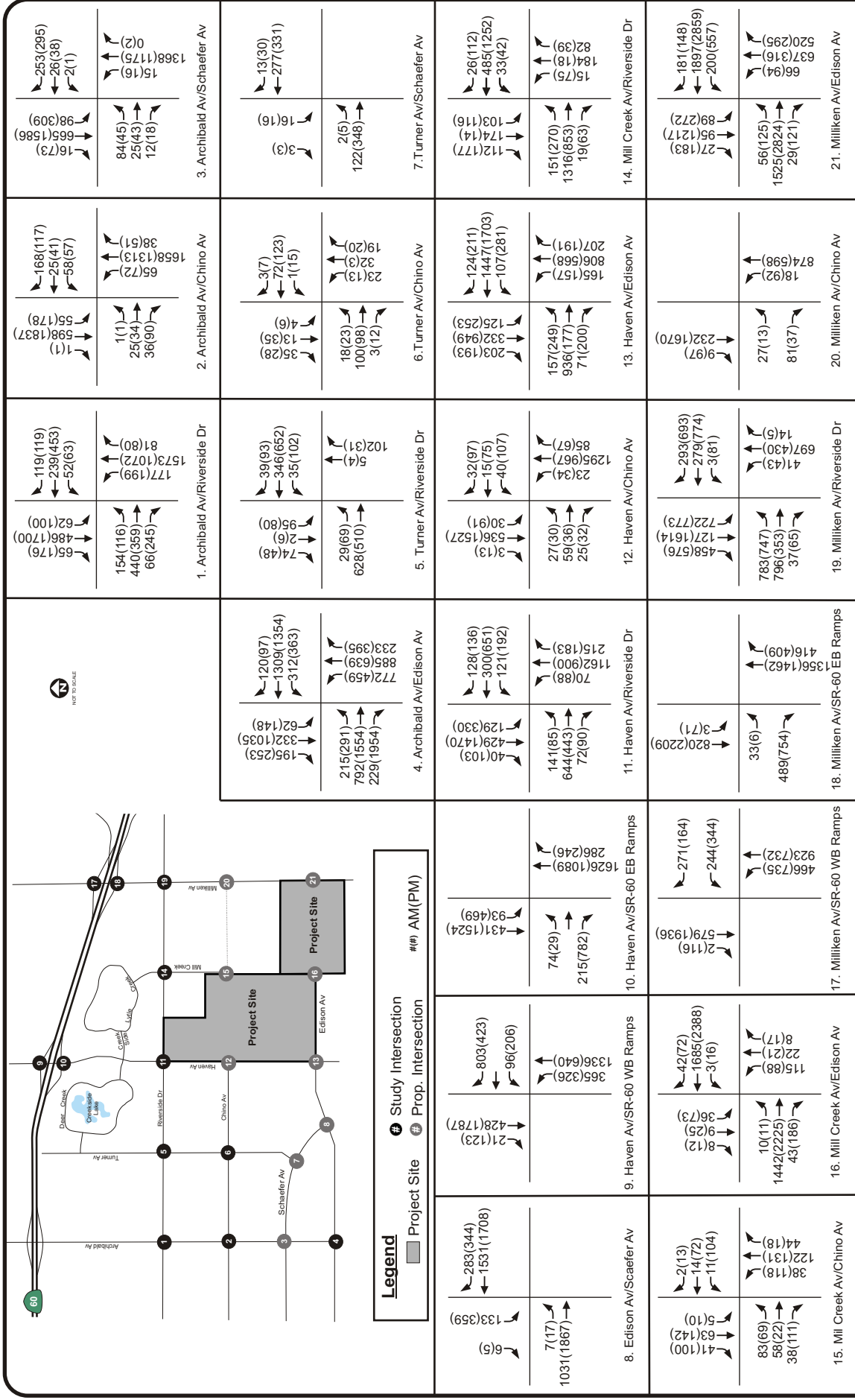
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Total Lost time (s)	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	0.91	1.00	0.91	0.95
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Fit Protected	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Satd. Flow (prot)	5085	5085	5085	5085	5085	5085	5085	5085	5085	5085	5085	5085
Fit Permitted	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Satd. Flow (perm)	5085	5085	5085	5085	5085	5085	5085	5085	5085	5085	5085	5085
Volume (vph)	0	981	392	0	1773	343	0	0	0	1147	6	2368
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	981	392	0	1773	343	0	0	0	1147	6	2368
RTOR Reduction (vph)	0	0	251	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	981	141	0	1773	343	0	0	0	965	1027	1529
Turn Type	Prot	Perm	Perm	Free	Free	Free	Free	Free	Free	Prot	Prot	Free
Protected Phases	4	4	4	8	8	8	8	8	8	1	6	6
Permitted Phases	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	29.9	51.1	51.1	90.0
Actuated Green, G (s)	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	53.6	53.6	90.0
Effective Green, g (s)	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.60	0.60	1.00
Actuated g/C Ratio	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Clearance Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Vehicle Extension (s)	1831	570	1831	1831	1831	1831	1831	1831	1831	1001	878	1504
Lane Grp Cap (vph)	0.19	0.25	0.25	0.35	0.35	0.22	0.22	0.22	0.22	0.96	1.17	1.02
v/s Ratio Prot	0.54	0.25	0.25	0.97	0.97	0.22	0.22	0.22	0.22	0.96	1.17	1.02
v/s Ratio Perm	22.8	20.2	20.2	28.3	28.3	0.0	0.0	0.0	0.0	17.3	18.2	45.0
Uniform Delay, d1	0.62	0.20	0.20	0.60	0.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Progression Factor	0.3	0.2	0.2	10.1	10.1	0.2	0.2	0.2	0.2	20.1	88.4	27.4
Incremental Delay, d2	14.5	4.3	4.3	27.1	27.1	0.2	0.2	0.2	0.2	37.4	106.6	72.4
Delay (s)	B	A	A	C	C	A	A	A	A	D	F	E
Level of Service	B	A	A	C	C	A	A	A	A	D	F	E
Approach Delay (s)	11.6	22.7	22.7	0.0	0.0	0.0	0.0	0.0	0.0	72.8	E	E
Approach LOS	B	C	C									

