APPENDIX 1 "Existing Condition Report, Pacific Coast Highway Safety Study, Malibu, California", February 2013, LSA

I. EXISTING CONDITION REPORT

PACIFIC COAST HIGHWAY SAFETY STUDY

MALIBU, CALIFORNIA

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LSA

February 2013

I. EXISTING CONDITION REPORT

PACIFIC COAST HIGHWAY SAFETY STUDY

MALIBU, CALIFORNIA

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INTRODUCTION

Pacific Coast Highway (PCH or State Route 1 [SR-1]) is the sole east-west artery in the City of Malibu (City). PCH serves as a major thoroughfare for daily commuters as well as recreational traffic for a distance of approximately 21 miles through the City. Along this route, the posted speed limit is between 45 to 55 miles per hour (mph). Generally, its four lanes are constrained by the Pacific Ocean and the Santa Monica Mountains into a tight cross-section. These constraints, as well as vertical and horizontal curves, leave little right-of-way (ROW) for sidewalks or bicycle paths. Most of the residential enclaves have access onto PCH, and most commercial and recreational activity in town is accessed directly from PCH. Motorists use it for commuting and recreation, bicyclists for sport and entertainment, and pedestrians for exercise and coastal access. PCH is a constrained mobility corridor that accommodates several modes serving a diverse array of adjoining land uses. Because PCH is a State highway, it is controlled and maintained by the California Department of Transportation (Caltrans).

This report describes PCH's existing mobility and safety setting, based on information obtained from several sources, most of it from the City. In addition, observations and research information was gathered along the study corridor. Traffic turning movement data were collected for a.m. and p.m. peak periods at 28 intersections along PCH. Of the 28 locations, pedestrian and bicycle data were collected at 12 intersections, and daily traffic volumes were collected at 6 locations. The evaluation of existing conditions will be used to describe a common setting along PCH and to set the foundation for an assessment of safety issues along the project corridor.

The data collection and existing setting are also necessary components of future Project Study Reports for recommended actions within the corridor. The project corridor has been divided into the following three study areas:

- **Study Area 1:** Topanga Canyon to Cross Creek Road
- **Study Area 2:** Cross Creek Road to Busch Drive
- **Study Area 3:** Busch Drive to Western City Limits

The review itself is divided into a land use/policy setting and a mobility setting. The land use and policy setting collates relevant materials from the United States (U.S.) Census, the City Local Coastal Program (LCP), the City General Plan, and other policy documents. The mobility setting includes a description of the four primary modes of mobility along PCH, namely vehicular traffic, transit, bicycles, and pedestrians. The setting revealed in this existing condition report and information gathered at a series of public meetings will be combined to create a safety assessment. The forthcoming safety assessment will identify key safety problems and will prioritize them to form the foundation for proposed solutions.

LAND USE

The City of 12,645 people is located along a 21 mile scenic strip of the Pacific Ocean almost completely surrounded by the Santa Monica Mountains to the north, Topanga Canyon on the east, Ventura County on the west, and the Pacific Ocean on the South. The City is directly adjacent to Los Angeles County on both the eastern and western ends of the City. Topanga Canyon Boulevard is outside of the City limits but is included in the study, as this intersection regulates traffic flow

entering the City. The City's rural setting is a stark contrast to the metropolitan area of the City of Los Angeles southeast of Malibu. PCH is the only east-west artery through the City, linking Ventura County with Santa Monica. PCH, SR-1, is under the authority of Caltrans. Police service and traffic control is provided by the Los Angeles County Sheriff, with support and occasional assistance from the California Highway Patrol (CHP). The City has no authority over the operation and maintenance of PCH.

Prior to incorporation on March 28, 1991, the City was under the jurisdiction of the County of Los Angeles (County). In 1995, after its incorporation, the City adopted a General Plan and an interim Zoning Ordinance. However, due to the fact that the City lies entirely within a designated Coastal Zone, the City is required to have a Local Coastal Program (LCP) approved by the California Coastal Commission (CCC) in order to be in conformance with the California Coastal Act (CCA). The LCP was adopted by the CCC in 2002 and implemented in 2004. The LCP consists of the Land Use Plan and the Local Implementation Plan (LIP).

Unlike the growth patterns of other cities in northern Los Angeles County, Malibu has been able to remain a small town due to its remote location between the Santa Monica Mountains and the Pacific Ocean. Due to the linear layout of the City, the majority of development in Malibu is along PCH. Most commercial areas and beaches are accessed from the highway, and most residential areas have homes with driveways having access onto PCH.

With a high concentration of residential development along PCH comes congestion during peak commute hours. According to 2010 Census data, 3,762 out of 5,587 residents of Malibu commuting to work travel alone by car, truck, or van with an average travel time of approximately 30 minutes. Most of these commuters rely on PCH as the main route from their residence to their place of employment.

The PCH Safety Study (and this existing condition report) is divided into three study areas. Each study area has a distinctive character and land use mix. The discussion below describes the existing land use setting of each of the three segments along PCH.

Study Area 1: Topanga Canyon Boulevard to Cross Creek Road

Study Area 1 extends approximately 6.2 miles along PCH. Regarding the topography of Study Area 1 along PCH, the first 1.7 miles between Topanga Canyon Boulevard and Big Rock Drive is relatively flat compared to the remainder of the study area. Public Open Space and Rural Residential zones dominate the north side of PCH; however, residential development in this area is scarce. Residents on the north side of the highway must access roads connecting to PCH. These collector streets have positive impacts on congestion because they reduce friction (from multiple driveways) with traffic along PCH, and negative impacts that result from concentrating congestion where these roads intersect the highway.

The southern side of PCH between Topanga Canyon Boulevard and Big Rock Drive is characterized by large homes with public beaches interposed between residential lots. This part of Study Area 1 is designated as Single-Family Residential-Medium with some Public Open Space uses. Development in this area is consistent with the settlement patterns in the City seen in the higher density residential and commercial uses near the beaches, and lower density development in the hillsides and canyons.

The southern side is dominated by a multitude of residences with driveways emptying out onto the highway. City services for residences along the highway, such as trash pick-up, rely exclusively on PCH as their main access road. For these reasons, these residential areas contribute to congestion during peak commute hours.

Additionally, there are no sidewalks between Topanga Canyon Boulevard and Big Rock Drive and the only marked pedestrian crossings are at Topanga Canyon Boulevard and Big Rock Drive, making it less walkable and prone to potential pedestrian safety hazards. There are no designated bicycle lanes on PCH, causing a potential safety concern because bicyclists share the road with vehicles driving or attempting to park along PCH. Additionally, the winding nature of PCH has the potential to be a visual impediment for all modes of travel.

Between Big Rock Drive and Cross Creek Road, this portion of PCH in Study Area 1 contains two overlay districts as designated by the LCP. As stated in the LCP, an overlay zone is established when development impacts may be greater or circumstances require additional site-specific regulation. All uses within an overlay zone must comply with the overlay zone, as well as with standards of the underlying zone. The overlay districts are located north of PCH near the Patriot Homes and La Costa developments in the central portion of the study area. The Patriot Homes overlay district allows multifamily residential uses with varying height standards and setbacks; the La Costa Overlay District differs from the General Residential Development Guidelines in Chapter 3 of the Local Implementation Plan (LIP) on building height regulations and in how lot sizes are calculated.

This portion of Study Area 1 is also defined by single-family homes on large lots as seen in the multitude of Rural Residential zones located along PCH and extending into the canyons. The western side of this study area is defined by single-family and multifamily homes with commercial uses located to the north and south of PCH. Throughout the entire study area on PCH, Public Open Space in the form of small beaches is intermittently located adjacent to residential areas. The majority of these beaches are smaller and less frequented than the popular Surfrider Beach located in the western portion of this area.

The main sources of vehicular traffic in this area are people traveling to commercial areas, visiting beaches, and commuting to work. Potential safety hazards can be attributed to the sinuous nature of PCH in this area and the increase in hills towards the western side. Malibu Pier is a landmark, drawing pedestrians into the area. There are sidewalks in this area for a short distance near Rambla Vista and between Carbon Canyon Road and Cross Creek Road. Along with the pedestrian crossing already mentioned at the intersections of Topanga Canyon Road and Big Rock Drive, pedestrian crossings are also marked at the intersections of Las Flores Canyon Road, Rambla Pacifico Street, Carbon Canyon Road, and Cross Creek Road. Pedestrian activated crossings are provided at the Malibu Pier, 22730 PCH, and 22333 PCH. In addition, two marked but unprotected crosswalks are provided in this section, for a total of 11 crossings in the 6.2 mile area.

Due to infrequent crosswalks in this area, residents and visitors parking and/or visiting the commercial areas on the north side of the highway are encouraged to cross PCH without a marked crosswalk to reach popular restaurants and beaches located on the southern side. As stated in the LCP, the City is working with Caltrans to provide safe pedestrian crossings along PCH to allow for safe public beach access for both residents and visitors.

Study Area 2: Cross Creek Road to Busch Drive

Study Area 2 extends about 8 miles along PCH and is more developed than Study Area 1. This study area has a variety of overlay districts in the northeastern section near the areas of Malibu Country Estates, De Ville, Malibu Knolls, and Malibu Colony. These overlay districts are site-specific development standards that differ from the General Residential Development Guidelines in Chapter 3 of the LIP. These standards address structure size, setbacks, height, and grading, among other specifications.

Development in Study Area 2 is concentrated within the western and eastern portions of this area. The northeastern portion of this area generates a large amount of vehicular traffic traveling to and from the Civic Center, large residential developments, and Pepperdine University. The Civic Center attracts individuals to the area due to the variety of public uses located in this area, including City facilities, the Los Angeles County Superior Court, Malibu Court, the Library, religious institutions, and an elementary school. Although the university is located just outside the City boundary, it brings an influx of students and their families to the area on a regular basis. Additionally, the western portion of Study Area 2 near Point Dume is dominated by residential uses while commercial uses are scattered along the north side of PCH. The lack of signage for these commercial areas could present a safety hazard for all modes of travel. Although there are residences on the south side of PCH in the western and eastern portions, the central portion where Malibu Road meets PCH largely remains open space with nearly unobstructed views of the Santa Monica Mountains and the Pacific Ocean. The development pattern in this area is consistent with the LCP policy acknowledging that PCH shall be a protected scenic highway and a significant viewshed.

The central portion of Study Area 2 is less developed, so vehicles driving in this area tend to increase their speed. The combination of increased speed with the winding and hilly nature of PCH presents a potential safety hazard for all modes of travel in this area. Sidewalks and pedestrian crossings are currently infrequent throughout Study Area 2. However, an LCP policy will encourage all new commercial uses to locate near an existing transit service and require them to provide non-automobile circulation within the development. Bike lanes in this area are nonexistent while on-street public parking is frequent, presenting a potential safety risk for bicyclists.

Study Area 3: Busch Drive to Western City Limits

Study Area 3 has two LCP Overlay Districts on the southern side of PCH, Trancas Beach Overlay and Malibu Bay Company (MBC) Overlay. The primary development standard in this overlay district that requires additional regulation specifies structure height limits in an effort to preserve the character of this area.

Just west of Busch Drive is a large concentration of residential neighborhoods and public facilities. These public facilities include an equestrian park and an elementary, middle, and high school. This study area is comprised primarily of Rural Residential and Public Open Space uses located along the Pacific Ocean and continuing into the canyons. Study Area 3 also contains small amounts of commercial uses. A large Commercial Recreation zone exists where the Malibu Riding and Tennis Club is currently located. The south side of PCH in this area is defined by Rural Residential and Public Open Space uses characterized by large homes on oceanfront properties adjacent to a variety of private and public beaches.

Although development is less concentrated, a variety of attractions bring people to Study Area 3. The well-known and heavily used Zuma Beach is located in the eastern portion of Study Area 3. Residents and visitors flock to this beach, causing increased pedestrian, bicycle, and vehicular traffic. In addition, three schools are located opposite of Zuma Beach directly across PCH. Parents and students travel to these schools by way of PCH every day. The main access road connecting PCH to the schools is Morning View Drive. Additionally, small drop-off zones located along Morning View Drive cause vehicular congestion while parents drop off students. This congestion is not limited to Morning View Drive but also extends onto PCH where there is no sidewalk in this area. Along Morning View Drive, striped pedestrian crossings near the school zone have no lighting or signage to indicate the need for vehicles to yield or stop for pedestrians. The lack of pedestrian crossings, sidewalks, streetlights, and bicycle lanes along PCH in Study Area 3 causes a safety risk to pedestrians and bicyclists.

The Malibu General Plan and LCP have several implementation measures and policies that pertain to improving traffic flow and safety along PCH. Strategies to address accelerating implementation of capital projects for active transportation (pedestrian and bicycles) as well as review of parking locations and activity may enhance safety in the corridor.

ROADWAY INFRASTRUCTURE

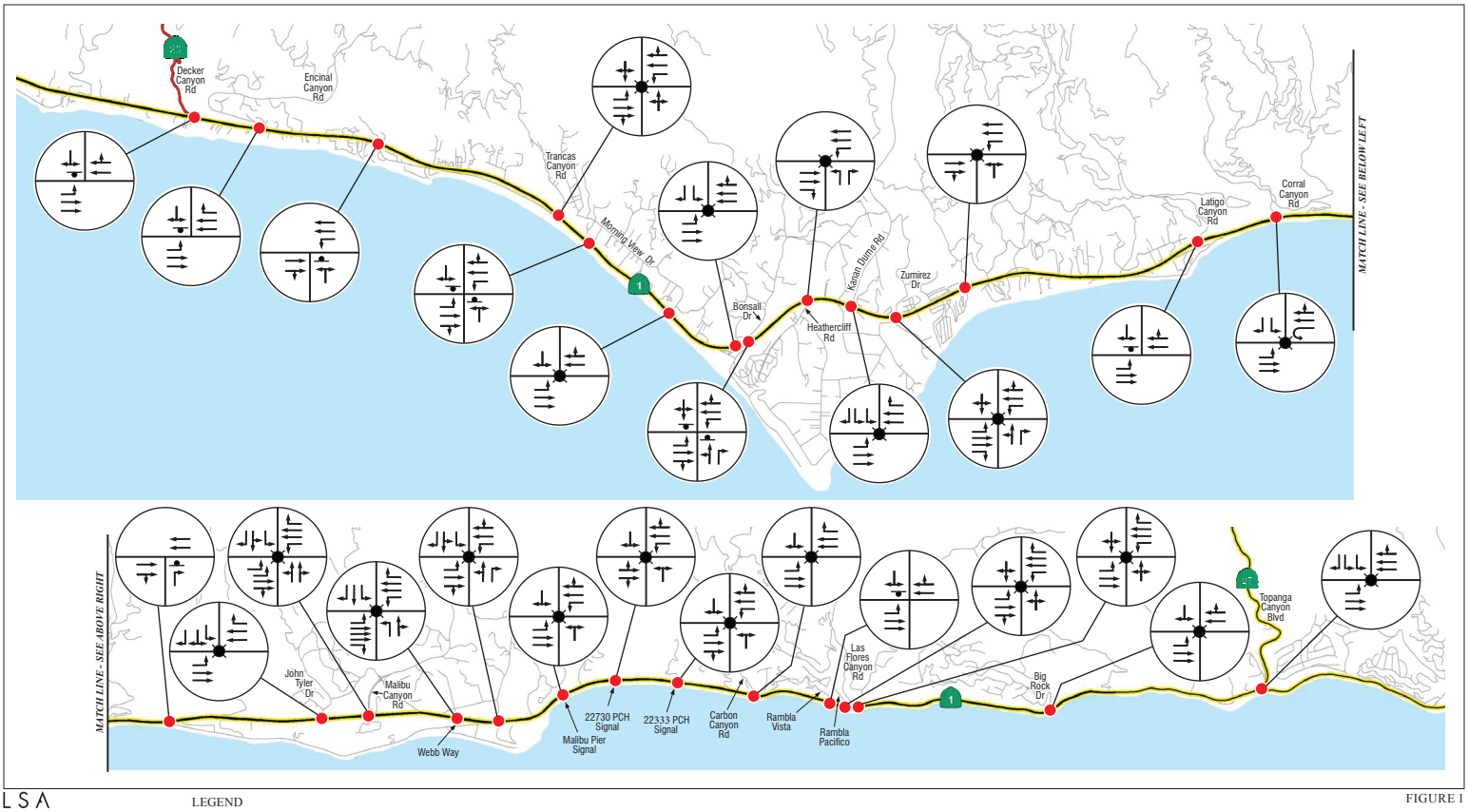
The existing physical condition of the PCH corridor is described based on existing and historical data, aerials and plans, visual observations, and research. Intersection lane configurations for the 28 intersections assessed in this report are presented on Figure 1. Throughout all three study areas, parking along PCH creates opportunities for conflict as vehicles stop suddenly, back into a space, make a U-turn at intersections or midblock, or enter the roadway from a parking space. In some locations, residential driveways are located directly on PCH. In areas near beach access points, competition for on-street parking is particularly strong. Appendix A displays public access locations.

Study Area 1: Topanga Canyon Road to Cross Creek Road

This segment of PCH in the eastern part of the City provides access to residential, commercial and recreational uses. The average daily traffic (ADT) volume along this highway segment is 45,330 vehicles during the week and 47,490 vehicles on weekends.

Topanga Canyon Boulevard is outside of the City limits but is included in the study, as this intersection regulates traffic flow entering the City. Between Topanga Canyon Road and Big Rock Drive, PCH is a four-lane highway with a flat profile and no sharp curves. Sight distance appears adequate in the westbound direction, based on review of aerials and recent travel within the segment. The eastbound sight distance along PCH may not be adequate due to visual obstructions from on-street parking and residential structures. A two-way left-turn-lane runs along PCH from Topanga Canyon Road to east of Big Rock Drive, with plastic delineators separating the two directions for the remaining portion. Warning signs for upcoming signals and rockslide areas are installed along this stretch of PCH.

Along this stretch of PCH, shoulder parking is provided on the southern side. The residential parking for homes abutting PCH backs up to the highway and may be a safety concern for all modes of travel. On the northern side, the shoulder is of inconsistent width and is frequently obstructed bring



LSA

LEGEND

- Study Intersection
- Travel Lane
- Stop Sign
- Traffic Signal

FIGURE 1

PCH Safety Study

Existing Lane Configurations

I:\SGO1201\G\Ex Lane Configurations.cdr (10/24/12)

bicyclists into the travel lane. The entire stretch has street lights 100 to 180 feet apart. No additional lighting at unsignalized intersections or illuminated roadway signing is present in this segment. The speed limit is 45 mph except at one location where it is 40 mph, an advisory speed for an upcoming horizontal curve in the westbound direction. Speed-monitoring radar is installed just west of the intersection of Tuna Canyon Road/PCH. Commercial, residential, recreational centers are located along PCH between Big Rock Drive and Cross Creek Road, so different modes of travel (cars, bus, bicycles, pedestrians, trucks) interact extensively in this study area. Parking along PCH is free, which results in competition for these spaces. Parking maneuvers can be sudden, creating a possibly unsafe condition. The ADT volume here is 46,390 during the week and 46,790 vehicles on weekends.

Here, PCH is four flat lanes with numerous horizontal curves, so sight distance may be an issue in both directions due to the residences obstructing the view on the south side of PCH and due to hillsides doing so on the north side. A two-way left-turn lane exists for the majority of the segment, but some locations have double solid lines (west of Big Rock Drive), medians with delineators (east of Las Flores Canyon Road), and raised medians (west of Malibu Pier). U-turns are prohibited westbound at the intersections of Las Flores Canyon Road/PCH and Carbon Canyon Road/PCH, eastbound at the intersection of Rambla Pacifico Street/PCH and both eastbound and westbound at the intersection of Cross Creek Road/PCH. No warning signs about curves, pedestrians, bicycles, or driveways are installed along this section. Residential driveway and access roads on the north side of PCH have steep gradients and lack of proper warning signs, striping, or lighting.

On-street parking is provided on both sides of PCH between Big Rock Drive and Cross Creek Road, and there are approximately 50 residential and commercial driveways between Carbon Canyon Road and Rambla Vista (0.68 mile). These conditions increase friction and conflict points, causing congestion along this segment of PCH. Parking for homes abutting PCH backs up to the highway and may be a safety concern. The entire stretch has street lights placed 100 to 180 feet apart. No additional lighting at unsignalized intersections or illuminated roadway signing is present in this segment. The speed limit is 45 mph except at one location, where it is 40 mph, an advisory speed for upcoming curve eastbound at Rambla Pacifico Street.

Study Area 2: Cross Creek Road to Busch Drive

This section of PCH is in central Malibu and includes the Colony, the Civic Center area, Pepperdine University, and other key destinations. The ADT along this highway segment is 34,400 during the week and 41,340 on weekends.

PCH here is a four-lane highway with significant grades at various locations (Malibu Canyon Road, Sea Vista Drive). The vertical gradient varies from flat to rolling hills in both directions. Delineators and raised medians prohibit U-turns because of limited visibility of oncoming through traffic and to vertical curves between Escondido Beach Road and Winding Way, and between Latigo Canyon Road and Sea Vista Drive. The median is either raised concrete, plastic delineators, or solid double lines. A two-way left-turn lane is provided just east of Puerco Canyon Road. The intersection of Corral Canyon Road/PCH westbound has an exclusive U-turn lane in the westbound direction. This segment has no warning signs for curves, speeds, and upcoming access points. Street lights are not provided. Residential driveways and access roads on the north side of PCH have steep grades and lack proper warning signs, striping and lighting. Most driveways along this segment are right-in/right-out only.

On-street parking is present near commercial areas on both sides of PCH, presenting the potential for sudden parking maneuvers. Near Paradise Cove, for example, free parking on PCH is an attractive alternative to paid parking in the private lot, resulting in U-turns at intersections and midblock, contributing to congestion and sudden stopping and backing on the highway, which creates conflict. Street lights are not provided. The speed limit is 50 mph except at the eastern side near Cross Creek Road, where it is 45 mph. Speed-monitoring radar is installed just west of the Malibu Canyon Road/ PCH intersection.

Study Area 3: Busch Drive to the Western City Limits

This section traverses western Malibu, including Zuma Beach and the Western City limits. The ADT along this highway segment is 20,830 during the week and 25,140 on weekends.

It is a four-lane highway with a relatively flat profile throughout this segment. There are no sharp curves; sight distance appears adequate based on visual observation. The median varies from raised (at Zuma Beach) to plastic delineators (west of Mountain View) to two solid yellow lines (west of Guernsey Avenue) to a two-way left-turn-lane (west of Broad Beach Road). No warning signs for driveway locations are present along this section of PCH. Again, free parking along PCH can result in sudden parking maneuvers, creating a possibly unsafe condition.

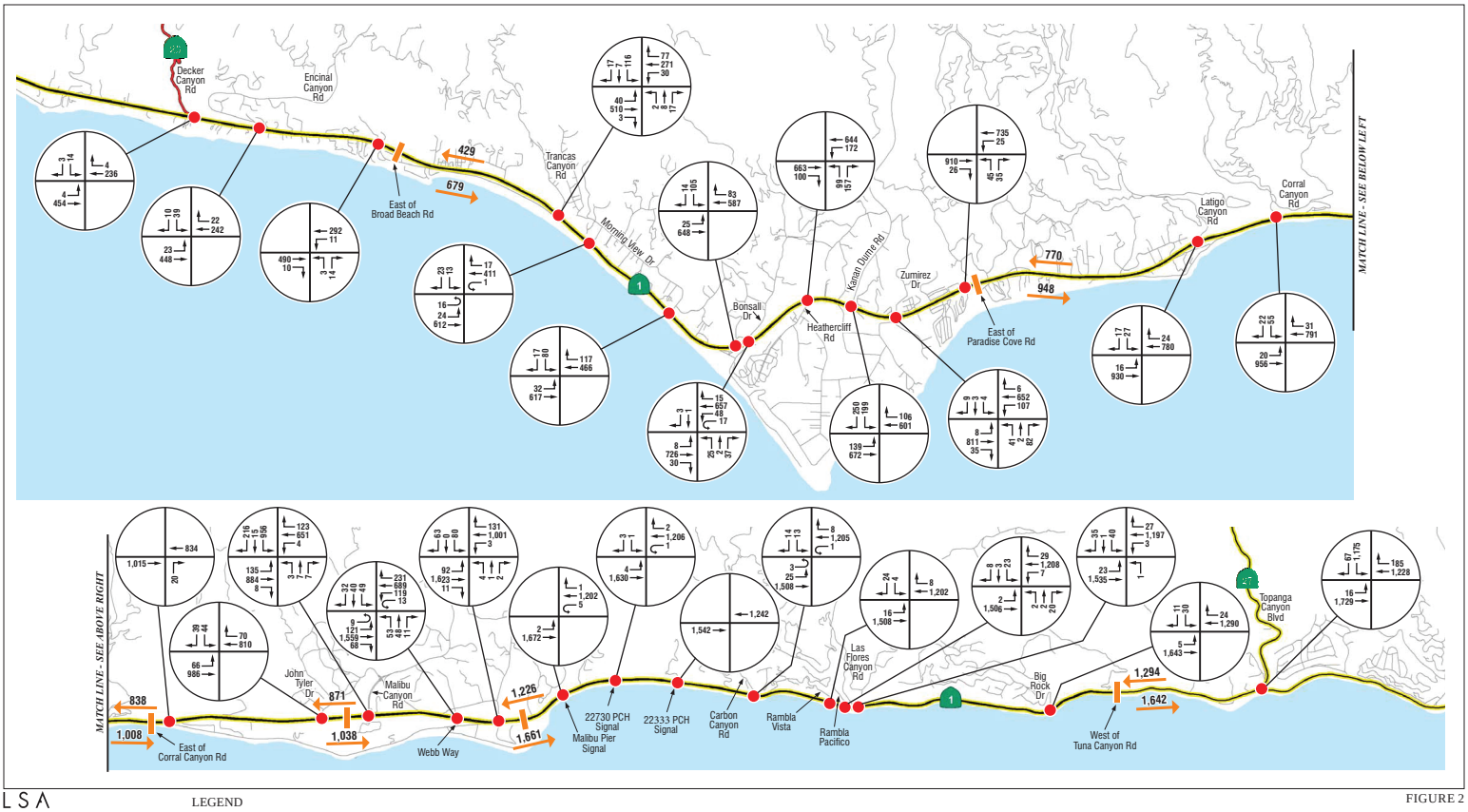
Access to Malibu High School, Malibu Middle School, and Juan Cabrillo Elementary School is provided via Morning View Drive; however, no school warning signs are present. Street lights are not provided. Lack of signage and lighting makes it difficult for vehicles traveling along this stretch of PCH to identify upcoming cross streets. The speed limit along this segment of PCH varies from 50 mph (Busch Drive to Broad Beach Road) to 55 mph (west of Broad Beach Road). The speed limit remains unchanged near the school zone along PCH.

VEHICULAR TRAFFIC

Extending from Topanga Canyon Road to the western city limits of Malibu, PCH is a four-lane highway that is the City's primary roadway for the recreational and commercial purposes. Along with local users, traffic generated from Santa Monica and throughout the region uses PCH as an alternate route to Interstate 405 (I-405) and United States Route 101 (US-101), primarily via Malibu Canyon Road and Kanan Dume Road. The average annual daily traffic (AADT) significantly decreases west of Malibu Canyon Road and Kanan Dume Road. Visitors from neighboring cities and counties also use PCH to travel to and from the City for recreation. PCH serves commuters mainly during weekday peak hours, and tourists and recreation traffic mainly on weekends.

Vehicular Traffic Volumes

Existing vehicular traffic data was collected by National Data & Surveying Services (NDS), an independent data collection company. Traffic volumes were collected for weekday a.m. peak hour (7:00 a.m. to 9:00 a.m.), p.m. peak hour (4:00 p.m. to 6:00 p.m.), and midday on weekends (11:00 a.m. to 1:00 p.m.) at study intersections along PCH. The existing peak-hour volumes for weekday a.m. and p.m., and weekend midday are displayed on Figures 2, 3, and 4, respectively. Daily traffic volumes were also collected at six locations along PCH during weekdays and weekends. The ADT volumes at these locations are displayed on Figure 5. The data sheets are provided in Appendix B.



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LEGEND

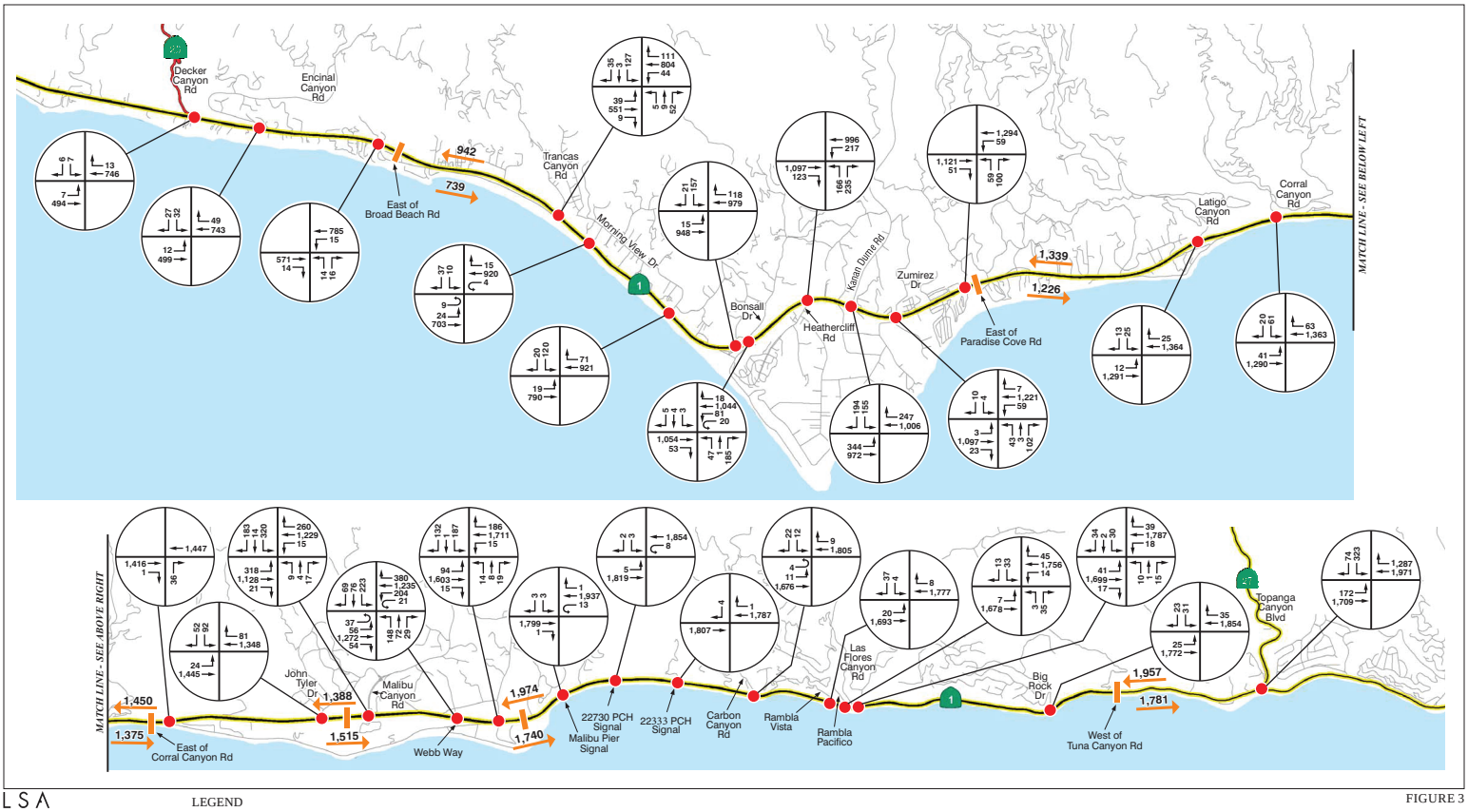
- Study Intersection
- XXX - Weekday AM Intersection Peak Hour Volume
- Roadway Link
- YYYY - Weekday AM Roadway Link Volume

FIGURE 2

PCH Safety Study

Existing Traffic Volumes - Weekday AM Intersection Peak Hour Volumes and AM Roadway Link Volumes

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LEGEND

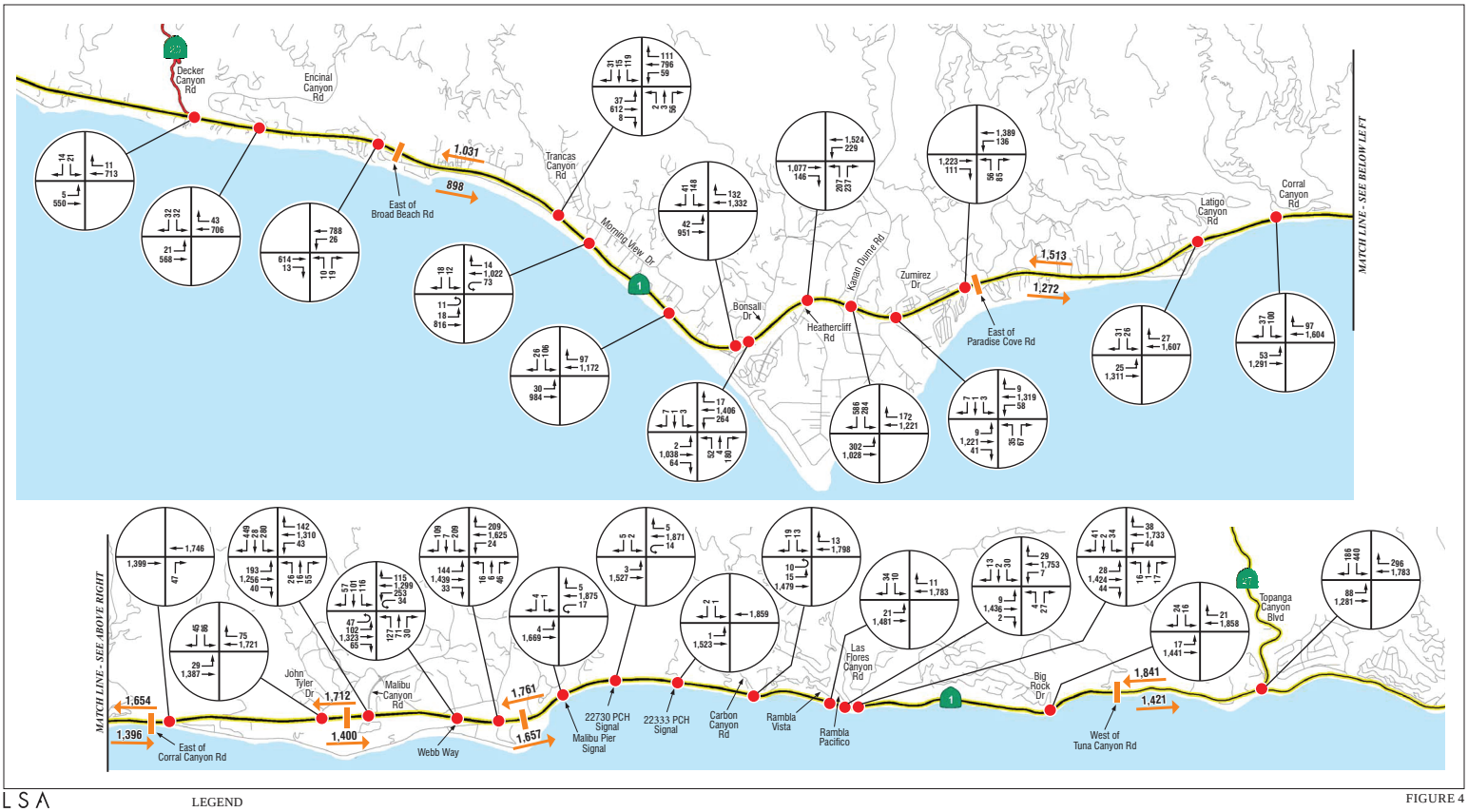
- Study Intersection
- XXX - Weekday PM Intersection Peak Hour Volume
- Roadway Link
- YYYY - Weekday PM Roadway Link Volume

FIGURE 3

PCH Safety Study

Existing Traffic Volumes - Weekday PM Intersection Peak Hour Volumes and PM Roadway Link Volumes

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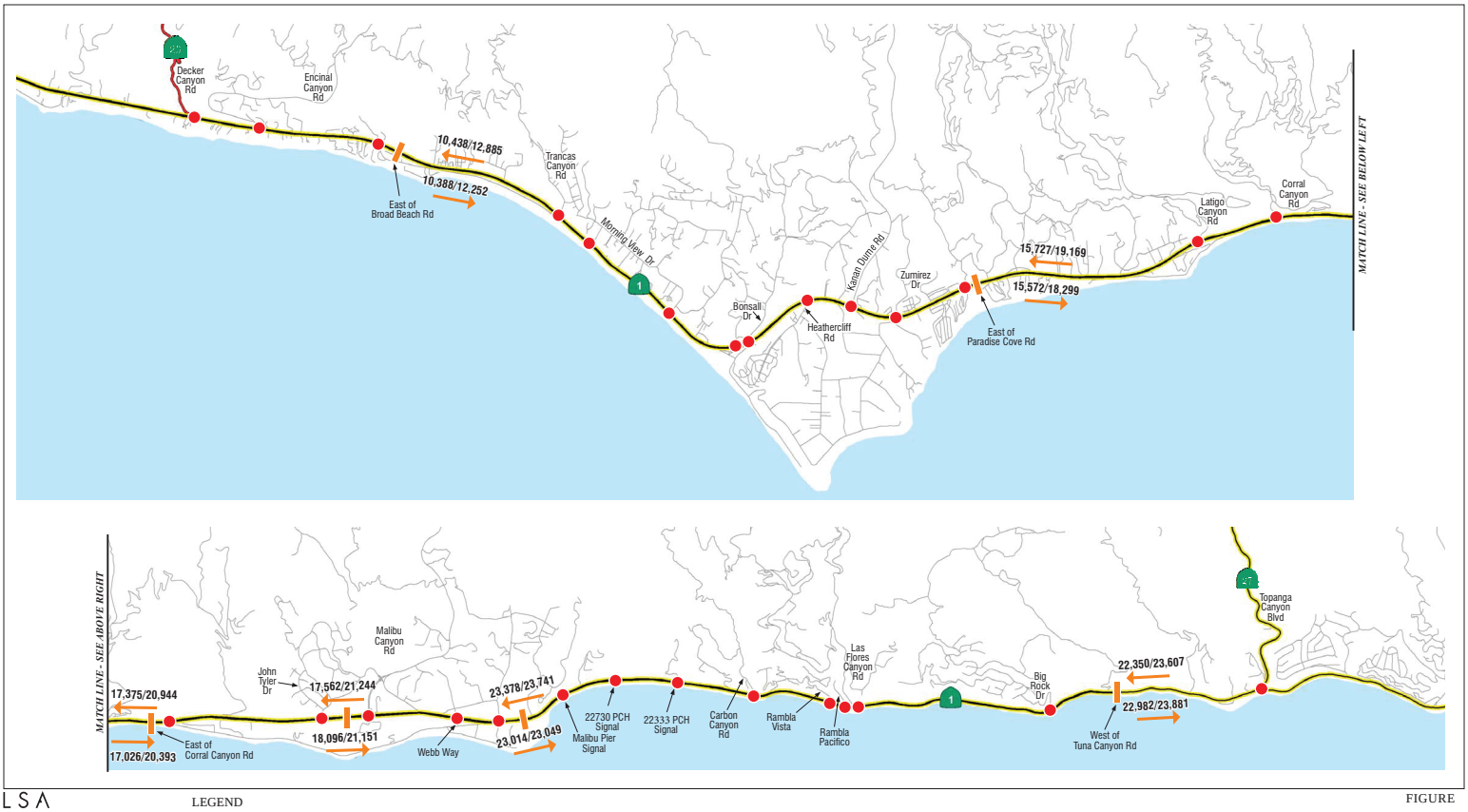
- Study Intersection
- XXX - Weekend Midday Intersection Volume
- Roadway Link
- YYYY - Weekend Midday Roadway Link Volume

FIGURE 4

PCH Safety Study

Existing Traffic Volumes -
Weekend Midday Intersection Peak Hour Volumes
and Midday Roadway Link Volumes

I:\SGO1201\G\Weekend Midday Volumes.cdr (10/24/12)



LSA

LEGEND

- Study Intersection
- Roadway Link
- XXX/YYY - Weekday/Weekend erage Daily Traffic

FIGURE

PCH Safety Study

Existing Traffic Volumes - Total erage Daily Traffic (Weekday/Weekend)

I:\SGO1201\G\Total erage Daily Traffic.cdr (10/24/12)

Review of traffic volumes collected reveals that the a.m. peak travel is predominantly eastbound, while the peak travel direction in the p.m. peak hour (weekday) and midday peak hour (weekend) is westbound. During the peak hours (weekday a.m. and p.m., and weekend midday), the intersection of Topanga Canyon Boulevard/PCH has the highest volume throughout the study corridor. The ADT is 46,390 at Cross Creek Road (eastern Malibu), 31,300 near Kanan Dume Road (central Malibu) and 20,830 near Decker Canyon Road (western Malibu). The ADT along PCH decreases from east to west.

Apart from collecting existing traffic volume data, LSA researched historical peak-hour volumes at study intersections, and ADT along segments of PCH for the previous 4 years. These data were used to determine changes in travel patterns and to review variations in the traffic volumes over this period. The historical data were obtained from Caltrans and from previous traffic studies conducted for projects in the City.[1] The AADT volume for the six roadway segments along PCH was obtained from Caltrans[2] for 2007 through 2011.

The traffic volumes surveyed in July 2012 were compared with the historical data to determine any general change in travel patterns. It should be noted, however, that traffic data surveyed in July 2012 would represent peak traffic volumes. Caltrans data reveals that traffic volumes during summer driving months are 8 to 10 percent higher than annual average traffic volumes in Study Areas 1 and 2 and 18 to 19 percent higher than annual average traffic volumes in Study Area 3. Figure 6 shows the comparison of ADT at six segments along PCH: the ADT along the project corridor has generally remained the same. The corridor has experienced a decline in daily traffic between Paradise Cove Road and Trancas Canyon Road. At the same time, daily traffic has increased between Cross Creek Road and Malibu Canyon Road.

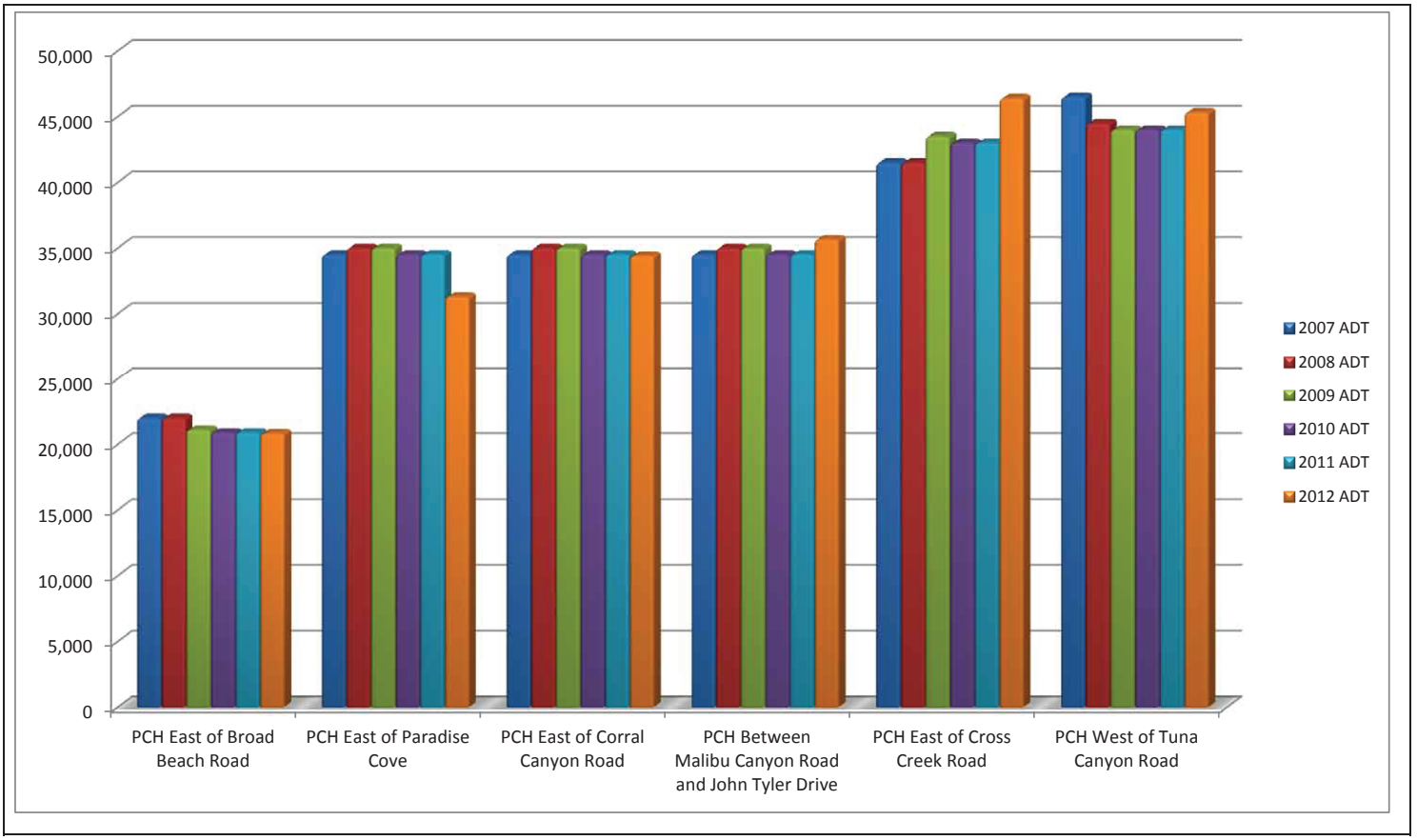
Existing (2012) intersection turn volumes for a.m., p.m., and midday peak hours were compared with 2007, 2008, 2009, and 2011 turn volumes obtained from previous studies. As shown in Table A, overall traffic volumes at PCH intersections have been declining in the a.m. peak hour and were lower in 2012 than in other recent years. Overall traffic volumes at PCH intersections in the p.m. peak hour are similar to or higher in 2012 than in 2007. However, traffic volumes in 2012 were lower than in 2011. This phenomenon might be attributable to lower travel demand from Malibu residents and to Malibu employment centers due to the 2008 economic downturn while visitor travel demand has continued to grow.

PCH is not designated as a truck route in the City's General Plan, and truck traffic is limited to local deliveries and access. Truck ADT volumes 2009 through 2012 along PCH (between Trancas Canyon Road and Busch Drive) were obtained from Caltrans. This portion of PCH has approximately 1,160 truck ADT in 2012. Similar to the intersection volumes, the 2012 truck ADT was compared to 2009, 2010, and 2011 truck ADT. The graph presented in Figure 7 shows that the truck ADT along PCH has gradually increased over the last 4 years, except for a slight drop in 2010.

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1 Neighborhood Shopping Center Draft Traffic Impact Analysis (May 2011), Resort Hotel Development Draft (April 2012), Draft Malibu La Paz Project (October 2007), Pepperdine University Campus Life Project Draft (September 2010), Crummer Site Subdivision Project Draft (May 2012) and PCH Bike Study Draft Technical Memo (April 2012).

2 http://traffic-counts.dot.ca.gov/.



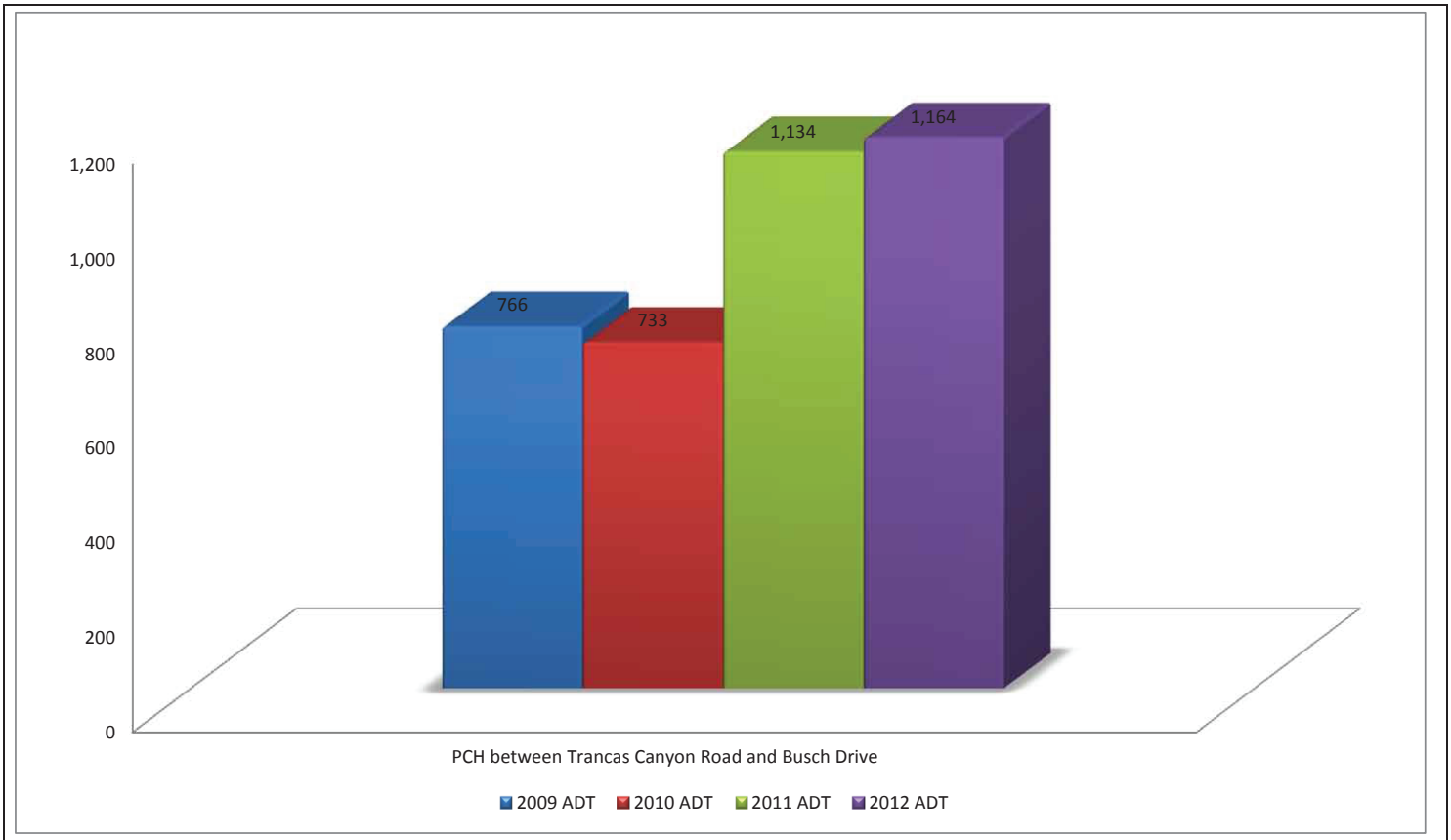
LSA

FIGURE 6

PCH Safety Study

Average Daily Traffic (ADT) Volume Comparison

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LSA

FIGURE 7

PCH Safety Study

Average Daily Truck Traffic (ADT) Volume Comparison

P:\SGO1201 - PCH Safety Study\Task 3 Existing Conditions\Mobility\data comparison for trucks .xls (10/23/2012)

Table A: Volume Comparison for Weekday AM and PM Peak Hours

Intersection	Total Intersection Peak Hour Volume/Percent of 2007 Volume									
	2007		2008		2009		2011		2012	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1. Decker Canyon Road/PCH	918	1,167	-	-	844/ 92%	2,075/ 178%	750/ 82%	1,434/ 123%	715/ 78%	1,273/ 109%
4. Trancas Canyon Road/PCH	1,482	1,693	-	-	-	-	-	-	1,098/ 74%	1,789/ 106%
9. Heathercliff Road/ PCH	2,070	2,135	-	-	-	-	-	-	1,835/ 89%	2,834/ 133%
10. Kanan Dume Road/PCH	2,557	2,921	-	-	2,608/ 102%	2,701/ 92%	2,006/ 78%	3,347/ 115%	1,967/ 77%	2,918/ 100%
17. Malibu Canyon Road/PCH	3,448	3,644	3,170/ 92%	3,469/ 95%	3,208/ 93%	3,438/9 4%	3,190/9 3%	4,243/ 116%	3,009/ 87%	3,518/ 97%
18. Webb Way/PCH	3,572	4,081	3,567/ 100%	4,018/ 98%	-	-	-	-	3,020/ 85%	3,818/ 94%
19. Cross Creek Road/ PCH	3,584	4,080	3,279/ 91%	3,952/ 97%	-	-	-	-	3,011/ 84%	3,985/ 98%
26. Las Flores Canyon Road/PCH	3,575	3,947	3,508/ 98%	3,904/ 99%	3,151/ 88%	3,635/ 92%	3,026/ 85%	4,027/ 102%	2,862/ 80%	3,693/ 94%
28. Topanga Canyon Boulevard/PCH	4,802	5,148	-	-	-	-	-	-	4,400/ 92%	5,536/ 108%

PCH = Pacific Coast Highway

Level of Service and Performance Metrics

The attributes that characterize the operation of a facility (corridor) such as level of service (LOS), queuing at intersections, sight distance, speed and U-turns were used as vehicular performance metrics. Additionally, the elements of existing infrastructure such as roadway width, signing, striping, curves (horizontal and vertical) and lighting were reviewed.

Roadway operations and the relationship between capacity and traffic volumes are usually determined based on the operation of intersections along the roadway during the peak hours of operation. For example, the Los Angeles County Congestion Management Program (CMP) monitors arterial performance by measuring LOS at key intersections in the a.m. and p.m. peak hours. In particular, for the forthcoming safety assessment, intersection operation is a source of data to consider because intersections are locations of potential conflict between vehicles. Average daily traffic on the roadway, while also measureable, is a less concrete description of roadway operations because the concentration of vehicle conflicts is unknown. Average daily traffic is identified for segments of PCH and used generally. However, average daily traffic analysis does not lend itself to the determination of safety issues to the extent that intersection operation does.

Intersection operation is expressed in terms of LOS (which are defined using the letter grades A through F) at intersections. These levels recognize that, while an absolute limit exists as to the amount of traffic traveling through a given intersection (the absolute capacity), the conditions that motorists experience rapidly deteriorate as traffic approaches the absolute capacity. Under such conditions, congestion occurs. The traffic flow is generally unstable, which means that relatively small incidents (e.g., momentary engine stalls) can cause considerable fluctuations in speeds and delays. This near-capacity situation is labeled as LOS E. Beyond LOS E, capacity has been exceeded, and arriving traffic will exceed the ability of the intersection to accommodate it. An upstream queue will then form

and continue to increase in length until the demand declines. A complete description of the meaning of LOS can be found in the *Highway Capacity Manual (HCM) 2000*. Table B provides brief descriptions of the six LOS, as abstracted from the Manual.

Table B: Level of Service Descriptions

LOS	Description
A	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.
D	This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

LOS = level of service

PCH (SR-1) is a Caltrans facility, and Caltrans uses the HCM 2000 methodology to determine the LOS along State Highways. The HCM 2000 intersection methodology presents LOS in terms of control delay (in seconds per vehicle [sec/veh]). Table C displays the relationship between LOS and delay as defined in Caltrans guidelines for traffic studies for signalized and unsignalized intersections.

Table C: Level of Service Definitions

LOS	Signalized Intersection Control Delay per Vehicle (sec/veh)	Unsignalized Intersection Control Delay per Vehicle (sec/veh)
A	≤10	≤10
B	>10–20	>10–15
C	>20–35	>15–25
D	>35–55	>25–35
E	>55–80	>35–50
F	>80	>50

LOS = level of service
sec/veh = seconds per vehicle

According to Caltrans Traffic Study Guidelines, the LOS at an intersection is considered unsatisfactory when the delay exceeds 35 sec/veh (LOS D) for signalized intersections and 25 sec/veh (LOS D) at the approach with the worst delay for unsignalized intersections. Per the City's General Plan, if the LOS at signalized intersections and roadways is below LOS C, the City shall ensure that new development maintains the then current LOS or the acceptable LOS.

Synchro (Version 7.0) software was used to analyze intersection operation. Weekday a.m., p.m. peak hour, and weekend midday peak-hour conditions were analyzed. LOS calculation worksheets are included in Appendix C. Table D displays the existing LOS for 28 study intersections along PCH. All the intersections operate at acceptable LOS except for the following locations:

- Guernsey Avenue/PCH (for 33 southbound left-turns in the weekend midday peak hour)
- Bonsall Drive/PCH (for 11 southbound vehicles in the weekend midday peak hour)
- Latigo Canyon Road/PCH (for 44 southbound vehicles in the weekday a.m., 38 southbound vehicles in the weekday p.m., and 57 southbound vehicles in the weekend midday peak hour)
- Malibu Canyon Road/PCH (weekday a.m., p.m., and weekend midday peak hour)
- Webb Way/PCH (weekday a.m., p.m., and weekend midday peak hour)
- Cross Creek/PCH (weekday a.m., p.m., and weekend midday peak hour)
- Topanga Canyon Boulevard/PCH (weekday a.m. and p.m. peak hour)

Table D: Existing (2012) AM, PM, and Midday Peak-Hour Level of Service

	Weekday AM Peak Hour		Weekday PM Peak Hour		Weekend Midday	
Intersection	Delay	LOS	Delay	LOS	Delay	LOS
1. Decker Canyon Road/PCH*	10.5	B	13.2	B	13.8	B
2. Encinal Canyon Road/PCH*	11.0	B	14.6	B	14.1	B
3. Broad Beach Road/PCH*	10.6	B	12.5	B	12.3	B
4. Trancas Canyon Road/PCH	14.1	B	17.4	B	15.9	B
5. Guernsey Avenue/PCH*	14.1	B	23.2	C	38.3	E
6. Morning View Drive/PCH	12.0	B	7.9	A	7.8	A
7. Busch Drive/PCH	14.3	B	12.7	B	15.0	B
8. Bonsall Drive/PCH*	12.7	B	24.8	C	65.9	F
9. Heathercliff Road/PCH	16.5	B	23.8	C	22.5	C
10. Kanan Dume Road/PCH	15.7	B	29.1	C	32.2	C
11. Zumirez Drive/PCH	31.3	C	28.7	C	30.4	C
12. Paradise Cove Road/PCH	6.9	A	8.5	A	9.9	A
13. Latigo Canyon Road/PCH*	32.8	D	215.7	F	469.1	F
14. Corral Canyon Road/PCH	12.9	B	19.1	B	20.1	C
15. Malibu Road/PCH*	13.1	B	17.2	C	17.2	C
16. John Tyler Drive/PCH	12.3	B	12.6	B	13.1	B
17. Malibu Canyon Road/PCH	49.3	D	47.0	D	45.2	D
18. Webb Way/PCH	47.8	D	50.5	D	85.1	F
19. Cross Creek Road/PCH	40.9	D	43.5	D	51.4	D
20. Malibu Pier/PCH	18.4	B	13.1	B	15.4	B
21. 22730 PCH Signal	18.3	B	18.2	B	16.2	B
22. 22333 PCH Signal	11.2	B	12.9	B	17.7	B
23. Carbon Canyon Road/PCH	13.3	B	17.0	B	16.8	B
24. Rambla Vista/PCH*	11.6	B	14.9	B	17.1	C
25. Rambla Pacifico Street/PCH	12.2	B	15.1	B	14.8	B
26. Las Flores Canyon Road/PCH	16.2	B	23.2	C	20.1	C
27. Big Rock Drive/PCH	12.9	B	26.9	C	18.6	B
28. Topanga Canyon Boulevard/PCH	41.2	D	38.0	D	10.7	B

* Unsignalized Intersections; LOS determined for worst approach delay rather than average intersection delay

Exceeds California Department of Transportation level of service (LOS) threshold

Queuing is an important aspect of traffic operations that affects congestion and can be used to identify the locations with safety issues along PCH. Queue buildup along PCH in left-turn pockets increases safety concerns if left-turn traffic spills over into through lanes (when the queue exceeds the available capacity). Queuing analysis at signalized study intersections was conducted for left-turn lanes in the westbound and the eastbound directions along PCH. Analysis worksheets are included in Appendix C. Table E shows that the queue formation in left-turn lanes at study area intersections can be accommodated within the existing capacity of left-turn lanes during weekdays. During the weekend midday peak hour, observed traffic volumes are likely to exceed the available capacity at Kanan Dume Road/PCH, Paradise Cove Road/PCH, and Corral Canyon Road/PCH. Left-turn queues at Busch Drive/PCH (weekday a.m. and weekend midday peak hour) and Cross Creek Road/PCH (weekend midday peak hour) are close to capacity (within one car length, approximately 25 feet).

Table E: Existing (2012) AM, PM, and Weekend Midday Peak-Hour Left-Turn Queues

Intersection	Eastbound Left-Turn Pocket				Westbound Left-Turn Pocket			
	Capacity (feet)	Queue (feet)			Capacity (feet)	Queue (feet)		
		AM	PM	Midday		AM	PM	Midday
4. Trancas Canyon Road/PCH	180	32	33	32	165	28	37	45
6. Morning View Drive/PCH	150	28	>25	33	-	-	-	-
7. Busch Drive/PCH	50	26	>25	41	-	-	-	-
9. Heathercliff Road/PCH	-	-	-	-	250	152	203	202
10. Kanan Dume Road/PCH	330	121	300	334	-	-	-	-
11. Zumirez Drive/PCH	300	>25	>25	>25	315	145	90	98
12. Paradise Cove Road/PCH	-	-	-	-	100	>25	65	133
14. Corral Canyon Road/PCH	70	>25	45	76	-	-	-	-
16. John Tyler Drive/PCH	300	38	>25	>25	-	-	-	-
17. Malibu Canyon Road/PCH	310	94	197	130	250	>25	30	80
18. Webb Way/PCH	250	131	104	149	340	133	243	275
19. Cross Creek Road/PCH	300	137	212	277	150	>25	40	54
20. Malibu Pier/PCH	100	>25	0	>25	100	>25	30	33
21. 22730 PCH Signal	-	-	-	-	100	>25	>25	>25
23. Carbon Canyon Road/PCH	120	33	26	36	-	-	-	-
25. Rambla Pacifico Street/PCH	70	>25	>25	>25	50	>25	>25	>25
26. Las Flores Canyon Road/PCH	70	>25	>25	>25	150	>25	30	61
27. Big Rock Drive/PCH	150	>25	>25	>25	-	-	-	-
28. Topanga Canyon Boulevard/PCH	300	>25	265	77	-	-	-	-

Exceeds capacity
Capacity for less than one vehicle remaining

Congestion Management Program. Since 1992, the Los Angeles County Congestion Management Program (CMP) has addressed the impacts of local growth on regional transportation systems. The following intersections along PCH are CMP arterial monitoring locations:

- Decker Road/PCH
- Kanan Dume Road/PCH
- Malibu Canyon Road/PCH
- Las Flores Canyon Road/PCH

The City tracks LOS of the CMP locations every 2 years in accordance with the requirement of the CMP. Based on the comparison between the 2010 CMP and the 2011 LOS transmittal submitted by the City to the Los Angeles County Metropolitan Transportation Authority, the LOS at Decker Road/ PCH remains unchanged (LOS A) for a.m. and p.m. peak hours. The LOS at Kanan Dume Road/PCH has improved from LOS B to LOS A in the a.m. peak hour and worsened from LOS B to LOS C in the p.m. peak hour. Las Flores Canyon Road/PCH remains unchanged at LOS B in the a.m. peak hour and at LOS C in the p.m. peak hour. Malibu Canyon Road/PCH is also unchanged at LOS C in the a.m. and p.m. peak hours. Table F displays the CMP LOS.

Table F: Los Angeles County Congestion Management Program LOS in the City of Malibu

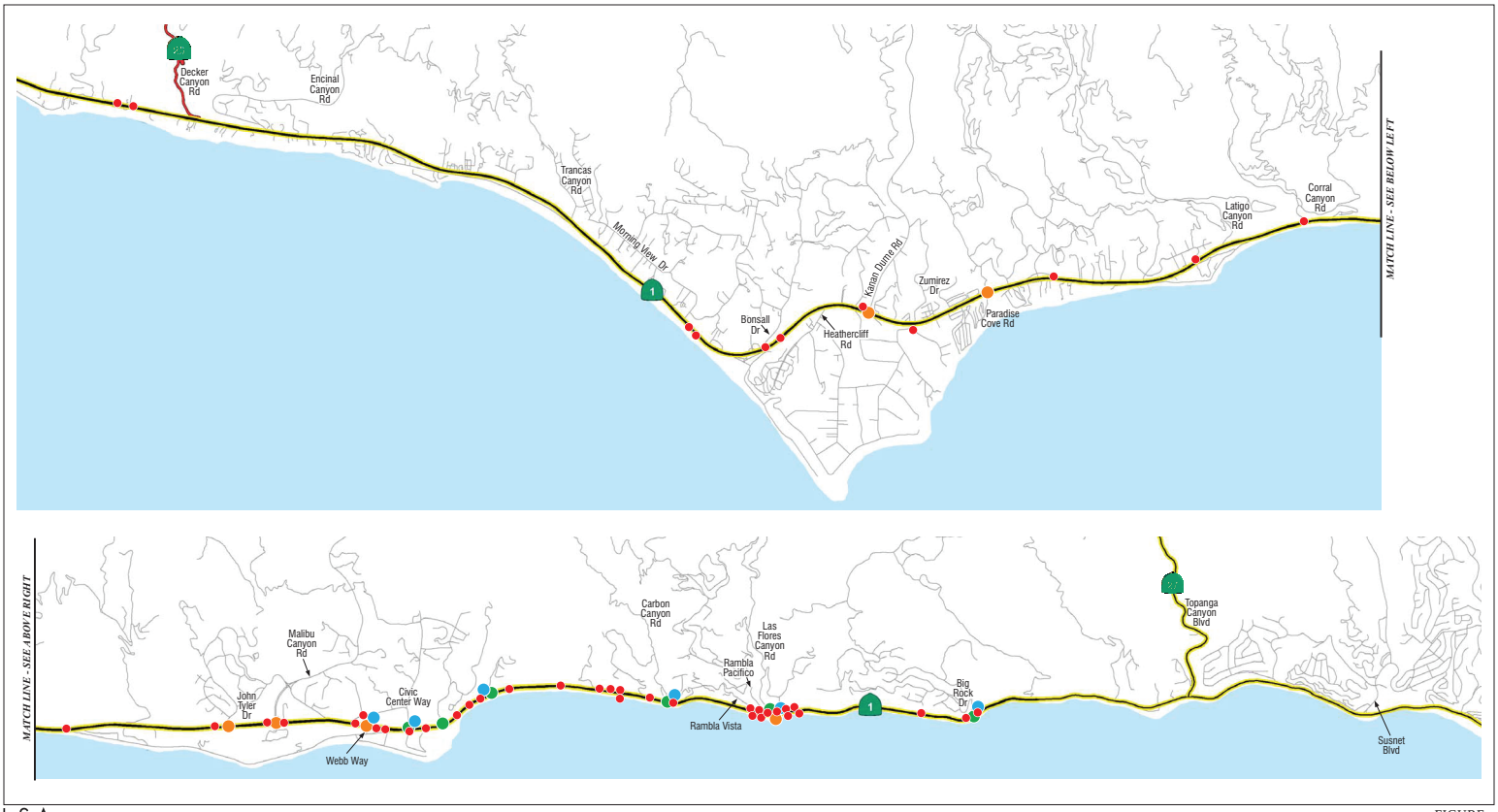
	2009 LOS[1]				2011 LOS[2]			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	v/c	LOS	v/c	LOS	v/c	LOS	v/c	LOS
1. Decker Canyon Road/PCH	0.280	A	0.350	A	0.266	A	0.358	A
10. Kanan Dume Road/PCH	0.620	B	0.690	B	0.494	A	0.724	C
17. Malibu Canyon Road/PCH	0.670	B	0.740	C	0.665	B	0.767	C
26. Las Flores Canyon Road/PCH	0.770	C	0.700	C	0.772	C	0.743	C

[1] 2010 Los Angeles County Congestion Management Program
[2] 2011 City of Malibu highway monitoring transmittal to Los Angeles County Metropolitan Transportation Authority
LOS = level of service
v/c = volume to capacity ratio

Vehicular Collisions

Collision data is one of many sources of data to examine when determining the potential for safety issues. Existing and past collision trends can reveal problem areas and are also more informative than focusing on specific collisions. Since its incorporation in 1991, the City has monitored collision rates and sought solutions to frequent problems. The Los Angeles County Sheriff's Department provides traffic safety and enforcement services to the City. Traffic collision data is available from both the Sheriff's Department and the California Highway Patrol. In preparing this report, data was queried from the Statewide Integrated Traffic Records System (SWITRS), the Transportation Injury Mapping System (TIMS), and Los Angeles County Sheriff's Department Collision Summary Reports. The Sheriff's Department data was found to be the most recent of these sources. Therefore, the following discussion summarizes Sheriff's Department collision statistics along PCH. The purpose of this exercise is to identify trends that could indicate safety concerns. An exhaustive list of all collisions is not being produced.

Collision Locations. According to the Sheriff's Department, the majority of traffic collisions in the City occur along PCH, with most of these occurring at or near intersections with other roadways. Collision reports are included in Appendix D. In a search for trends, Figure 8 shows the intersections where collisions have occurred most frequently during three periods in the City's history. As it was the most common contributing factor, unsafe speed collisions are also mapped on Figure 8. A discussion of collision factors is included in the next section. The City has attempted to address traffic safety issues at some locations through signalization, raised medians, or median barriers. As a result of these efforts, some areas where collisions occurred frequently during one period were not among the most common areas in another period. At other locations, such as Las Flores Canyon Road, traffic collisions continue to be frequent.



LSA

FIGURE

LEGEND

- To ollision Locations - 1 0 s
- To ollision Locations - 2000 s
- To ollision Locations - 2010 - 2012
- Unsafe S eed ollisions - 1/1/12 to /30/12

PCH Safety Study

Ve icular ollision Locations

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In the 1990s, all six of the most common locations for traffic collisions were in Study Area 1 (specifically, Big Rock Drive to Cross Creek Road). Later, Study Area 2 (Cross Creek Road to Busch Drive) became the most common area for traffic collisions. Since 2010, Study Area 1 has again been the most common area for traffic collisions. Of the top six locations, only Webb Way at PCH is in Study Area 2. The most common location for traffic collisions since 2010 has been near Carbon Canyon Road at PCH. This one location accounts for nearly 8 percent of all collisions since 2010.

Figure 8 is helpful in establishing historic trends for collision locations. However, traffic collisions are attributed to an intersection at the time the collision report is written and may not reflect the nearest intersection. In addition, an collision could be attributed to one intersection based on proximity while the operation of another intersection was a contributing factor. To further refine the historic collision trends, LSA searched for location trends by plotted locations for the most serious of the recent collisions. Between January 2001 and December 2010 (the limit of data available through SWITRS or TIMS), 33 traffic fatalities occurred in the City. Of these, 26 occurred on PCH – 15 percent of which occurred near Zuma Beach. Of the vehicle-vehicle fatal collisions, broadside was the most common type of collision. Conclusions drawn from this historic data may no longer be relevant. Changes to the roadway (e.g., median barriers near Zuma Beach to disallow U-turns) have been made to address some historic problem areas. This existing condition report focuses on more recent collisions to identify potential trends. Figure 9 displays traffic fatalities that occurred on PCH between January 1, 2010, and October 30, 2012.

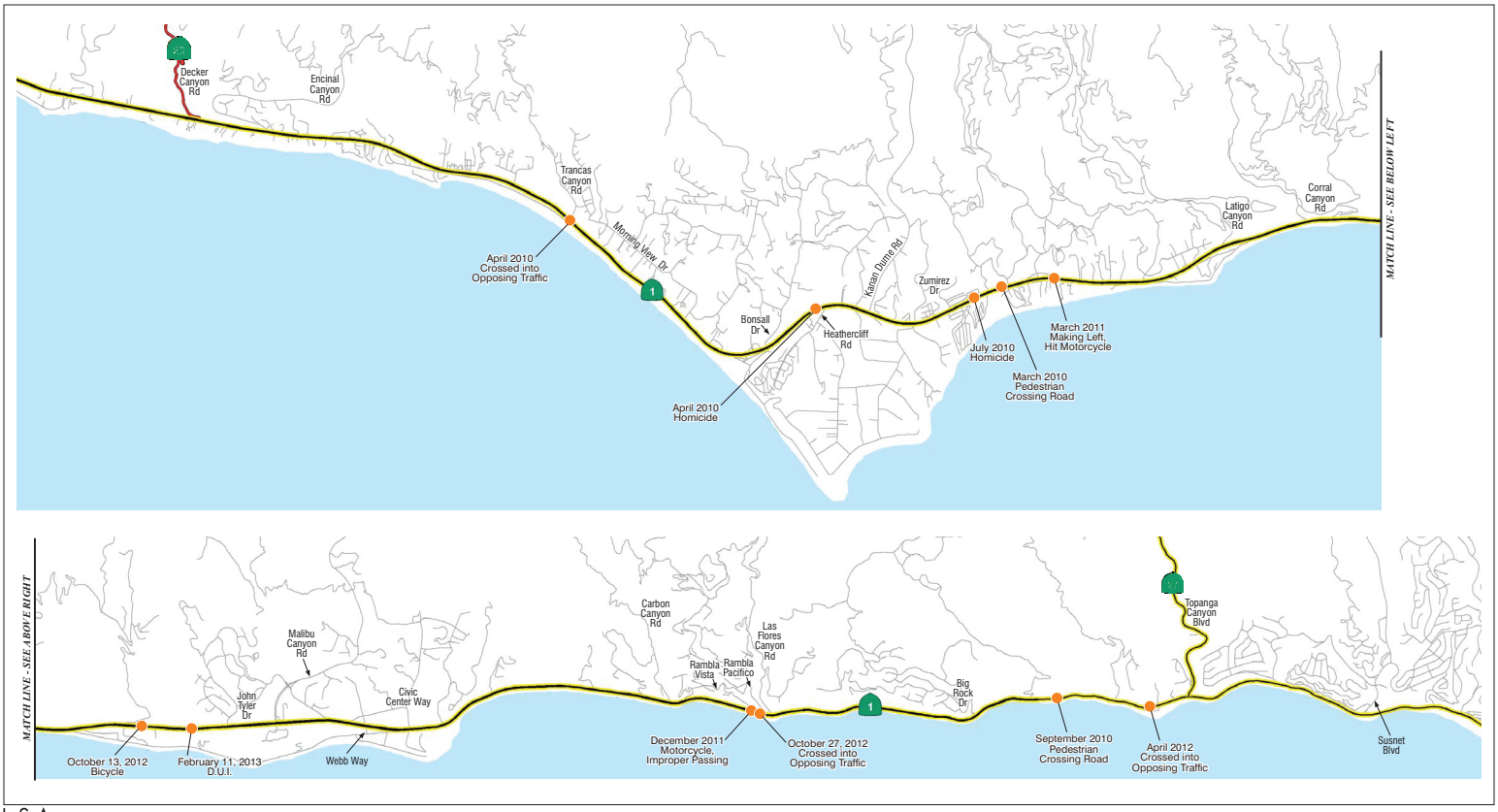
Two of these fatalities involved motorcycles. In one incident, the motorcyclist was attempting to pass a garbage truck by driving on the shoulder when the garbage truck made a right turn. In the other, a motorist exited a restaurant driveway and was attempting a left turn onto PCH when the vehicle struck a motorcycle. A median barrier at this prevents left turns and the motorist turned towards opposing traffic.

Two of these fatalities involved pedestrians crossing the road outside of a marked crosswalk. In one incident, the pedestrian parked on the north side of PCH and was walking across the roadway to his apartment. In the other incident, the pedestrian had left her place of employment and was crossing the roadway to a bus stop.

Two fatalities occurred when a vehicle crossed into opposing traffic. One of these incidents was in eastern Malibu, near Tuna Canyon Road. The other was in western Malibu, at Broad Beach.

Two of the fatal incidents on PCH were the result of homicide. On April 3, 2010, according to court records, a driver purposely veered off the roadway to strike a pedestrian on the shoulder of the roadway. In May 2012 this driver was convicted of second-degree murder. On July 16, 2010, a driver was traveling in excess of 90 mph in opposing traffic and struck a vehicle with two Navy Seabees returning to Point Mugu, killing one. In this case, the perpetrator also died. In both of these incidents, the offending drivers had left suicide notes before getting in the car.

Two fatal collisions have occurred since the start of the PCH Safety Study. One occurred near Puerco Canyon Road when shoulder conditions may have contributed to a bicyclist to fall into traffic lanes. The other occurred near Rambla Vista when the failure of a tire caused a vehicle to cross into opposing traffic.



LSA

FIGURE

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● - Fatal ollision Locations - 1/1/10 to 2/11/13

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PCH Safety Study

Fatal ollision Locations on P H

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Again, traffic fatalities, and traffic collisions in general, are not the only indicator of potential safety issues. Data were collected during the data-gathering process to search for patterns and inform the process, but a pattern or a concentration of fatalities in one area is not indicated.

Each year, over 100 injury collisions occur in the City. The purpose of mapping injury collisions is not to produce an encyclopedic list, but is instead to investigate patterns and support or challenge the findings of top collision location trends. Figure 10 illustrates the locations of injury collisions in the first half of 2012. Reviewing the injury collision data confirms some of the conclusions of the collision trend exercise. Most importantly, the intersection with Las Flores Canyon Road was found to be a top collision location in the 1990s, 2000s, and most recently. In the first half of 2012, four injury collisions occurred in this intersection and three more occurred just south of the intersection. In addition, three injury collisions occurred in the intersection with Rambla Pacifico and one occurred in the intersection with Rambla Vista.

Also mirroring the collision trend exercise, three injury collisions occurred in or near the intersection with Big Rock Drive, three injury collisions occurred just south of Webb Way, and two injury collisions occurred in the intersection with Carbon Canyon Road in the first half of 2012. However, only one injury collision occurred in the intersection with Cross Creek Road, which is the same as occurred in the intersections with Busch Drive, Kanan Dume Road, Paradise Cove Road, Winding Way, Latigo Canyon Road, and John Tyler Drive. No injury collisions occurred in the intersection with Sweetwater Canyon Drive.

The injury collision data suggests a relationship that was not revealed by the collision trend exercise. Four injury collisions occurred near the La Costa Beach Club crosswalk. Another five injury collisions occurred near the 22333 PCH pedestrian signal, one near the 22506 PCH flashing yellow crosswalk, two near the 22730 PCH pedestrian signal, and two near the Malibu Pier pedestrian signal.

Collision Factors. The Sheriff's Department identifies primary collision factors in collision reports. Analysis of collision data from the 1990s, 2000s, and more recently identifies a clear factor in City traffic collisions. The most common collision factor is unsafe speed (which includes excessive speed), which is involved in at least one third of all traffic collisions in the City.

These were the most common collision factors in the 1990s:

- Unsafe speed (36 percent)
- ROW violation (12 percent)
- Improper turning (12 percent)
- Driving under the influence (DUI) (8 percent)

Increased awareness of the dangers of drinking and driving, and increased enforcement have reduced the frequency of DUI traffic collisions in the City. The most common collision factors in the 2000s were the following:

- Unsafe speed (38 percent)
- Unsafe lane change (15 percent)



LSA

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- In ury ollision Locations - 1/1/12 to /30/12

FIGURE 10

PCH Safety Study

In ury ollision Locations on P H

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- ROW violation (11 percent)
- Improper turning (9 percent)

Since 2010, the most common collision factors have been the following:

- Unsafe speed (34 percent)
- Unsafe lane change (11 percent)
- ROW violation (10 percent)
- Improper turning (9 percent)

Again, unsafe speed (defined as speed greater than is reasonable or prudent with due regard for weather; visibility; and the traffic on, and the surface and width of, the highway) continues to be the most common collision factor. Unsafe speed could be a factor, even at a speed below the posted limit, if the speed is not reasonable or prudent for the situation. Posted speed limits along PCH vary from 45 to 55 mph. Vehicles travelling at higher speeds require longer sight distance to identify potential hazards, more time to slow or stop, and are, therefore, more prone to collisions. Collision data for the past 6 months were reviewed for locations with the most common collision factor (unsafe speed) and were plotted on a map. As seen in Figure 8, a cluster of unsafe speed collisions have occurred along PCH between Rambla Vista and Las Flores Canyon Road in the last 6 months. The majority of these collisions occurred within Study Area 1.

LSA conducted eight independent floating speed surveys within the flow of traffic along the PCH corridor and during varying times of day. These speed surveys found that prevailing speeds on PCH are typically 4–6 mph higher than the posted speed limit. This finding does not, of course, conclude that no vehicles exceed the speed limit by more than 6 mph. Rather, the finding is that the prevailing traffic flow, which most vehicles maintain, is 4–6 mph higher than the posted speed limit, whether it is 45 mph or 50 mph. It should be noted that this premium was observed to diminish in areas where the roadway was curving.

Other common collision factors over the years have been ROW violations and improper turning. As traffic volumes increase, the frequency of gaps in traffic large enough to enter the roadway safely from a driveway or to turn from the driveway into the roadway decreases. As drivers wait for an acceptable gap, their perception of an acceptable gap changes, which causes them to try to utilize smaller, unsafe gaps and leads to ROW violations and improper turning collisions. Also contributing to ROW violations and improper turning collisions are parking maneuvers. As motorists are looking for parking, they may slow or stop unexpectedly or may turn across traffic without waiting for an appropriate gap for fear of losing a parking space. While surveying traffic conditions along PCH, vehicles were observed stopped in the right-of-way waiting for a parking space to be vacated.

Unsafe speed (defined as speed greater than is reasonable or prudent with due regard for weather; visibility; and the traffic on, and the surface and width of, the highway), improper turning, and unsafe lane change were the top three factors contributing to injury collisions in the first half of 2012. The fourth and fifth most common factors contributing to injury collisions in the first half of 2012 were driving under the influence and unsafe starts from a parking space. The most frequent type of injury

collision in the first half of 2012 was broadside a moving car (16) followed by rear-ending a moving car (12), rear-ending a parked car (6), and rear-ending a parking car (5).

Collision Timing. Traffic volume on PCH is composed of residents of the City and of visitors and tourists. More traffic collisions would be expected to occur during the higher-volume summer months than at other times of the year as unfamiliar drivers travel along PCH. Collision statistics bear out these expectations. Based on the comparison of the distribution of traffic collisions in the 1990s and the past 2 years, as displayed in Table G, more collisions have consistently occurred in the City during the summer months of June, July, and August, with April also seeing higher than average traffic collisions.

Table G: Historic and Recent Monthly Distribution of Traffic Collisions

1990s (percent)	Past 24 months (percent)
July: 12	July: 13
August: 11	August: 11
April: 10	April: 10
June: 9	June: 9
January: 9	September: 8
March: 9	May: 8
May: 8	March: 8
October: 7	October: 8
February: 7	January: 6
September: 6	February: 6
November: 6	December: 6
December: 6	November: 6

Similarly, higher traffic volumes on weekends would be expected to result in more traffic collisions than the remainder of the week. Again, the weekly distribution of collisions meets these expectations. This trend has remained constant since the 1990s.

- **Friday:** 17 percent
- **Sunday:** 17 percent
- **Saturday:** 15 percent
- **Thursday:** 14 percent
- **Wednesday:** 14 percent
- **Tuesday:** 12 percent
- **Monday:** 11 percent

In addition to time of year and the day of the week, the time of day was also examined. Most traffic collisions occur in the afternoon between 3:00 p.m. and 7:00 p.m. Next are midday between 11:00 a.m. and 3:00 p.m. Over 60 percent of all traffic collisions in the City occur during this 8-hour

period. The next highest period is between 7:00 a.m. and 11:00 a.m. The data lead to a rather unusual conclusion: traffic collisions in the City tend to occur in good weather during daylight hours.

In summary, the most common collision factors for vehicular collisions in the City are unsafe speed, unsafe lane change, ROW violation and improper turning, all of which suggests that driver behavior may be the primary cause for vehicular collisions along the study corridor. Traffic collisions increase during summer months and may be due to drivers unfamiliar with the area. Night and darkness are not primary contributors to safety incidents. Vehicular traffic conditions and the parameters that define them (e.g., total traffic volume, LOS performance and queuing) are generally acceptable and do not seem to influence safety along the corridor systematically. High traffic volumes and LOS E or F conditions are not prevalent throughout the corridor and do not create corridor-wide safety concerns. Instead, the lack of congestion and potential speed issues along with driver behavior may be the primary contributing factors to safety issues in discrete locations.

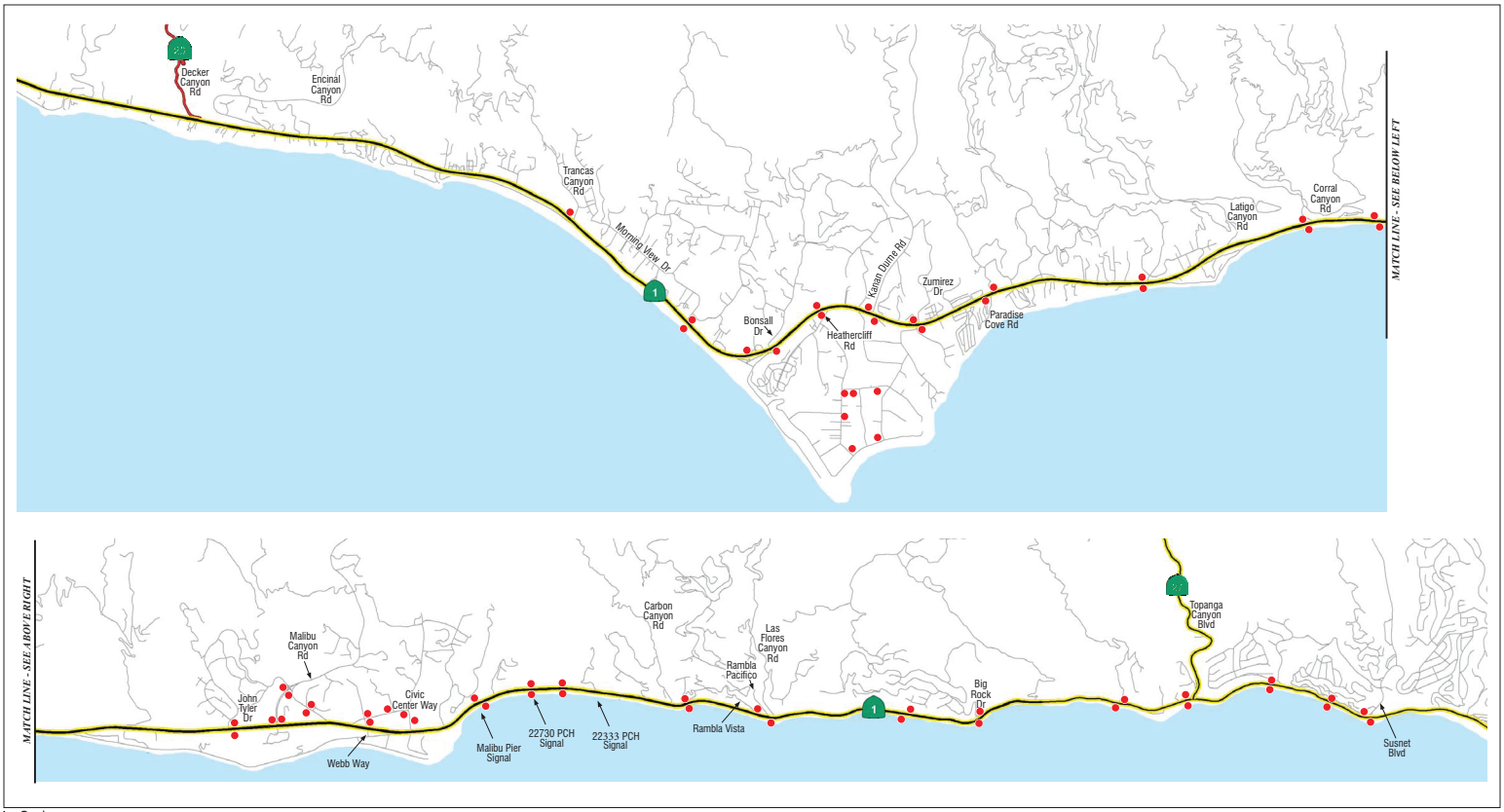
TRANSIT

The City is generally inaccessible by rail. Metrolink operates parallel to State Route 118 (SR-118), making it unattractive for trips to/from the City. The closest Metro Rail line is the Expo line, which currently terminates in Culver City, several miles from the City limits. Future extension of the Expo line will reach Olympic Boulevard/4th Street in Santa Monica, approximately 7 miles from City limits.

Bus service within the City is provided by the Los Angeles Metropolitan Transportation Authority along intercity express bus Route 534, which operates between Trancas Canyon Road and the Washington/Fairfax transit hub in Los Angeles from 6:00 a.m. to 10:18 p.m. eastbound and from 4:35 a.m. to 8:46 p.m. westbound, Monday through Friday; from 6:49 a.m. to 10:15 p.m. eastbound and from 5:15 a.m. to 8:42 p.m. westbound on Saturday; and from 7:05 a.m. to 10:09 p.m. eastbound and 5:40 a.m. to 8:47 p.m. westbound on Sunday. The cost is $1.50 for a one-way trip from Santa Monica to Malibu. Headways, the time between buses, are approximately 30 minutes through most of the operating day. The nearest connection to another Los Angeles Metropolitan Transportation Authority bus is at Sunset Boulevard in Pacific Palisades, where both Routes 2 and 302 terminate.

Buses traveling along Route 534 generally make 20 stops on PCH within the City. Along the primary route, stops are also made on Malibu Canyon Road near Pepperdine University, near Winter Canyon Road and Webster Elementary, and within the Civic Center on Civic Center Way and Cross Creek Road. In addition to the usual stops along PCH, Route 534 includes six stops in Point Dume for three westbound buses in the morning and four eastbound buses in the afternoon. The buses taking this alternate route to/from Point Dume facilitate morning and afternoon trips to and from the schools along Morning View Drive. Bus stop locations are illustrated in Figure 11. On-demand Paratransit operates within the City and is not limited to these stops.

Los Angeles Metropolitan Transportation Authority buses have bicycle racks in front that can transport two bicycles. Almost all bus stops within the City provide benches but are not equipped with shelters. Bus stops do not have their own turnout and use the shoulder for passenger loading and unloading close to the highway. Not all bus stops are near crosswalks to facilitate rider access to both sides of the roadway.



LSA

LEGEND
- Bus Stop Locations

FIGURE 11

PCH Safety Study
Metro Route 534 Stops

I:\SGO1201\G\Metro Route 534 Stops.cdr (10/24/12)

Bus stops in the City can be located either before an intersection (near-side) or after an intersection (far-side). The Transit Cooperative Research Program (TCRP) Report 19 provides guidelines for the location of bus stops. According to this report, the advantages of far-side stops are maximization of right-turn capacity and minimization of deceleration distance needed. The disadvantages of far-side stops are:

- Sight distances can be obscured for crossing vehicles and pedestrians;
- Through lanes may be blocked and could result in traffic queued into intersections; and
- Number of rear-end collisions may increase, if drivers do not expect the bus to stop again after stopping at a red light.

The advantages of near-side stops are allowing passengers to board and alight while the bus is stopped at a red light and eliminating double stopping at intersections. The disadvantages of near-side stops are:

- Conflicts with right-turning vehicles;
- Curbside traffic control devices and crossing pedestrians may be obscured;
- Sight distances for vehicles to the right of the bus may be obscured;
- Through lanes may be blocked; and
- Sight distance problems for crossing pedestrians are increased.

Both configurations work best when the bus is at the back of a platoon of passenger cars. The TCRP report suggests that the decisions regarding bus stop placement should also consider passenger origins and destinations. In other words, buses should stop on the side that is the most likely destination of the passengers in order to reduce the number of pedestrians crossing the adjacent street.

When a bus stop is located after an intersection, Los Angeles Metropolitan Transportation Authority standards require 90 feet of curb length. When a bus stop is located before an intersection, 100 feet of curb length is needed for standard 40-foot buses. Los Angeles Metropolitan Transportation Authority policy regarding the placement of bus stops is provided below.

> "Bus stops should be located to balance good rider access with pedestrian safety. Stop locations should support efficient transfer movements, minimizing walking distances, unnecessary crosswalk movements, and potential for jaywalking. No standard type of stop can be recommended for all locations as each intersection has its own unique characteristics. An inventory of land uses within a quarter-mile corridor of the road under consideration should be taken, particularly uses that serve as major trip producers and attractors. The proper location of a transit stop that requires on-site investigation of the stop(s) under consideration must be concurred by the municipality in which the stop is located."[1]

[1] 2012 Metro Transit Service Policy

The City provided a report from the Los Angeles Metropolitan Transportation Authority containing data on passenger boarding and alighting the bus at each stop along Route 534. This data was collected in March 2012. Although the bus stops along Civic Center Way are popular destinations for bus travelers, most trips originating within the City are not destined for locations within the City. The most popular destination along Route 534 is Ocean Avenue/Colorado Avenue in the City of Santa Monica. Analysis of boardings and alightings reveals that the following are the busiest bus stops within the City: Trancas Canyon Road, Heathercliff Road, La Paz Lane (Civic Center), Cross Creek Road, and Rambla Pacifico Street.

Figure 12 illustrates the a.m. and p.m. peak-hour usage of Route 534 within the City. The predominant direction of morning travel is eastbound, and in the evening, westbound. Passenger loads are lowest in Study Area 3 and increase in Study Areas 1 and 2.

School buses also operate within and near the City with various stops. Santa Monica-Malibu Unified School District operates 25 school buses within its district, which is larger than the City. In addition, there are several private schools operating in Malibu with designated bus stops. Within the City, approximately 500 students are transported by seven 40-foot buses while approximately a dozen students are transported on two smaller buses. Pepperdine University operates shuttles within its campus, and an off-campus shuttle to locations on Malibu Road and PCH. These off-campus shuttles make four trips per day between 11:45 a.m. and 5:30 p.m., Monday through Friday.

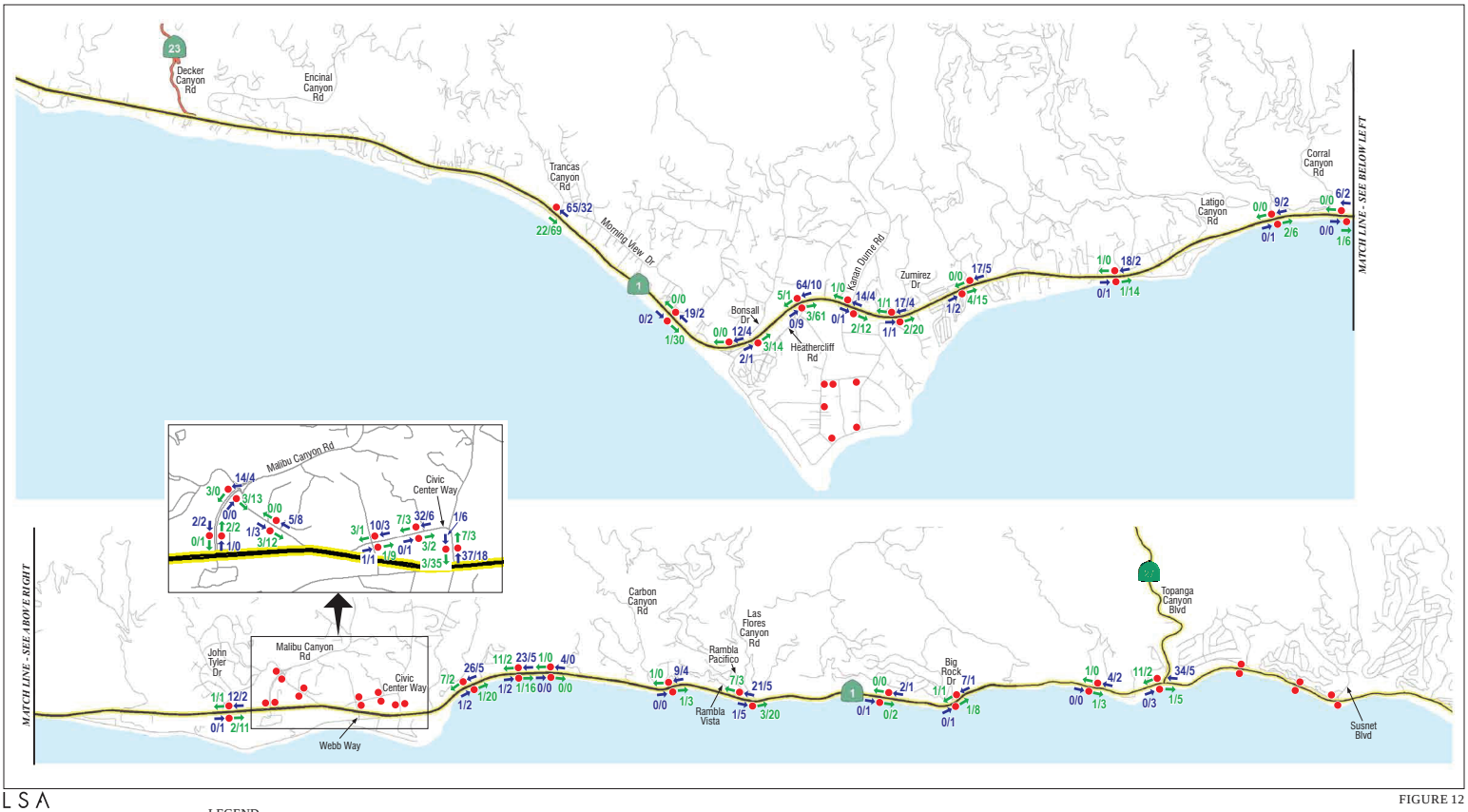
The low volume and headways of the existing transit service do not appear to be a primary contributor to safety issues in the corridor.

BICYCLES

Bicycle travel along PCH is popular with many groups and for many interests. PCH is a designated bicycle route throughout the City. Bicycle routes are a Class III facility consisting of an on-road signed route without separate lanes. Bicycle routes are different from Class II facilities, which have separate bicycle lanes. Bicyclists use PCH for recreation, leisure, or commuting throughout the week. Hundreds of bicycles use the roadway daily, vying for ROW on slender shoulders or adjacent to parked vehicles. While signing has recently been added along PCH to "Share the Road," the physical cycling setting has remained unchanged since the 1990s.