Intersection Summary												
HCM Average Control Delay	45.7	HCM Level of Service	D									
HCM Volume to Capacity ratio	1.10											
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	2.0									
Intersection Capacity Utilization	97.0%	ICU Level of Service	F									
Analysis Period (min)	15											
c Critical Lane Group												

NOTE: WBL turning movement removed to reflect the addition of a proposed loop ramp onto I-15 SB using a WBR turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Util. Factor	0.97	1.00	0.85	1.00	0.85	1.00	0.91	1.00	0.97	0.91	1.00
Flt Protected	1.00	0.85	1.00	0.85	1.00	0.85	1.00	0.85	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1583	3433	1583	1583	3433	1583	3433	1583	3433
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	1583	3433	1583	1583	3433	1583	3433	1583	3433
Volume (vph)	1701	0	262	0	0	0	2097	502	596	1027	0
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1701	0	262	0	0	0	2097	502	596	1027	0
RTOR Reduction (vph)	0	0	56	0	0	0	0	287	0	0	0
Lane Group Flow (vph)	1701	0	206	0	0	0	2097	215	596	1027	0
Turn Type	Prot	custom					Perm	Prot			
Protected Phases	7						2		1		6
Permitted Phases		4						2			
Actuated Green, G (s)	33.5	33.5	33.5	33.5	31.5	31.5	31.5	11.5	47.5		
Effective Green, g (s)	36.0	36.0	36.0	36.0	34.0	34.0	34.0	14.0	50.0		
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.38	0.38	0.38	0.16	0.56		
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	1373	633	633	1921	598	534	2825				
v/s Ratio Prot	c0.50			c0.41	0.32			c0.17	0.20		
v/s Ratio Perm		0.17			0.36			1.12	0.36		
v/c Ratio	1.24	0.32			1.09	0.36		1.12	0.36		
Uniform Delay, d1	27.0	18.6			28.0	20.2		38.0	11.1		
Progression Factor	1.00	1.00			0.80	0.59		1.04	0.75		
Incremental Delay, d2	113.9	0.3			49.9	1.6		73.3	0.3		
Delay (s)	140.9	18.9			72.3	13.4		112.7	8.7		
Level of Service	F	B			E	B		F	A		
Approach Delay (s)	124.6				60.9			46.9			
Approach LOS	F				E			D			
Intersection Summary											
HCM Average Control Delay		77.5			HCM Level of Service			E			
HCM Volume to Capacity ratio		1.14									
Actuated Cycle Length (s)		90.0			Sum of lost time (s)			6.0			
Intersection Capacity Utilization		128.4%			ICU Level of Service			H			
Analysis Period (min)		15									
c Critical Lane Group											

Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lane Util. Factor	0.95	0.91	0.95	0.97	0.91	0.95	0.97	0.91	0.91	1.00	1.00
Flt Protected	1.00	0.85	1.00	0.85	1.00	1.00	0.85	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1681	1441	1504	3433	5085	5085	3433	5085	5085	1583	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1681	1441	1504	3433	5085	5085	3433	5085	5085	1583	1583
Volume (vph)	0	0	0	482	1	1029	684	1962	0	0	634
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	0	0	482	1	1029	684	1962	0	0	634
RTOR Reduction (vph)	0	0	0	2	2	2	0	0	0	0	245
Lane Group Flow (vph)	0	0	0	482	513	513	684	1962	0	0	634
Turn Type	Perm	Perm	Perm	Perm	Prot	Prot	Perm	Prot	Perm	Perm	Perm
Protected Phases				8		5	2				6
Permitted Phases					8						
Actuated Green, G (s)				35.8	35.8	35.8	45.2				21.2
Effective Green, g (s)				38.3	38.3	38.3	47.7				23.7
Actuated g/C Ratio				0.43	0.43	0.43	0.53				0.26
Clearance Time (s)				4.5	4.5	4.5	4.5				4.5
Vehicle Extension (s)				3.0	3.0	3.0	3.0				3.0
Lane Grp Cap (vph)				715	613	640	2695				1339
v/s Ratio Prot				c0.36		c0.20	0.39				0.12
v/s Ratio Perm				0.29		0.34					0.21
v/c Ratio				0.67		0.84	0.82				0.47
Uniform Delay, d1				20.8		23.1	22.5				27.9
Progression Factor				1.00		1.00	0.59				1.00
Incremental Delay, d2				2.5		9.7	7.1				1.2
Delay (s)				23.3		32.7	29.7				29.1
Level of Service				C		C	C				C
Approach Delay (s)				0.0		28.7					28.4
Approach LOS				A		C					C
Intersection Summary											
HCM Average Control Delay				19.2		HCM Level of Service			B		
HCM Volume to Capacity ratio				0.81							
Actuated Cycle Length (s)				90.0		Sum of lost time (s)			6.0		
Intersection Capacity Utilization				87.1%		ICU Level of Service			E		
Analysis Period (min)				15							
c Critical Lane Group											



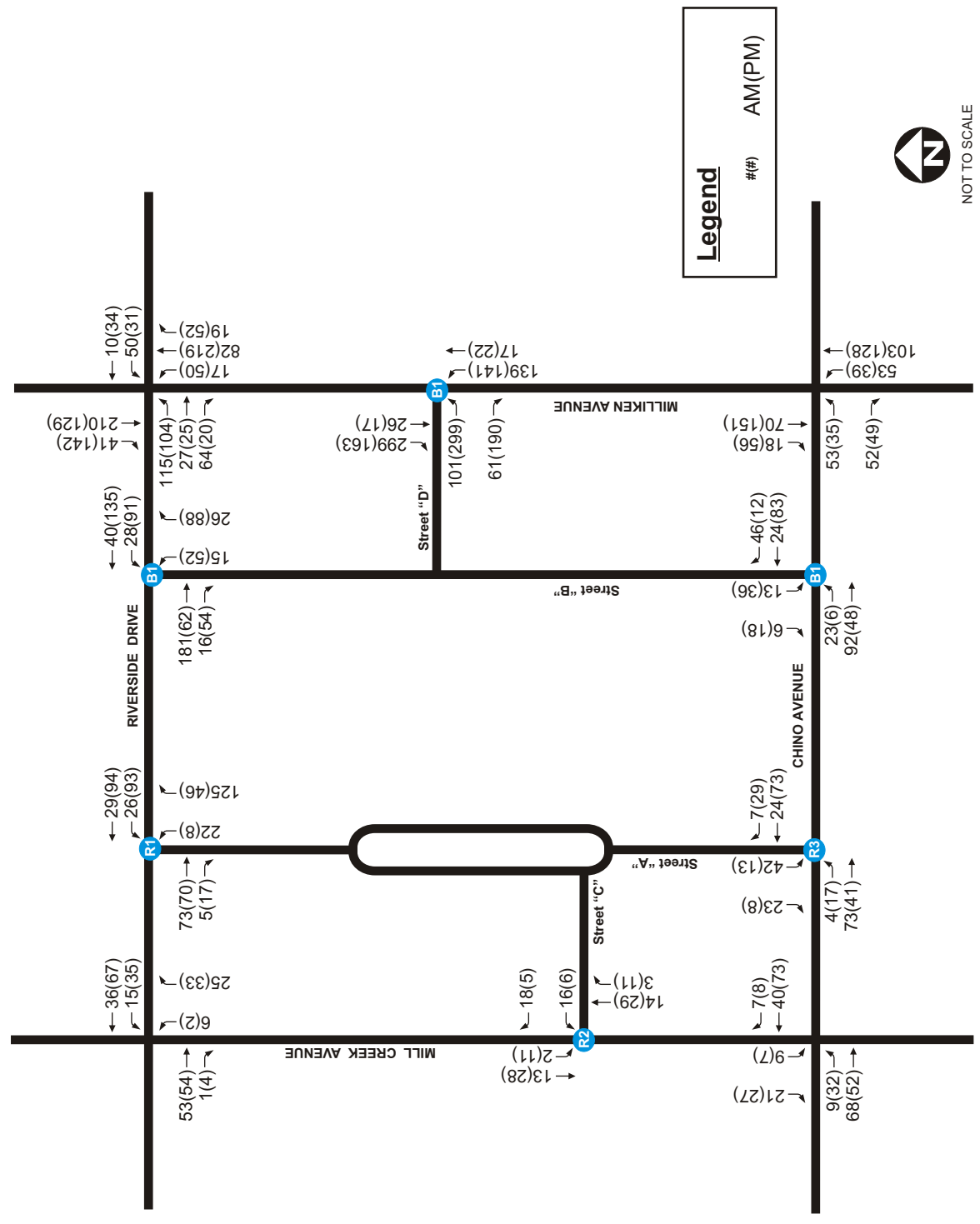


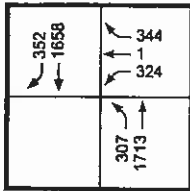
**Meyer, Mohaddes Associates**

a business unit of Iteris, Inc.