Based on design standards, the minimum width of a bicycle-lane where on-street parking is prohibited is 4 feet (without gutter) and 5 feet (with gutter) from the edge of the pavement; the width of the bicycle lane where on-street parking is permitted is 5ft from the curb.[1] The standard bicycle lane line is a solid 6-inch white line that turns into a dotted line (8 feet apart), 100 to 200 feet from the nearest cross street or an intersection for a permitted right turn for incoming vehicles. Variable shoulder widths on the right edge of the roadway create conditions where bicyclists are forced into the travel lane. Some bicyclists may attempt to avoide slowing down motorists by riding next to the fog line which can put them at risk of colliding with opening car doors.

[1] Fig 9C-102(CA) in California Manual on Uniform Traffic Control Devices (CAMUTCD).



LSA

FIGURE 12

LEGEND

- - us Sto Locations
- X/X - oarding us M/PM
- Y/Y - Exiting us M/PM

PCH Safety Study

Metro Route 34 Passenger Volume

SOUR E: Riders i Tri Sto s Re ort (/ /2012) Los ngeles MT

I:\SGO1201\G\Metro Route 34 Passenger Volumes.cdr (11/ /12)

Bicycle Infrastructure

The existing physical condition of bicycle facilities along the PCH corridor is described based on aerials and plans, visual observations, and research.

Study Area 1: Topanga Canyon Boulevard to Cross Creek Road. Between Topanga Canyon Boulevard and Big Rock Drive, the westbound direction of PCH has little to no development and steep hillsides. An edge stripe is present for the No. 2 travel lane with a soft shoulder that may be used for parallel parking. There are frequent rock/debris obstructions of the narrow shoulder. There are also krails and other barriers to protect the traffic lanes from landslides, No bicycle lane is striped or signed in this area, which leaves a variable shoulder of 0 to 3 feet for cyclists. Typical "T" striping is not present for parallel parking to indicate a door zone. The eastbound or southerly side of PCH is fronted by residential uses, most of which have garages that back out onto PCH. Any space between homes or in front of garages may be used for parking. An edge stripe also exists along this segment of eastbound PCH; however, many parked vehicles were seen violating the stripe and crossing into the travel lane, leaving no space for cyclists or pedestrians. In addition, on trash day, trash cans are lined up to the fog line, also eliminating available shoulders for bicyclists.

Between Big Rock Drive and Cross Creek Road, commercial uses are present, and the attraction of retail, restaurant, and services increases the vehicular traffic volume and the number of turns into nonresidential driveways. The northerly, westbound side of PCH is fronted primarily by resident uses, which also are present in the hills and use residential collector routes from the driveways to PCH on the northerly side. This concentrates traffic, which has benefits (reduced friction from driveways and garages) as well as impacts (greater volume of turning traffic at poorly-signed and unilluminated intersections). West of Big Rock Drive, PCH is wider than the section east of Big Rock Drive. Curb and gutter is present through most of this segment, and parallel parking is available. No bicycle lanes are striped, and no door zones are indicated through parallel parking striping ("T" stripes).

Study Area 2: Cross Creek Road to Busch Drive. Here, the setting for cyclists changes. The eastern end includes the commercial corridor of Cross Creek Road and Webb Way along with the concentration of vehicular, pedestrian, and cycling activity. PCH widens in this stretch, and while vehicle speeds increase here, the shoulder is wider for cyclists. Progressing westerly, PCH passes Pepperdine University and becomes an undulating four-lane arterial with steep yet short grades. Many of the popular local hill-cycling courses are accessed in this segment. Driveways and intersecting streets are fewer than in the previous two segments, but the intersecting streets are not well-signed or illuminated. Edge striping is provided along much of this Study area in both directions, but bicycle lanes are not present.

Study Area 3: Busch Drive to Western City Limits. Study Area 3 includes Zuma Beach, a popular destination with a large parking lot. Access to Zuma Beach is via Busch Drive, which has elements of interchange design (i.e., slip ramps, gore points, etc.). This design can place cyclists in transitional areas in the intersection (i.e., within a merge or weave zone). The design, high traffic volume, and high speed can contribute to safety issues for cyclists in this immediate area. Poor shoulder conditions also contribute to bicyclist safety issues. Further west, PCH has a rural character, serving generally sparse residential hillside tracts served by residential collectors. Malibu High School and Cabrillo

Elementary School are accessed via Morning View Drive at PCH, where cyclists and school drop offs may mix. Furthermore, children on bicycles may be present in this area with the schools as a destination for play and other activities. Similar to the other segments, PCH includes edge striping, primarily soft shoulders, and no bicycle lanes. Shoulder parking along PCH creates conflicts near popular areas, such as Zuma Beach, Paradise Cove, etc.

Bicycle Traffic Volumes

Bicycle volumes were collected at 12 locations during weekday a.m. peak hours (7:00 a.m. to 9:00 a.m.) and p.m. peak hour (4:00 p.m. to 6:00 p.m.) and weekend midday (11:00 a.m. to 1:00 p.m.) along PCH, as shown in Figure 13. The bicycle volume data are included in Appendix E. During weekday morning and evening commute periods, cycling activity is low. Fewer than 20 bicycles were observed traveling through the corridor (across study intersections) during the weekday commute periods in July 2012. However, Saturday midday counts are much higher. Between 100 and 200 cyclists were observed in 1 hour midday on Saturday. With one exception, most weekend midday bicycling is eastbound, consisting mainly of recreational riders who have left earlier in the day from Santa Monica and other communities to the east of the City, now looping back at midday to their points of origin.

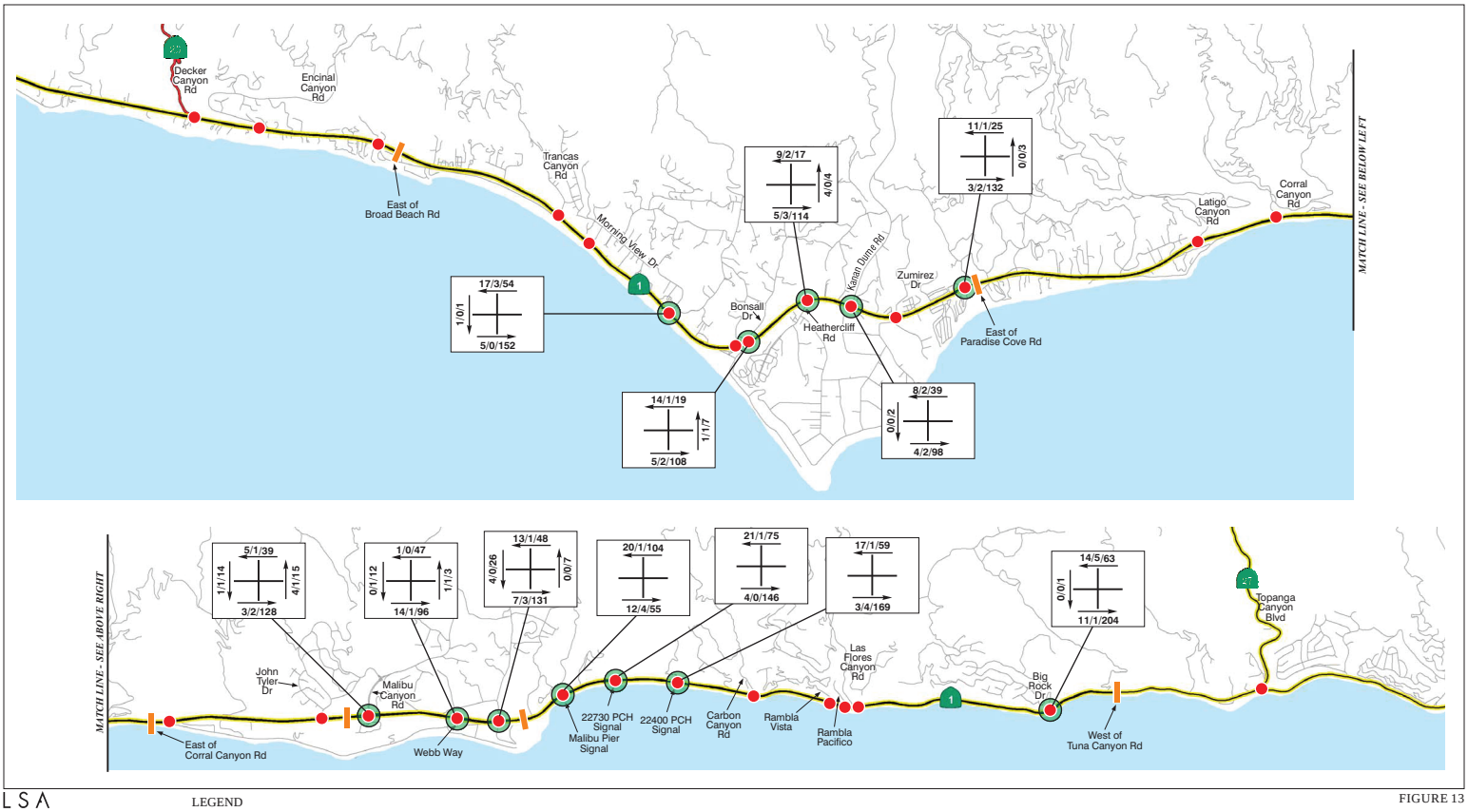
Based on the volume data and observations, most bicycle activity at study intersections is parallel to PCH. Few cyclists were observed crossing PCH at study intersections, with the exception of Cross Creek and Webb Way (activity around the commercial and Civic Center area) and Malibu Canyon Road (towards Pepperdine University and the northerly route into the Santa Monica mountains). As a result the primary objective seems to be to accommodate cyclists in the flow of traffic rather than to create safe crossing strategies at critical nodes.

A variety of bicyclists use PCH. Local residents ride for short shopping or service trips, to get to the beaches, and simply just for fun. Bicycle shops such as Helen's, Bike Attack, and Cynergy may promote cycling along PCH for casual and experienced riders alike from the coastal Los Angeles region. Cycling clubs/teams such as LaGrange, TriFit, and LATri Team have regularly scheduled casual group rides on PCH. A number of organizations have invested time and effort in planning and policy on behalf of the cycling community, including the Los Angeles County Bicycle Coalition, the Los Angeles County Metropolitan Transportation Authority, and the PCH Task Force. Finally, PCH, through the City, is used for competitive events such as the Mulholland Challenge and the Malibu Triathlon. In addition, various charity bicycle events bring several thousand riders on PCH, such as the AIDS Lifecycle Ride

Bicycle Collisions

From 1996 to 1998, 12 traffic collisions in the City involved bicycles, none fatal; this is a rate of 4 per year. Between January 2010 and June 2012, 19 traffic collisions in the City have involved bicycles, none fatal. In the first 6 months of 2012, 9 traffic collisions in the City have involved bicycles.

Figure 14 illustrates the locations of recent bicycle-involved traffic collisions. This figure shows a cluster of bicycle collisions on PCH between Rambla Vista and Las Flores Canyon Road. A smaller cluster appears near the Civic Center. Note that the peak-hour volume for bicycles is high at the intersections of Cross Creek Road/PCH and Webb Way/PCH.



LSA

LEGEND

- Traffic ount Study Intersection
- Traffic ount Roadway Link
- icycle ount Study Intersection

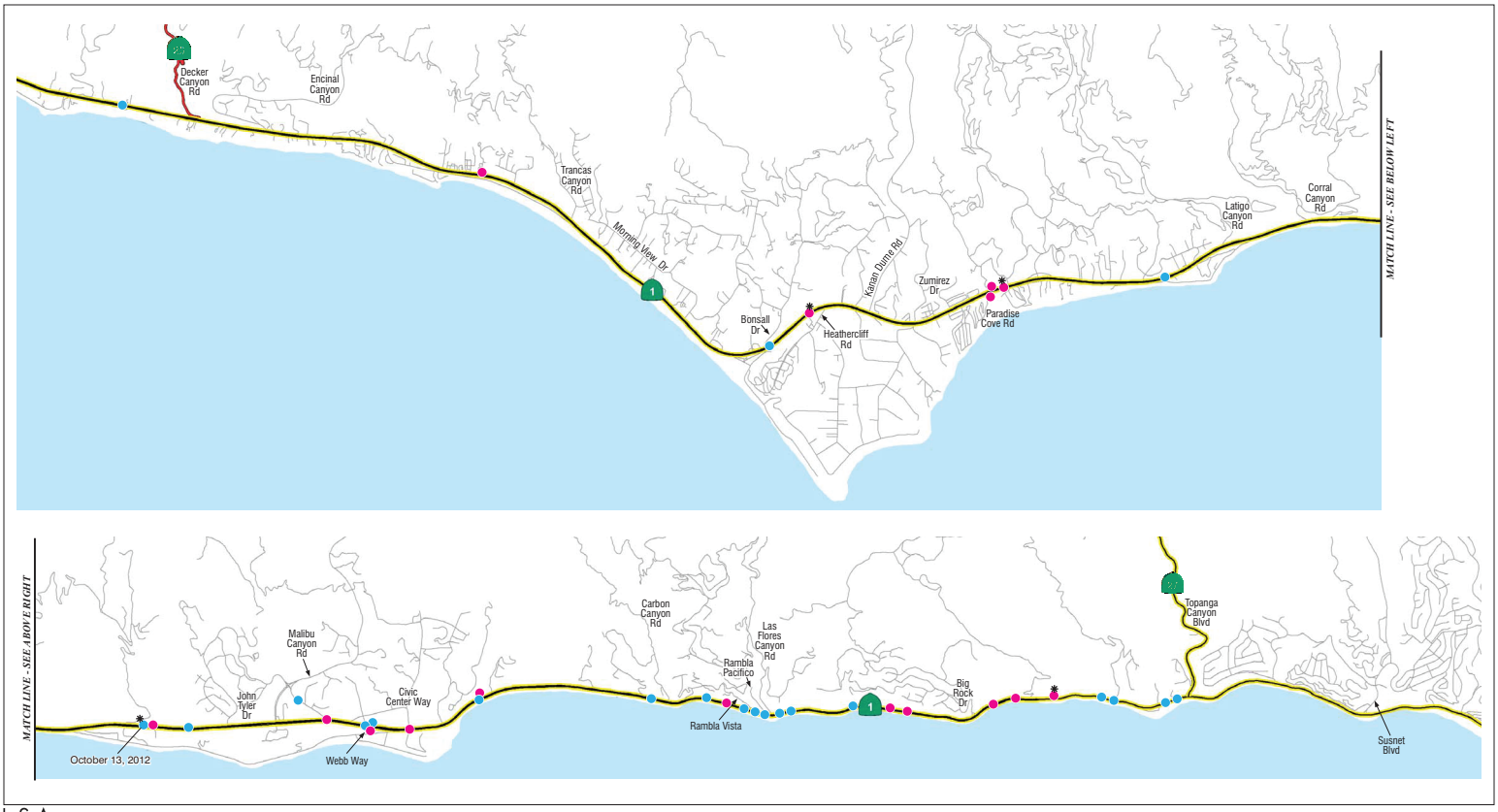
XX/YY/ZZ - M Weekday/PM Weekday/Weekend Midday

FIGURE 13

PCH Safety Study

Existing icycle Volumes - M/PM Weekday/Weekend Midday

I:\SGO1201\G\ ike Volumes.cdr (10/24/12)



LSA

LEGEND

- - icycle ollision Location - 1/1/10 to /30/12
- - Pedestrian ollision Location - 1/1/10 to /30/12
- ✱ - Fatal Pedestrian/ icycle ollision

FIGURE 14

PCH Safety Study

Pedestrian and icycle ollisions

I:\SGO1201\G\Ped ike ollisions.cdr (2/13/13)

Study Area 3 has had no traffic collisions involving bicycles over the past 30 months. Study Area 1 had 9, and Study Area 2 had eight bicycle collisions over the past 30 months. A fatal bicycle collision recently occurred in Study Area 2 when conditions on the shoulder may have contributed to a cyclist falling into vehicle lanes.

Bicycle use is highest on weekends, in response to the City's recreation and leisure offerings. Primary bicycle flows move along PCH. Few signs are present to differentiate bicycle paths or to alert motorists to the presence of bicycles along PCH.

PEDESTRIANS

The City has several beaches that attract millions of visitors every year. PCH provides access to all of them. On-street parking is allowed on PCH near public beaches. Also, most of the commercial areas within the City are located along PCH. This arrangement entices pedestrian activity across PCH. Pedestrians are active between commercial and recreational uses, residential and educational uses, and residential and commercial uses. In several pockets or nodes, these land uses and parking facilities are located on either side of PCH, which results in heavy pedestrian use across PCH.

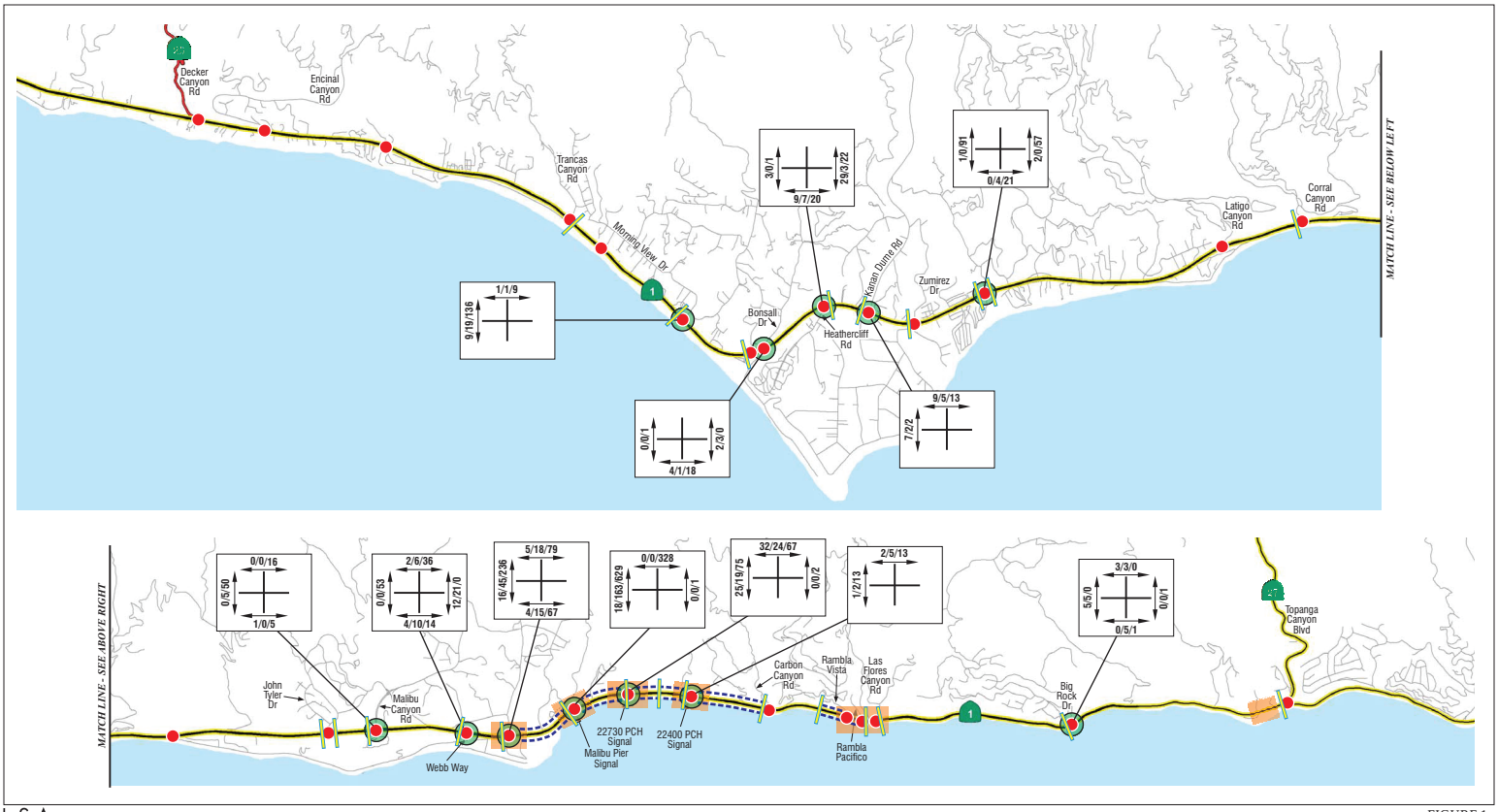
Most pedestrian traffic is part of longer trips that start in vehicles then end as a walk from the car to the destination. A smaller portion are pedestrians walking to and from transit stations (bus stops). A minor portion of the pedestrian traffic is generated by locals that walk from their homes to destinations such as beaches or commercial areas.

Pedestrian Infrastructure

The existing physical condition of pedestrian facilities along the PCH corridor is described based on aerials and plans, visual observations, and research.

Pedestrian facilities such as sidewalks and crosswalks are provided at few locations along PCH. Figure 15 highlights the regions where sidewalks are present on one and/or both sides and shows the location of pedestrian activity nodes. Sidewalks are not continuous along PCH and are primarily present in Study Area 2 (see Figure 15). Figure 15 also indicates the locations of marked crosswalks, which are located at the following intersections along PCH. Asterisks indicate intersections where weekday peak hour (a.m. and p.m.) and weekend midday peak-hour pedestrian counts were collected.

1. Trancas Canyon Road/PCH
2. Morning View Drive/PCH *
3. Busch Drive/PCH
4. Heathercliff Road/PCH *
5. Kanan Dume Road/PCH *
6. Zumirez Drive/PCH
7. Paradise Cove Road/PCH *
8. John Tyler Drive/PCH



LSA

LEGEND

- Traffic ount Study Intersection
- Pedestrian ount Study Intersection
- Hig Pedestrian cti ity Nodes
- XX/YY/ZZ - M Weekday/PM Weekday/Weekend Midday
- Sidewalks
- Marked rosswalks

FIGURE 1

PCH Safety Study

Existing Pedestrian Volumes - M/PM Weekday/Weekend Midday

I:\SGO1201\G\Pedestrian Volumes.cdr (10/24/12)

9. Malibu Canyon Road/PCH *
10. Webb Way/PCH *
11. Cross Creek Road/PCH *
12. Malibu Pier Signal/PCH *
13. 22730 PCH Signal *
14. 22506 PCH (unprotected midblock crossing)
15. 22333 PCH Signal *
16. Carbon Canyon Road/PCH
17. La Costa Beach Club (unprotected midblock crossing)
18. Rambla Pacifico Street/PCH
19. Las Flores Canyon Road/PCH
20. Big Rock Drive/PCH *
21. Topanga Canyon Boulevard/PCH

Study Area 1: Topanga Canyon Boulevard to Cross Creek Road. Between Topanga Canyon Boulevard and Big Rock Drive, PCH is constrained by residential uses on the south side and by the Santa Monica Mountains on the north side. Parking is allowed on both sides, and there are no crosswalks or sidewalks, so pedestrians walk on shoulders and/or between travel-lanes and parked vehicles.

The Topanga Beach is located just west of Topanga Canyon Boulevard along PCH. There is no pedestrian access (crosswalk) between the parking lot of the Topanga Beach and commercial uses (including Reel Inn) on the north side of PCH. The closest crosswalk is at the intersection of Topanga Canyon Boulevard/PCH approximately 700 feet east of the Topanga Beach parking lot. Additionally, because there are no sidewalks along PCH, pedestrians are not directed to walk to the intersection of Topanga Canyon Boulevard/PCH to cross PCH. There is an undercrossing at Topanga Lagoon about 800 feet west of Topanga Canyon. These existing conditions may encourage pedestrian crossing where no crosswalk is provided, creating hazards for pedestrians and drivers.

Between Big Rock Drive and Cross Creek Road, PCH is approximately 4.5 miles long. This segment has the highest pedestrian crossing volume and high peak-hour traffic volume. The high number of vehicles and pedestrians at the intersections compete for the same ROW during peak hours, resulting in friction between pedestrians and vehicular traffic.

The segment of PCH between Big Rock Drive and Las Flores Canyon Road has residential and multi-family structures on the south side and bluffs on the north side. Parking is allowed along PCH on both sides, and there are no crosswalks (except at signalized intersections) and no sidewalks. Without sidewalks, pedestrians must walk on shoulders and/or between travel-lanes and parked vehicles.

Between Las Flores Canyon Road and Rambla Vista (west), PCH has residential uses on both sides with some retail/commercial pockets. Parking is available on both sides, along with sidewalks, but

they lack continuity. The south side sidewalk is narrow (less than 4 feet) with walkways partially or fully obstructed by street furniture (signs, trash cans, fire hydrants, etc.), electric poles, and trees. The residential units along this segment of PCH (on the south side only) are closely spaced, and each home has driveway access to its garage. Pedestrians using the sidewalks along this section of PCH have to watch for vehicles pulling in and out of these closely spaced (20–50-foot spacing) driveways. A continuous sidewalk is provided on the north side of PCH for approximately 900 feet west of Rambla Pacifico Street. Access to commercial uses on the northern side of PCH is provided via Rambla Pacifico Street and Rambla Vista (east). The remaining portion of this segment does not have a sidewalk on the north side of PCH, forcing pedestrians to walk on shoulders and/or between travel-lanes and parked vehicles. An unsignalized painted crosswalk at 21440 PCH provides a pedestrian connection between residential uses north of PCH and beaches on the south side. This painted crosswalk is approximately 0.3 mile from the nearest signalized crosswalk at the intersection of Rambla Pacifico Street/PCH.

The segment of PCH between Rambla Vista (west) and Cross Creek Road has residential uses on the south side with some pockets of residential and commercial uses on the north side. This segment of PCH has continuous sidewalks on both sides, and on-street parking is available on both side of the street. The sidewalks along PCH are partially obstructed by street furniture (signs, fire hydrants, etc.), light poles, and trees. Pedestrians using the sidewalk have to watch for vehicles pulling in and out of residential driveways. The sidewalk on the north side of PCH is wider and has fewer residential driveways than the sidewalk on the south side. Three signalized crosswalks are at 22333, 22730, and 23068 PCH, which provide pedestrian connection between residential uses and parking north of PCH, and beaches and recreational uses on the south side. Unsignalized painted crosswalks located at the La Costa Beach Club and 22506 PCH (midblock) also provide pedestrian connections between residential uses north of PCH and beaches on the south side.

Study Area 2: Cross Creek Road to Busch Drive. At 8 miles long, this stretch of PCH is the longest segment in the study area. It has some pockets (primarily near commercial areas) of pedestrian activity. The overall pedestrian activity along this segment is low compared to the second segment (between Big Rock Drive and Cross Creek Road).

The segment of PCH between Cross Creek Road and Latigo Canyon Road has open spaces and recreational uses on both sides, with some residential and retail/commercial pockets. Most of the roadway within this segment is divided, and parking is available on both sides. There are no crosswalks except at signalized intersections and no sidewalks.

The segment of PCH between Latigo Canyon Road and Busch Drive has residential uses on both sides, with some retail/commercial pockets. Most of the roadway is divided, and parking is available on both sides. The residential and commercial development along this segment of PCH is sparse. There are no crosswalks except at signalized intersections or sidewalks. Access to St. Aiden School is provided via PCH and is located at 28211 PCH. No pedestrian facilities, crosswalks or sidewalks, are provided for students. Paradise Cove has high pedestrian activity, with much of it to and from vehicles parked on PCH.

Study Area 3: Busch Drive to Western City Limits. The segment of PCH between Busch Drive and Western City Limits is approximately 7.8 miles, with a mix of residential and recreational uses.

The overall pedestrian activity along this segment is lower than that of the second segment (between Big Rock Drive and Cross Creek Road). Malibu High School, Malibu Middle School, and Juan Cabrillo Elementary School are located along this segment of PCH, and access is provided via Morning View Drive. There is no direct access to the school from PCH. Parking is available on both sides, and there are no crosswalks except at signalized intersections or sidewalks along PCH within this segment. Most of the pedestrian activity across PCH occurs within this segment around the Zuma Beach area where visitors park their vehicles along PCH and in the residential area and walk to the beach.

Most pedestrians crossing PCH in this study area do so at the intersection of Morning View Road/ PCH, mainly on the weekends as visitors park in the residential neighborhoods and walk to Zuma Beach. Additionally, this intersection provides access to Malibu High School, Malibu Middle School, and Cabrillo Elementary School. Students use the Los Angeles Metropolitan Transportation Authority bus system to access the school and the sidewalks to walk from the bus stop at PCH to the school. Also, some parents drop off their children at the Zuma Beach Parking lot. From there, they use the pedestrian crosswalk at the intersection of Morning View Drive/PCH to cross over to the north side of PCH so they can use the sidewalks along Morning View Drive to walk to school.

Without pedestrian infrastructure (sidewalks and crosswalks) pedestrians share the same ROW as vehicles. Separating the two flows (pedestrians and vehicles) and creating safe pedestrian spaces (i.e., sidewalks, illumination, reservoir spaces) may enhance safety for pedestrian movements.

Pedestrian Traffic Volumes

Pedestrian volumes were collected at 12 locations during weekday a.m. peak hour (7:00 a.m. to 9:00 a.m.) and p.m. peak hour (4:00 p.m. to 6:00 p.m.) and weekend midday (11:00 a.m. to 1:00 p.m.) along PCH as shown in Figure 15. The pedestrian volume data are included in Appendix F. As seen in Figure 12, the pedestrian activity along PCH is higher during the weekend midday peak than in the weekday peak hours. Also, pedestrian volume crossing PCH is high. However, at the intersection of Bonsall Drive/PCH and Kanan Dume Road/PCH, the pedestrian traffic along PCH is higher than the pedestrian traffic across PCH during the peak hours. The majority of the pedestrian activity across PCH occurs between Topanga Canyon Boulevard and Cross Creek Road. The peak-hour pedestrian activity is high at the intersection of Morning View Drive/PCH, Webb Way/PCH, Cross Creek Road/ PCH Malibu Pier/PCH, and 22730 PCH.

Pedestrians crossing PCH during the weekday a.m., p.m., and weekend midday were counted at six locations in Study Area 1, seven locations in Study Area 2, and one location in Study Area 3. The highest number of pedestrians crossing PCH in Study Area 1 is 629 at the Malibu Pier signal; in Study Area 2, 236 cross at the intersection of Cross Creek Road/PCH; and 136 cross at the intersection of Morning View Drive/PCH in Study Area 3 during the weekend midday peak hour.

Pedestrian Collisions

From 1996 to 1998, 18 traffic collisions in the City involved pedestrians, one of them fatal. Between January 2010 and June 2012, 14 pedestrian collisions occurred in the City, three of them fatal. Of the three pedestrian fatalities, in only one collision was the pedestrian off the roadway. In this incident,

no sidewalk was present, and the pedestrian was walking on the shoulder when she was struck by a vehicle.

Figure 14 illustrates the locations of recent pedestrian-involved traffic collisions. This figure shows two small clusters of pedestrian collisions on PCH near Paradise Cove Road and the Civic Center. Note that the peak-hour volume for pedestrians is high at the intersections of Cross Creek Road/PCH and Webb Way/PCH.

Study Area 3 has had the fewest traffic collisions (one) involving pedestrians over the past 30 months. Study Area 1 had 8, and Study Area 2 had five pedestrian collisions over the past 30 months. One fatal pedestrian collision occurred in Study Area 1. Two fatal pedestrian collisions occurred in Study Area 2.

PUBLIC PARTICIPATION

The residents of the City and users of PCH, who have daily experience with the existing conditions, had the opportunity to share their knowledge through the public participation process. Meetings were held at the City Hall on September 13, 2012; September 20, 2012; September 27, 2012; and October 4, 2012, for the express purpose of input and definition of existing conditions along the PCH corridor. Written and verbal comments were collected at each of these meetings. In addition, an online public engagement tool was available to the public between August 31, 2012, and October 12, 2012. During this period, 1,327 unique visitors used the website to leave 624 comments. A full summary report of this first round of public participation is provided in Appendix G. Public involvement and additional meetings will be scheduled to gain public input on the safety assessment and recommended actions.

CONCLUSION

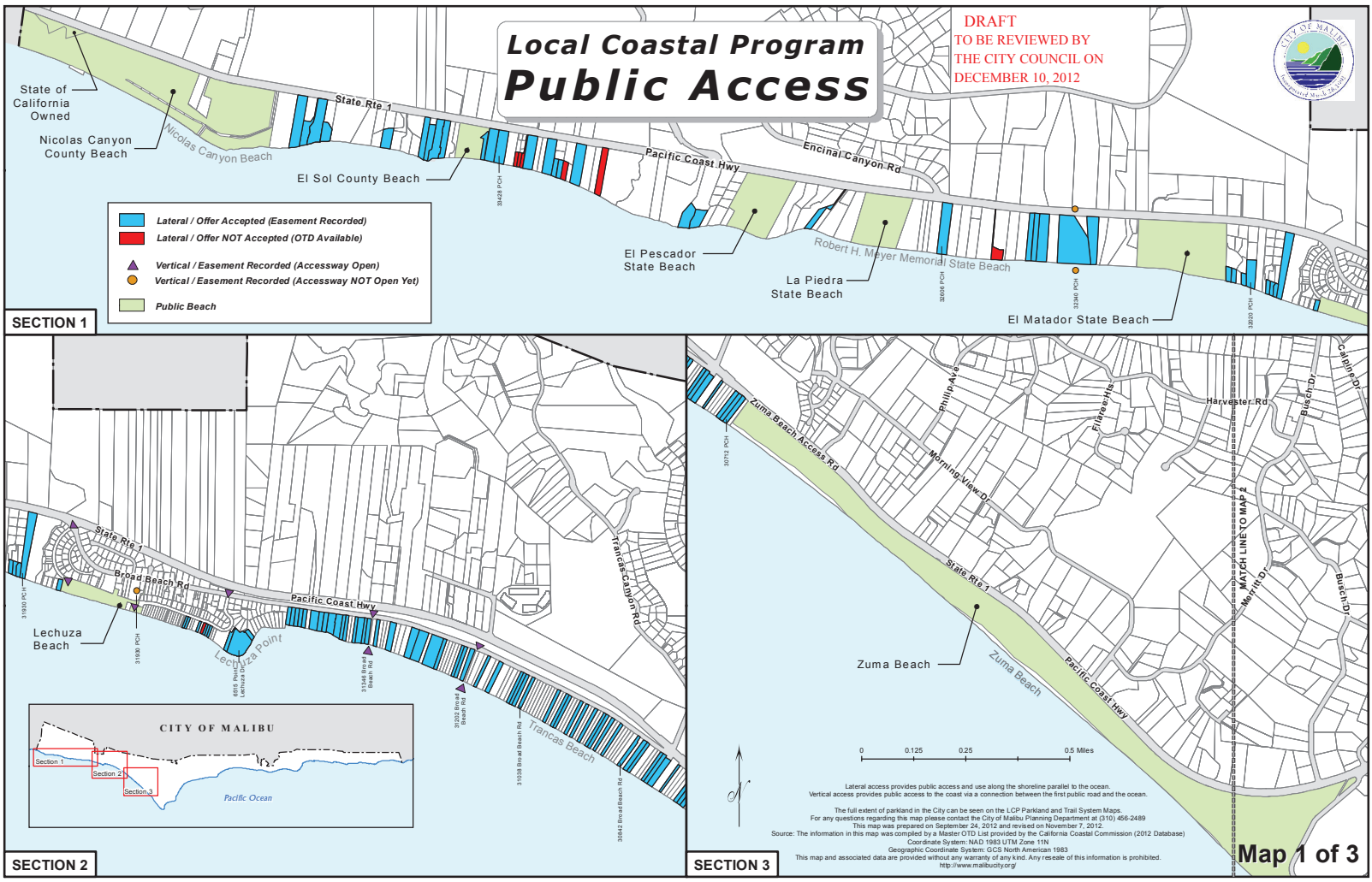
This existing condition report compiled data related to land use, vehicle traffic, collisions, transit, bicycles, and pedestrians. The data gathered and observations made so far leave these general impressions of the PCH corridor:

- Land uses on either side of PCH entice pedestrian crossing
- Traffic volumes have not increased dramatically in recent years
- Parking maneuvers affect traffic flow for all modes
- Collisions appear to be more prevalent at certain locations
- Unsafe speed (which includes excessive speed) is a frequently cited contributing factor
- Transit frequency is low and appears to have minimal impact on PCH
- Bicycles need to be accommodated within the flow of traffic on PCH
- Pedestrians need to be accommodated crossing PCH

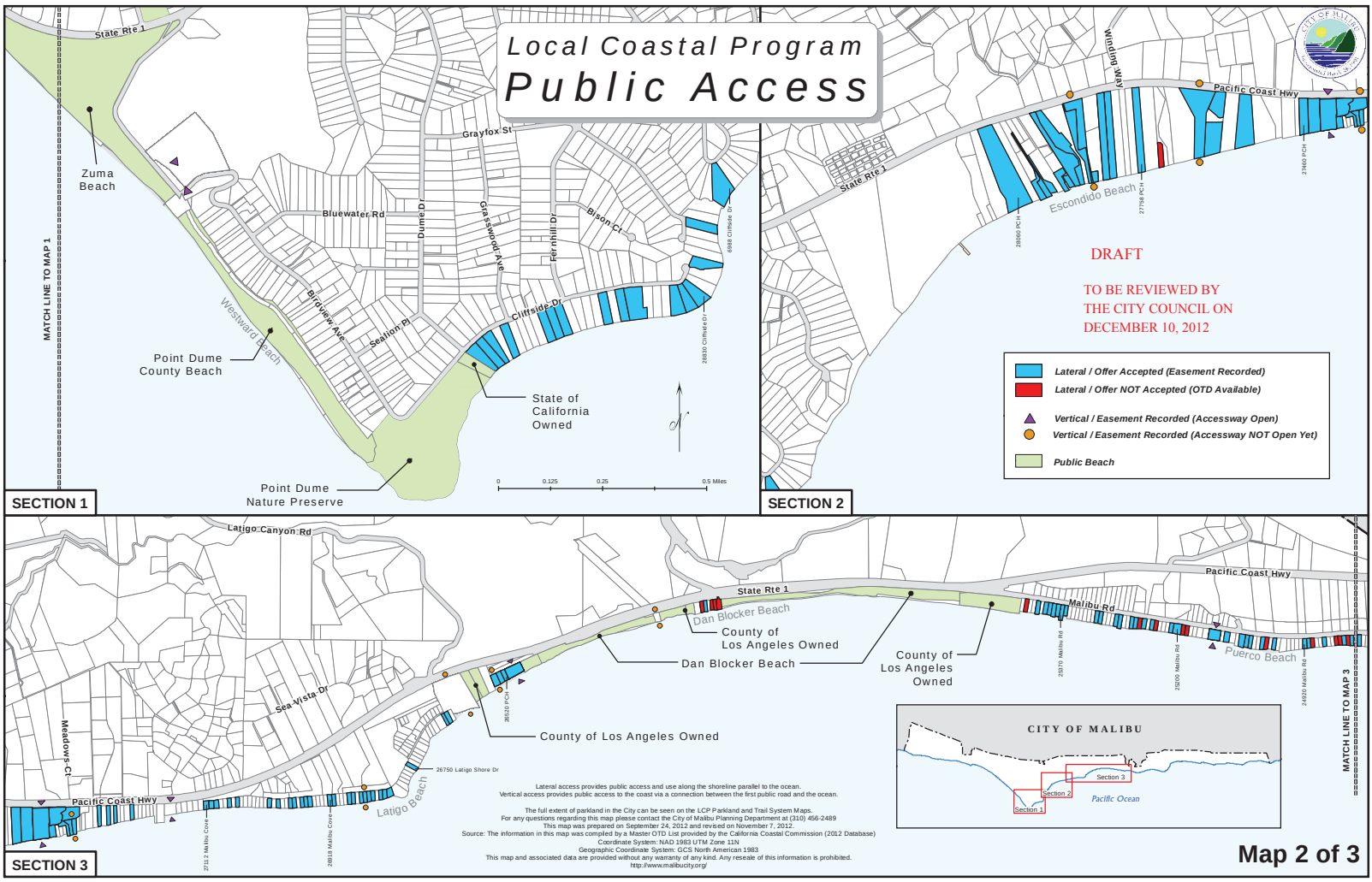
The setting revealed in this existing condition report, information gathered at the public meetings, and input generated from the online public engagement tool will be combined to create a safety assessment. The forthcoming safety assessment will identify key safety problems and will prioritize them to form the foundation for proposed solutions.

APPENDIX A

LOCAL COASTAL PROGRAM PUBLIC ACCESS MAPS


Local Coastal Program
Public Access
DRAFT
TO BE REVIEWED BY
THE CITY COUNCIL ON
DECEMBER 10, 2012
State of California Owned
Nicolas Canyon County Beach
Nicolas Canyon Beach
State Rte 1
El Sol County Beach
Pacific Coast Hwy
Encinal Canyon Rd
El Pescador State Beach
Robert H. Meyer Memorial State Beach
La Piedra State Beach
El Matador State Beach
Lateral / Offer Accepted (Easement Recorded)
Lateral / Offer NOT Accepted (OTD Available)
Vertical / Easement Recorded (Accessway Open)
Vertical / Easement Recorded (Accessway NOT Open Yet)
Public Beach
SECTION 1
Broad Beach Rd
Lechuza Beach
Lechuza Point
Trancas Canyon Rd
Trancas Beach
CITY OF MALIBU
Section 1
Section 2
Section 3
Pacific Ocean
SECTION 2
Zuma Beach Access Rd
Phillip Ave
Morning View Dr
Harvester Rd
Busch Dr
Calpine Dr
MATCH LINE TO MAP 2
Merritt Dr
Zuma Beach
Zuma Beach
0 0.125 0.25 0.5 Miles
Lateral access provides public access and use along the shoreline parallel to the ocean.
Vertical access provides public access to the coast via a connection between the first public road and the ocean.
The full extent of parkland in the City can be seen on the LCP Parkland and Trail System Maps.
For any questions regarding this map please contact the City of Malibu Planning Department at (310) 456-2489
This map was prepared on September 24, 2012 and revised on November 7, 2012.
Source: The information in this map was compiled by a Master OTD List provided by the California Coastal Commission (2012 Database)
Coordinate System: NAD 1983 UTM Zone 11N
Geographic Coordinate System: GCS North American 1983
This map and associated data are provided without any warranty of any kind. Any reseale of this information is prohibited.
http://www.malibucity.org/
SECTION 3
Map 1 of 3

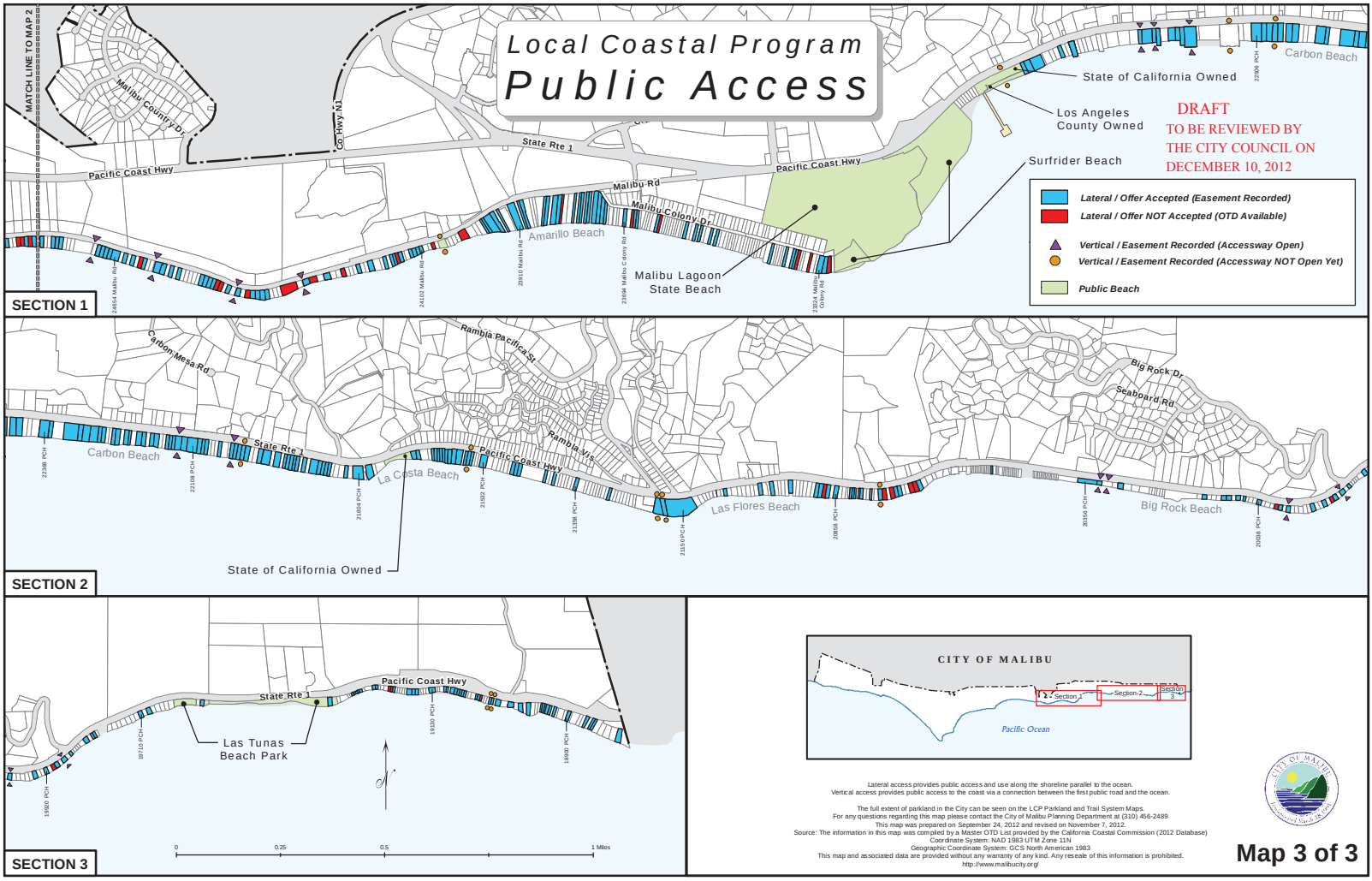
Local Coastal Program
Public Access



Lateral access provides public access and use along the shoreline parallel to the ocean.
Vertical access provides public access to the coast via a connection between the first public road and the ocean.

The full extent of parkland in the City can be seen on the LCP Parkland and Trail System Maps.
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This map was prepared on September 24, 2012 and revised on November 7, 2012.
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Geographic Coordinate System: GCS North American 1983
This map and associated data are provided without any warranty of any kind. Any reseale of this information is prohibited.
http://www.malibucity.org/

Map 2 of 3



Lateral access provides public access and use along the shoreline parallel to the ocean.
Vertical access provides public access to the coast via a connection between the first public road and the ocean.

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For any questions regarding this map please contact the City of Malibu Planning Department at (310) 456-2489
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This map and associated data are provided without any warranty of any kind. Any reseale of this information is prohibited.
http://www.malibucity.org/

Map 3 of 3

APPENDIX B

EXISTING VEHICULAR TRAFFIC VOLUME COUNTS

ITM Peak Hour Summary

Prepared by:

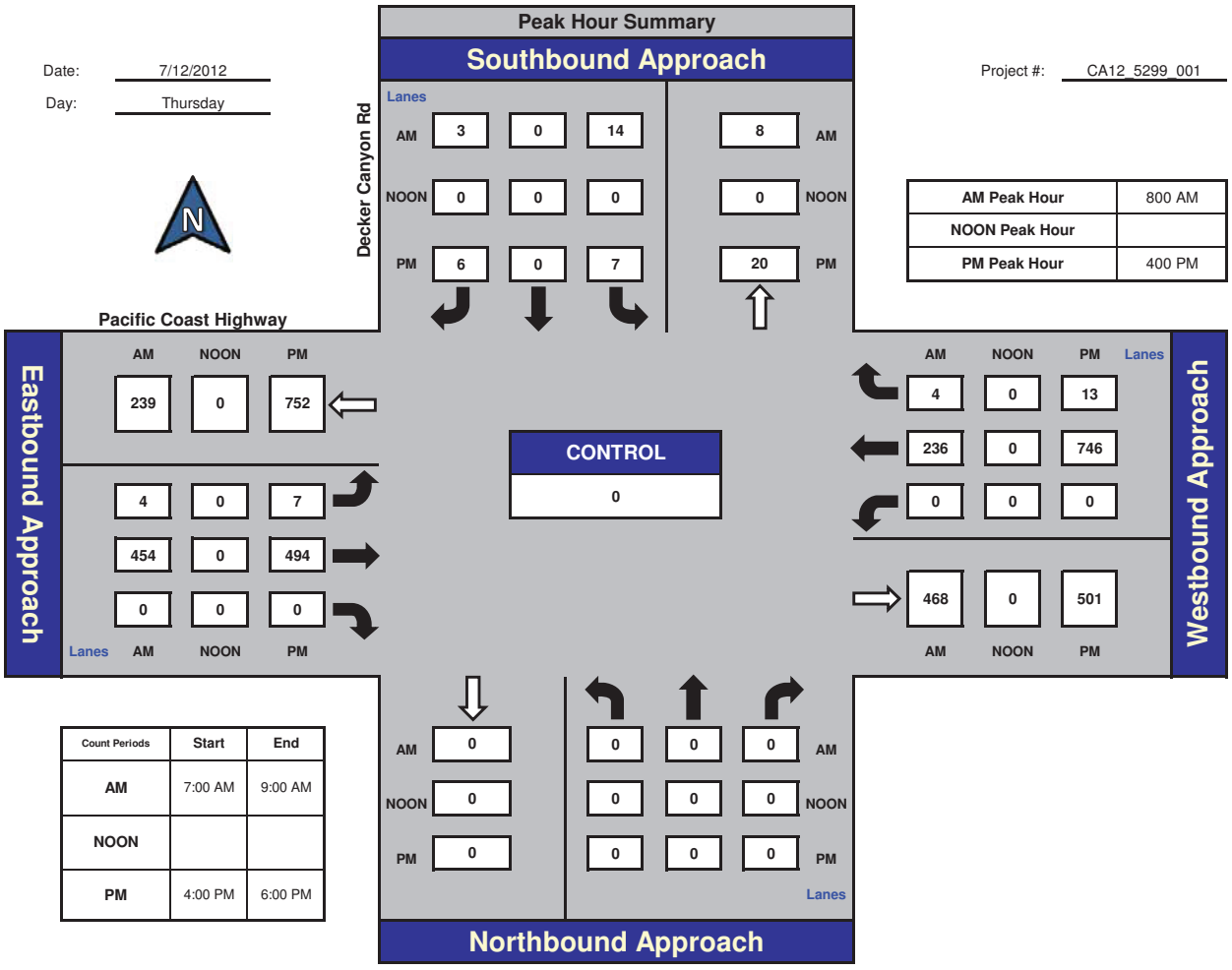
National Data & Surveying Services

Decker Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

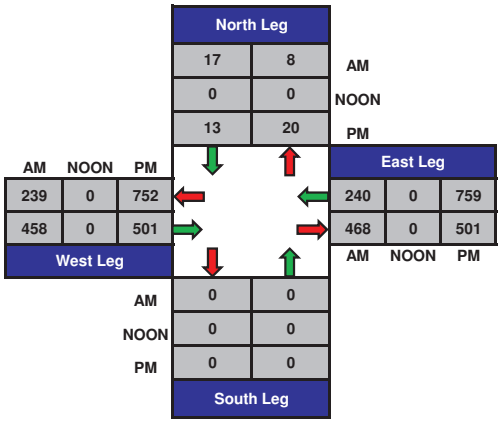
Project #: CA12_5299_001



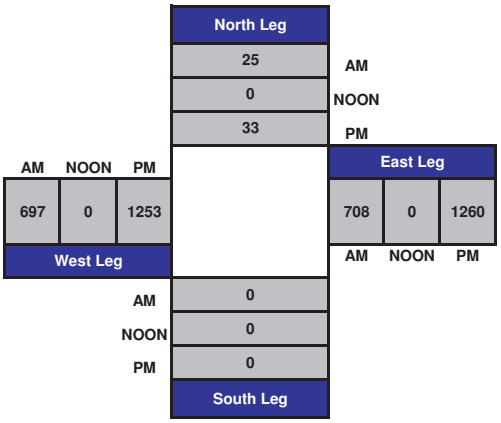
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

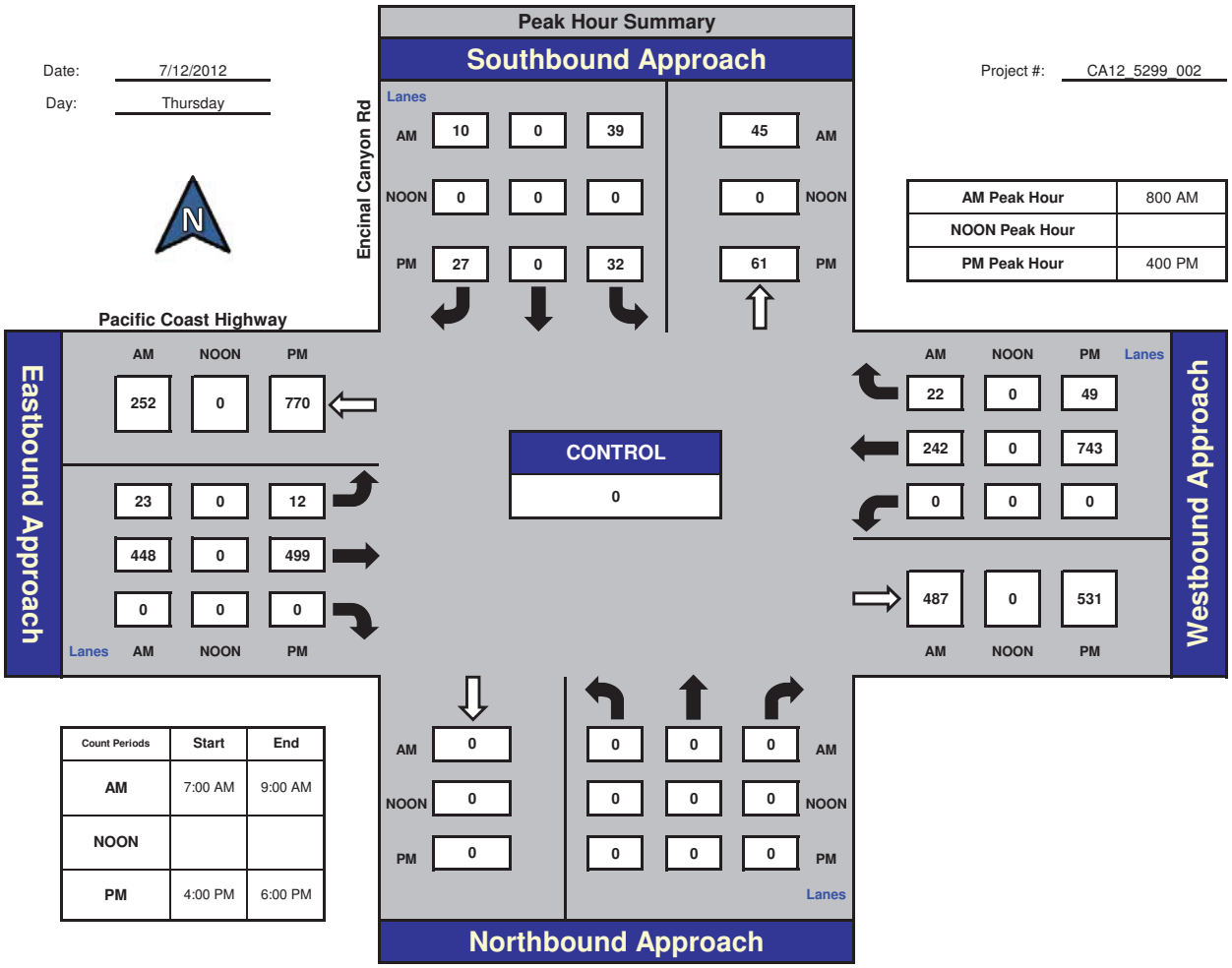
National Data & Surveying Services

Encinal Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

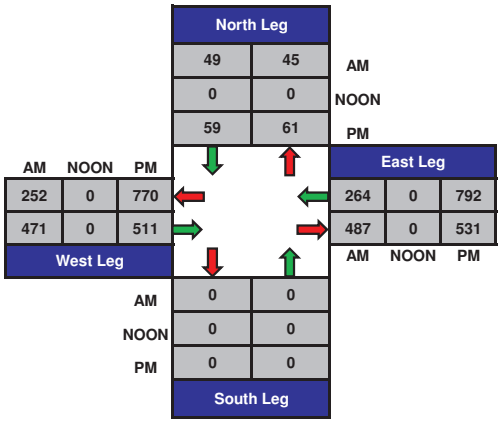
Project #: CA12_5299_002



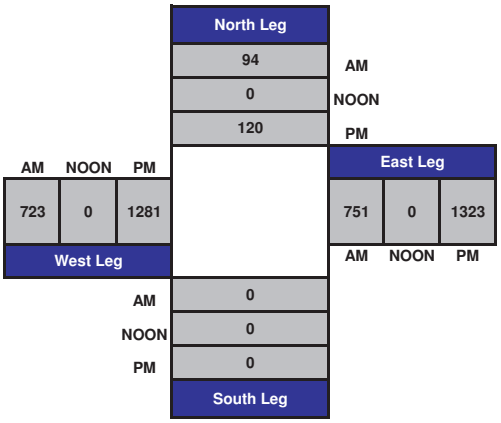
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Broad Beach Rd (west) and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

Project #: CA12_5299_003

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

North Leg		
0	0	AM
0	0	NOON
0	0	PM

West Leg			East Leg		
AM	NOON	PM			
295	0	799	303	0	800
500	0	585	504	0	587
			AM	NOON	PM

South Leg		
21	17	AM
0	0	NOON
29	30	PM

Total Volume Per Leg

North Leg	
0	AM
0	NOON
0	PM

West Leg			East Leg		
AM	NOON	PM			
795	0	1384	807	0	1387
			AM	NOON	PM

South Leg	
38	AM
0	NOON
59	PM

ITM Peak Hour Summary

Prepared by:

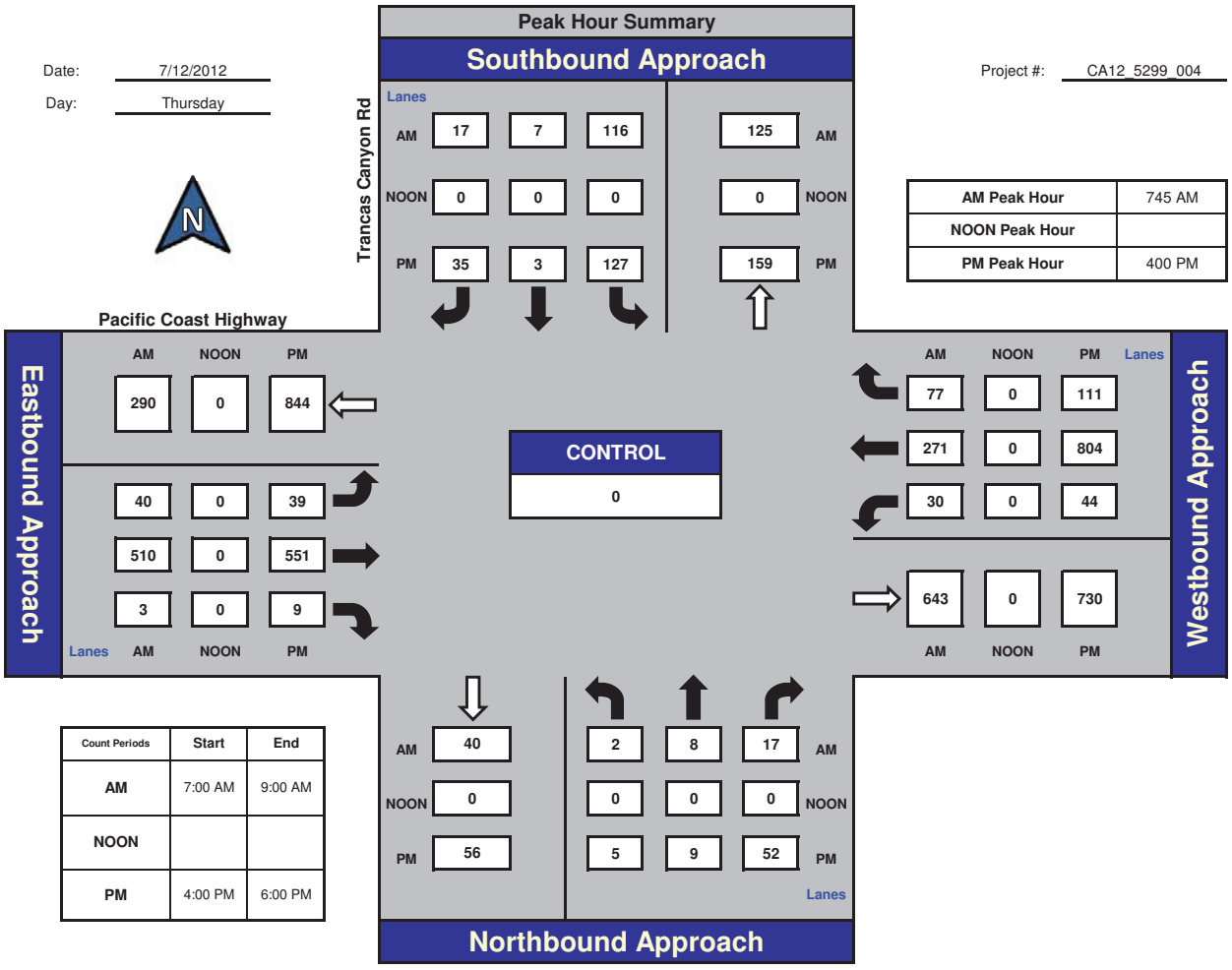
National Data & Surveying Services

Trancas Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

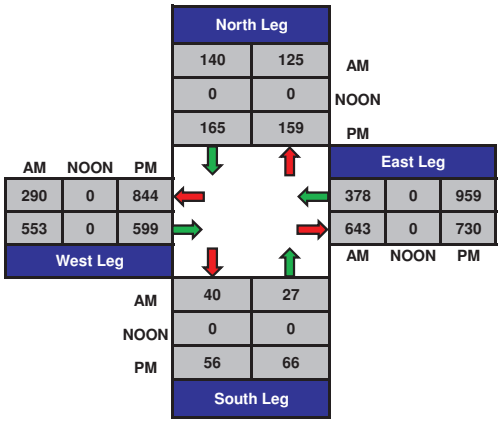
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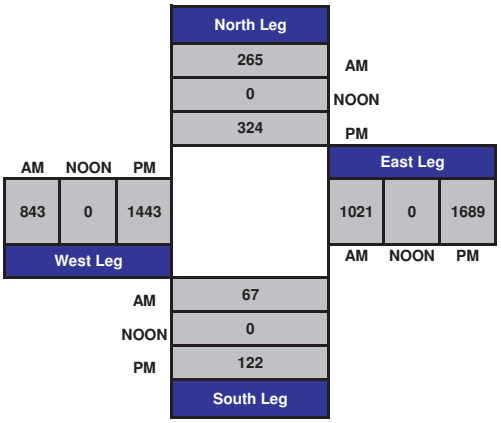
AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

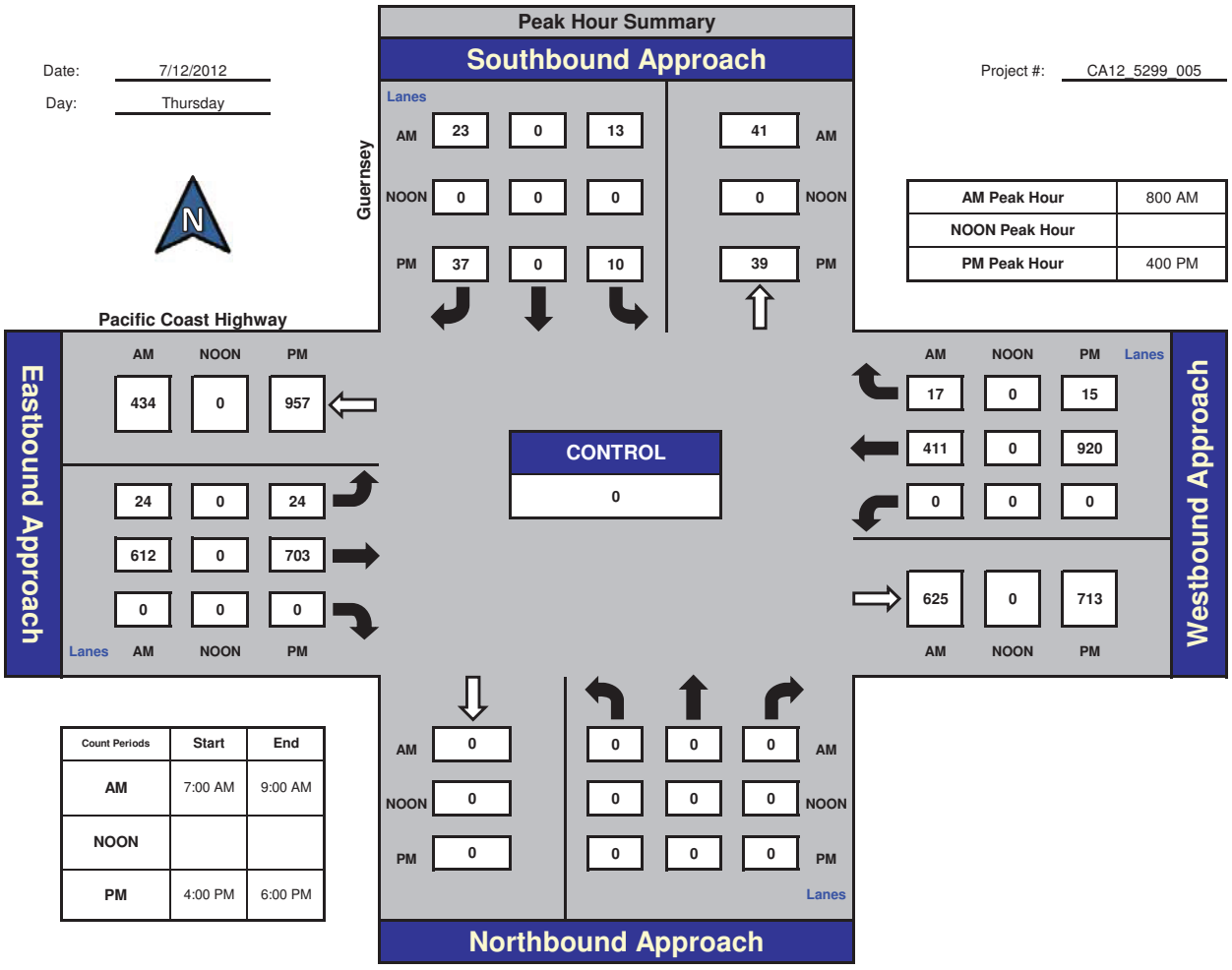
National Data & Surveying Services

Guernsey and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

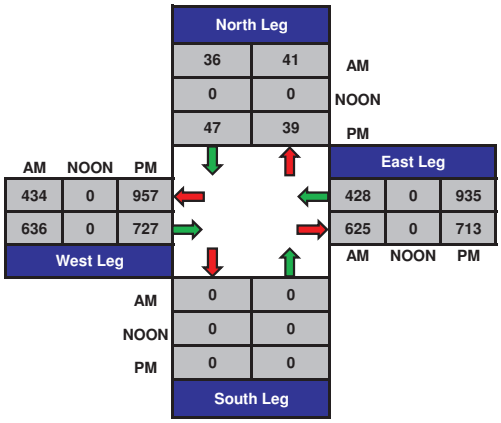
Project #: CA12_5299_005



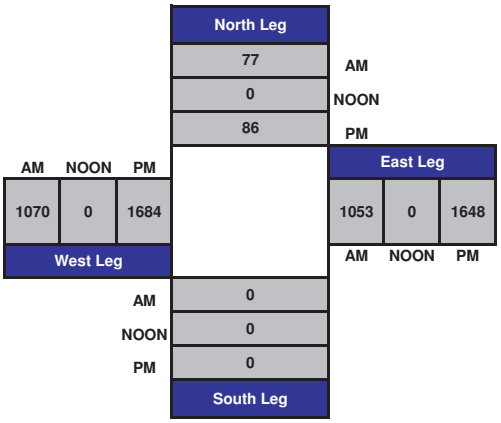
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Guernsey and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

Project #: CA12_5299_005

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Peak Hour Summary

Southbound Approach

Lanes					
AM	0	0	0	16	AM
NOON	0	0	0	0	NOON
PM	0	0	0	9	PM

Guernsey

Pacific Coast Highway

Eastbound Approach

Lanes	AM	NOON	PM
	0	0	0
	16	0	9
	0	0	0
	0	0	0

Westbound Approach

Lanes	AM	NOON	PM
	0	0	0
	0	0	0
	1	0	4
	0	0	0

UTURNS

CONTROL: 0

Northbound Approach

Lanes					
AM	1	0	0	0	AM
NOON	0	0	0	0	NOON
PM	4	0	0	0	PM

Total Ins & Outs

	North Leg		
AM	0	16	AM
NOON	0	0	NOON
PM	0	9	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
0	0	0		1	0	4
16	0	9		0	0	0

	South Leg	
AM	1	0
NOON	0	0
PM	4	0

Total Volume Per Leg

	North Leg	
AM	16	AM
NOON	0	NOON
PM	9	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
16	0	9	1	0	4

	South Leg
AM	1
NOON	0
PM	4

ITM Peak Hour Summary

Prepared by:

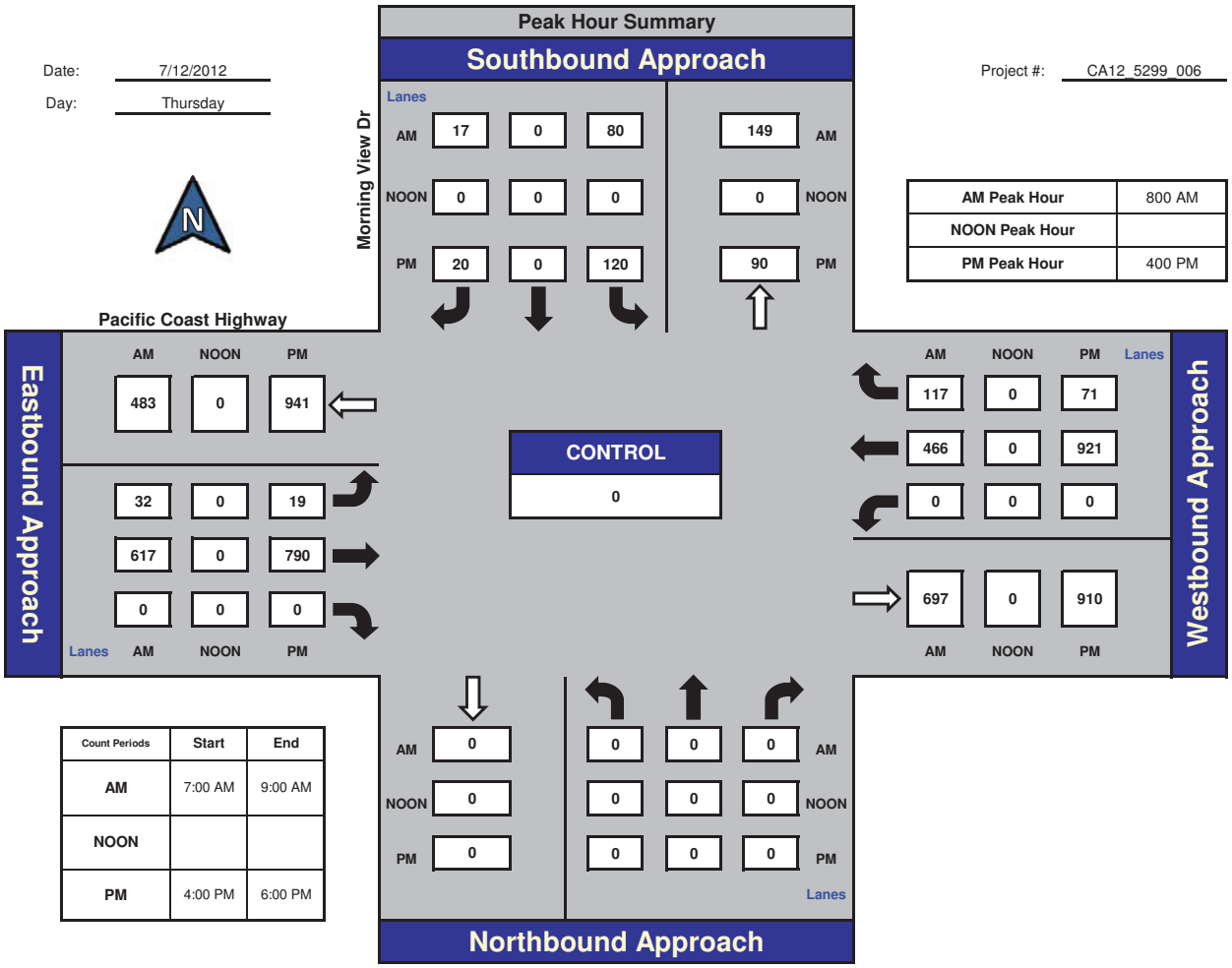
National Data & Surveying Services

Morning View Dr and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

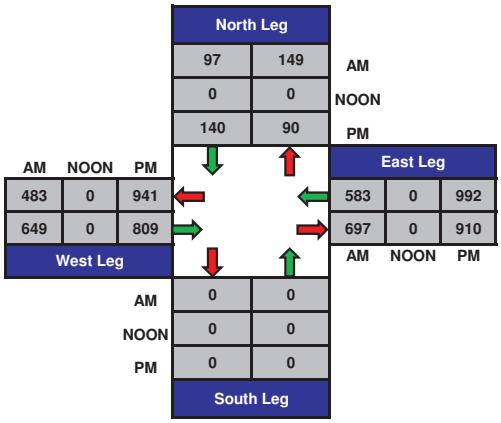
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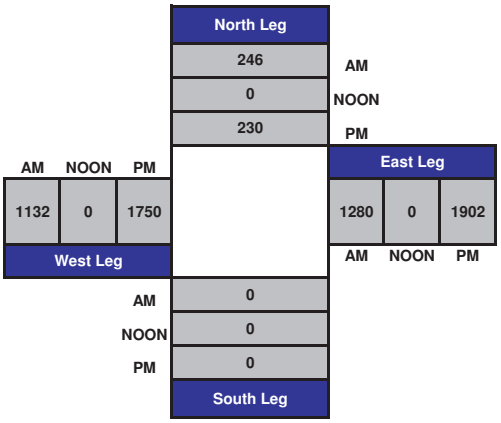
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

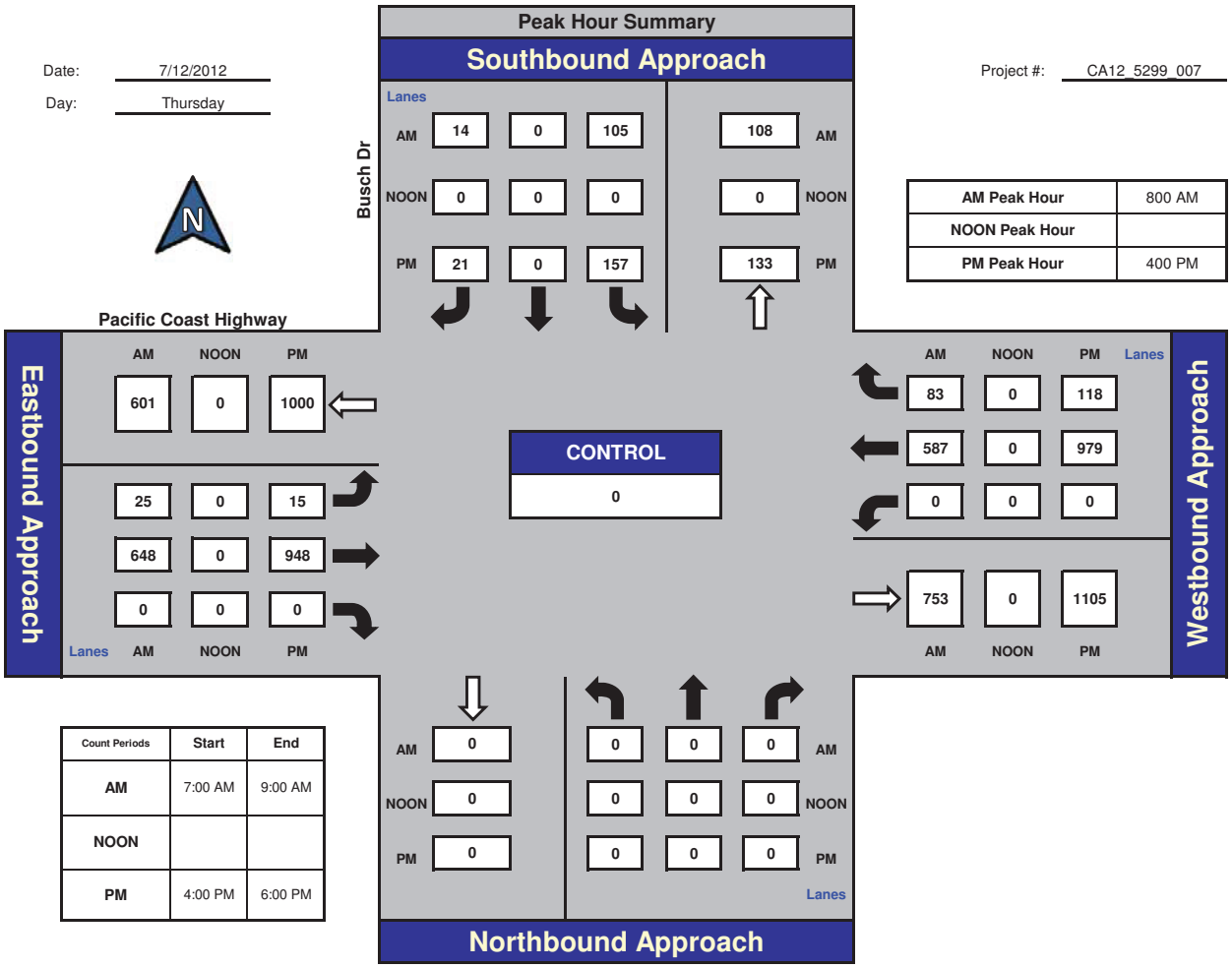
National Data & Surveying Services

Busch Dr and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

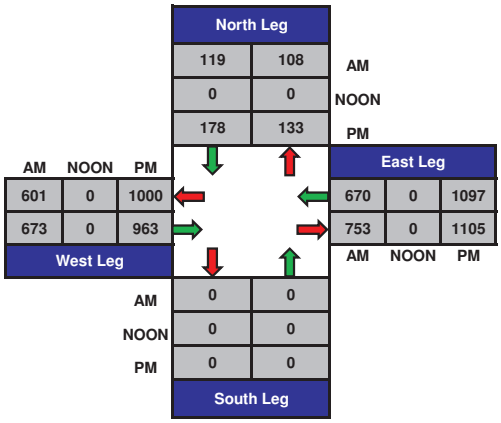
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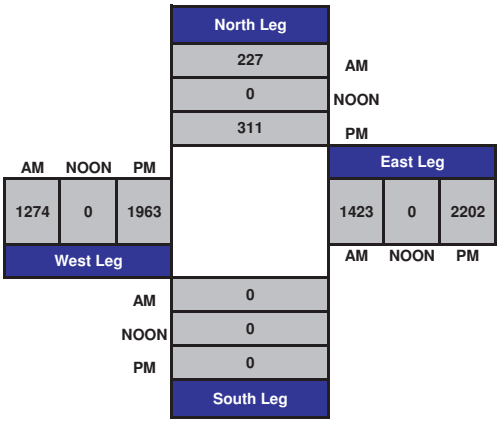
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

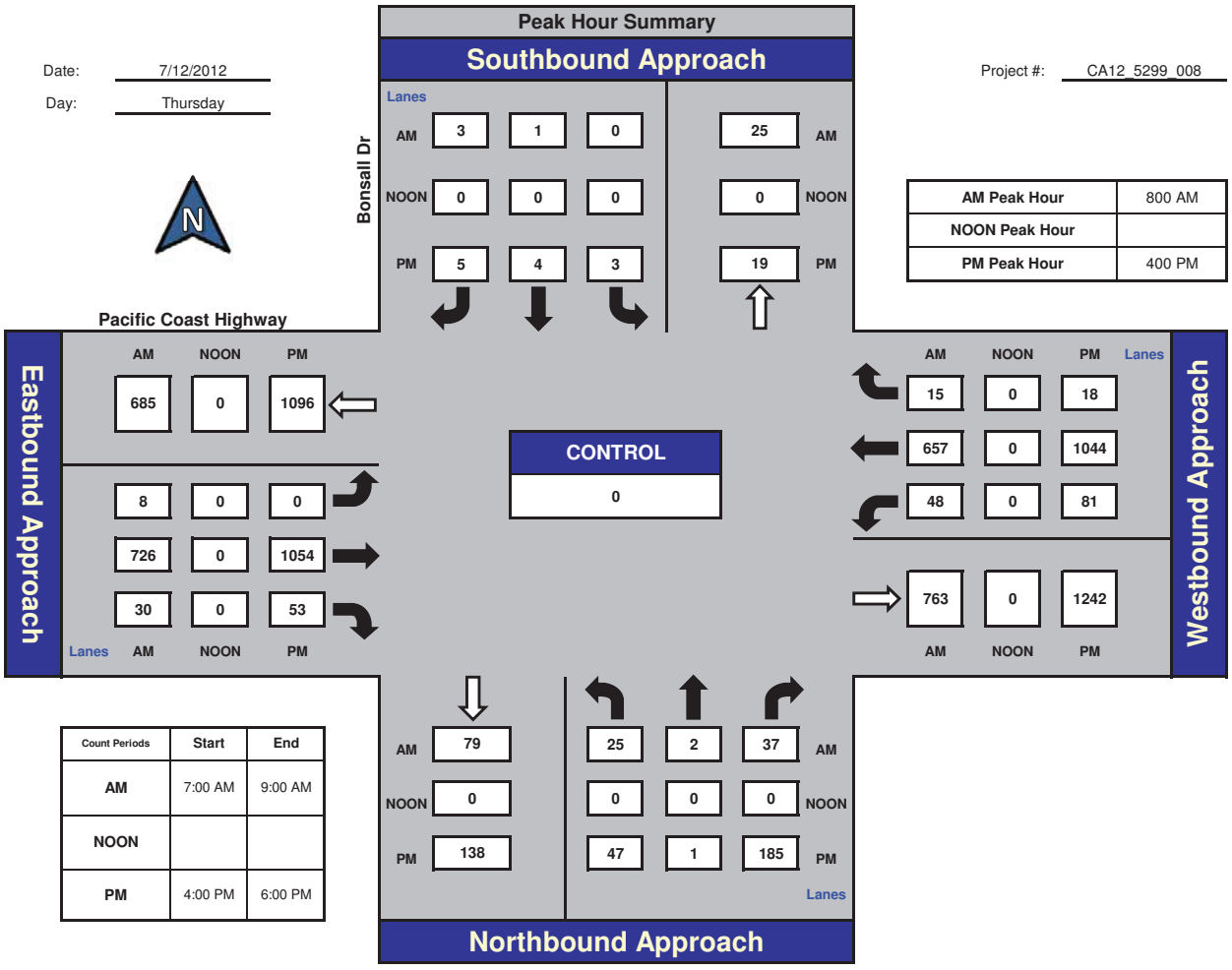
National Data & Surveying Services

Bonsall Dr and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

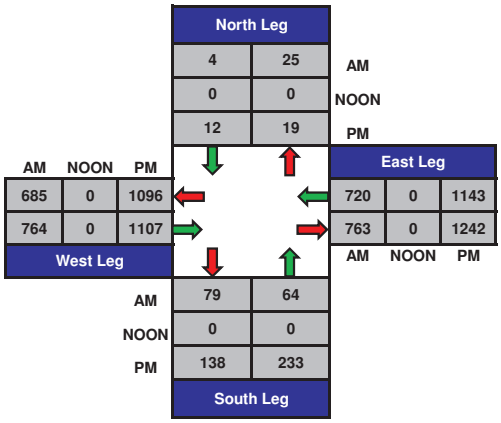
Project #: CA12_5299_008



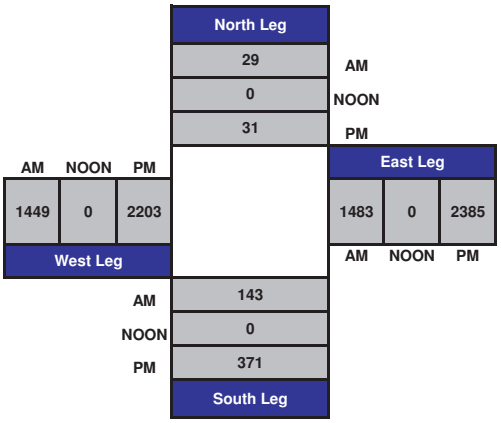
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

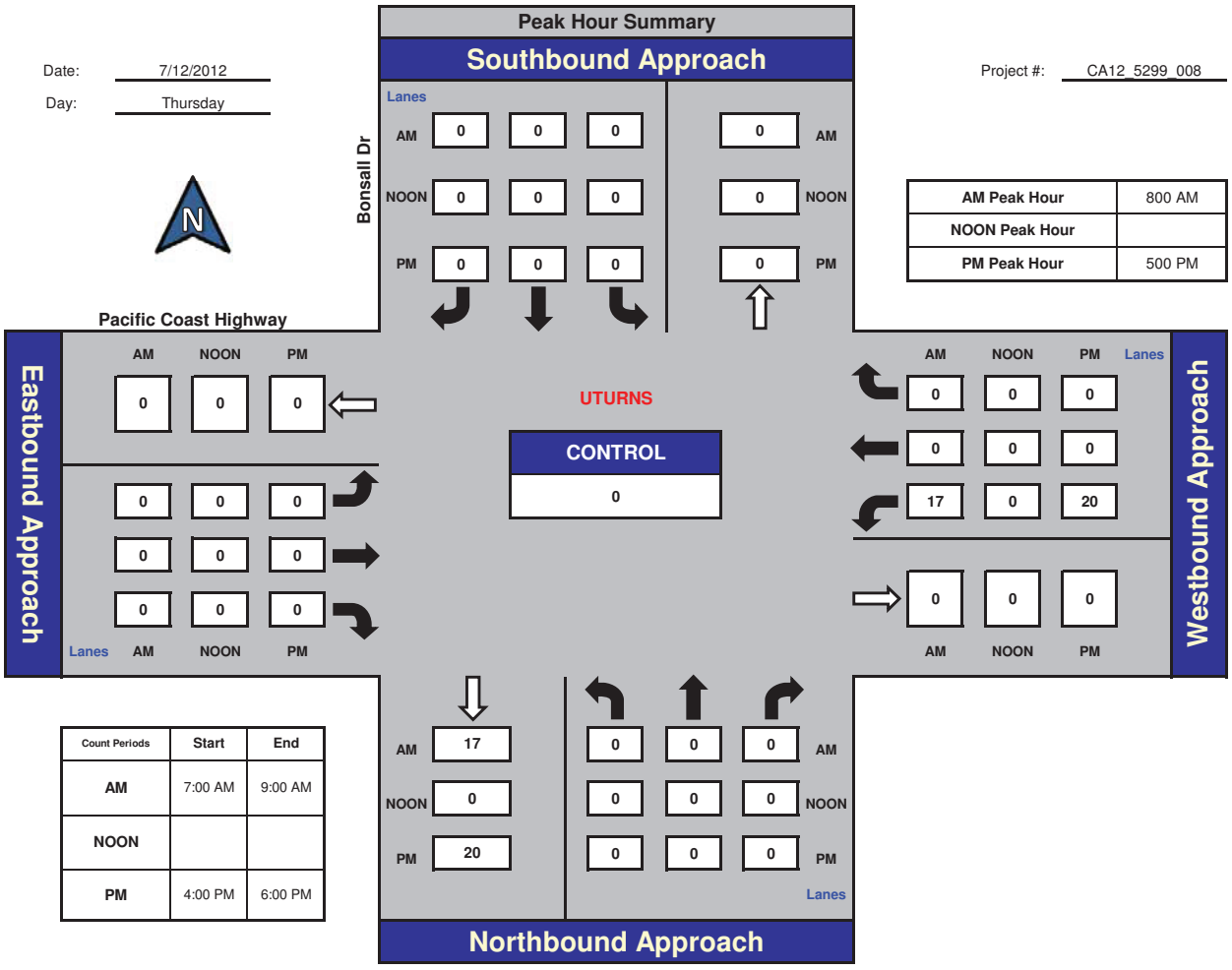
National Data & Surveying Services

Bonsall Dr and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

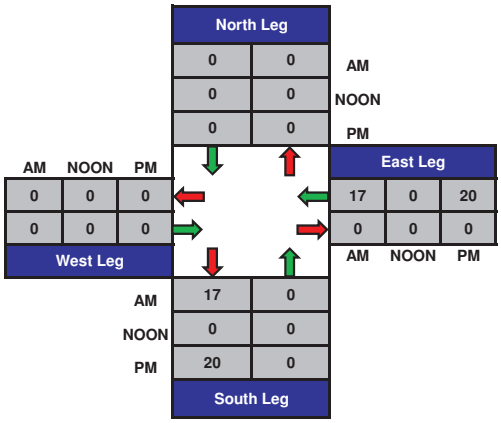
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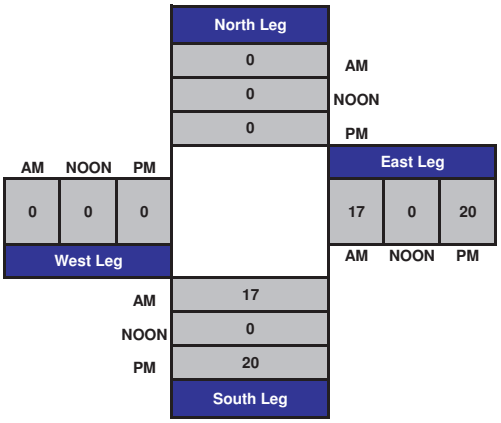
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

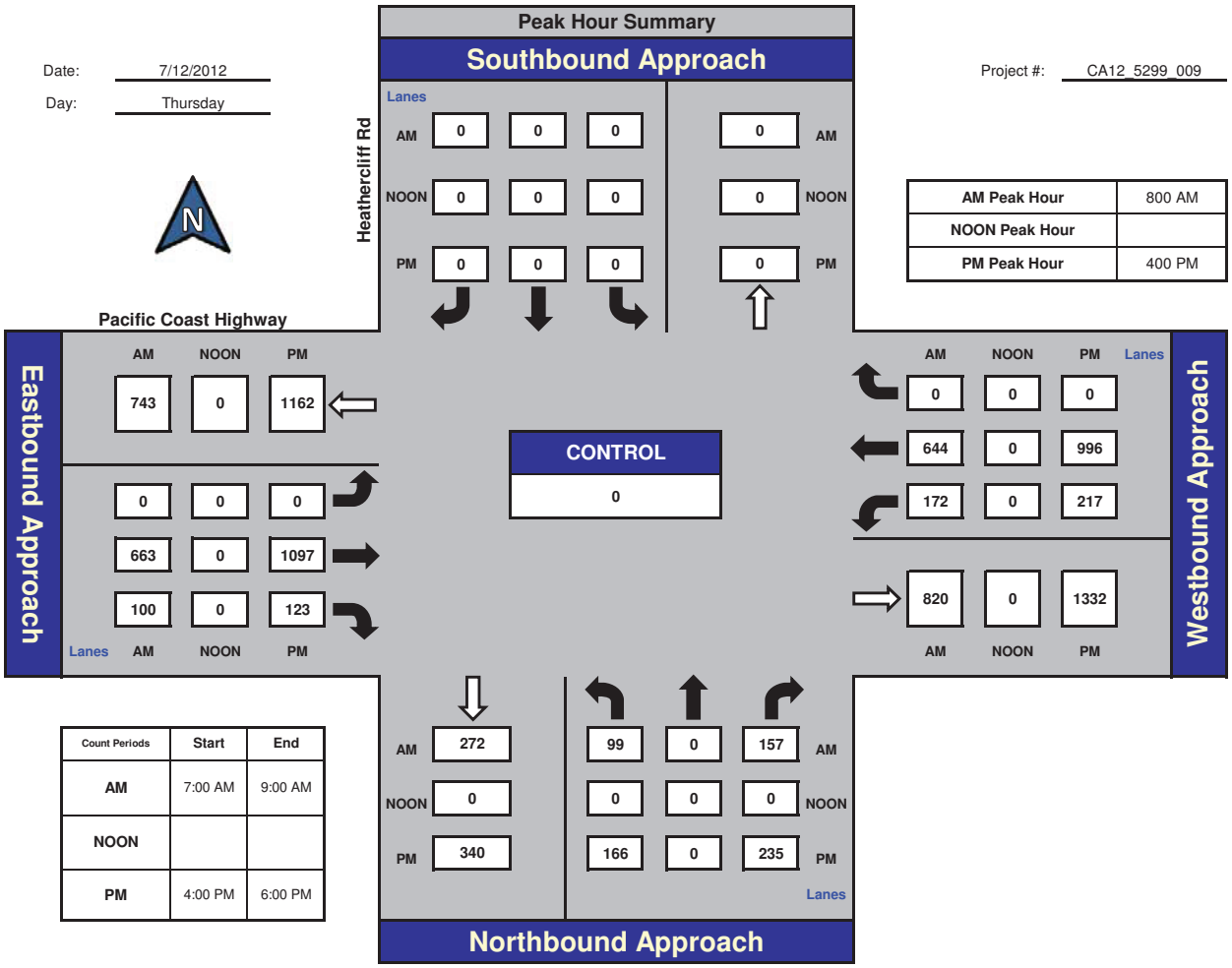
National Data & Surveying Services

Heathercliff Rd and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

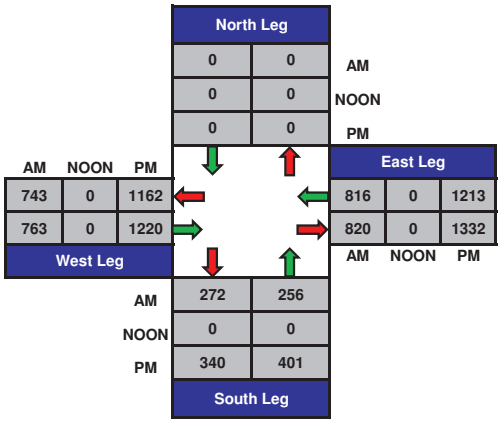
Project #: CA12_5299_009



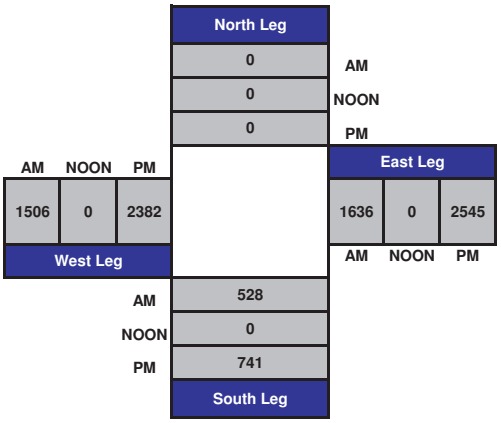
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

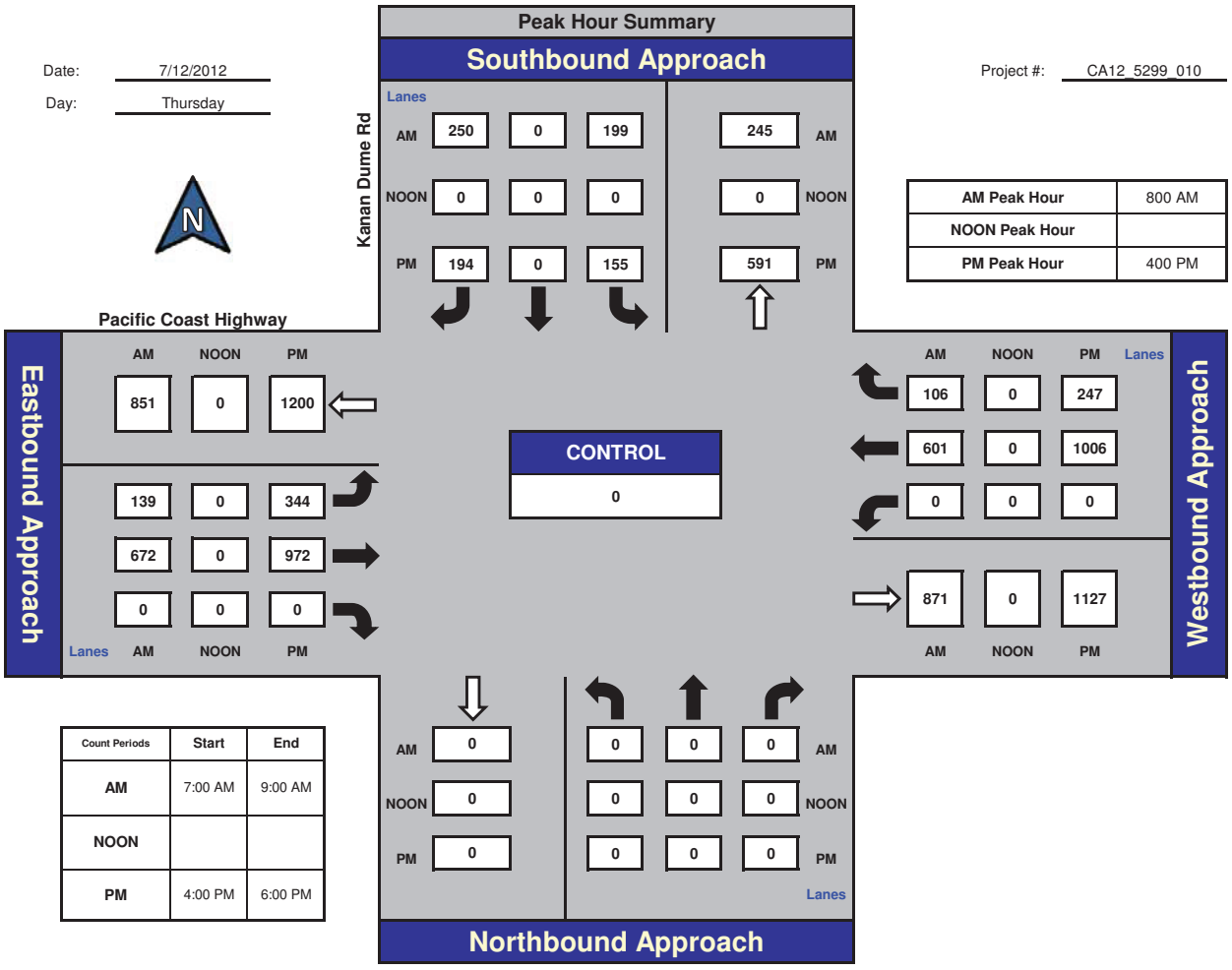
National Data & Surveying Services

Kanan Dume Rd and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

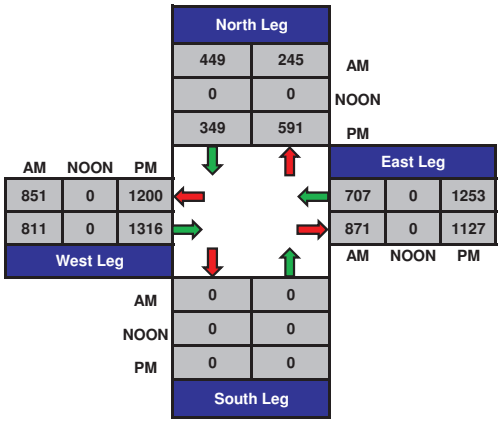
Project #: CA12_5299_010



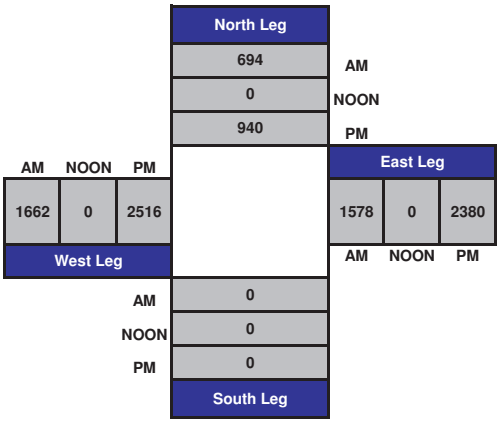
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