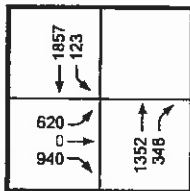
**Edenglen Specific Plan TIA**  
**City of Ontario**

**APPENDIX FIGURE F-2**  
**Project Only Peak Hour Internal Traffic Volumes**

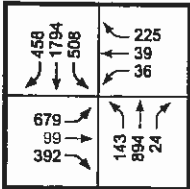




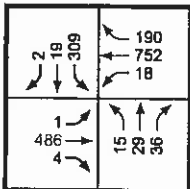
1. Milliken Avenue / SR-60 WB Ramps



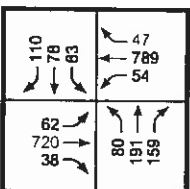
2. Milliken Avenue / SR-60 EB Ramps



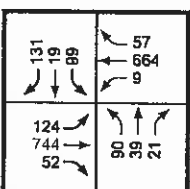
3. Hamner Avenue / Riverside Drive



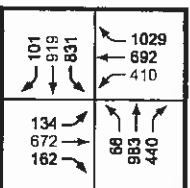
4. Schaefer Avenue / Edison Avenue



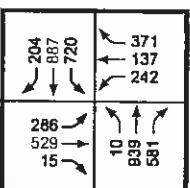
5. Haven Avenue / Edison Avenue



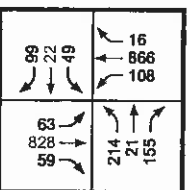
6. Mill Creek Avenue / Edison Avenue



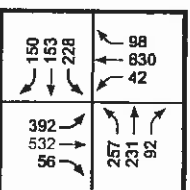
7. Hamner Avenue / Cantu-Galleano Ranch-Edison Ave