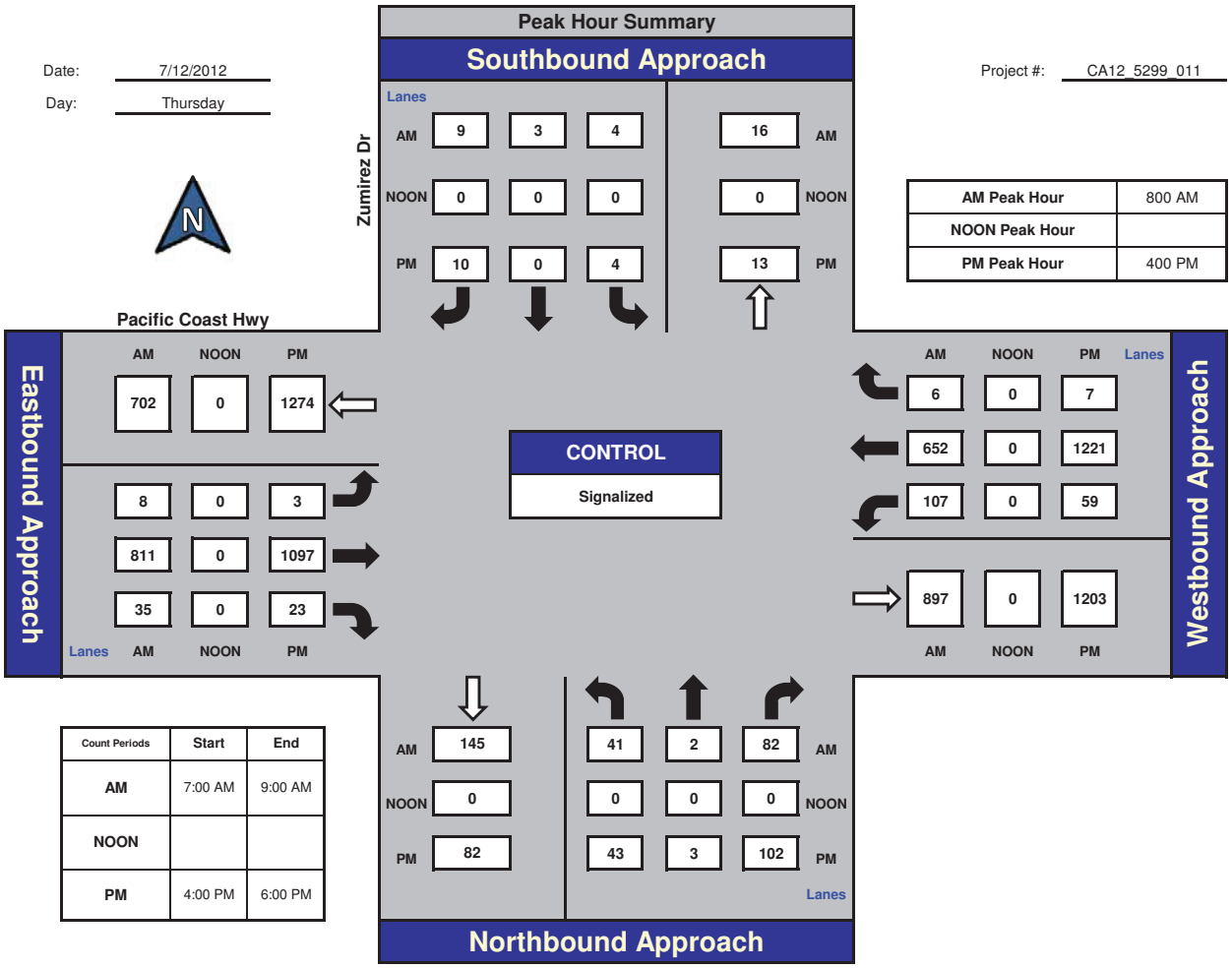
National Data & Surveying Services

Zumirez Dr and Pacific Coast Hwy , City of Malibu

Date: 7/12/2012

Day: Thursday

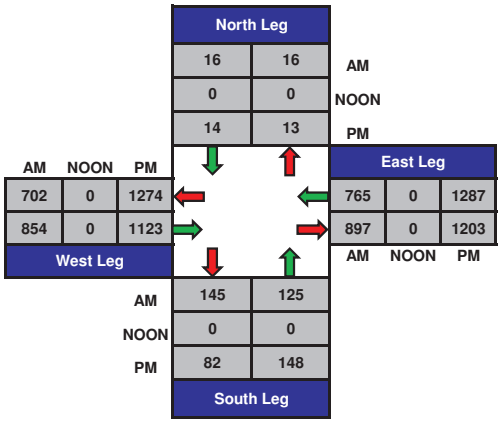
Project #: CA12_5299_011



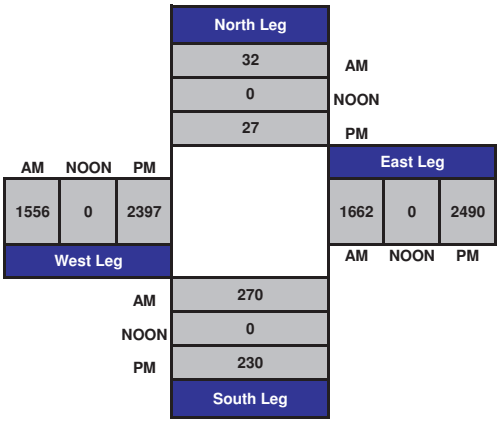
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

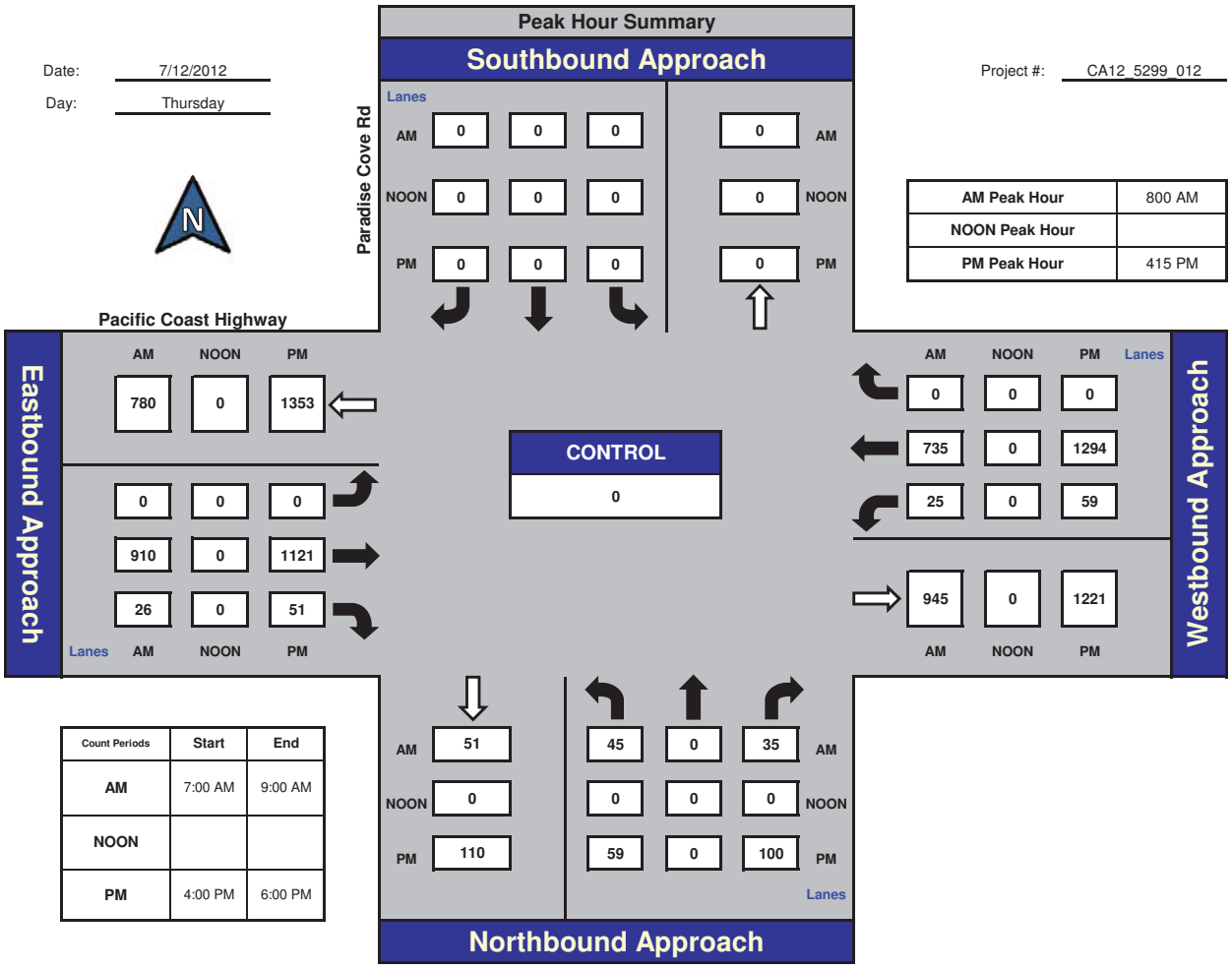
National Data & Surveying Services

Paradise Cove Rd and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

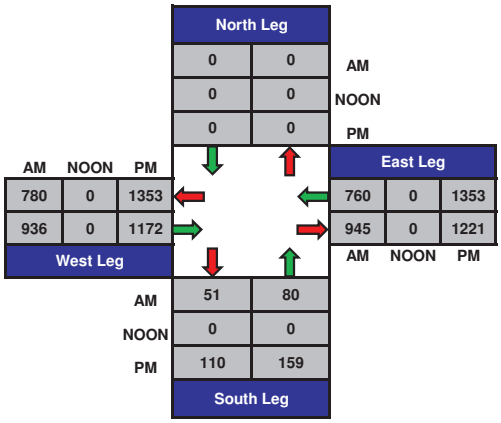
Project #: CA12_5299_012



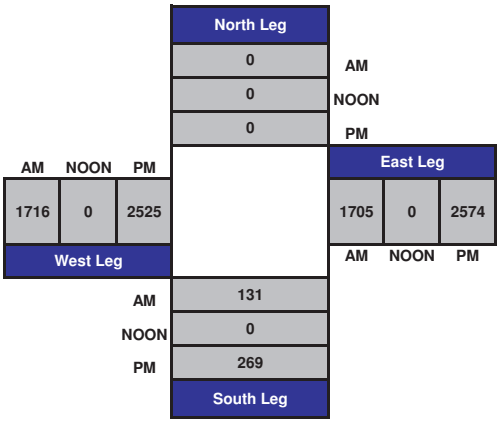
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

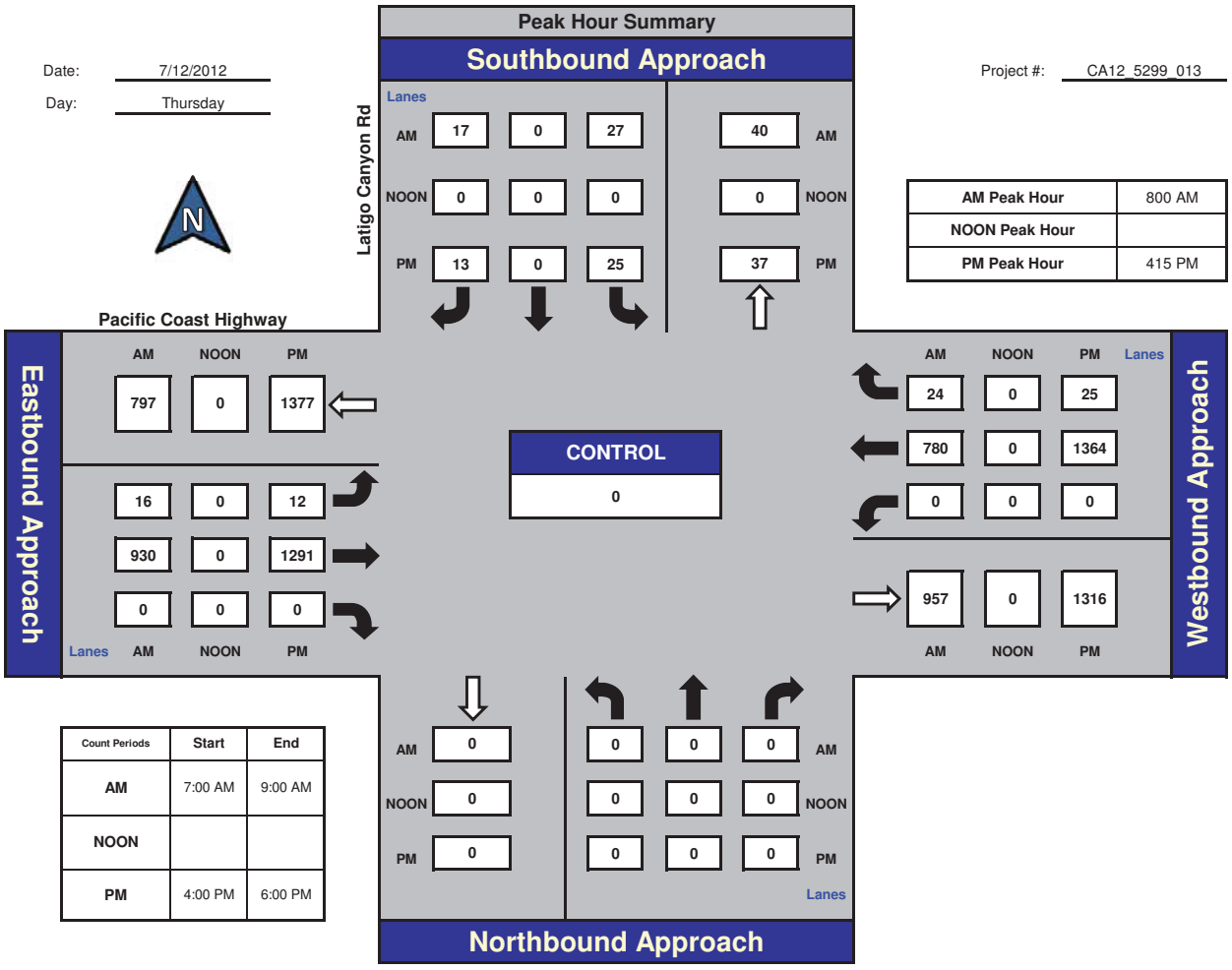
National Data & Surveying Services

Latigo Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

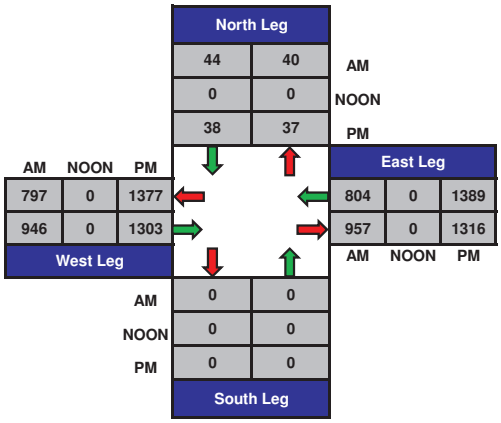
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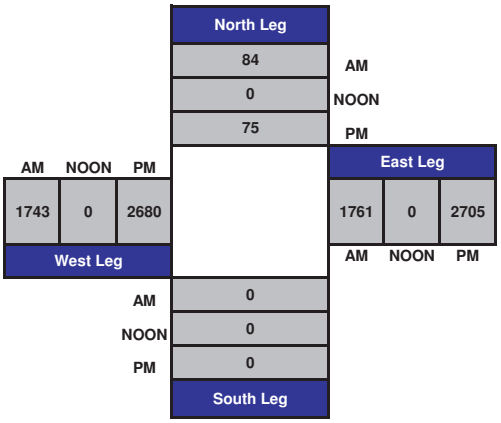
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

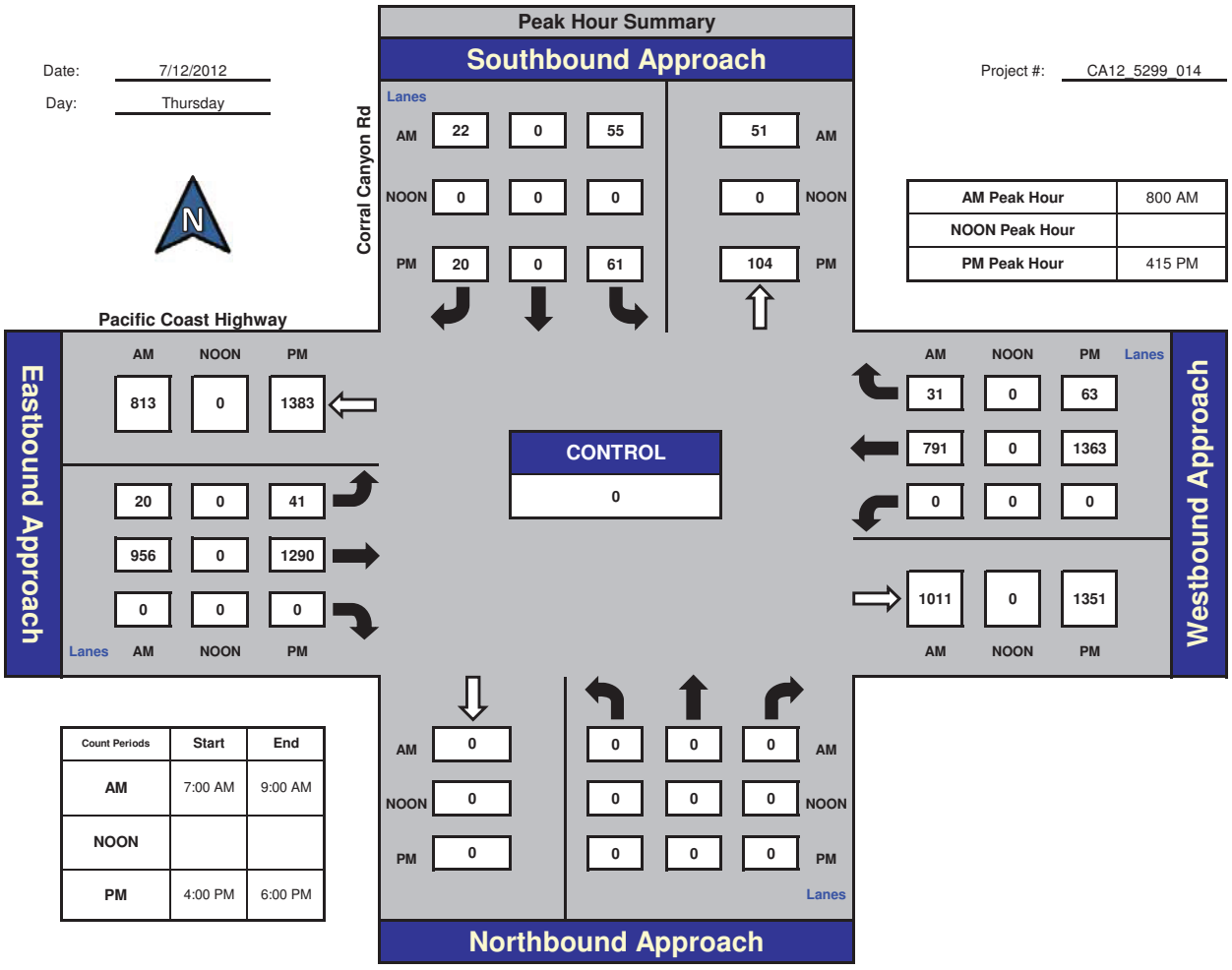
National Data & Surveying Services

Corral Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

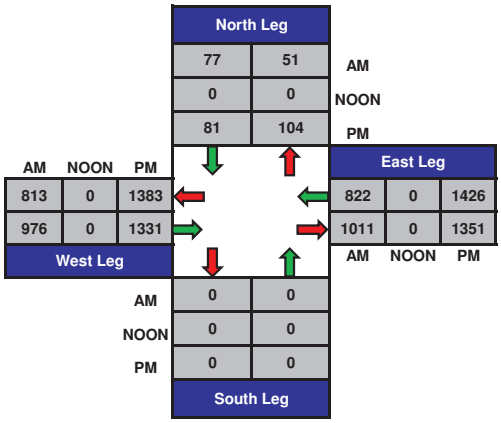
Project #: CA12_5299_014



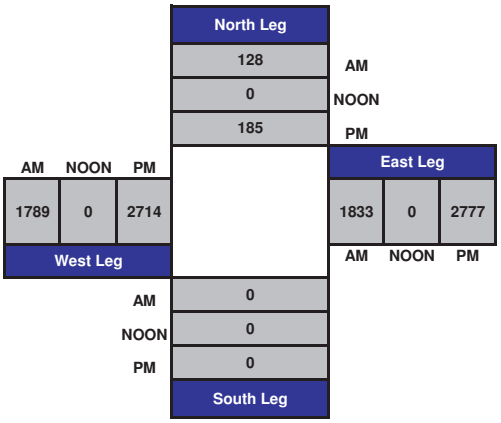
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

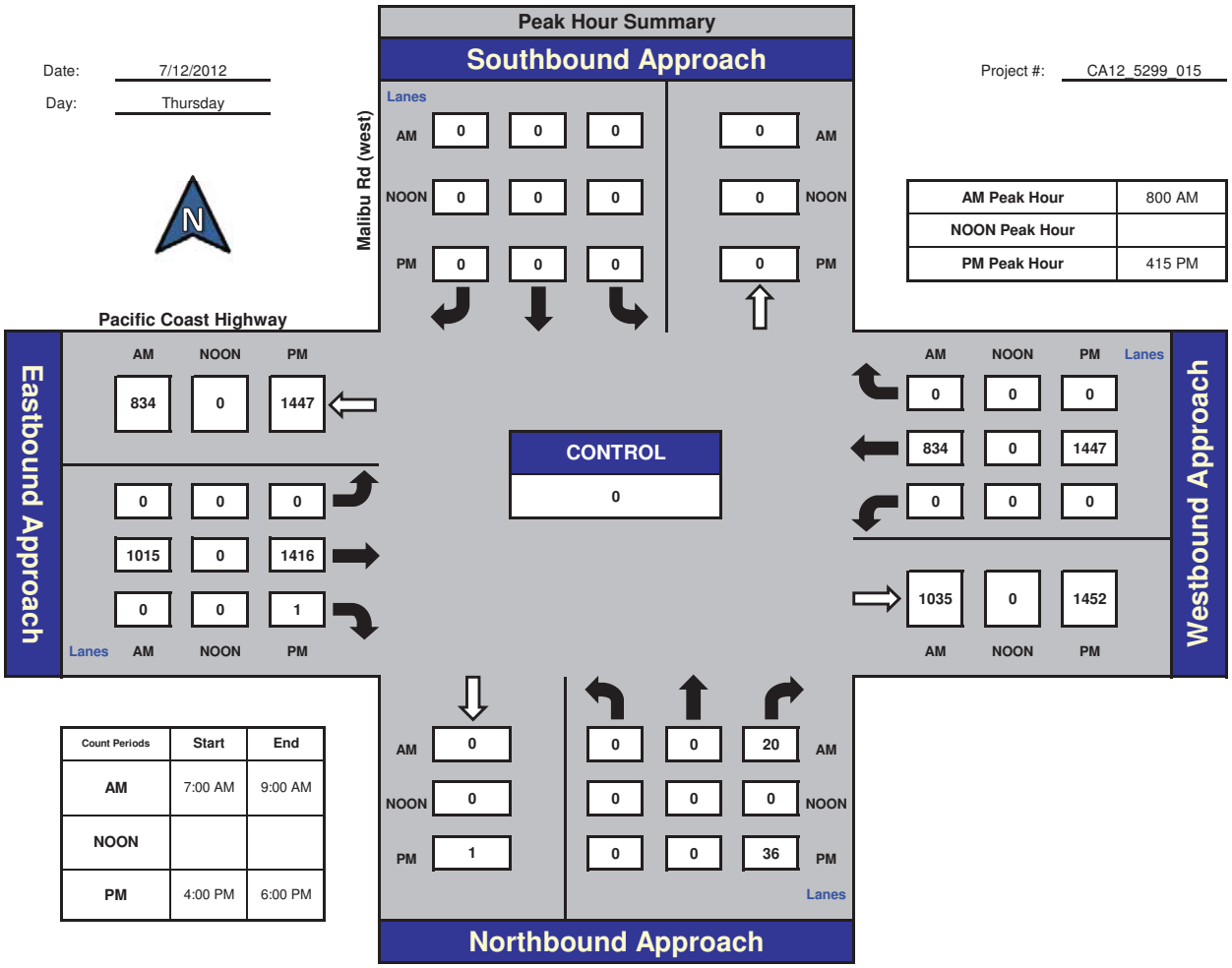
Malibu Rd (west) and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

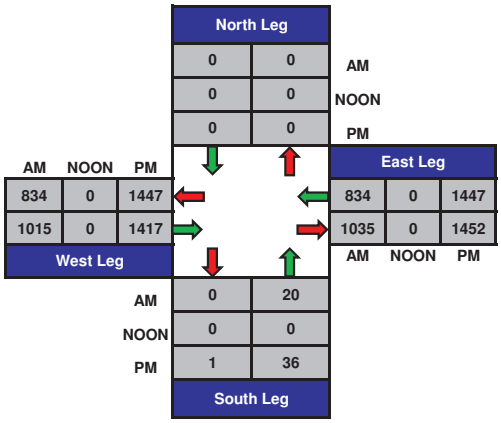
Project #: CA12_5299_015

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

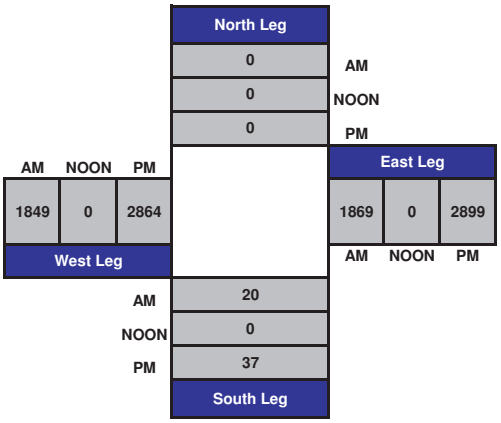


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

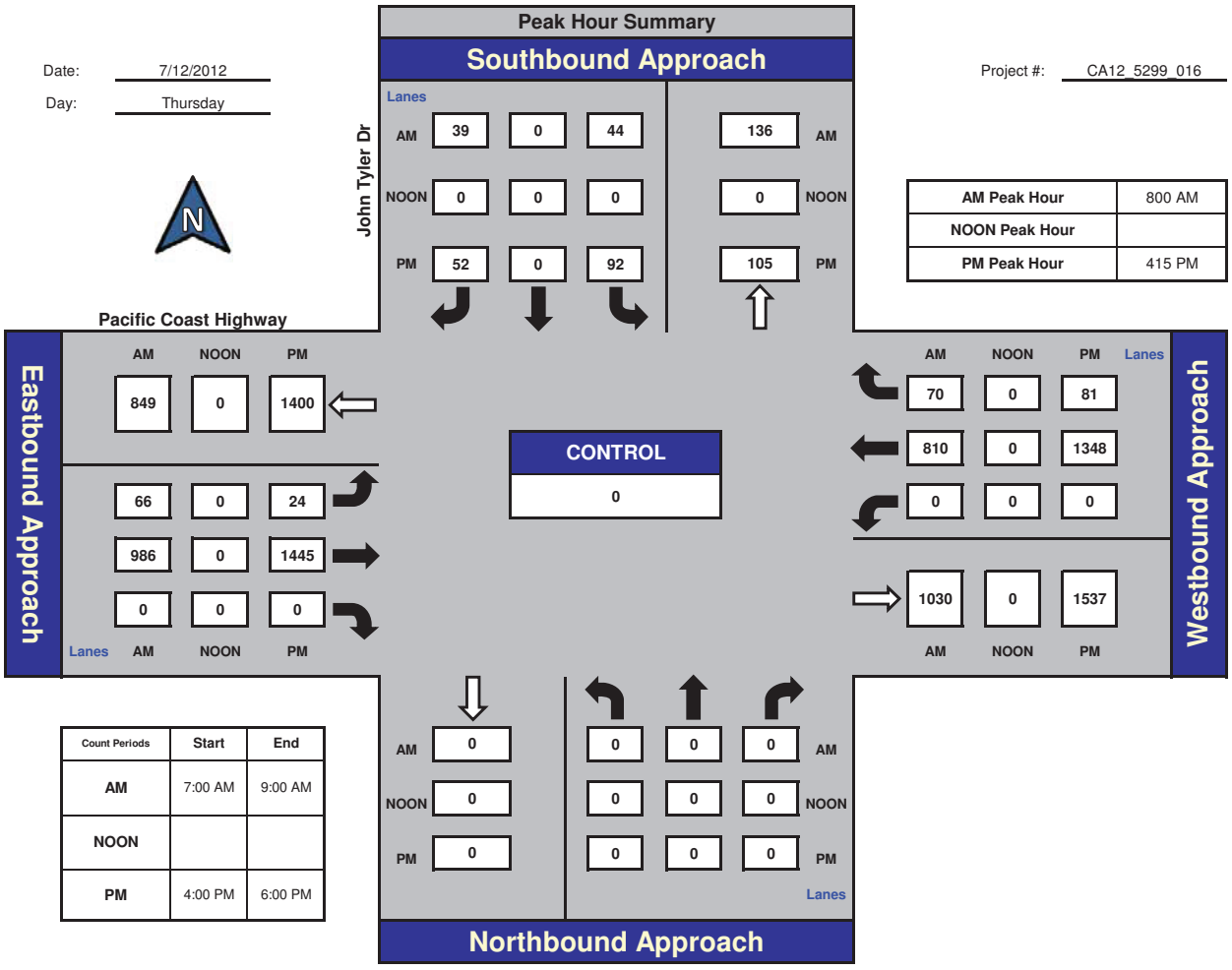
National Data & Surveying Services

John Tyler Dr and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

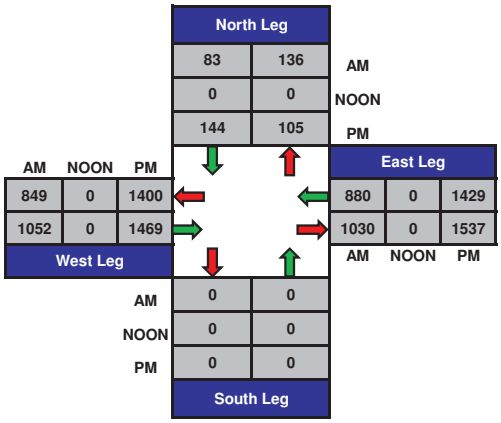
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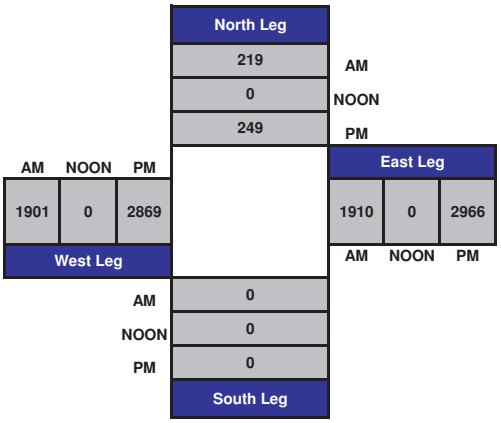
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

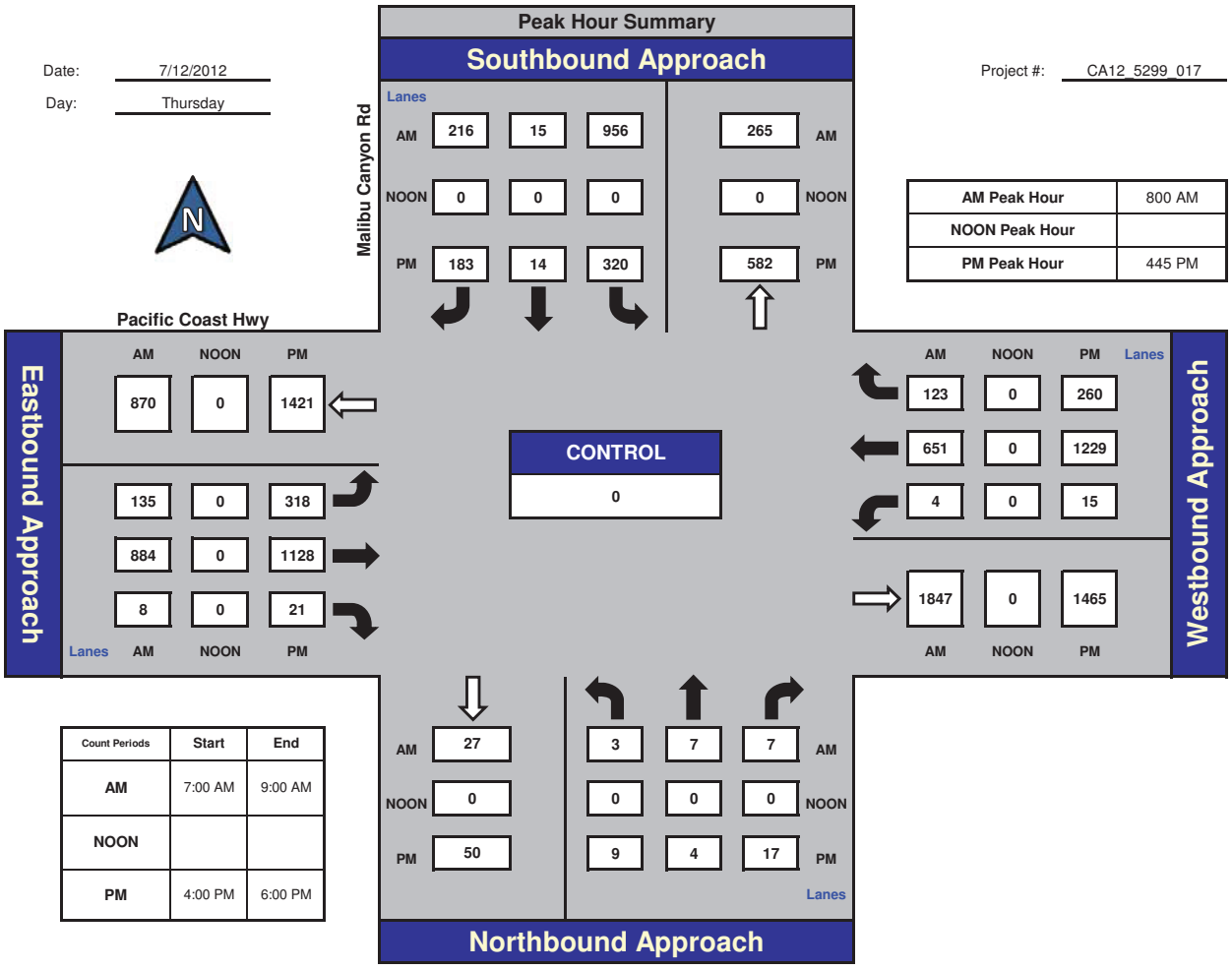
National Data & Surveying Services

Malibu Canyon Rd and Pacific Coast Hwy , City of Malibu

Date: 7/12/2012

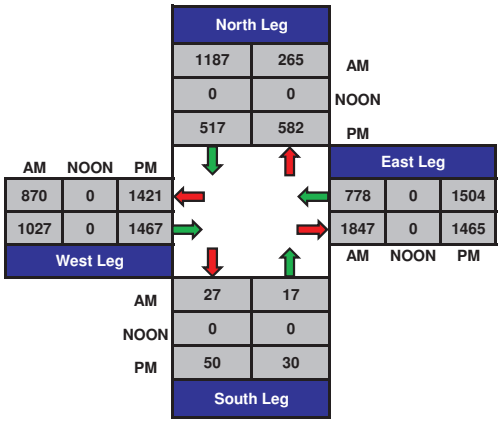
Day: Thursday

Project #: CA12_5299_017

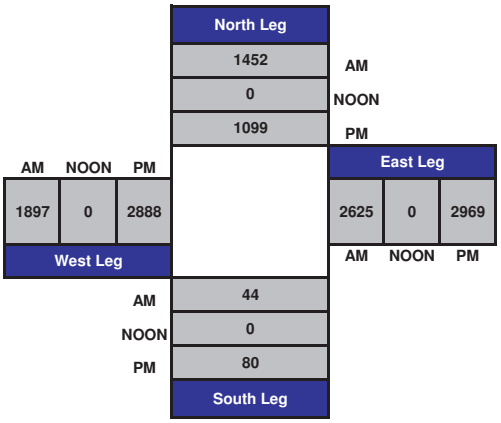


AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

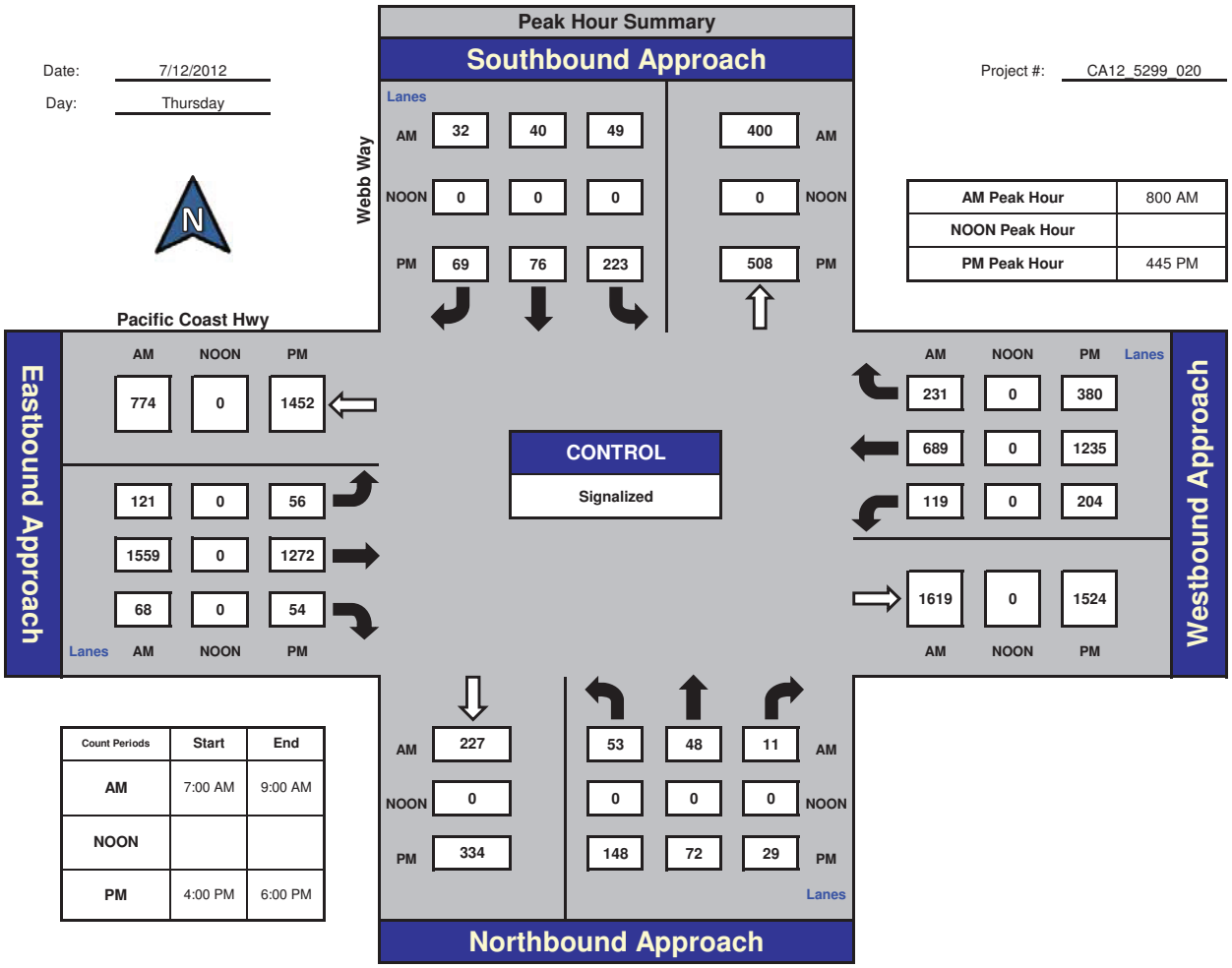
National Data & Surveying Services

Webb Way and Pacific Coast Hwy , City of Malibu

Date: 7/12/2012

Day: Thursday

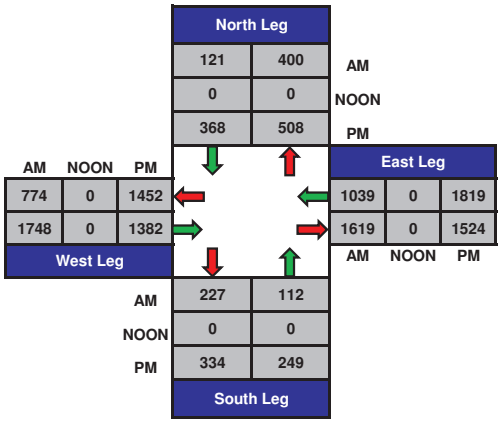
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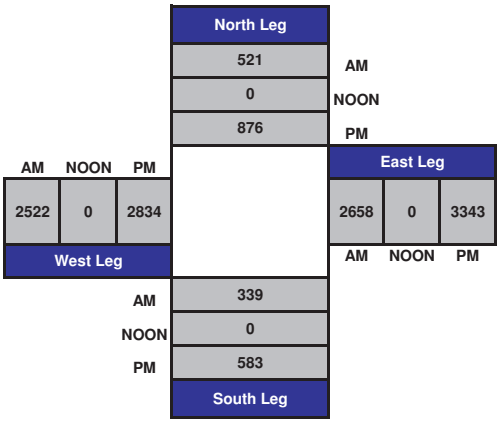
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

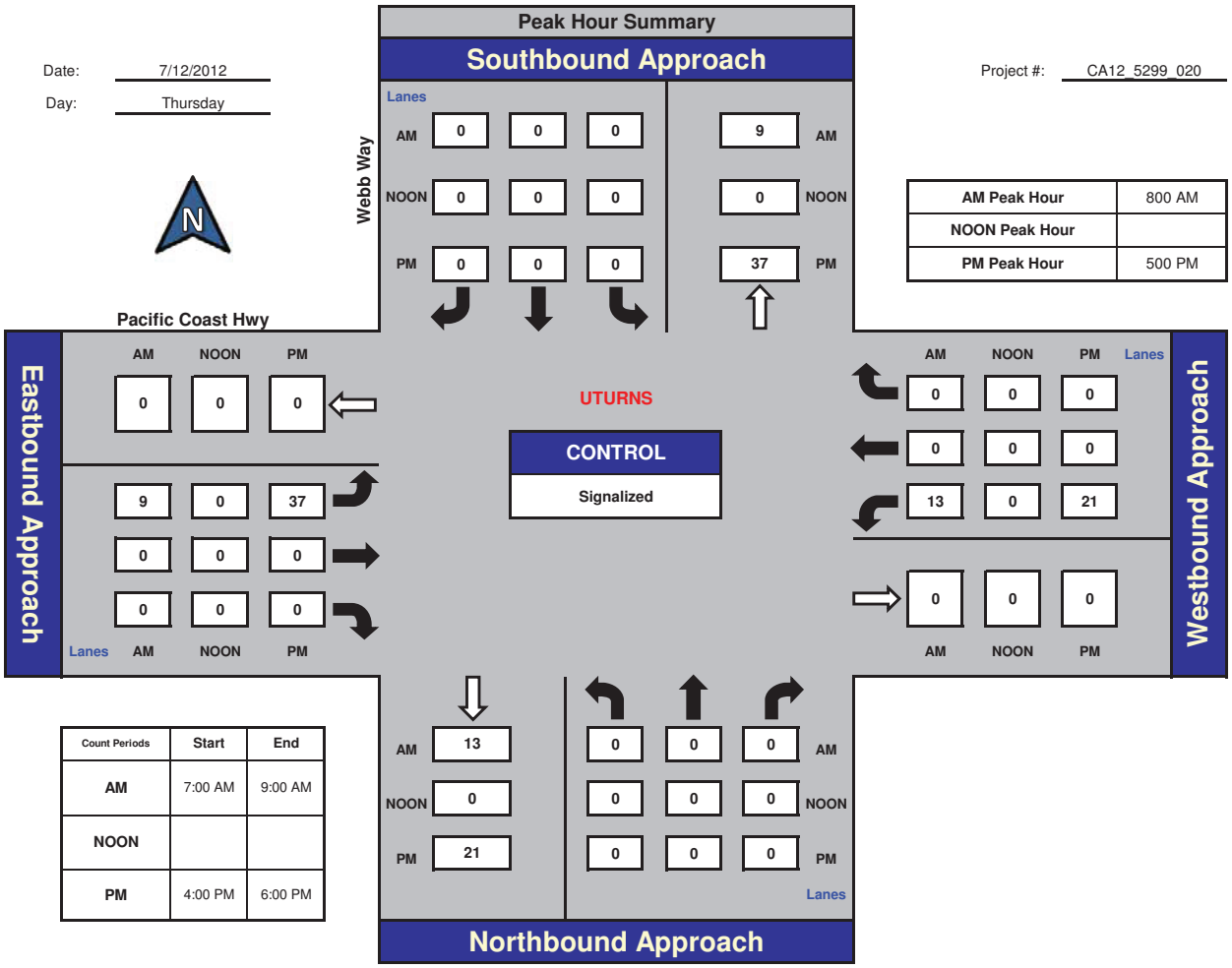
National Data & Surveying Services

Webb Way and Pacific Coast Hwy , City of Malibu

Date: 7/12/2012

Day: Thursday

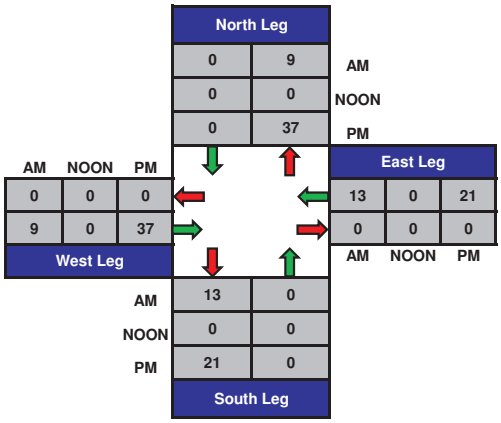
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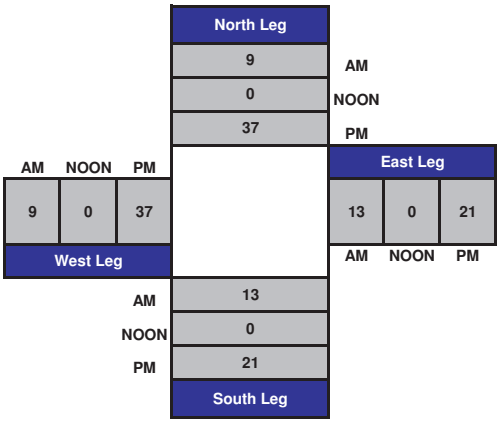
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

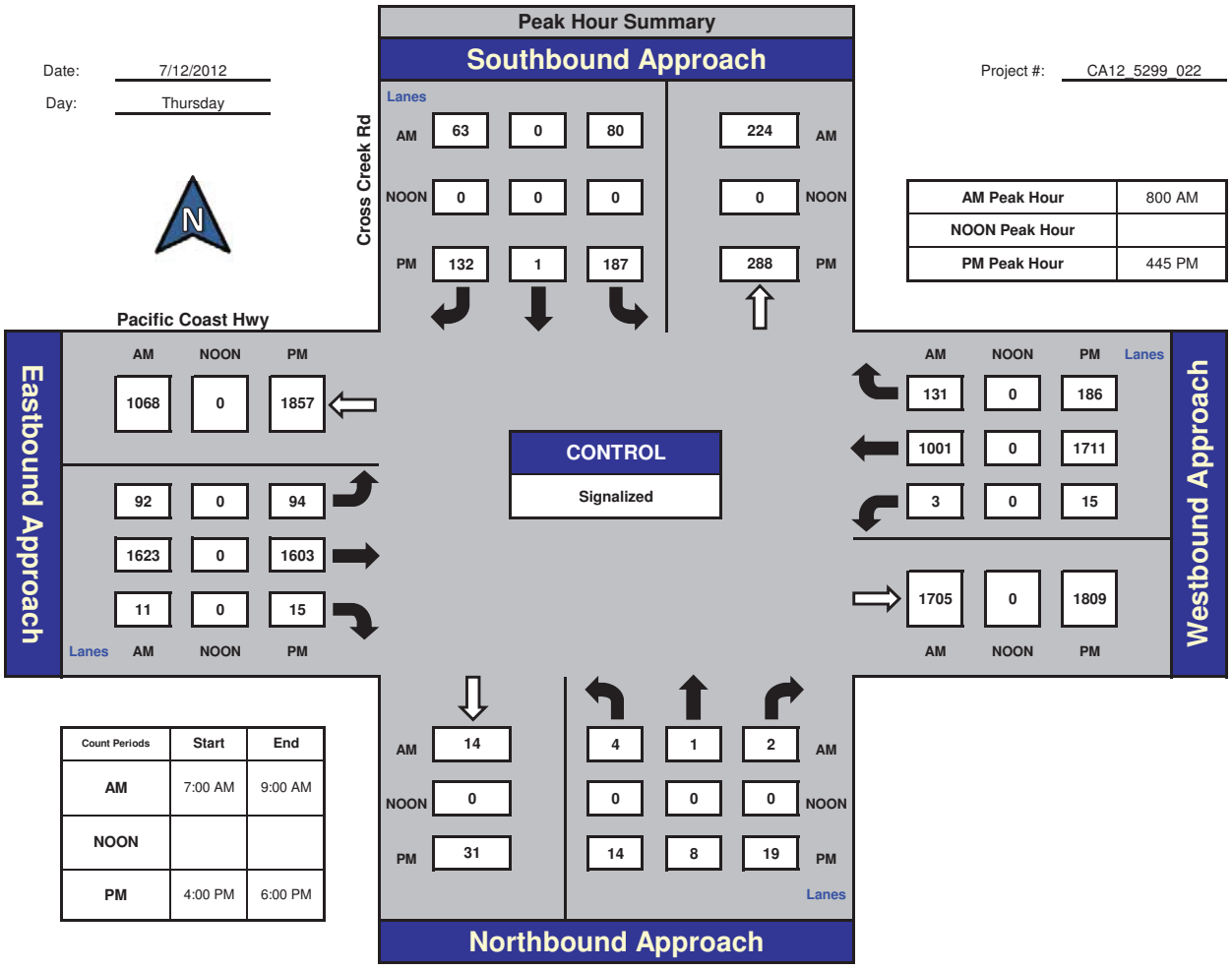
National Data & Surveying Services

Cross Creek Rd and Pacific Coast Hwy , City of Malibu

Date: 7/12/2012

Day: Thursday

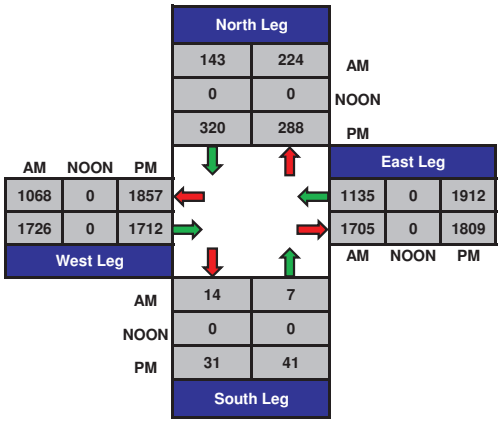
Project #: CA12_5299_022



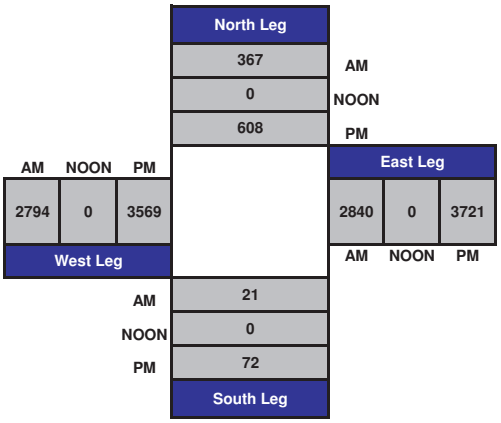
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

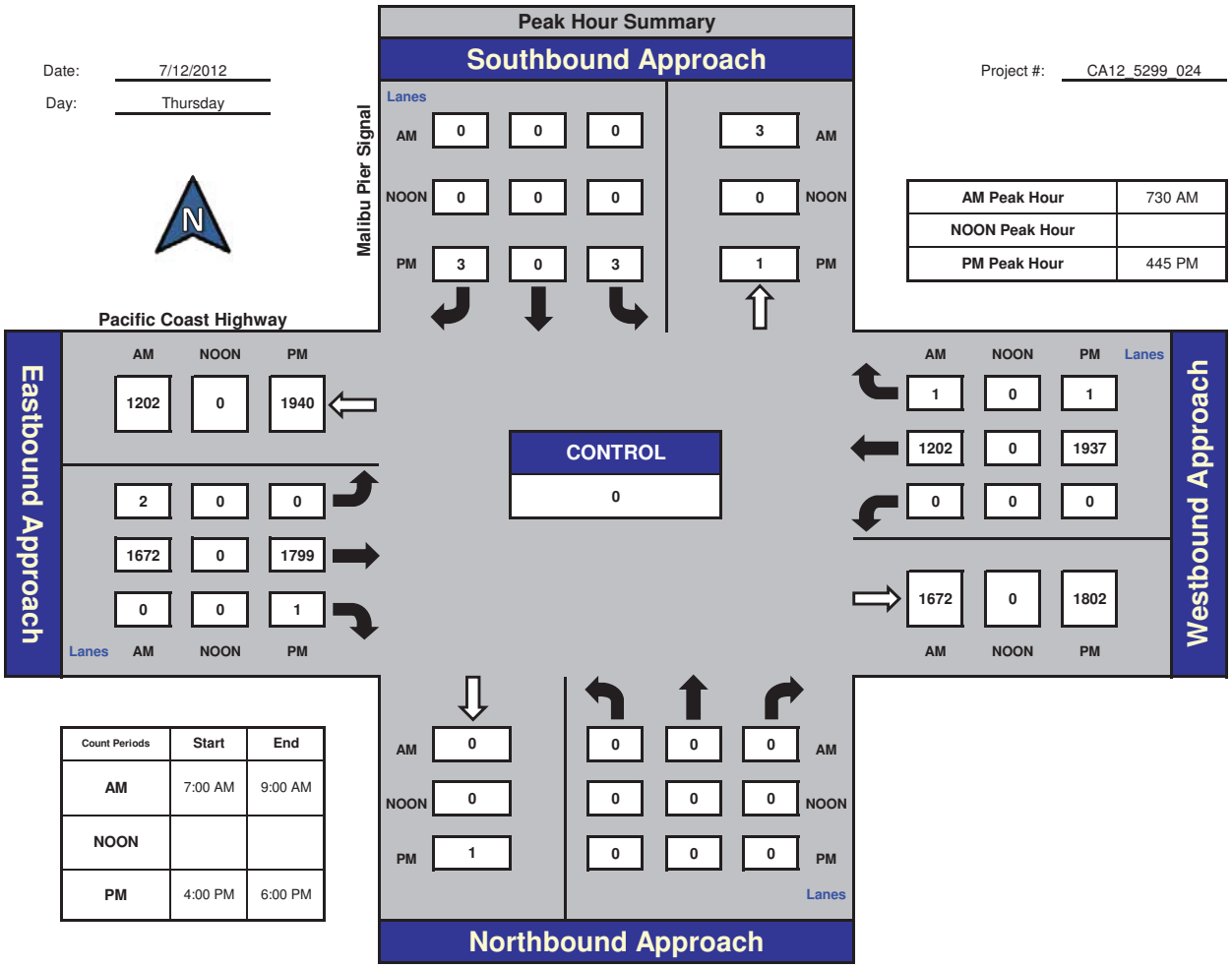
Malibu Pier Signal and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

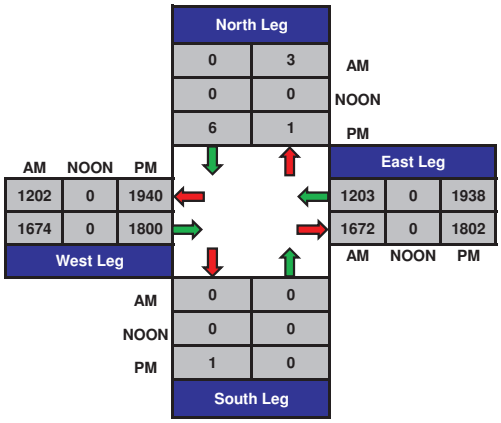
Project #: CA12_5299_024

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	445 PM

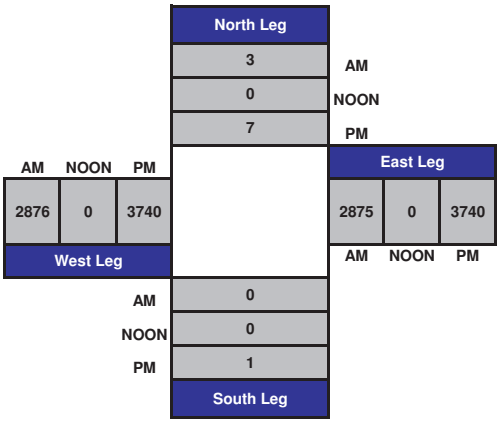


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

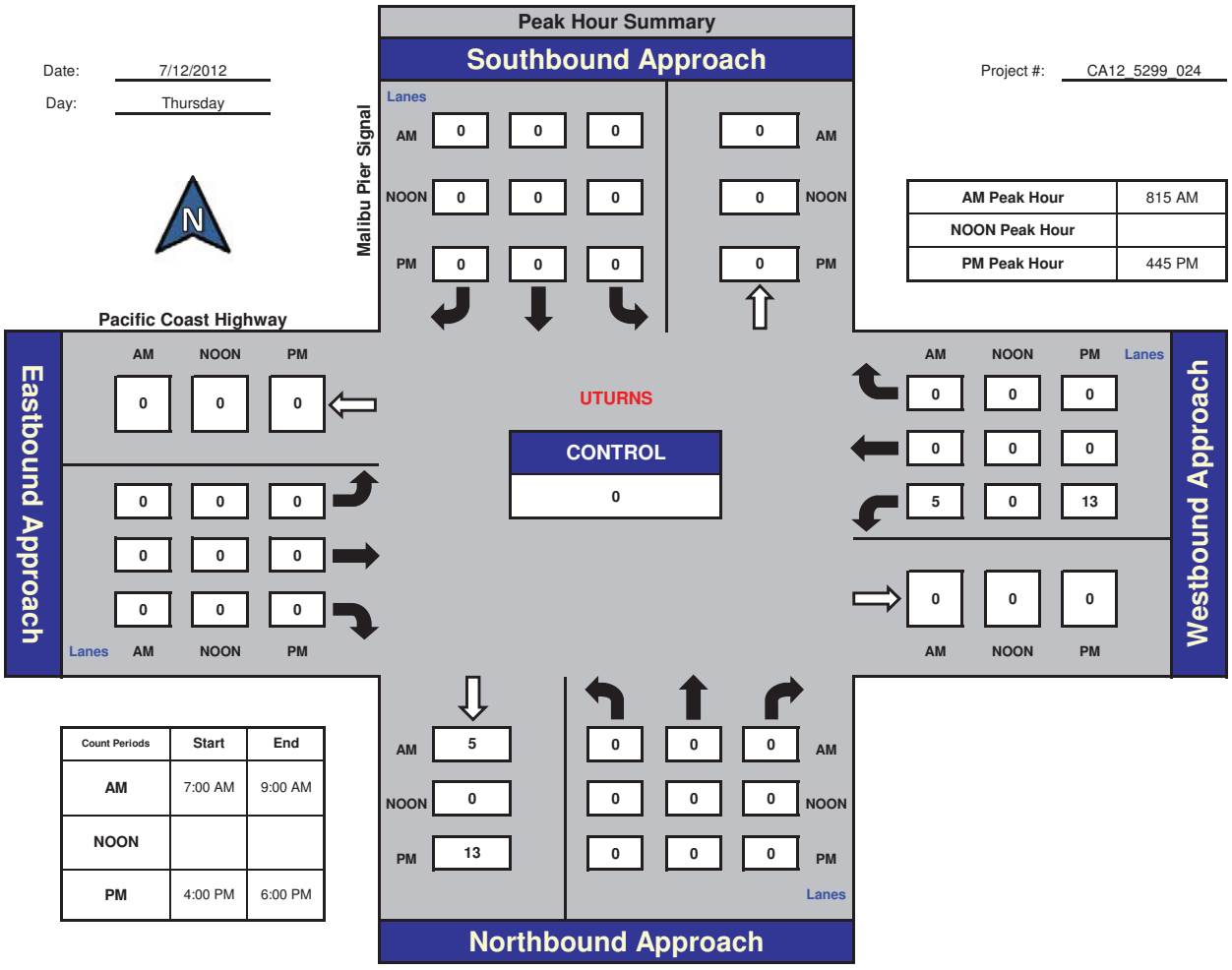
National Data & Surveying Services

Malibu Pier Signal and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

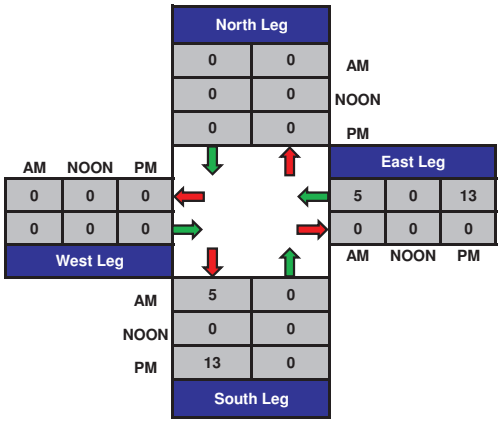
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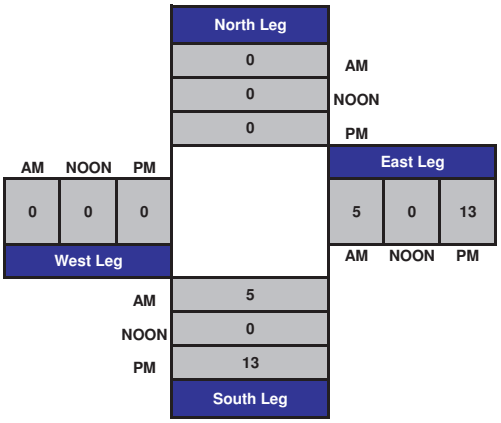
AM Peak Hour	815 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

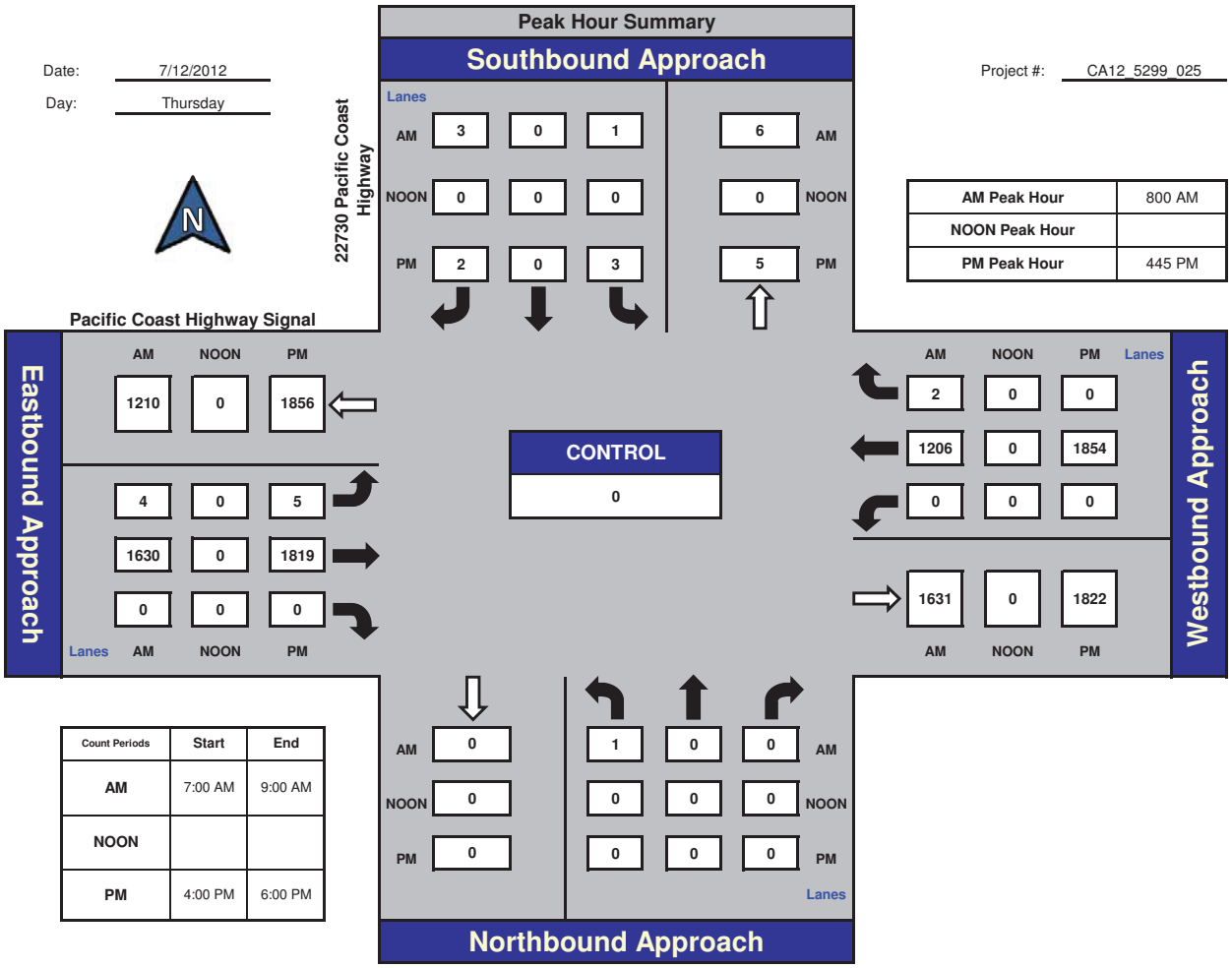
22730 Pacific Coast Highway and Pacific Coast Highway Signal , City of Malibu

Date: 7/12/2012

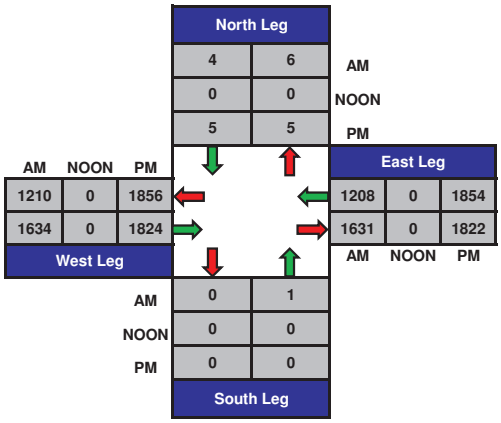
Day: Thursday

Project #: CA12_5299_025

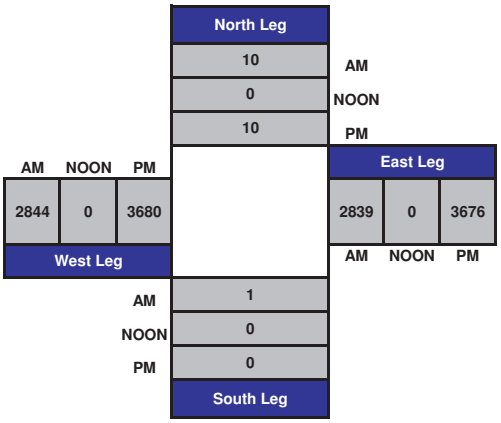
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

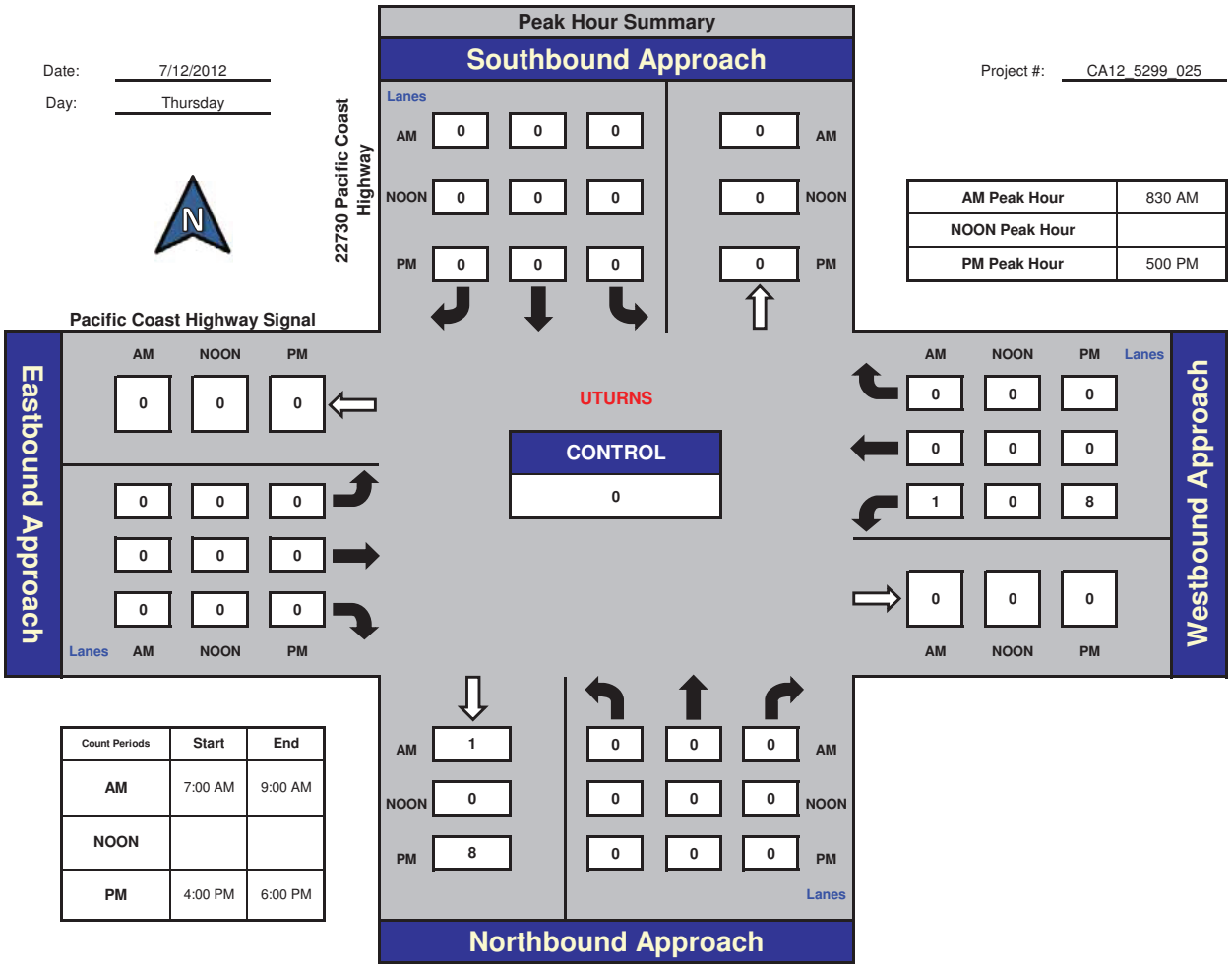
22730 Pacific Coast Highway and Pacific Coast Highway Signal , City of Malibu

Date: 7/12/2012

Day: Thursday

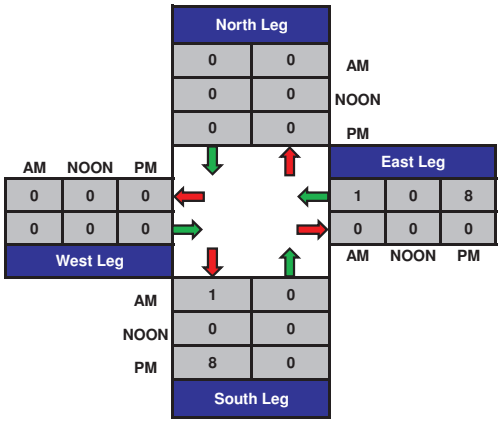
Project #: CA12_5299_025

AM Peak Hour	830 AM
NOON Peak Hour	
PM Peak Hour	500 PM

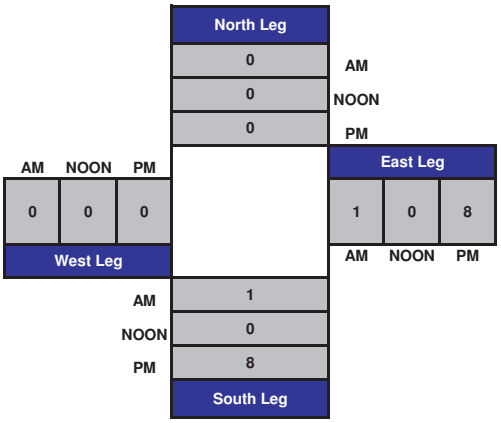


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

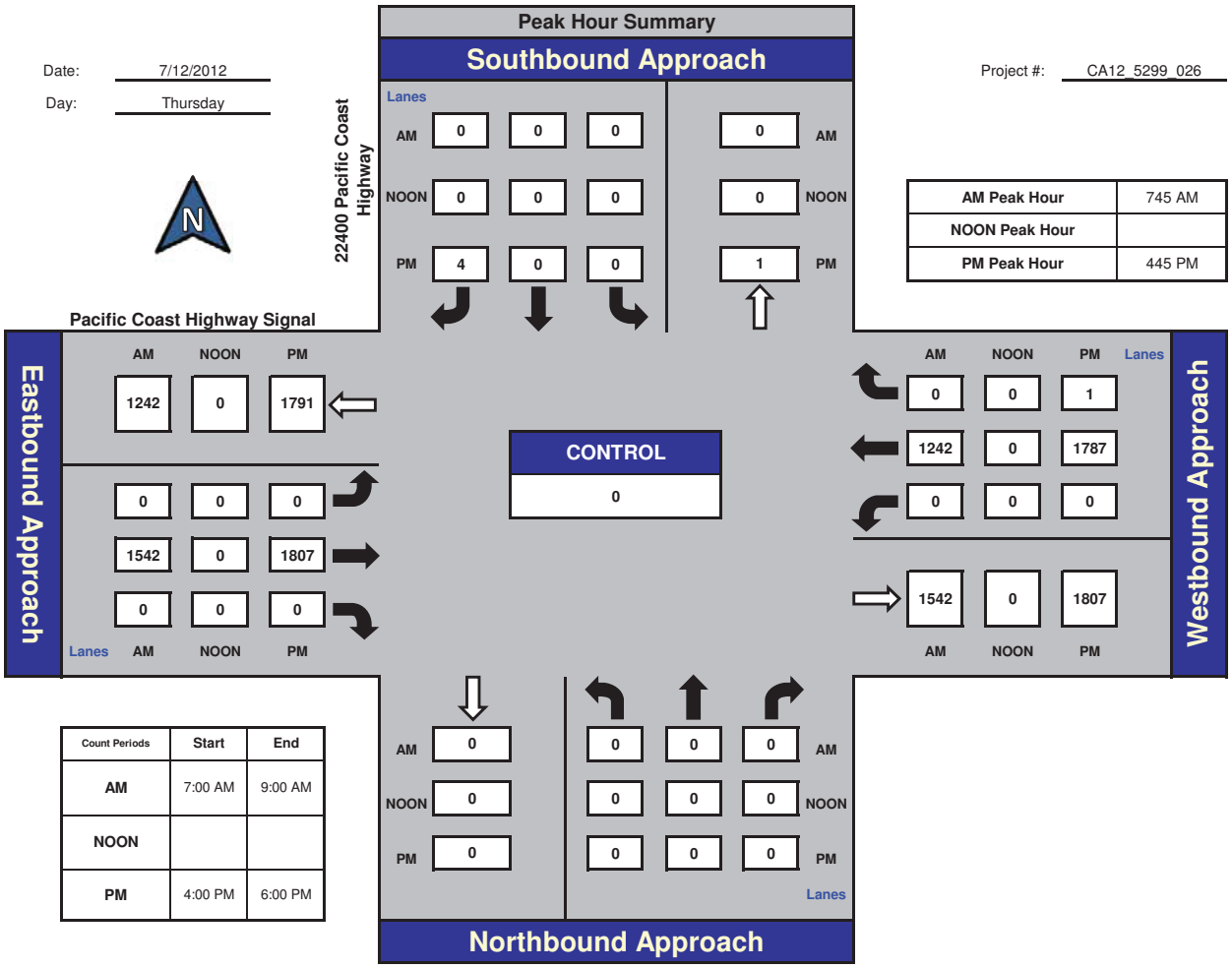
22400 Pacific Coast Highway and Pacific Coast Highway Signal , City of Malibu

Date: 7/12/2012

Day: Thursday

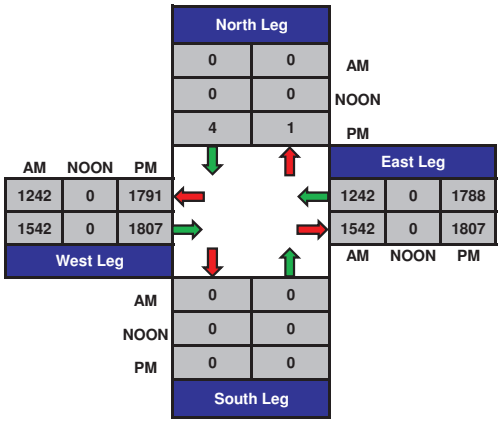
Project #: CA12_5299_026

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	445 PM

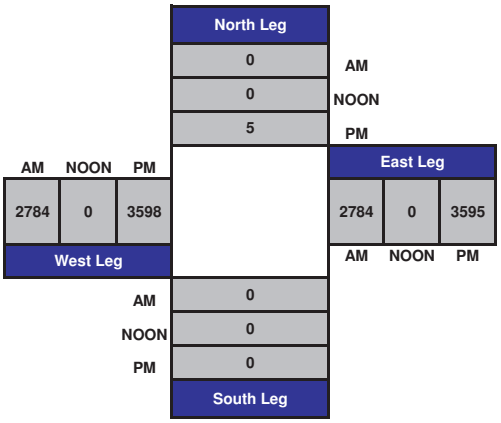


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

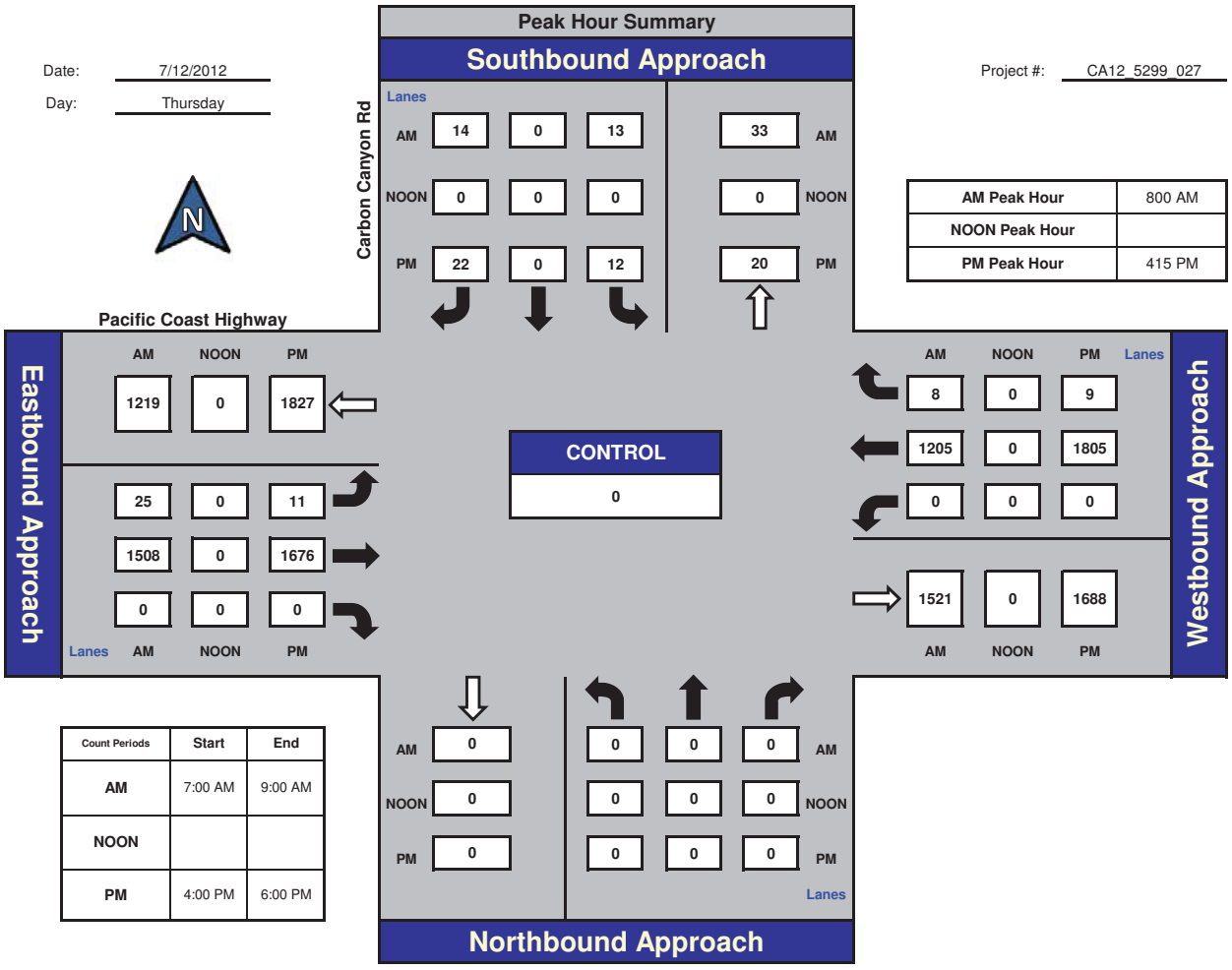
National Data & Surveying Services

Carbon Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

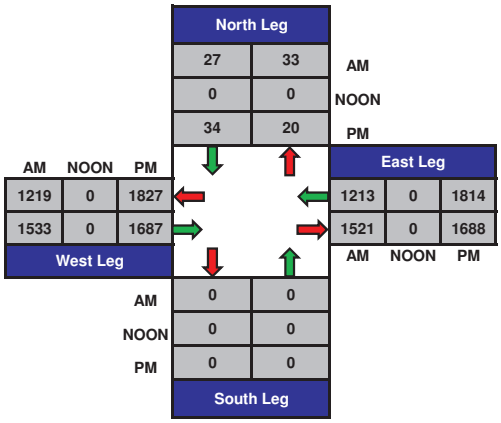
Project #: CA12_5299_027



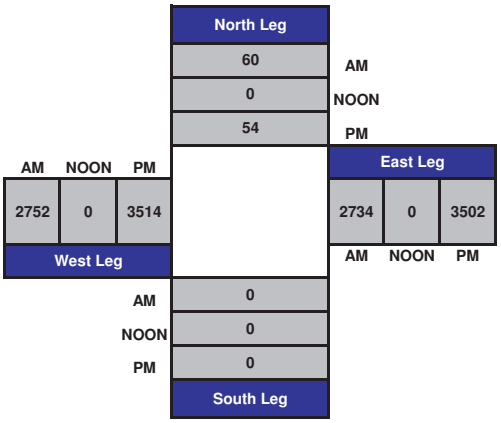
AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	415 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

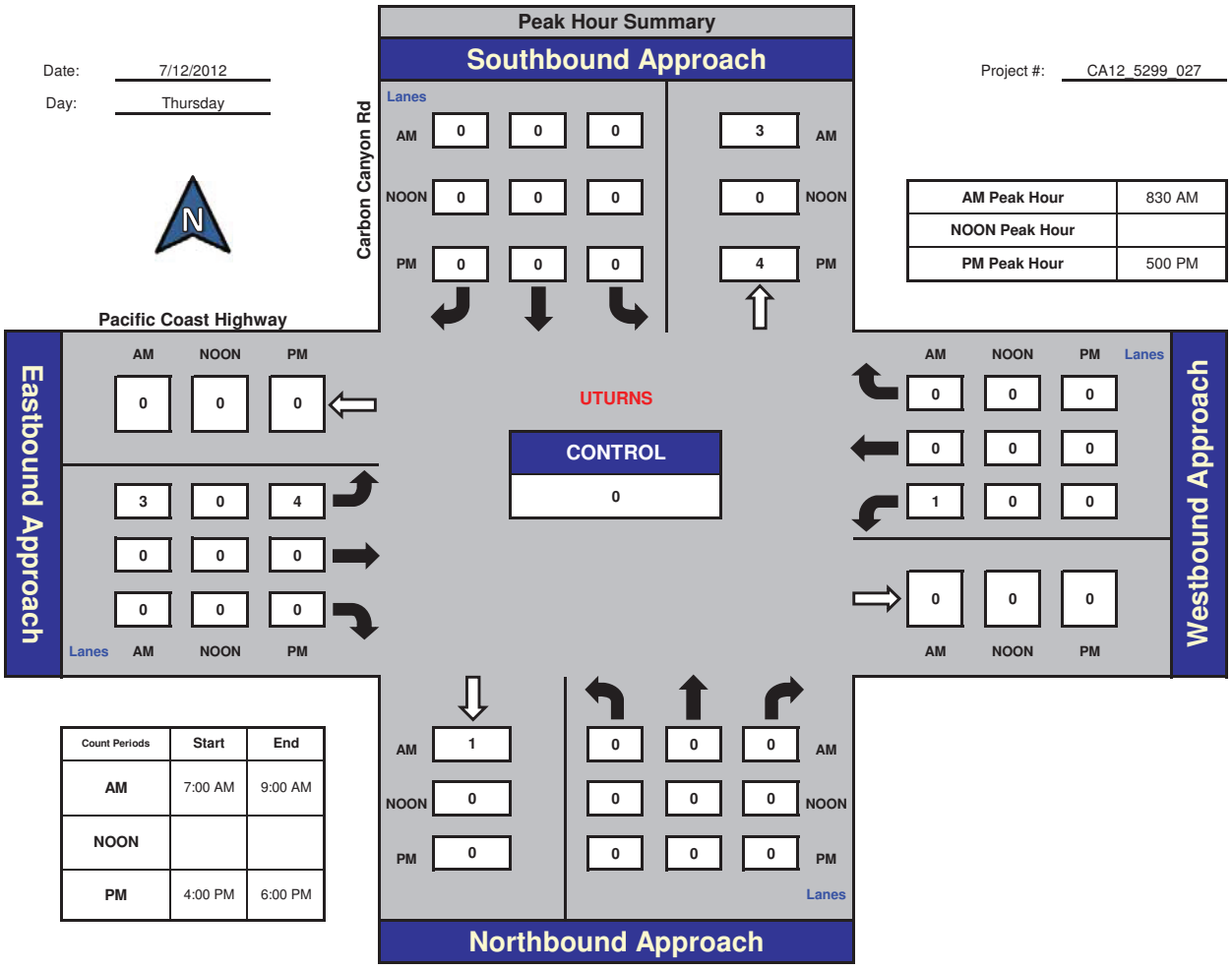
National Data & Surveying Services

Carbon Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

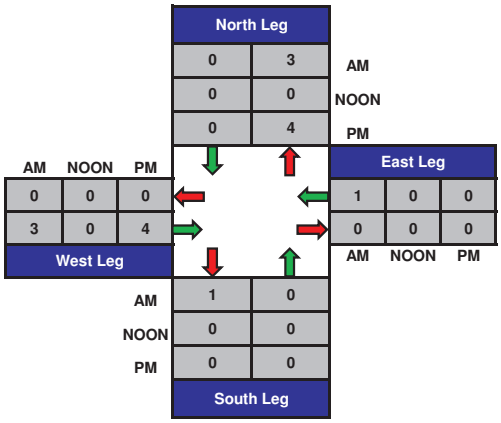
Project #: CA12_5299_027



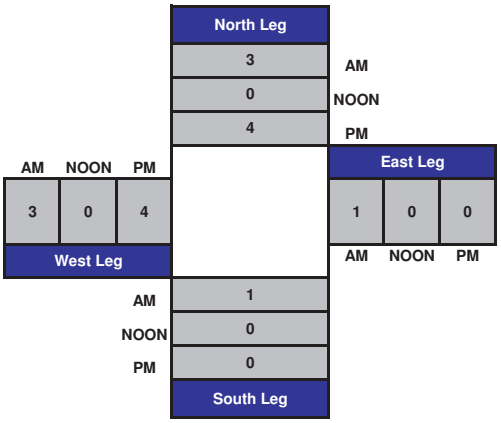
AM Peak Hour	830 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

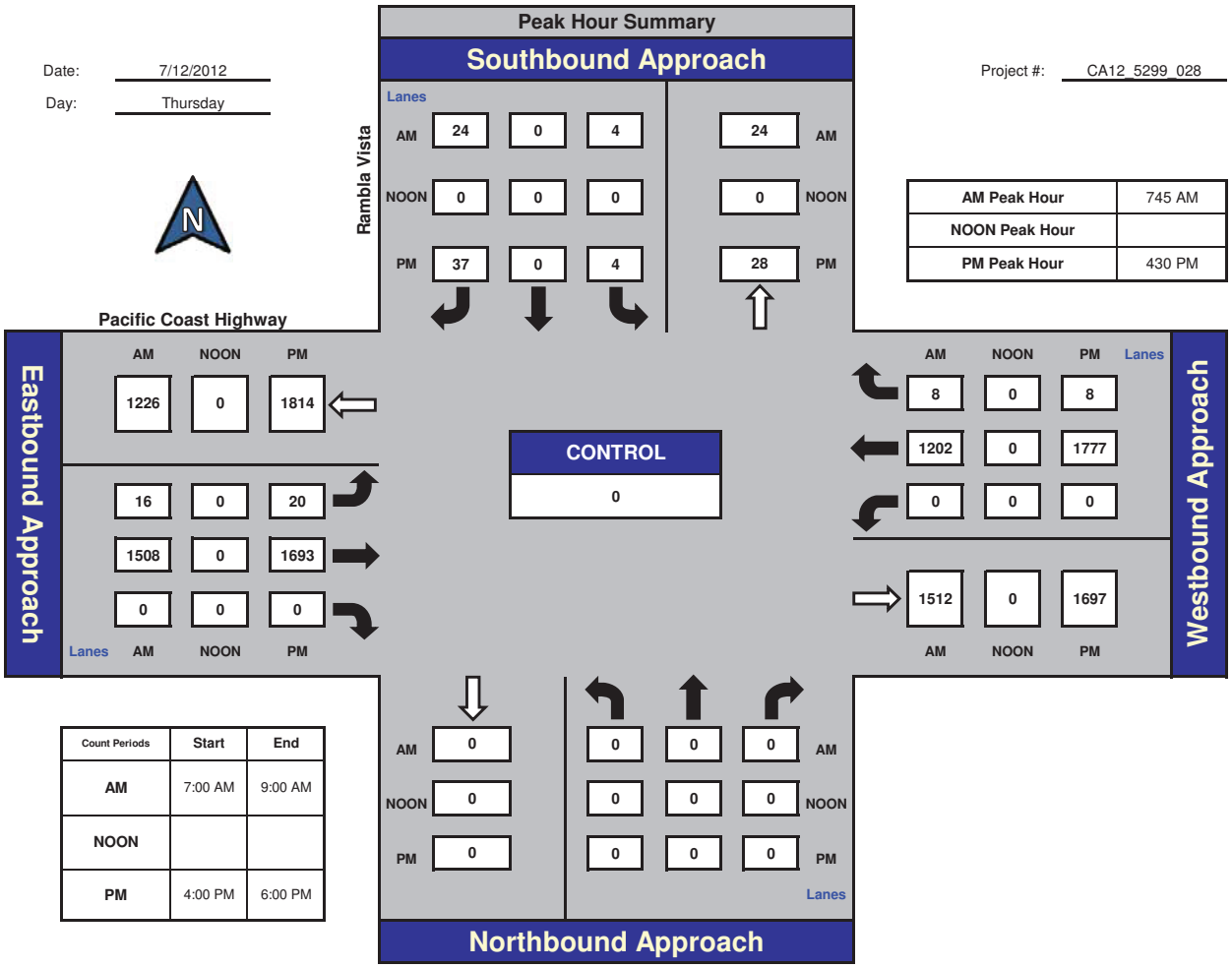
National Data & Surveying Services

Rambla Vista and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

Project #: CA12_5299_028



AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	
AM	28	24
NOON	0	0
PM	41	28

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
1226	0	1814		1210	0	1785
1524	0	1713		1512	0	1697

	South Leg	
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg
AM	52
NOON	0
PM	69

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
2750	0	3527	2722	0	3482

	South Leg
AM	0
NOON	0
PM	0

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

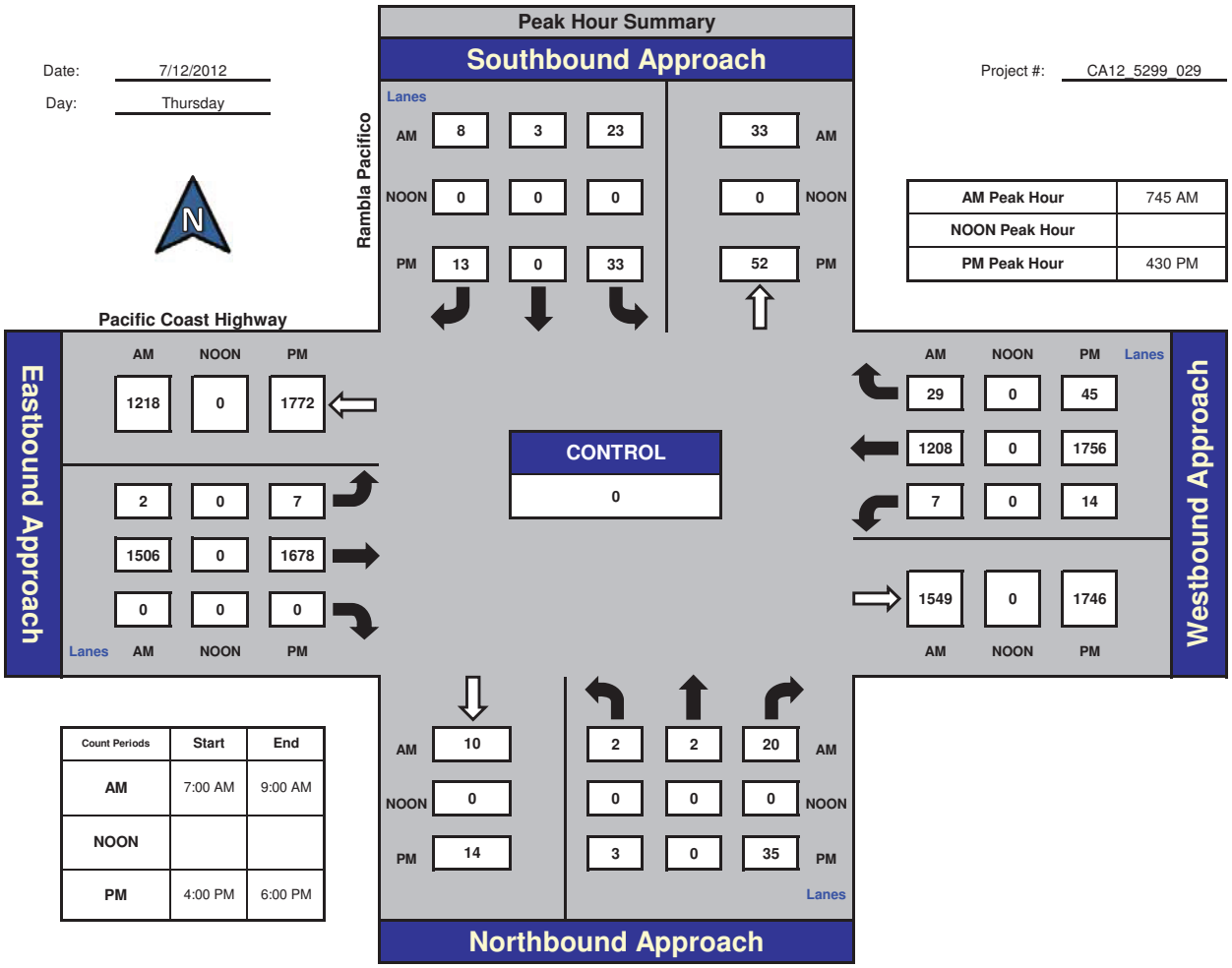
Rambla Pacifico and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