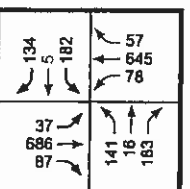
8. Hamner Avenue / Bellegrove Avenue



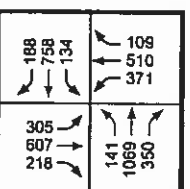
9. Harrison Avenue / Limonite Avenue



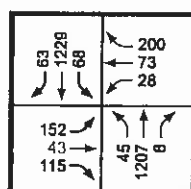
10. Sumner Avenue / Limonite Avenue



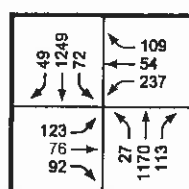
11. Cleveland Avenue / Limonite Avenue



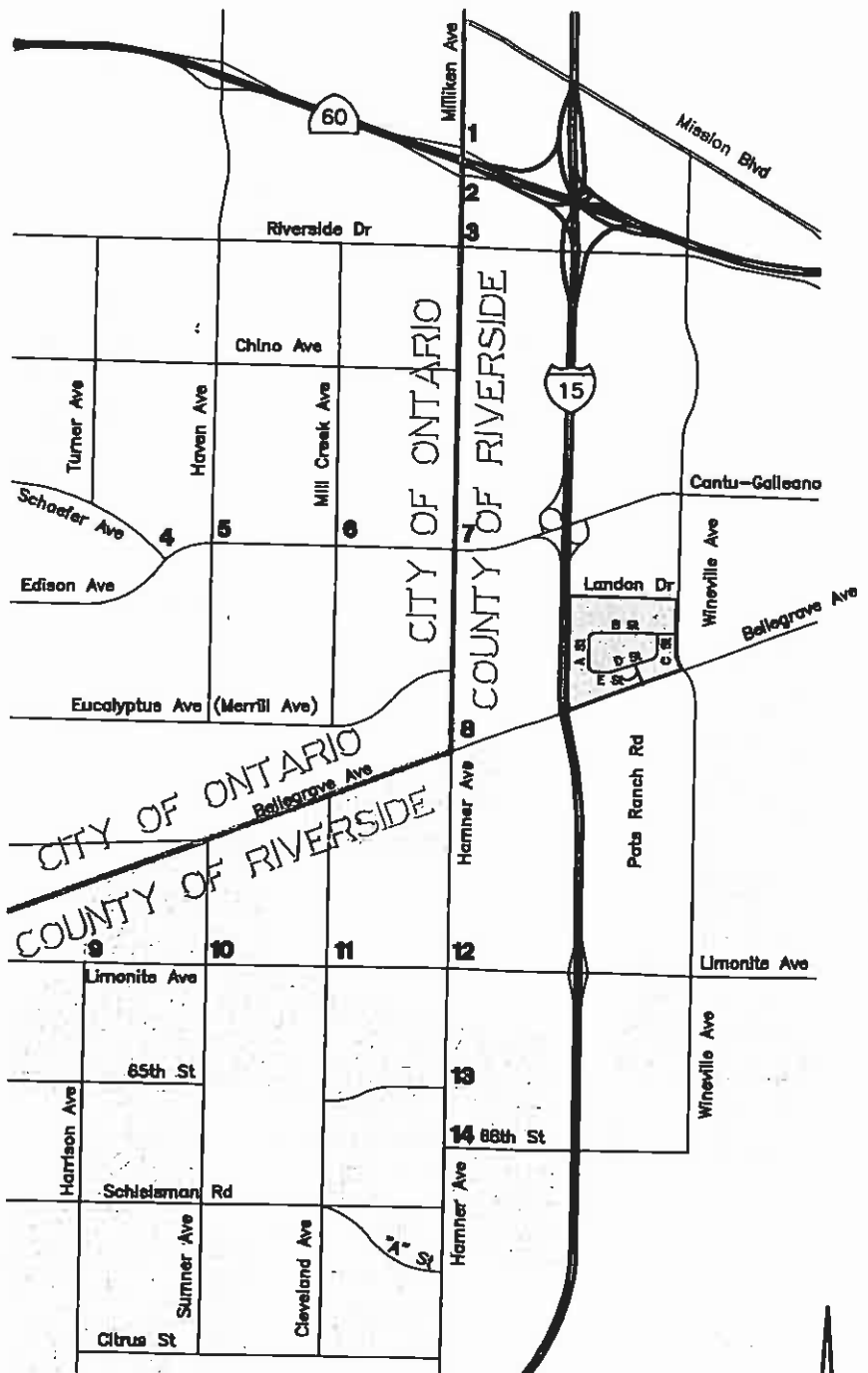
12. Hamner Avenue / Limonite Avenue

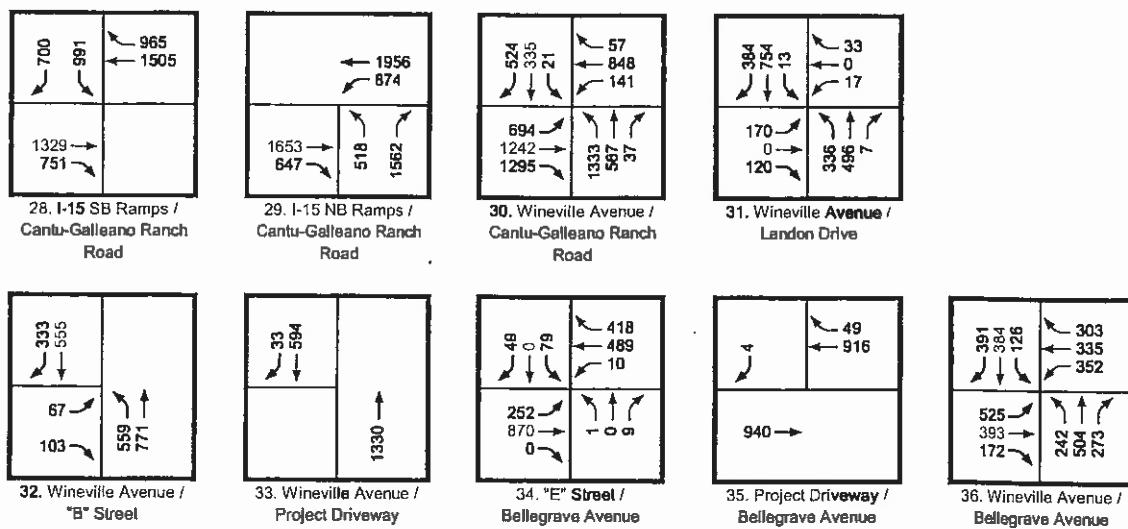
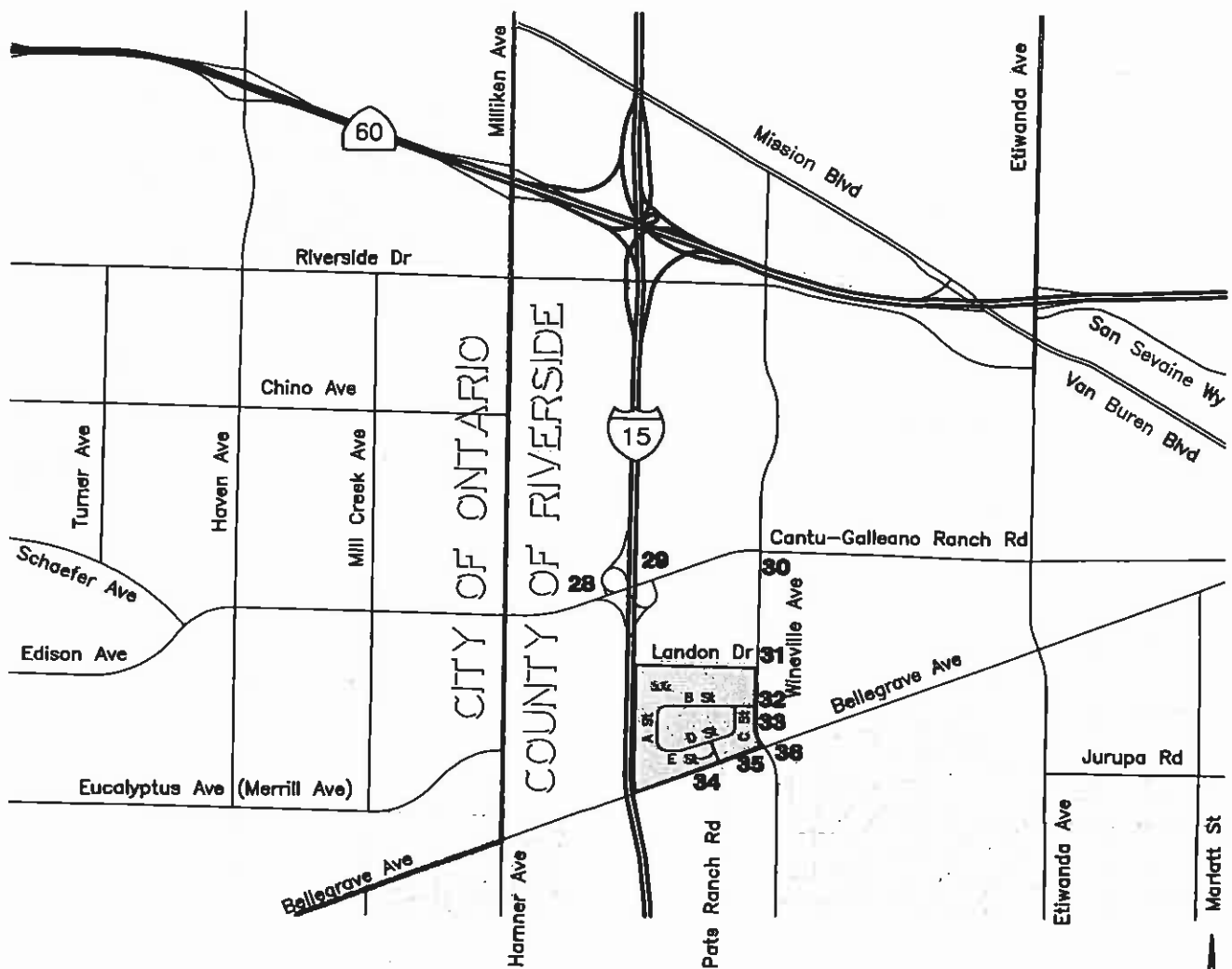