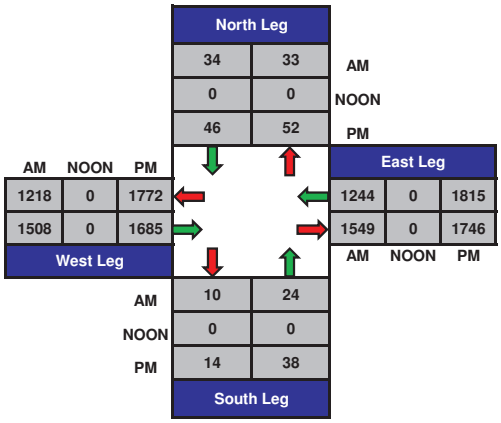
Project #: CA12_5299_029

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	430 PM

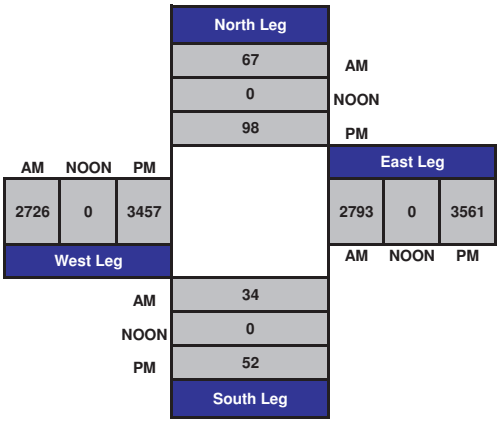


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

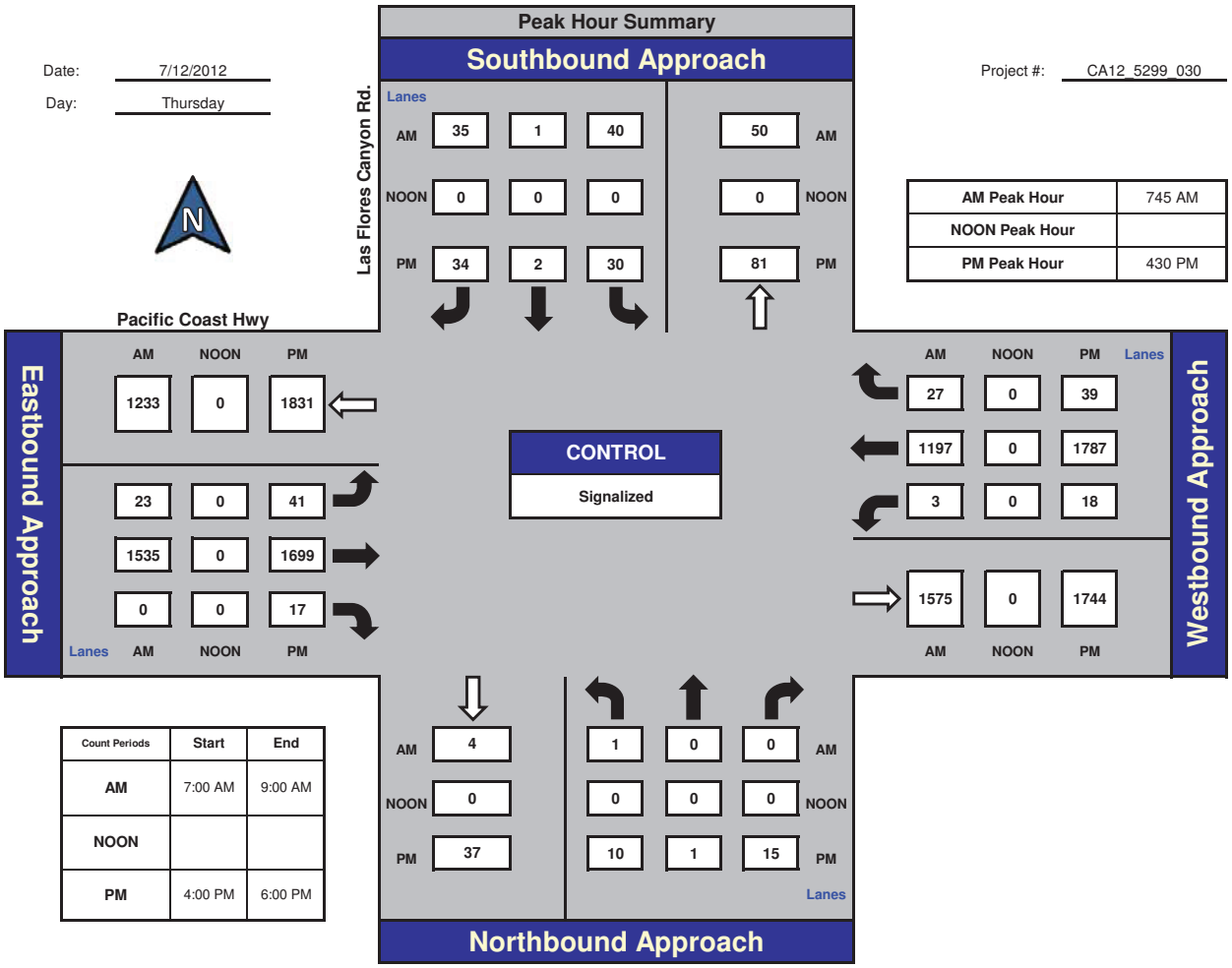
National Data & Surveying Services

Las Flores Canyon Rd. and Pacific Coast Hwy , City of Malibu

Date: 7/12/2012

Day: Thursday

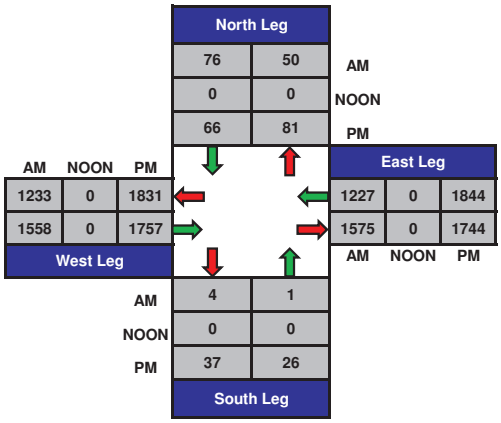
Project #: CA12_5299_030



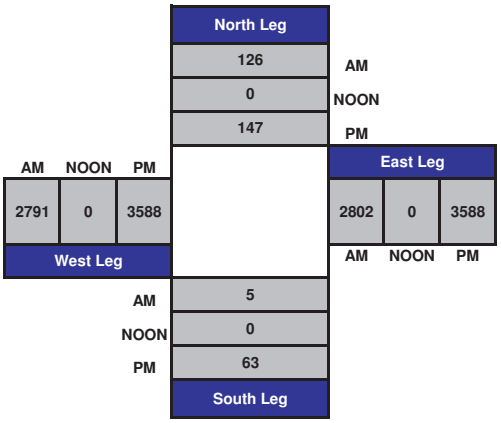
AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

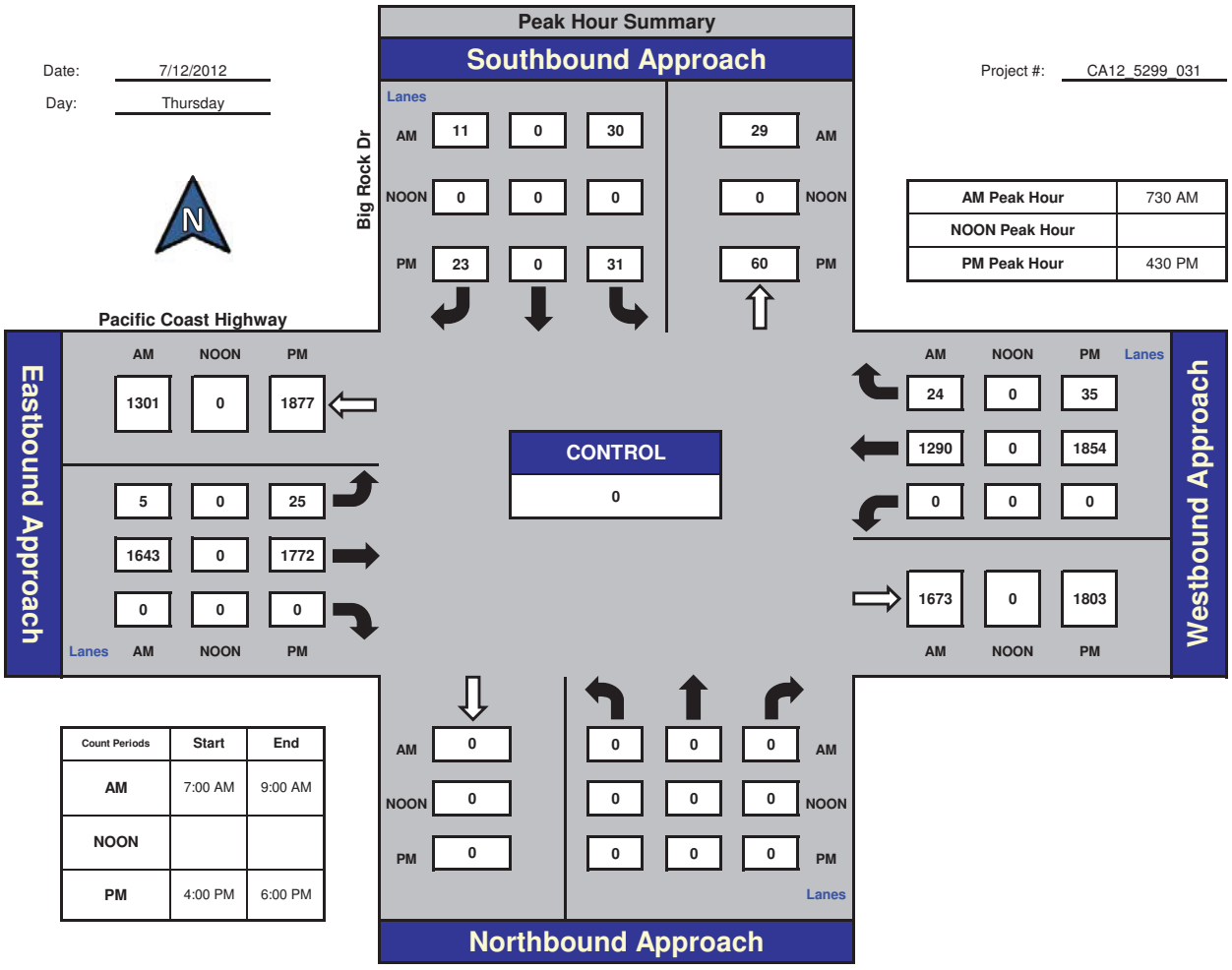
National Data & Surveying Services

Big Rock Dr and Pacific Coast Highway , City of Malibu

Date: 7/12/2012

Day: Thursday

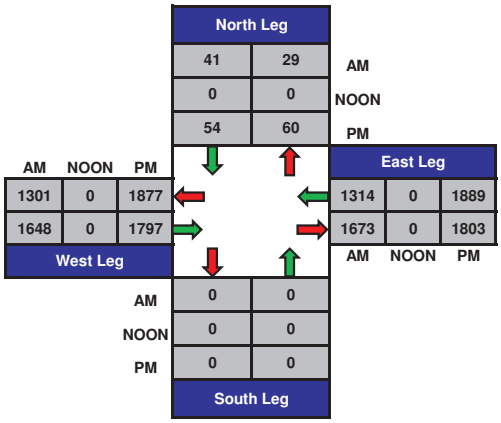
Project #: CA12_5299_031



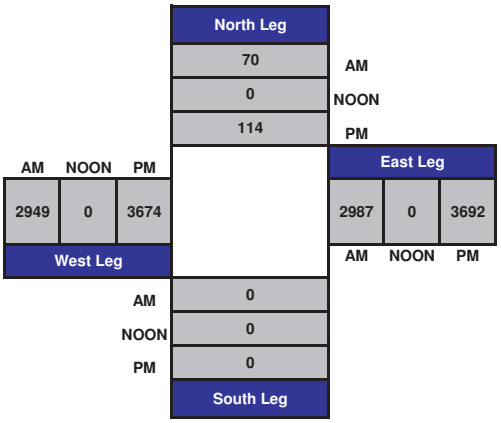
AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

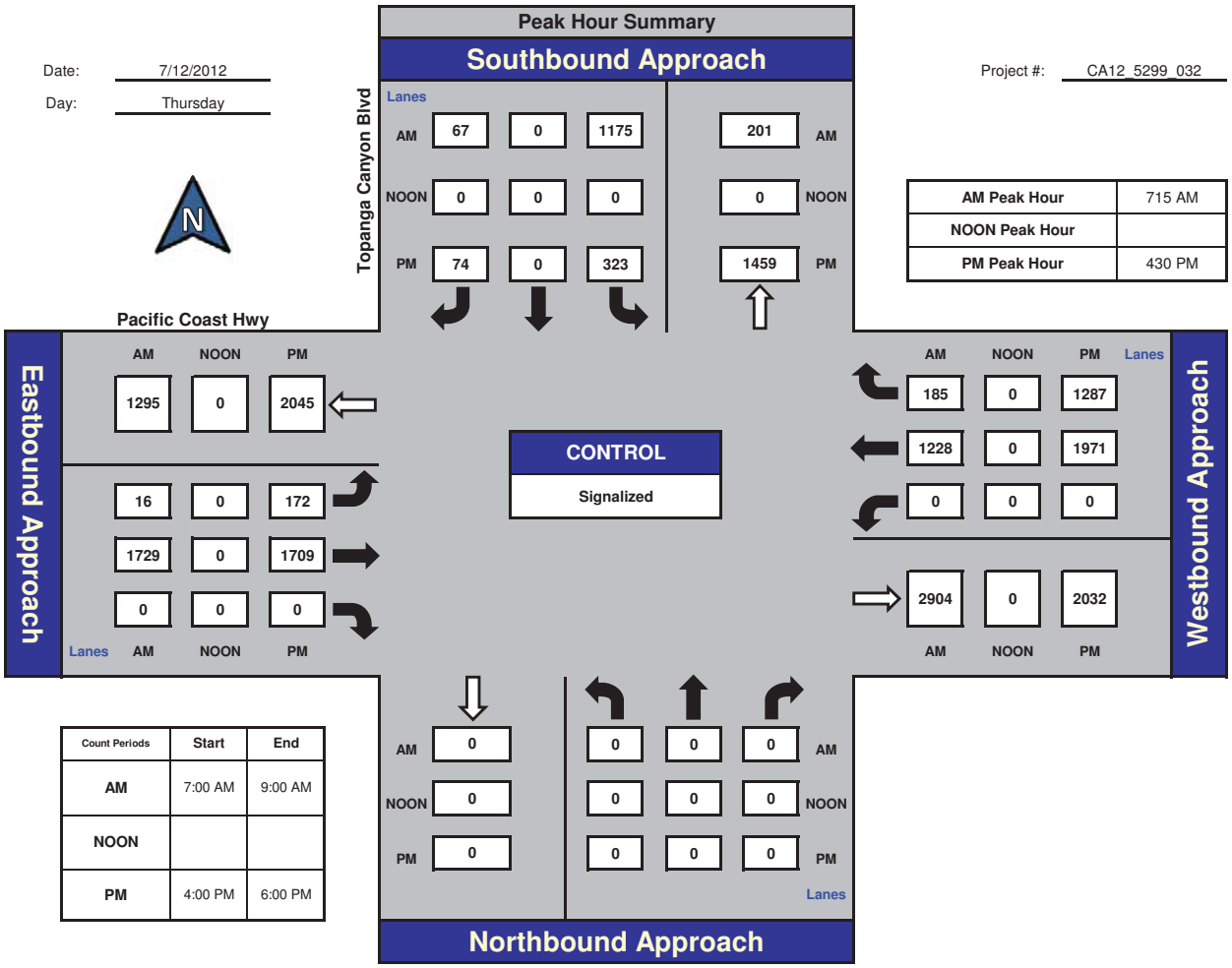
National Data & Surveying Services

Topanga Canyon Blvd and Pacific Coast Hwy , City of Malibu

Date: 7/12/2012

Day: Thursday

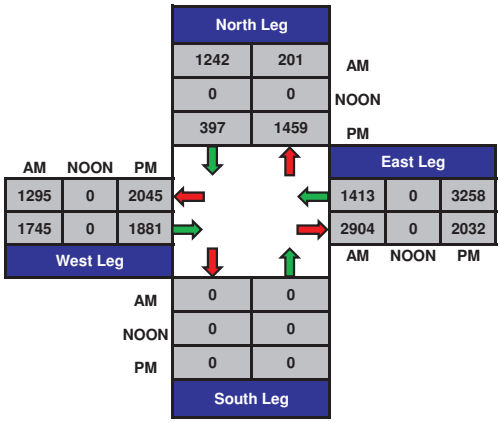
Project #: CA12_5299_032



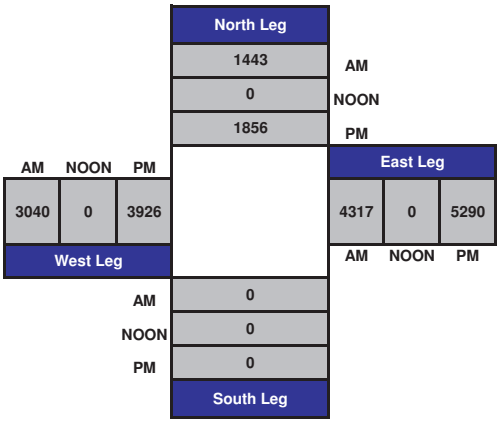
AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

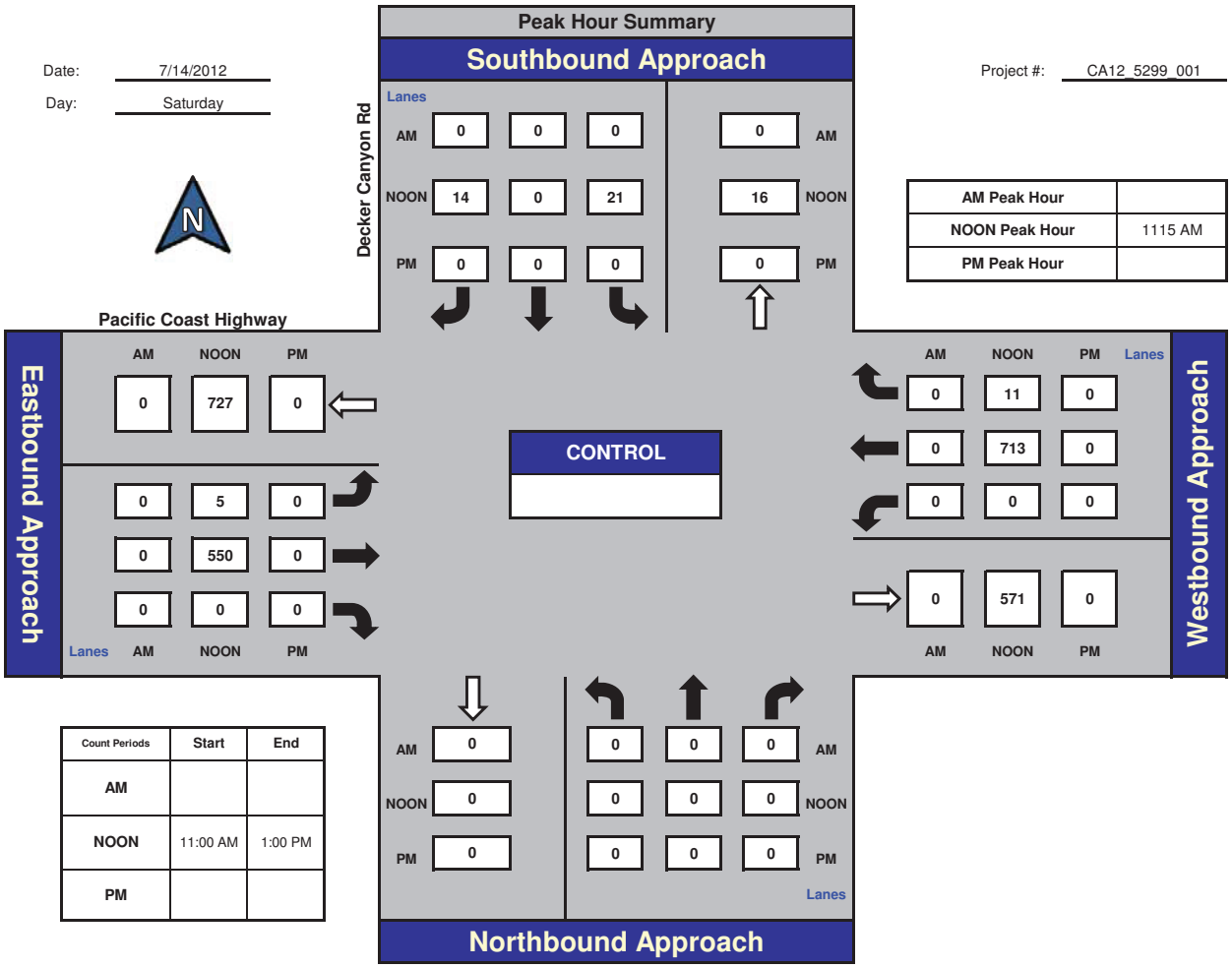
Decker Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

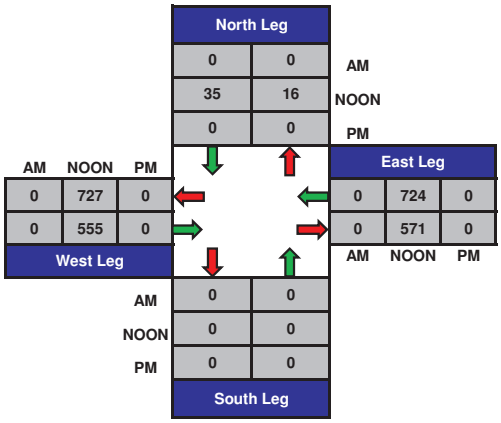
Project #: CA12_5299_001

AM Peak Hour	
NOON Peak Hour	1115 AM
PM Peak Hour	

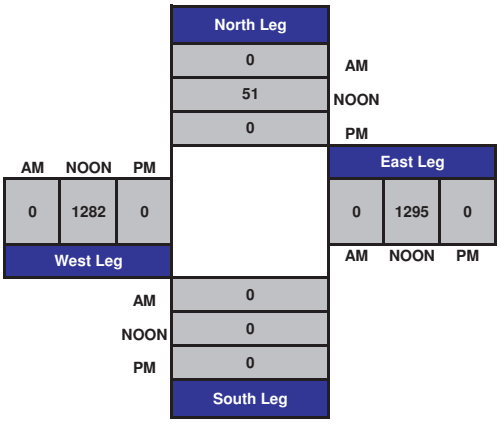


Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

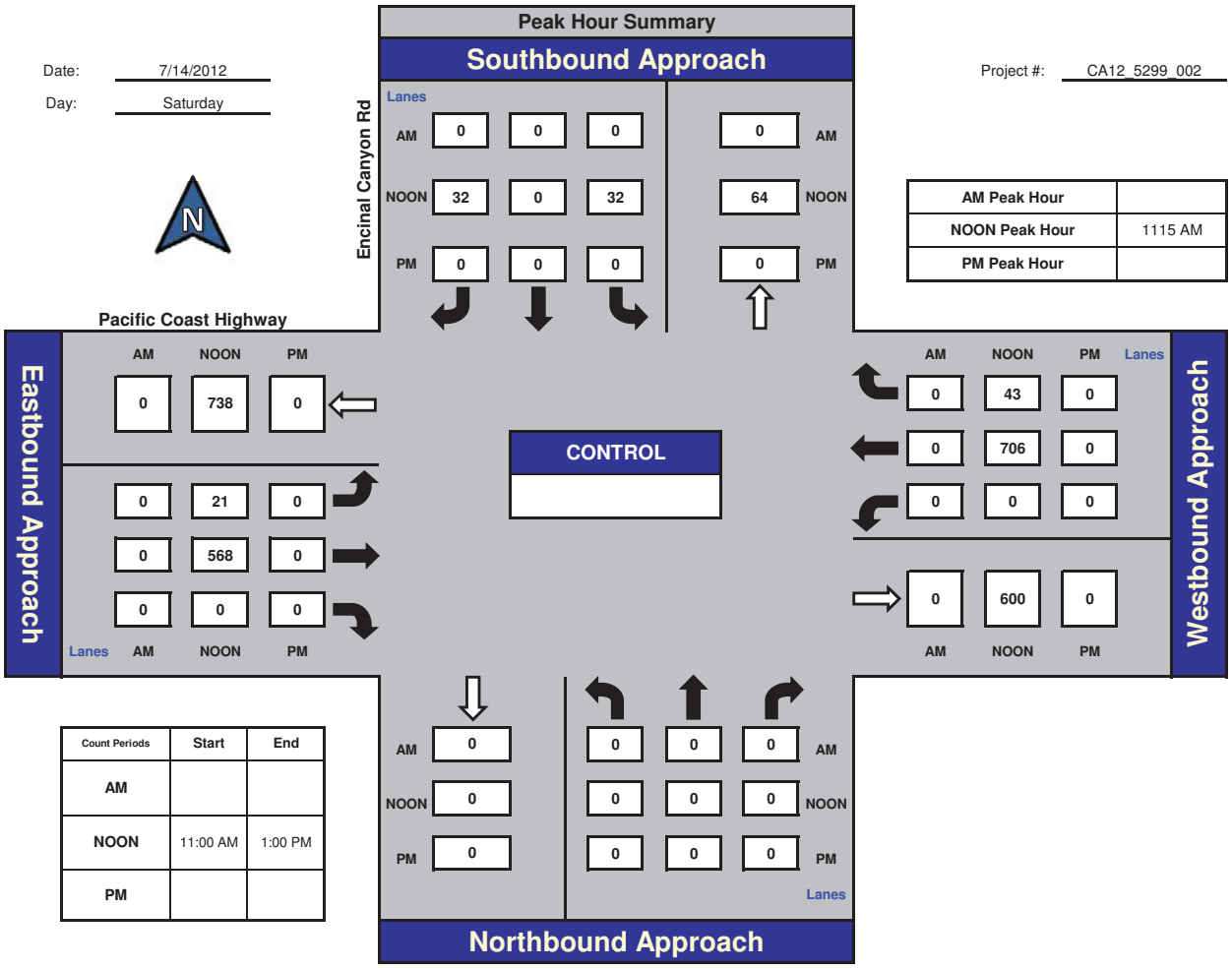
National Data & Surveying Services

Encinal Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

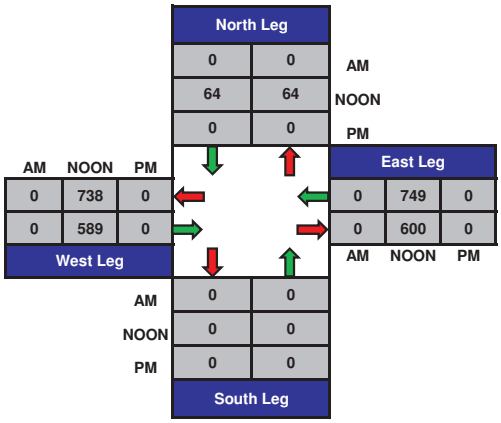
Project #: CA12_5299_002



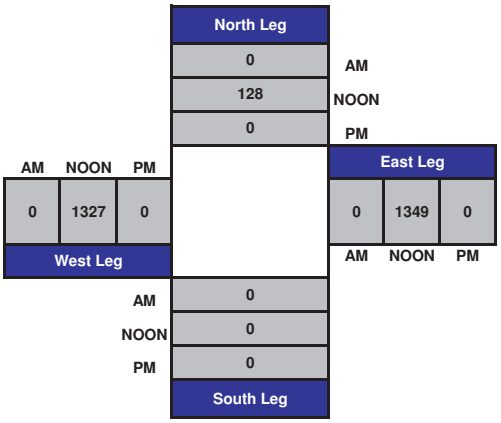
AM Peak Hour	
NOON Peak Hour	1115 AM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Broad Beach Rd (west) and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

Project #: CA12_5299_003

AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Peak Hour Summary

Southbound Approach (Broad Beach Rd (west))

Lanes					
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM

Pacific Coast Highway

Eastbound Approach

Lanes	AM	NOON	PM
	0	798	0
	0	0	0
	0	614	0
	0	13	0

Westbound Approach

Lanes	AM	NOON	PM
	0	0	0
	0	788	0
	0	26	0
	0	633	0

CONTROL

Northbound Approach

Lanes					
AM	0	0	0	0	AM
NOON	39	10	0	19	NOON
PM	0	0	0	0	PM

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs

	North Leg		
AM	0	0	AM
NOON	0	0	NOON
PM	0	0	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
0	798	0		0	814	0
0	627	0		0	633	0

	South Leg		
AM	0	0	
NOON	39	29	
PM	0	0	

Total Volume Per Leg

	North Leg	
AM	0	
NOON	0	
PM	0	

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
0	1425	0	0	1447	0

	South Leg
AM	0
NOON	68
PM	0

ITM Peak Hour Summary

Prepared by:

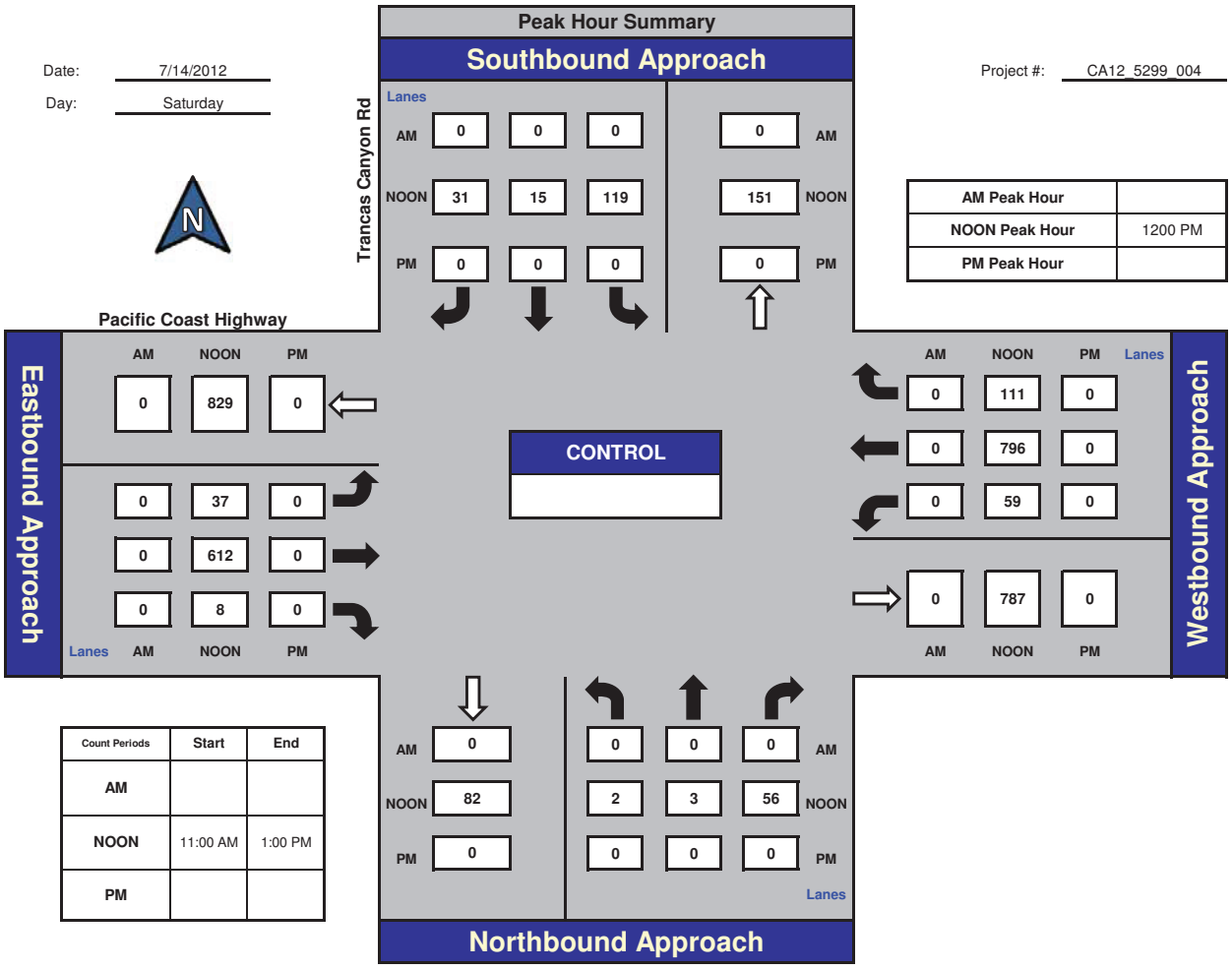
National Data & Surveying Services

Trancas Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

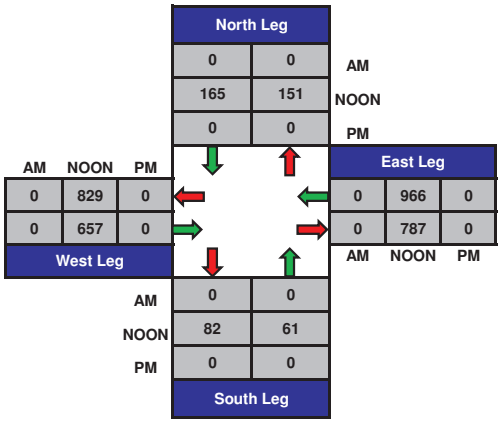
Project #: CA12_5299_004



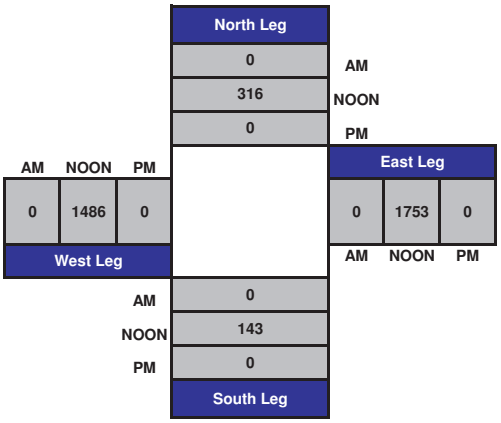
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

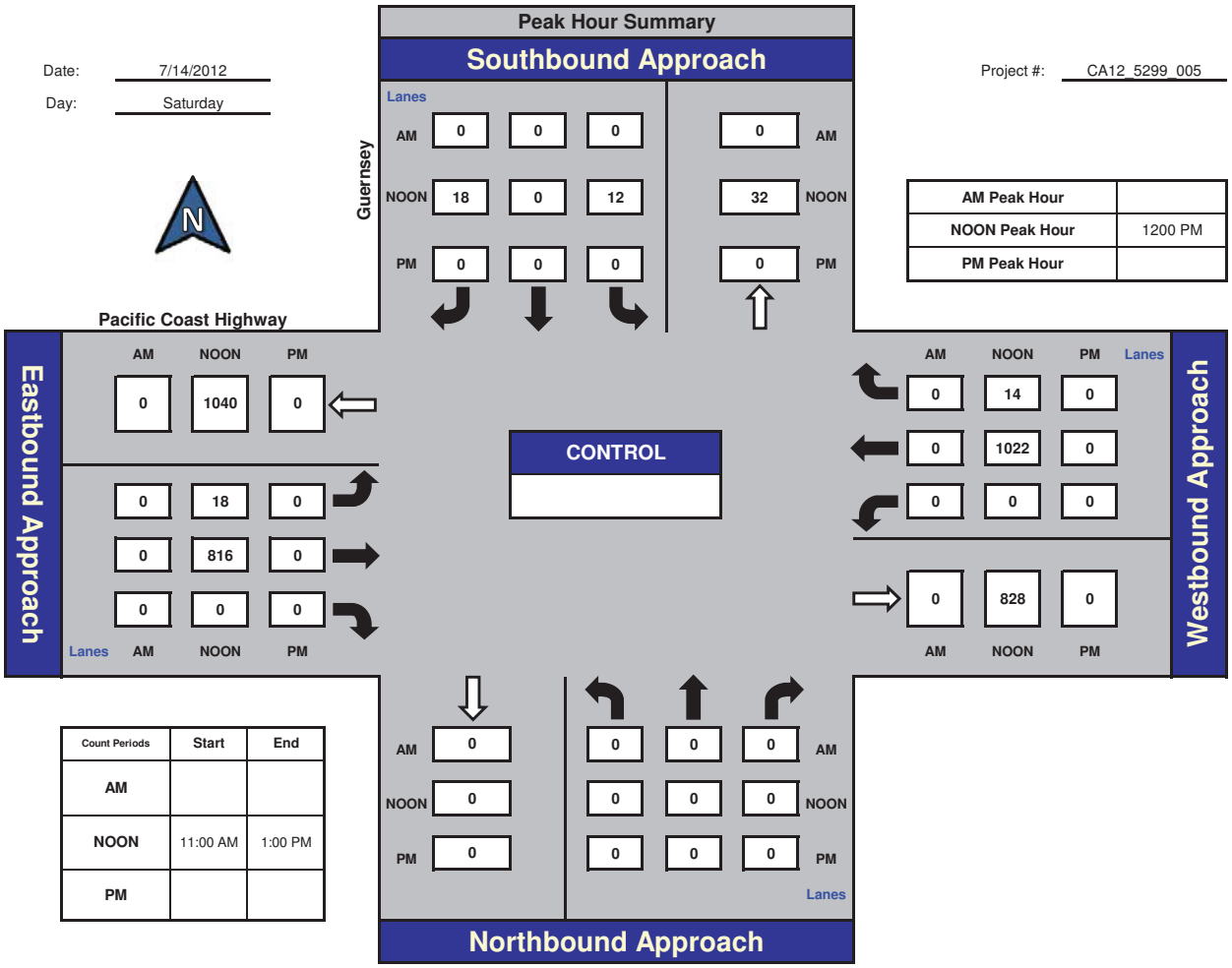
Guernsey and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

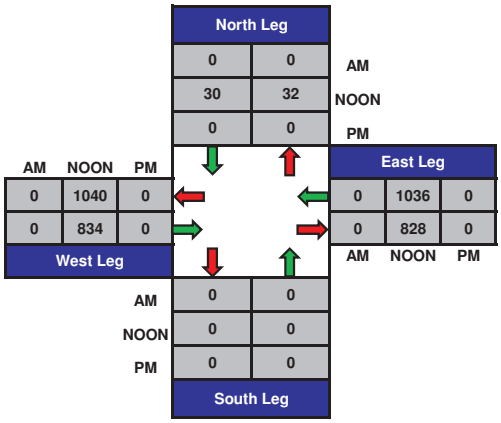
Project #: CA12_5299_005

AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

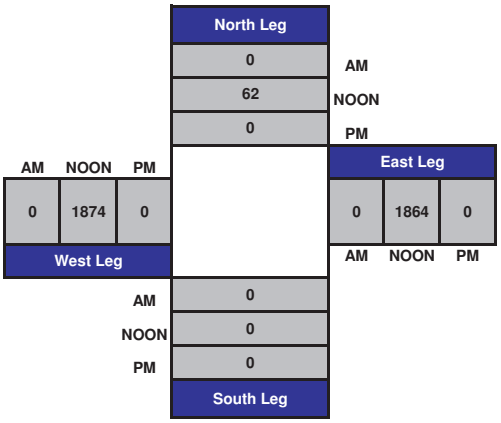


Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

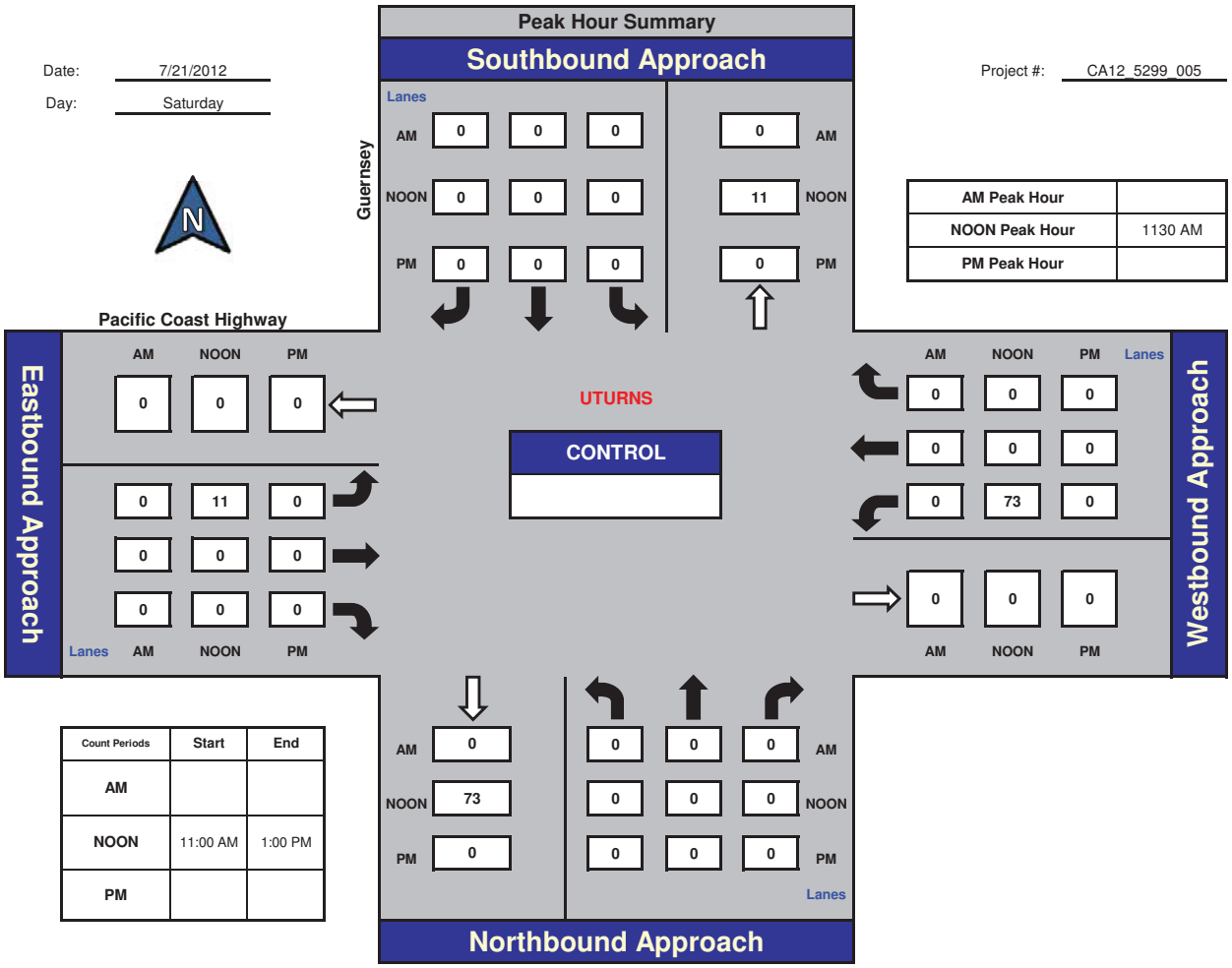
Guernsey and Pacific Coast Highway , City of Malibu

Date: 7/21/2012

Day: Saturday

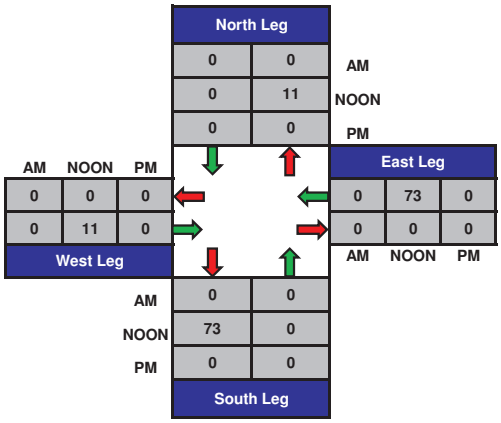
Project #: CA12_5299_005

AM Peak Hour	
NOON Peak Hour	1130 AM
PM Peak Hour	

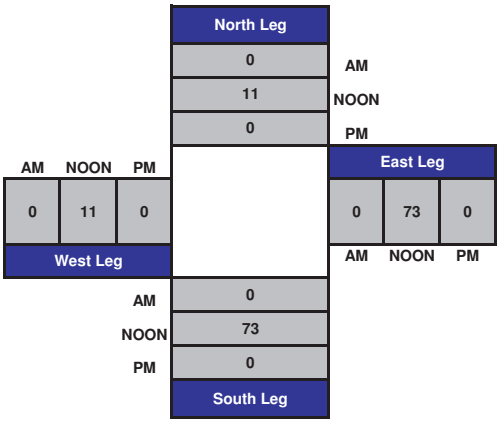


Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

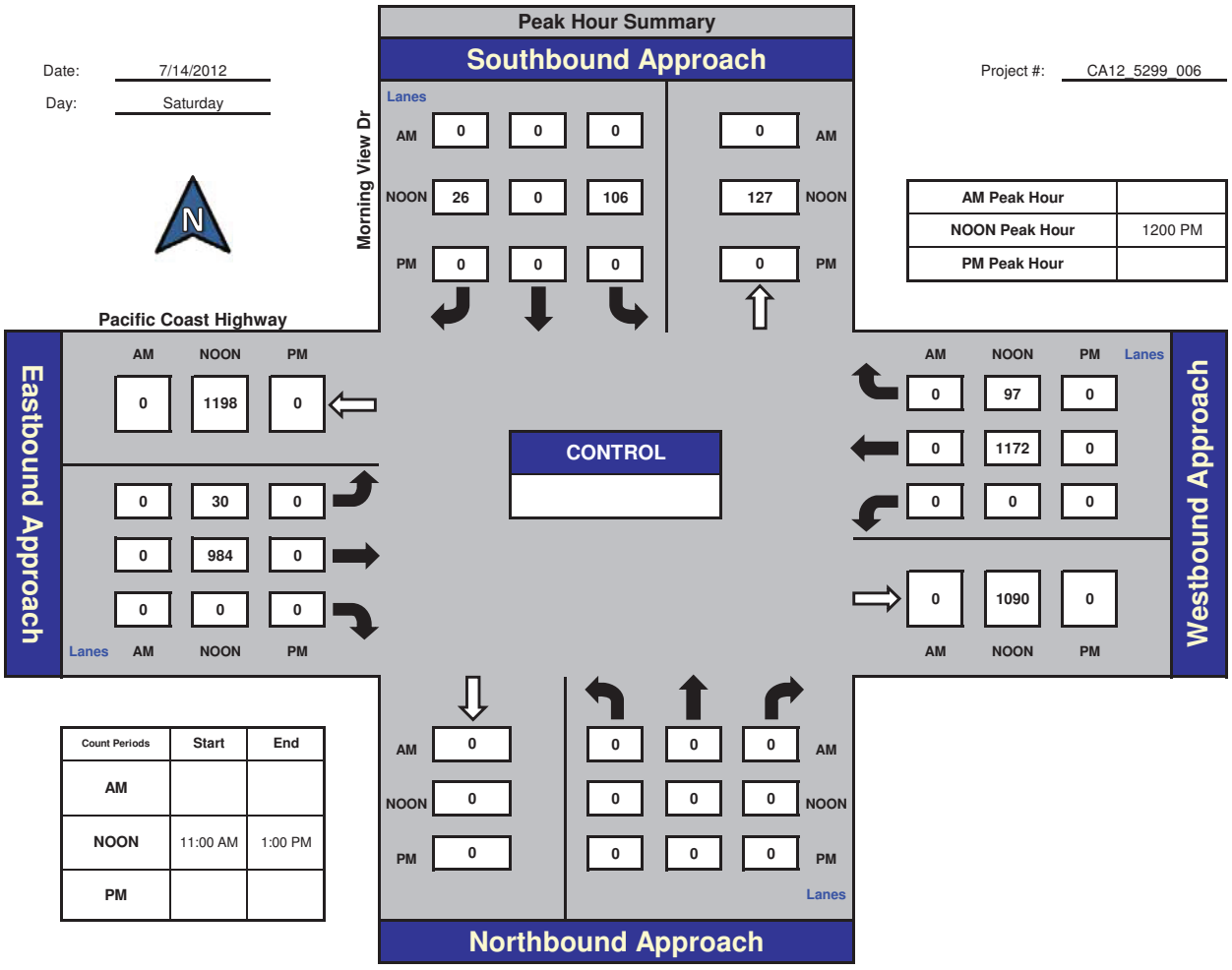
National Data & Surveying Services

Morning View Dr and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

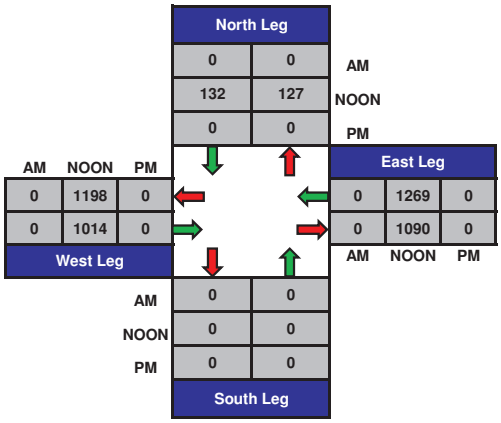
Project #: CA12_5299_006



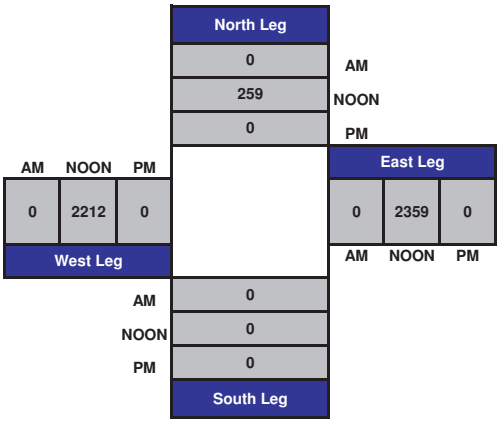
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