13. Hamner Avenue / 65th Street



14. Hamner Avenue / 68th Street





ALBERT A.  
**WEBB**  
ASSOCIATES

# BUILDOUT WITH PROJECT AM PEAK HOUR INTERSECTION VOLUMES IN PCE

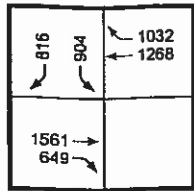
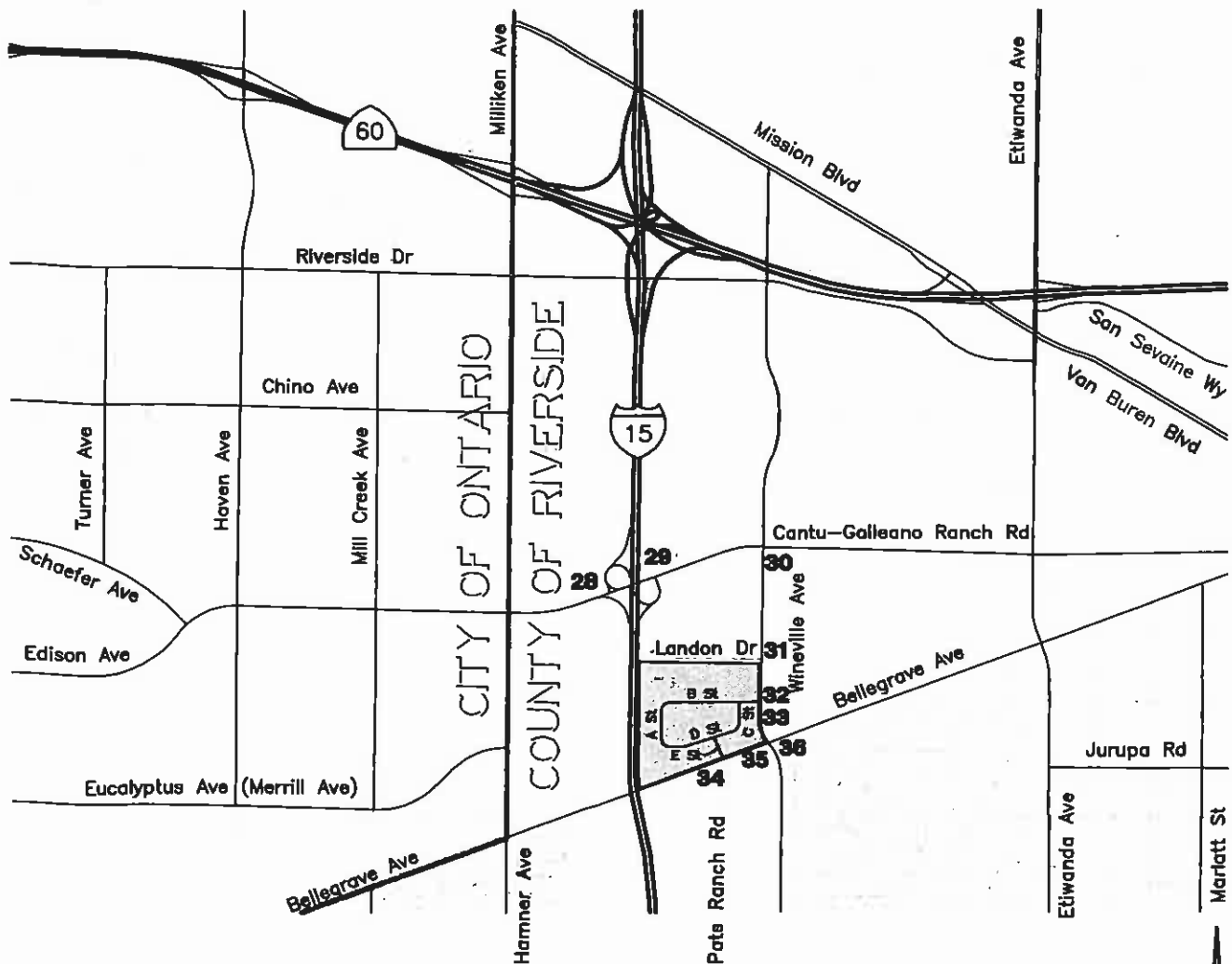
THOROUGHbred FARM SPECIFIC PLAN (SP 376)  
RIVERSIDE COUNTY, CALIFORNIA

FIGURE  
**5-Q3**

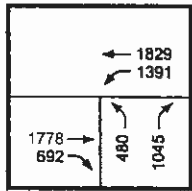
W.O. 05-0010E



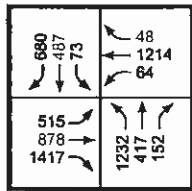




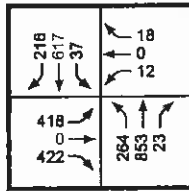
28. I-15 SB Ramps / Cantu-Galleano Ranch Road



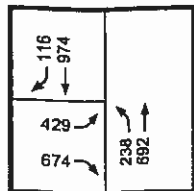
29. I-15 NB Ramps / Cantu-Galleano Ranch Road



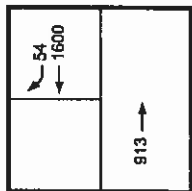
30. Wineville Avenue / Cantu-Galleano Ranch Road



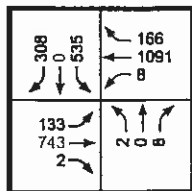
31. Wineville Avenue / Landon Drive



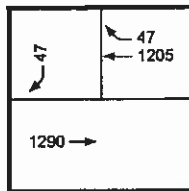
32. Wineville Avenue / "B" Street



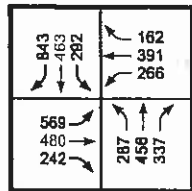
33. Wineville Avenue / Project Driveway



34. "E" Street / Bellegrave Avenue



35. Project Driveway / Bellegrave Avenue



36. Wineville Avenue / Bellegrave Avenue



ALBERT A.  
**WEBB**  
ASSOCIATES

# BUILDOUT WITH PROJECT PM PEAK HOUR INTERSECTION VOLUMES IN PCE

THOROUGHFBRED FARM SPECIFIC PLAN (SP 376)  
 RIVERSIDE COUNTY, CALIFORNIA

FIGURE

**5-R3**

W.O. 05-0010E

G:\200505-0010E\T\FIX BUILDOUT ANALYSES\WOL-SD-P-PM.dwg(12/2/2008)10:01:45 AM

# **Appendix H**

## **GENERAL PLAN WITH-PROJECT TRAFFIX WORKSHEETS FOR ALTERNATIVE 2**

Tuscana Village Specific Plan  
General Plan With-Project AM Peak Hour - No Hartford  
(All volumes converted to pce's and PHF applied).

Level Of Service Computation Report

2000 HCM Operations Method (Base Volume Alternative)

\*\*\*\*\*  
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)  
\*\*\*\*\*

Cycle (sec): 65 Critical Vol./Cap. (X): 0.559  
Loss Time (sec): 8 (Y+R=4.5 sec) Average Delay (sec/veh): 13.3  
Optimal Cycle: OPTIMIZED Level Of Service: B  
\*\*\*\*\*

Street Name: Milliken (Hamner) Avenue Industrial Dwy/Street "B" (Future  
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:	Include			Include			Include			Include		
Min. Green:	7	7	7	7	7	7	7	7	7	7	7	7
Lanes:	1	0	3	1	0	3	2	0	0	1	0	0

Volume Module: >> Count Date: 18 Aug 2009 << AM PEAK HOUR												
Base Vol:	166	2291	59	106	1474	537	237	2	22	12	2	35
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:	166	2291	59	106	1474	537	237	2	22	12	2	35
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:	166	2291	59	106	1474	537	237	2	22	12	2	35
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	166	2291	59	106	1474	537	237	2	22	12	2	35
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
Final Volume:	166	2291	59	106	1474	537	237	2	22	12	2	35

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.87	0.87	0.92	0.86	0.86	0.95	0.86	0.86
Lanes:	1.00	3.90	0.10	1.00	3.00	1.00	2.00	0.08	0.92	1.00	0.05	0.95
Final Sat.:	1805	6715	173	1805	4980	1660	3502	136	1501	1805	88	1542

Capacity Analysis Module:												
Vol/Sat:	0.09	0.34	0.34	0.06	0.30	0.32	0.07	0.01	0.01	0.01	0.02	0.02
Crit Moves:	****			****			****			****		
Green/Cycle:	0.16	0.55	0.55	0.11	0.49	0.49	0.11	0.11	0.11	0.11	0.11	0.11
Volume/Cap:	0.56	0.62	0.62	0.55	0.60	0.65	0.62	0.13	0.13	0.06	0.21	0.21
Delay/Veh:	27.3	10.2	10.2	30.7	12.1	12.8	30.7	26.6	26.6	26.1	27.1	27.1
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:	27.3	10.2	10.2	30.7	12.1	12.8	30.7	26.6	26.6	26.1	27.1	27.1
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	C
HCM2k95thQ:	8	18	18	6	16	18	7	1	1	1	2	2

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

Tuscan Village Specific Plan  
General Plan With-Project PM Peak Hour - No Hartford  
(All volumes converted to pce's and PHF applied)

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Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)
*****
Intersection #2 Milliken Avenue/Hamner - Industrial Dwy/Street "B" (Future)
*****
Cycle (sec):          80          Critical Vol./Cap.(X):          0.809
Loss Time (sec):      8 (Y+R=4.5 sec) Average Delay (sec/veh):      22.6
Optimal Cycle: OPTIMIZED          Level Of Service:          C
*****
Street Name:      Milliken (Hamner) Avenue      Industrial Dwy/Street "B" (Future
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:      Include      Include      Include      Include
Min. Green:      7      7      7      7      7      7      7      7
Lanes:      1 0 2 1 1      1 0 3 1 0      2 0 0 1 0      1 0 0 1 0
-----|-----|-----|-----|-----|
Volume Module: >> Count Date: 18 Aug 2009 << PM PEAK HOUR
Base Vol:      105 1973      15      36 2721      272      649      5      101      52      5      69
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:      105 1973      15      36 2721      272      649      5      101      52      5      69
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:      105 1973      15      36 2721      272      649      5      101      52      5      69
Reduct Vol:      0      0      0      0      0      0      0      0      0      0      0
Reduced Vol:      105 1973      15      36 2721      272      649      5      101      52      5      69
PCE Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      1.00
MLF Adj:      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      1.00      1.00 1.00      1.00
FinalVolume:      105 1973      15      36 2721      272      649      5      101      52      5      69
-----|-----|-----|-----|-----|
Saturation Flow Module:
Sat/Lane:      1900 1900      1900      1900 1900      1900      1900 1900      1900      1900 1900      1900
Adjustment:      0.95 0.91      0.91      0.95 0.90      0.90      0.92 0.86      0.86      0.95 0.86      0.86
Lanes:      1.00 3.00      1.00      1.00 3.64      0.36      2.00 0.05      0.95      1.00 0.07      0.93
Final Sat.:      1805 5182      1727      1805 6199      620      3502      77      1551      1805      110      1524
-----|-----|-----|-----|-----|
Capacity Analysis Module:
Vol/Sat:      0.06 0.38      0.01      0.02 0.44      0.44      0.19 0.07      0.07      0.03 0.05      0.05
Crit Moves:      ****          ****          ****          ****
Green/Cycle:      0.09 0.49      0.49      0.11 0.51      0.51      0.22 0.15      0.15      0.15 0.09      0.09
Volume/Cap:      0.66 0.78      0.02      0.18 0.86      0.86      0.86 0.43      0.43      0.19 0.52      0.52
Delay/Veh:      45.6 18.8      10.7      32.6 19.5      19.5      40.2 32.0      32.0      30.0 38.2      38.2
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:      45.6 18.8      10.7      32.6 19.5      19.5      40.2 32.0      32.0      30.0 38.2      38.2
LOS by Move:      D      B      B      C      B      B      D      C      C      C      D      D
HCM2k95thQ:      8      29      0      2      35      35      20      6      6      3      5      5
*****
Note: Queue reported is the number of cars per lane.
*****

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