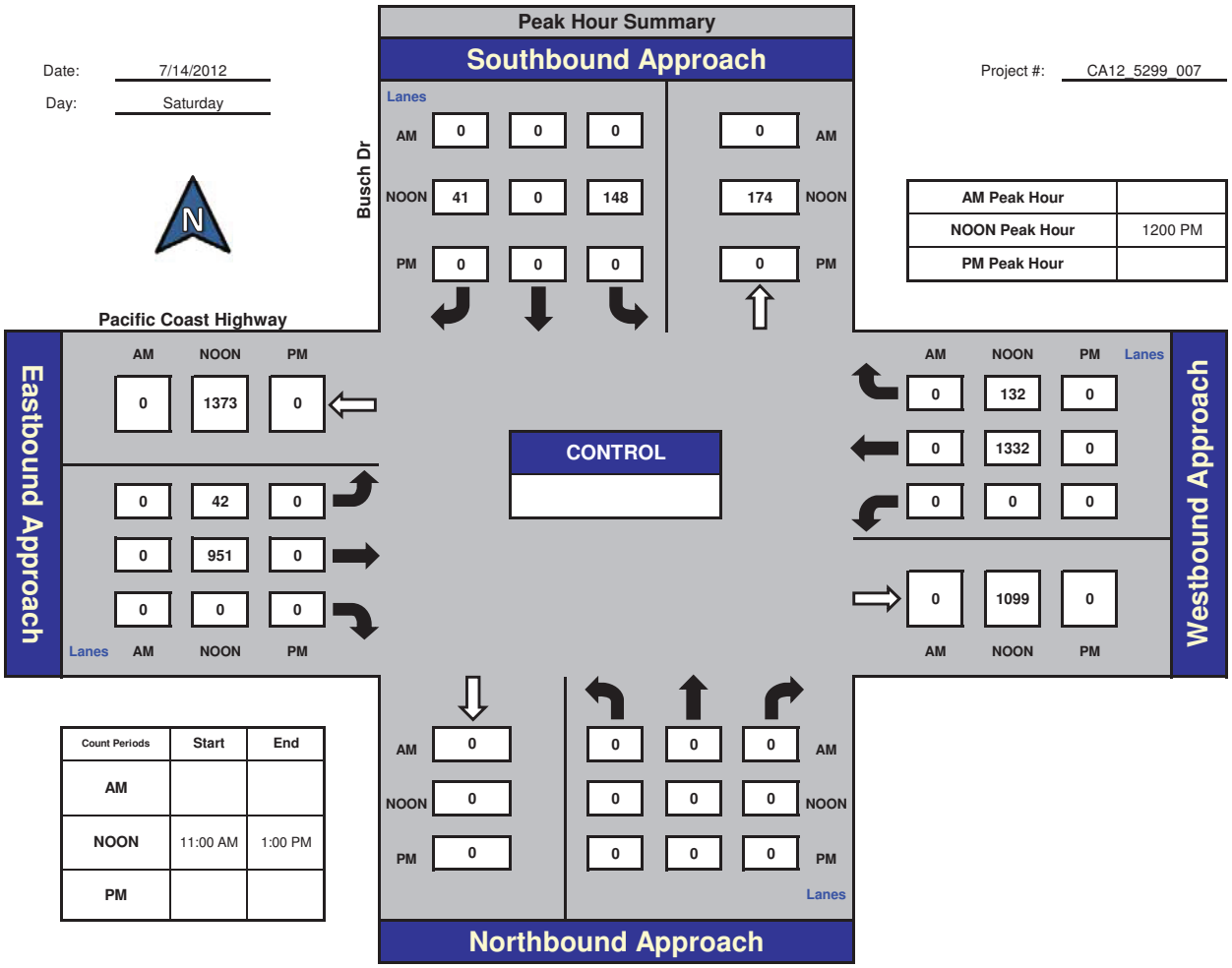
National Data & Surveying Services

Busch Dr and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

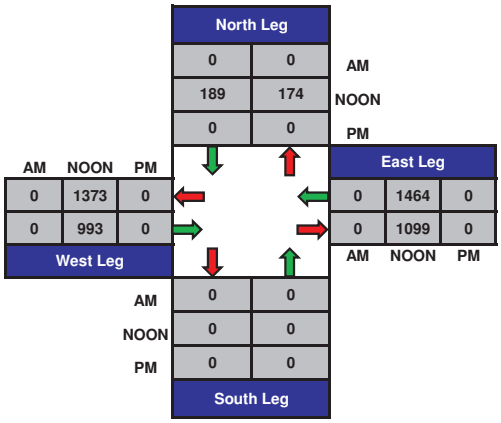
Project #: CA12_5299_007



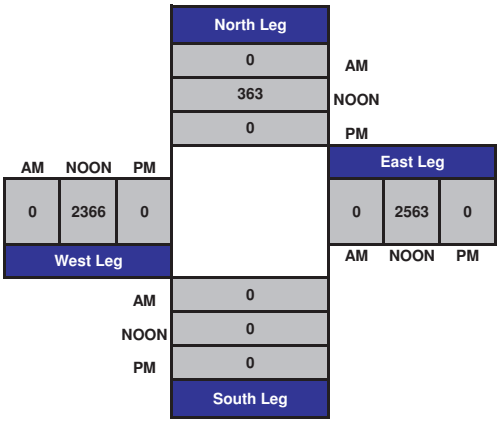
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

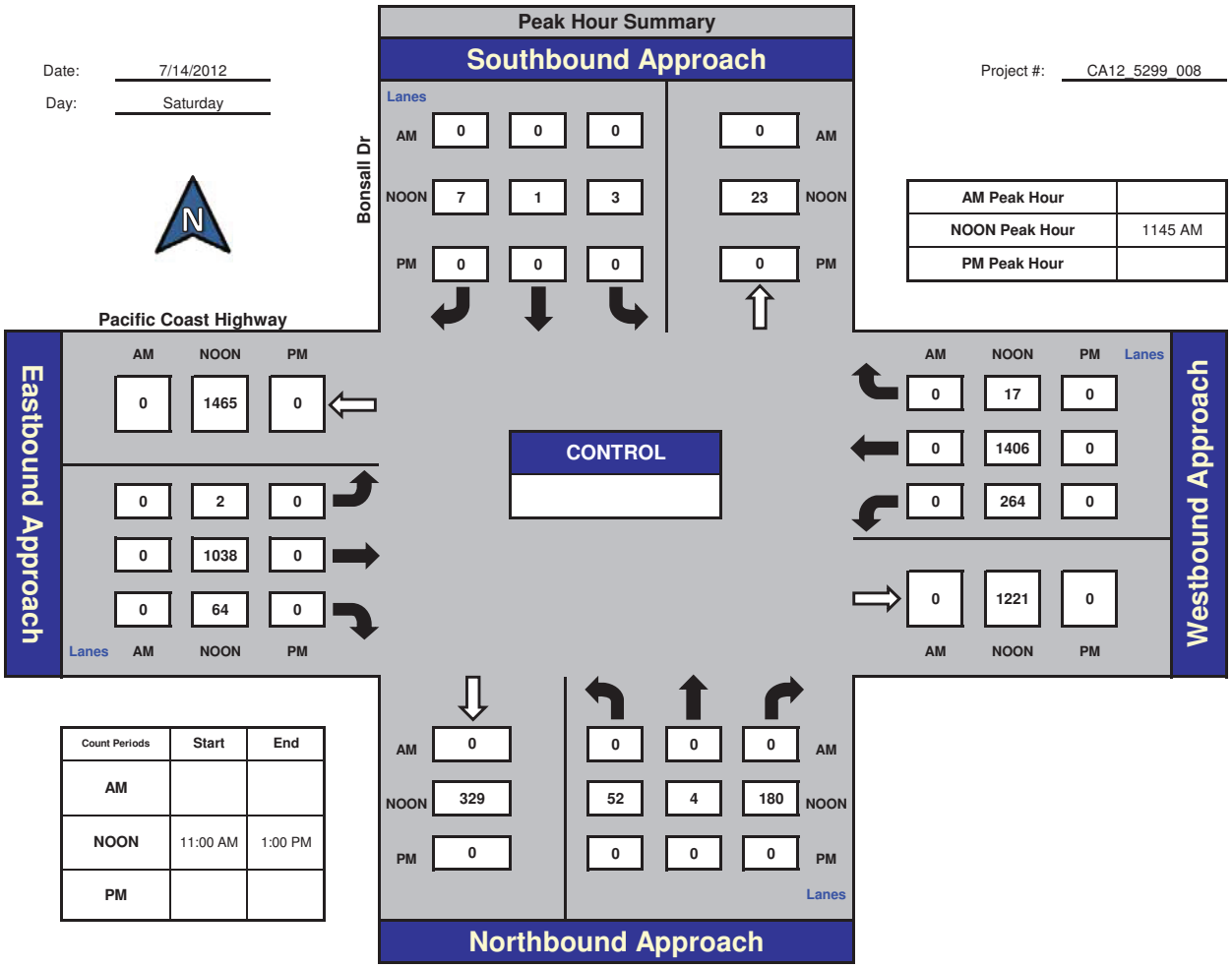
Bonsall Dr and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

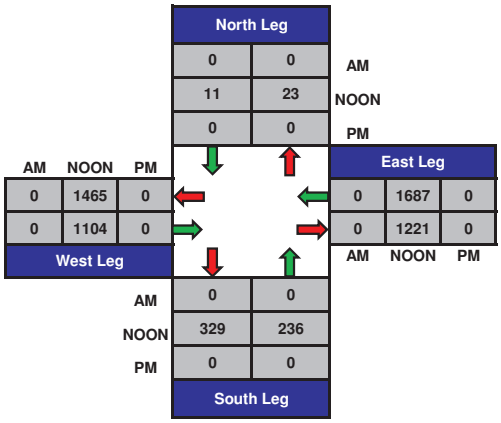
Project #: CA12_5299_008

AM Peak Hour	
NOON Peak Hour	1145 AM
PM Peak Hour	

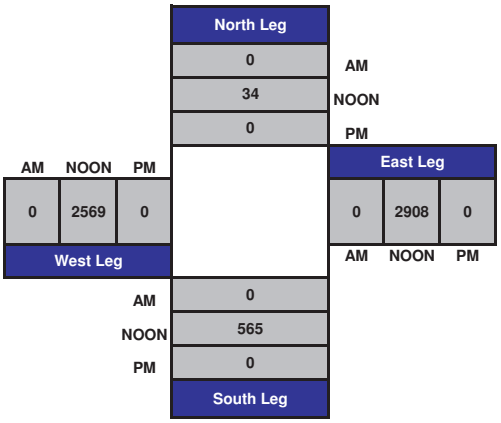


Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

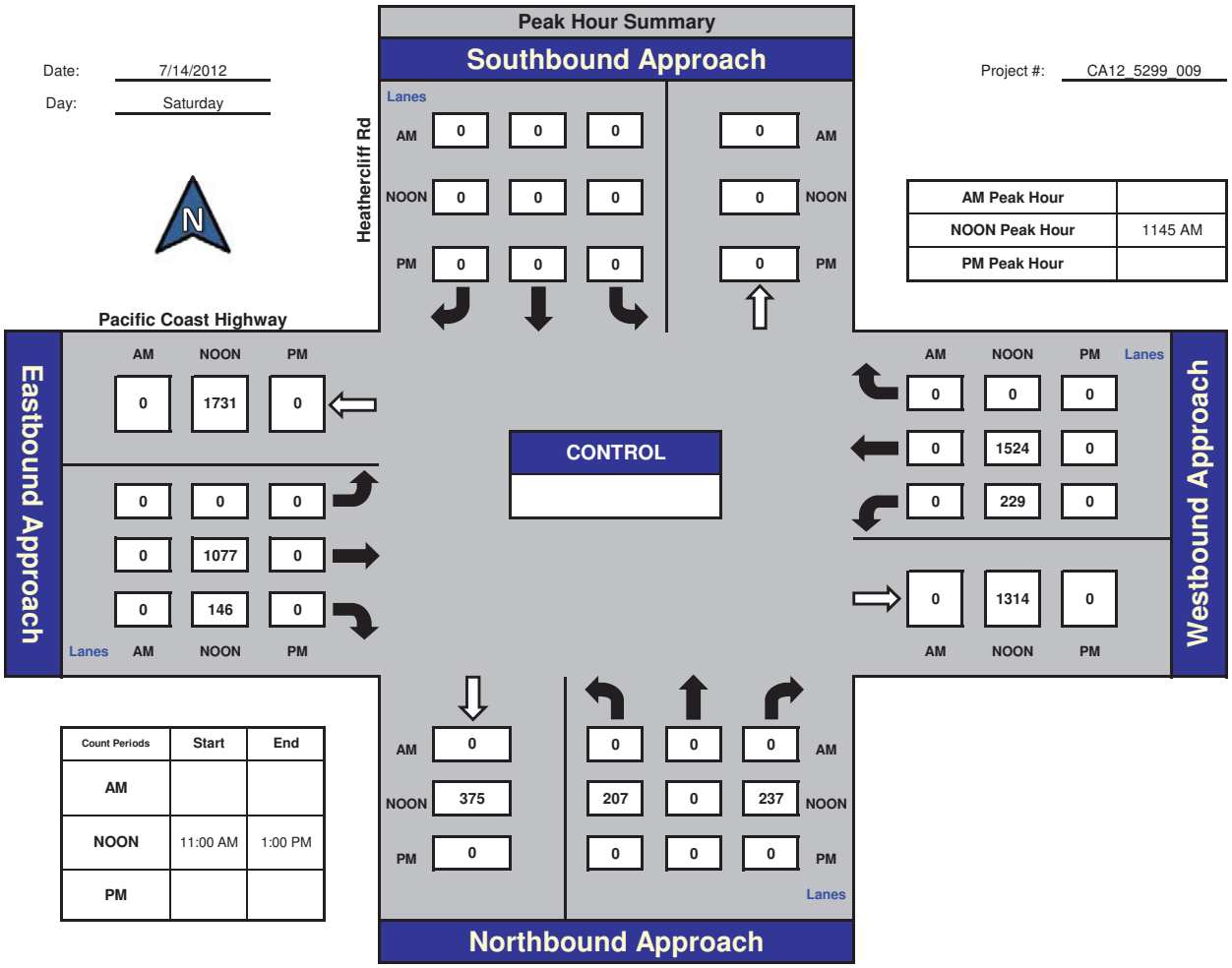
Heathercliff Rd and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

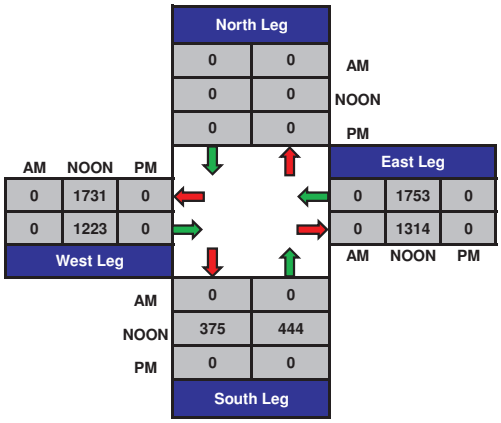
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AM Peak Hour	
NOON Peak Hour	1145 AM
PM Peak Hour	

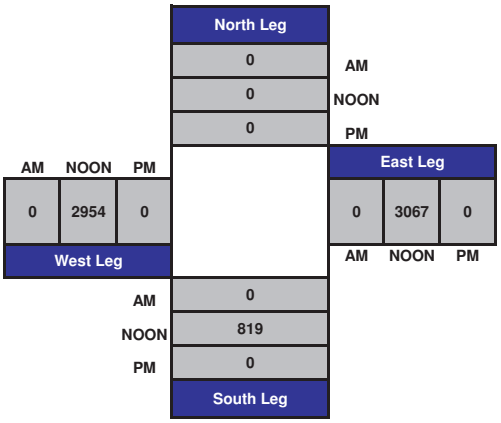


Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

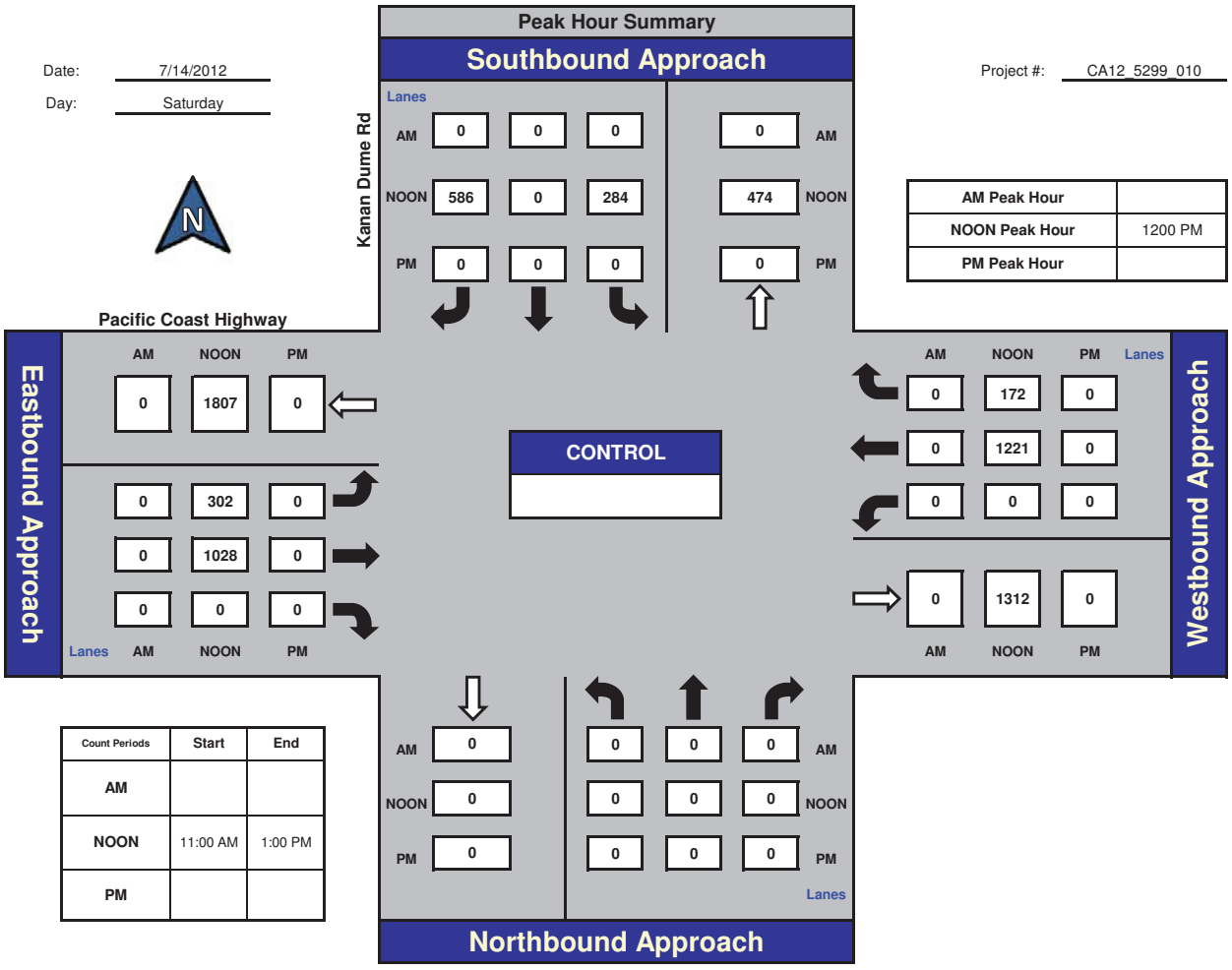
National Data & Surveying Services

Kanan Dume Rd and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

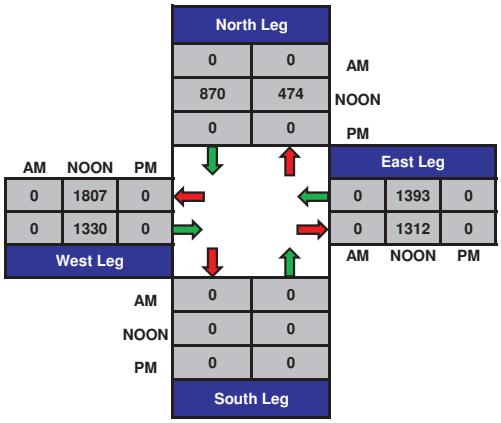
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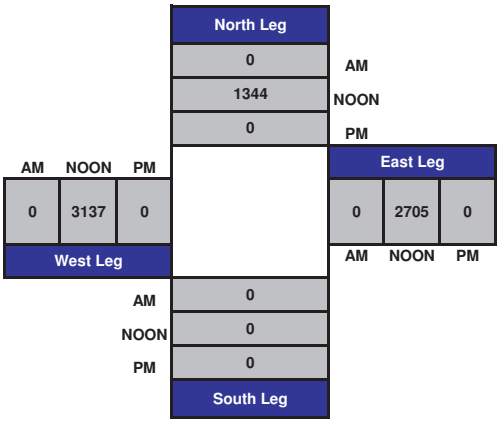
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

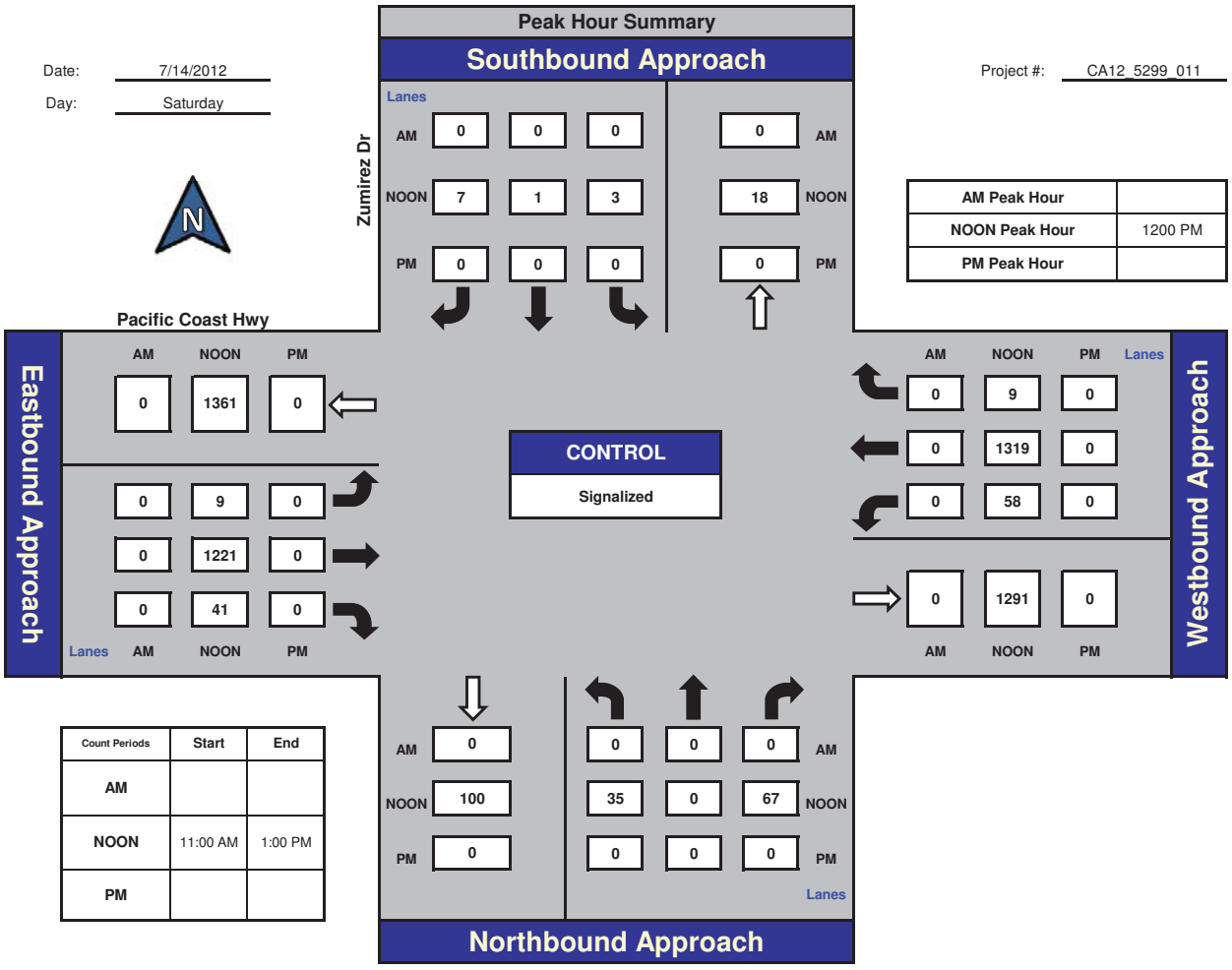
National Data & Surveying Services

Zumirez Dr and Pacific Coast Hwy , City of Malibu

Date: 7/14/2012

Day: Saturday

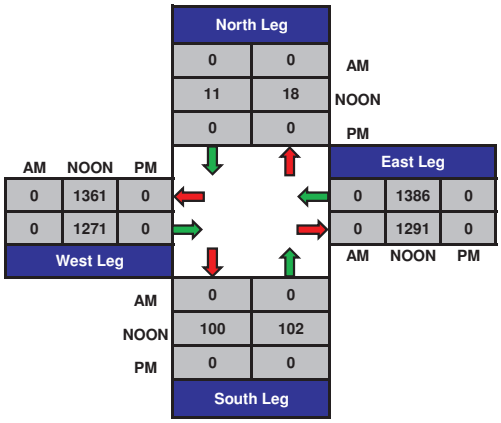
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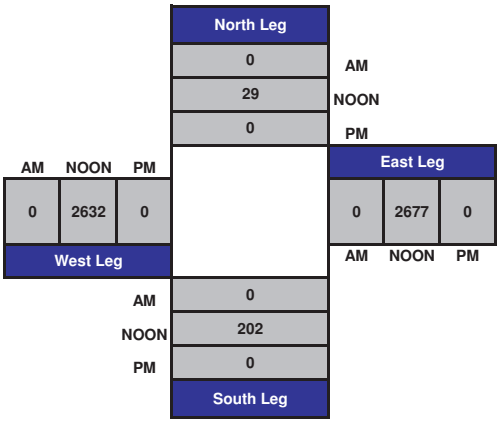
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

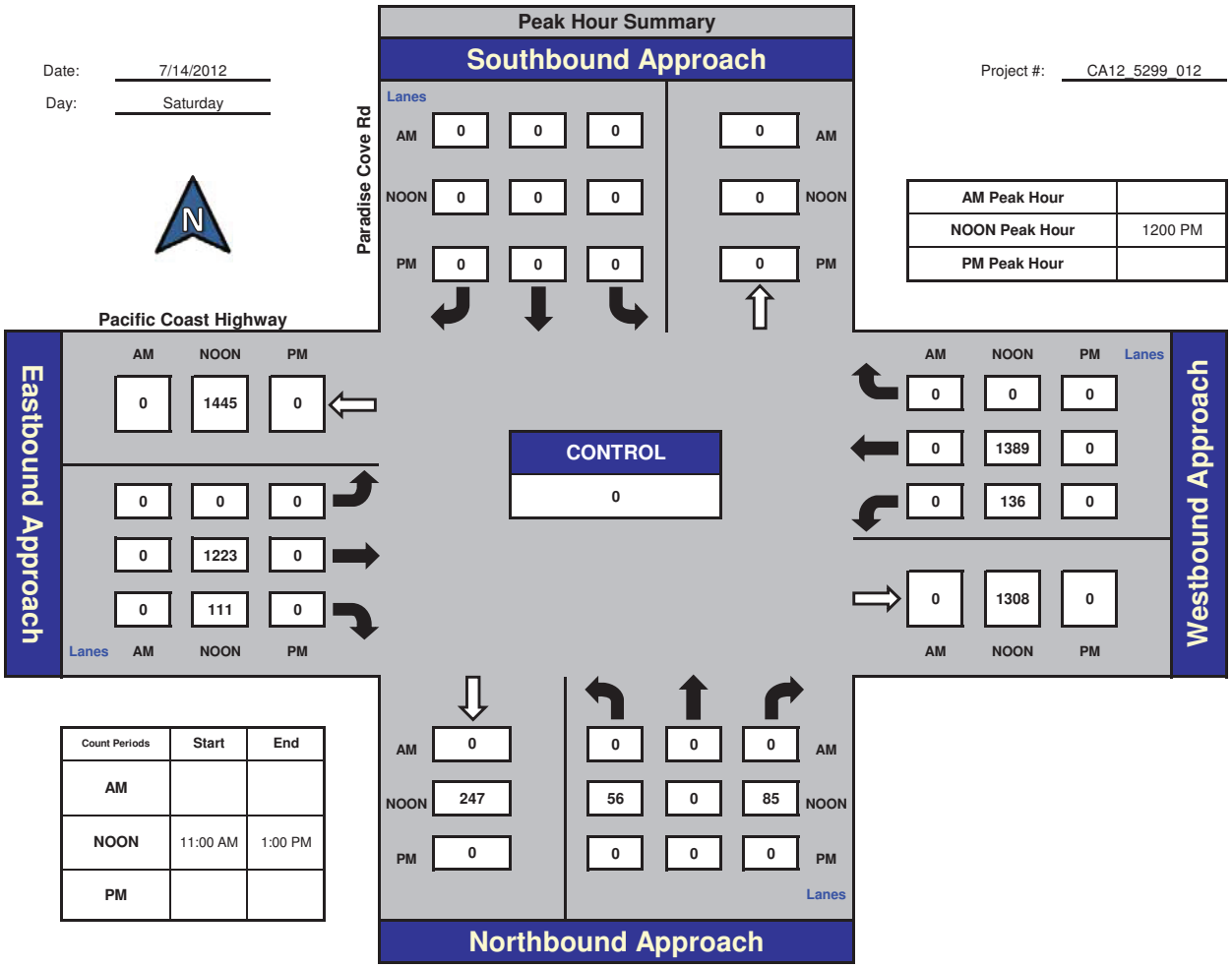
Paradise Cove Rd and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

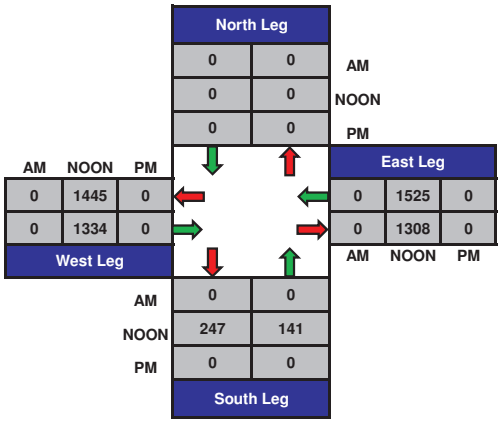
Project #: CA12_5299_012

AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

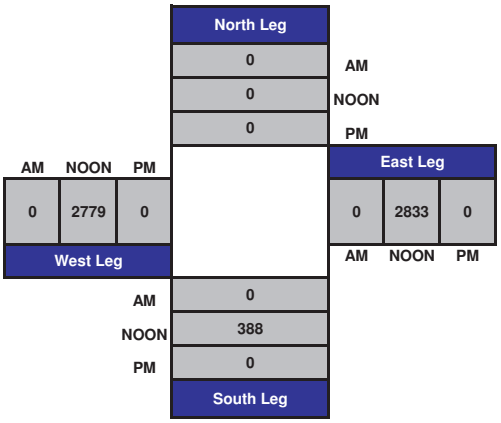


Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

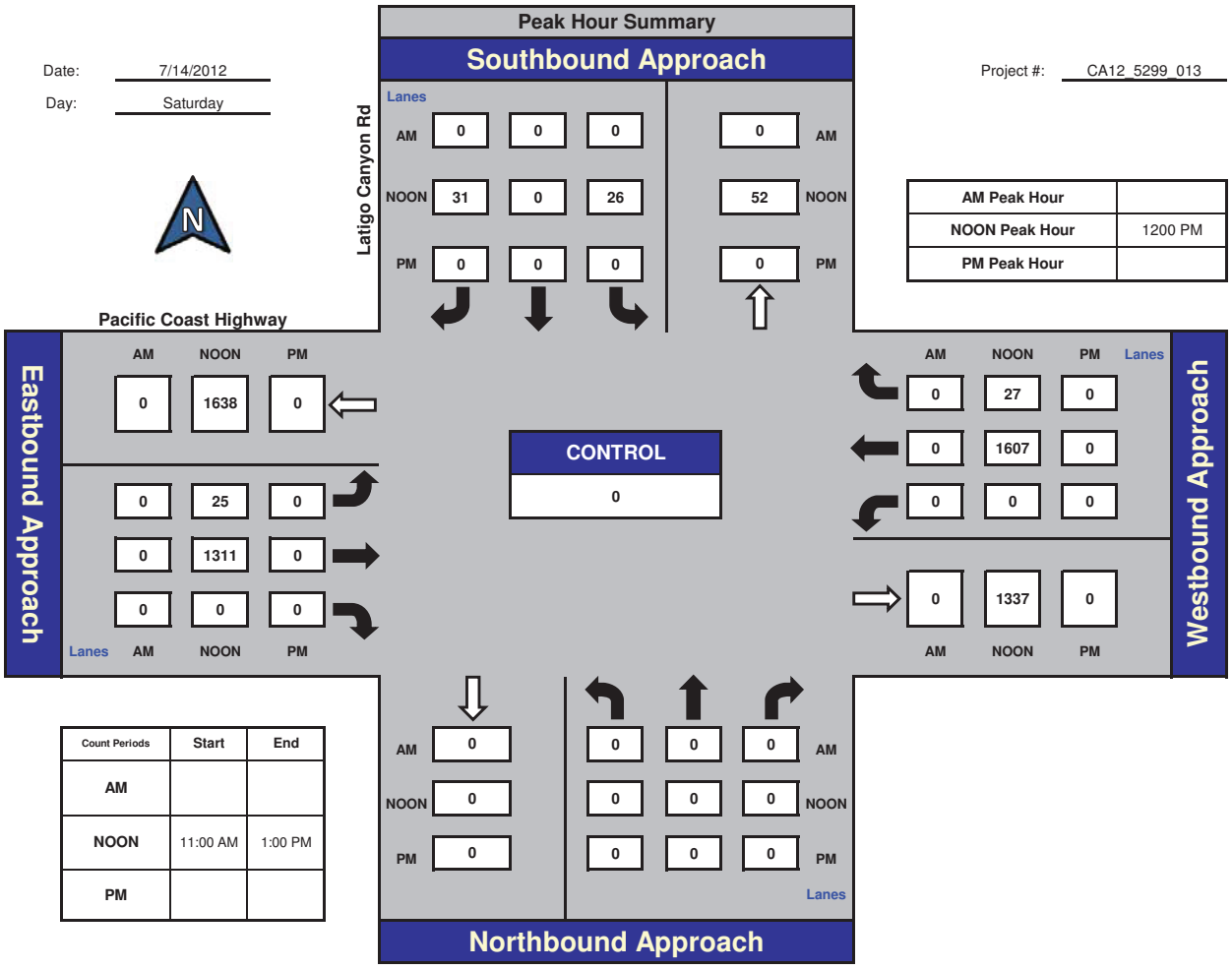
National Data & Surveying Services

Latigo Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

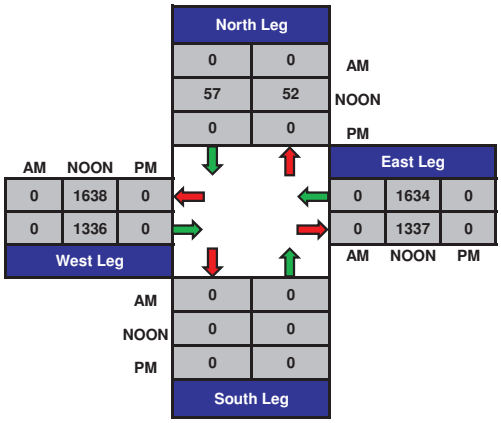
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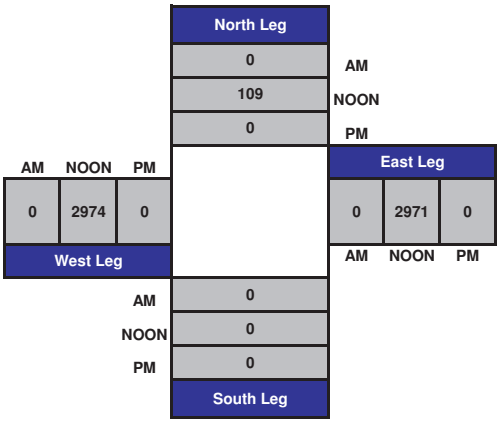
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

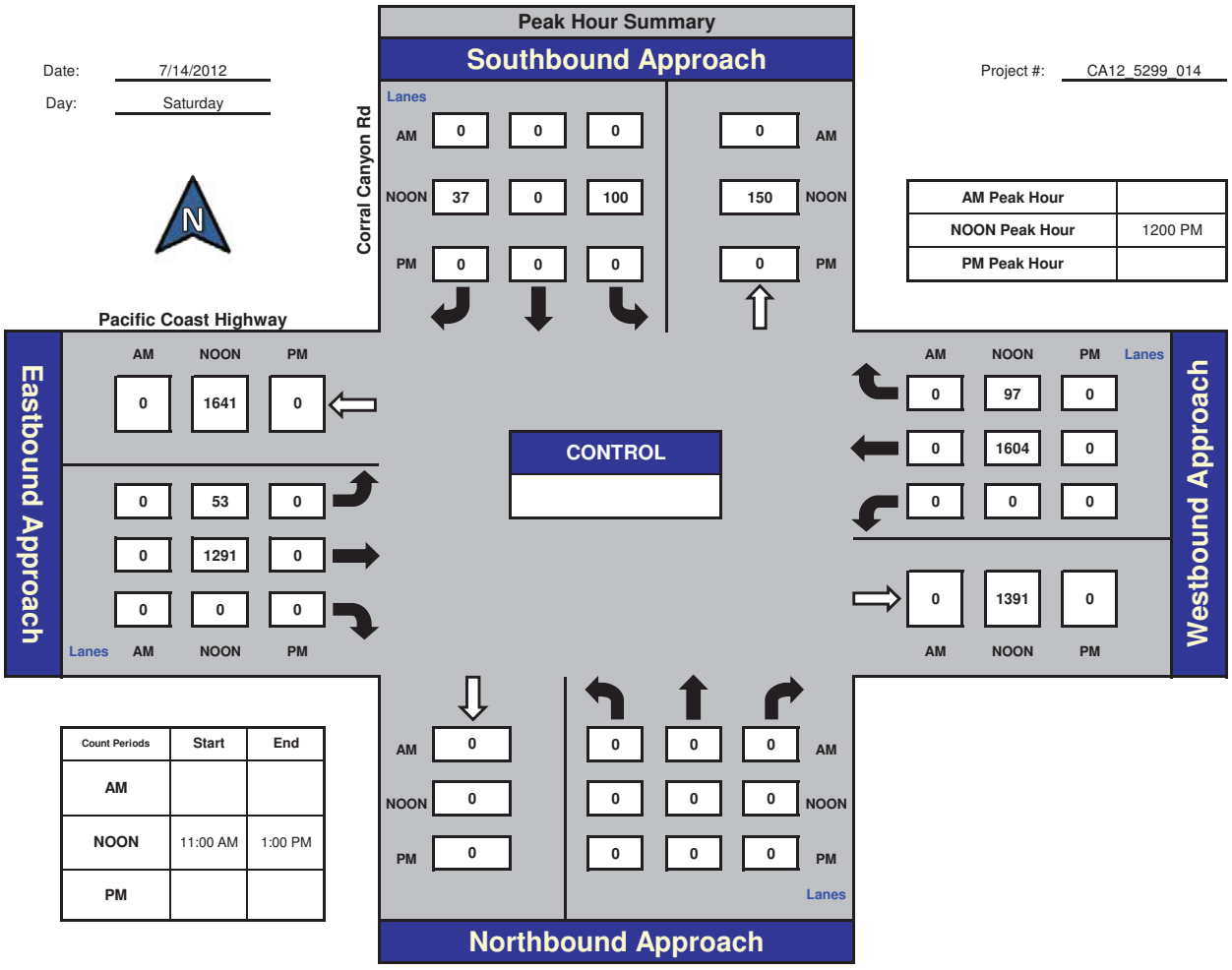
National Data & Surveying Services

Corral Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

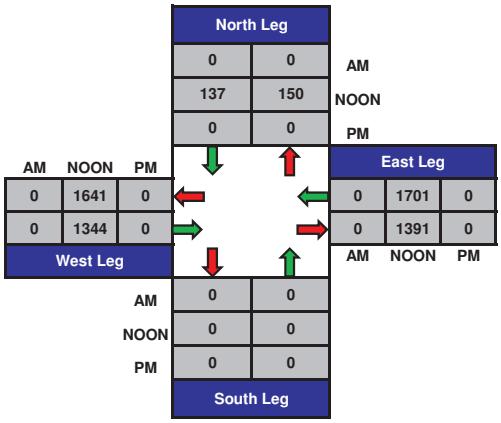
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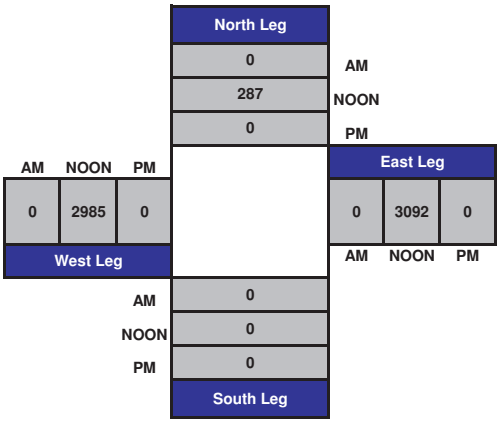
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Malibu Rd (west) and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

Project #: CA12_5299_015

AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Peak Hour Summary

Southbound Approach (Malibu Rd (west))

Lanes					
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM

Eastbound Approach (Pacific Coast Highway)

Lanes	AM	NOON	PM
	0	1746	0
	0	0	0
	0	1399	0
	0	0	0

Westbound Approach

Lanes	AM	NOON	PM
	0	0	0
	0	1746	0
	0	0	0
	0	1446	0

CONTROL: 0

Northbound Approach

Lanes					
AM	0	0	0	0	AM
NOON	0	0	0	47	NOON
PM	0	0	0	0	PM

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs

	North Leg		
AM	0	0	AM
NOON	0	0	NOON
PM	0	0	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
0	1746	0	0	1746	0
0	1399	0	0	1446	0

	South Leg	
AM	0	0
NOON	0	47
PM	0	0

Total Volume Per Leg

	North Leg	
AM	0	AM
NOON	0	NOON
PM	0	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
0	3145	0	0	3192	0

	South Leg
AM	0
NOON	47
PM	0

ITM Peak Hour Summary

Prepared by:

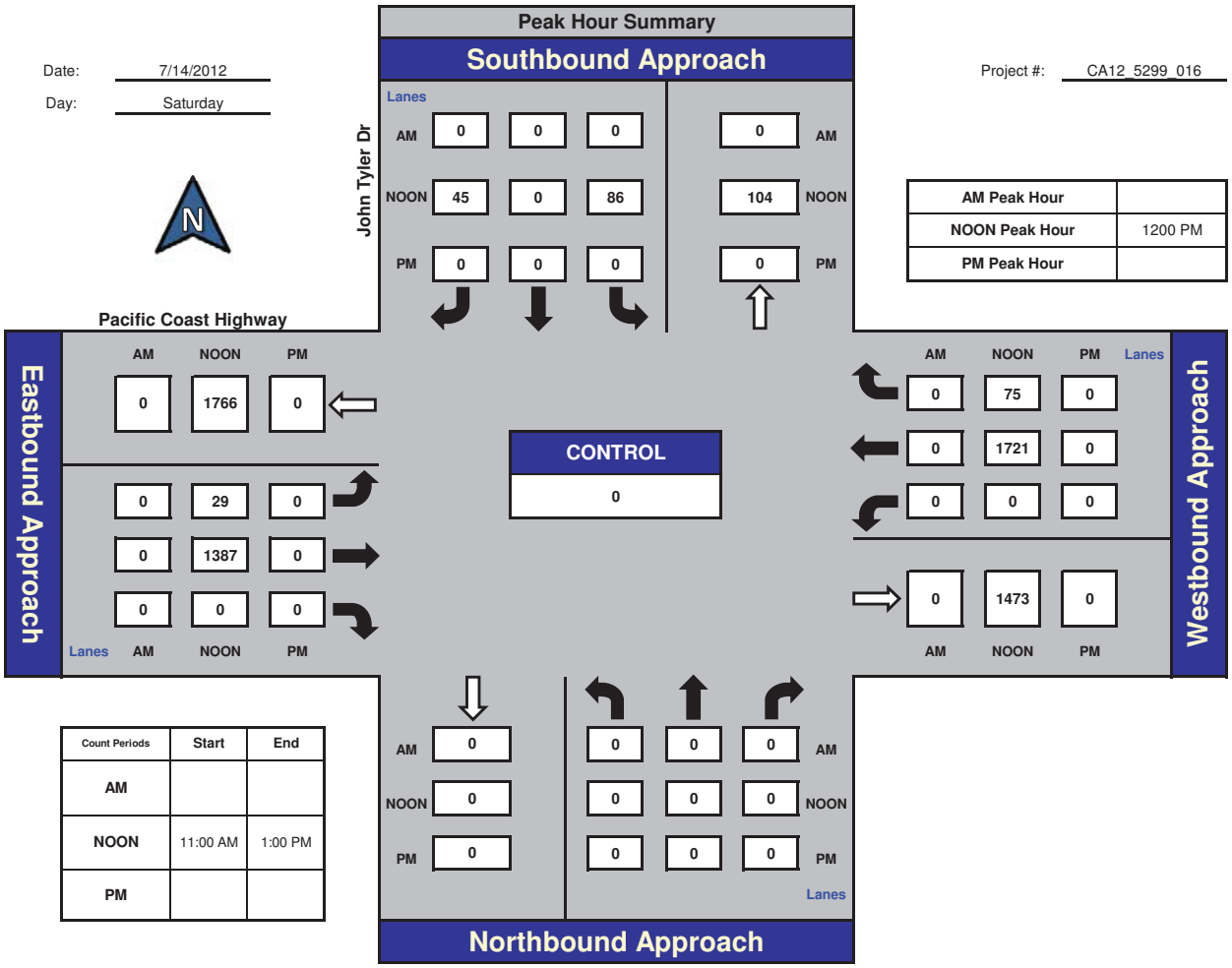
National Data & Surveying Services

John Tyler Dr and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

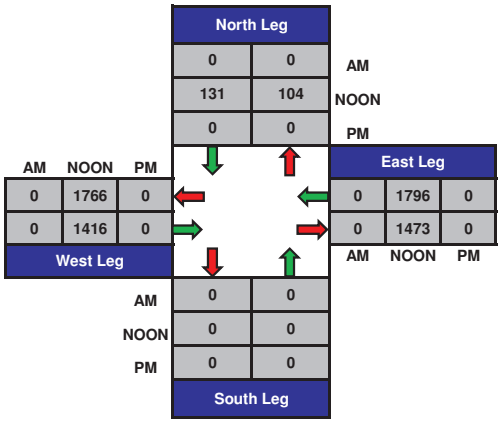
Project #: CA12_5299_016



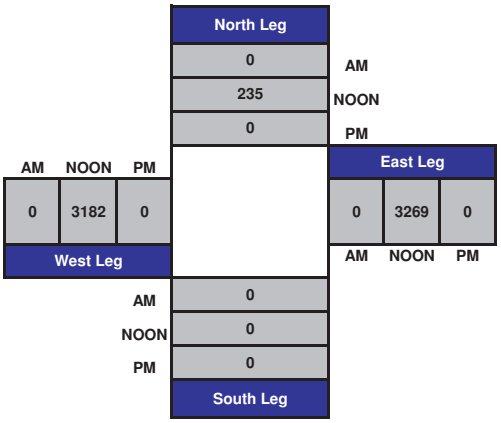
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

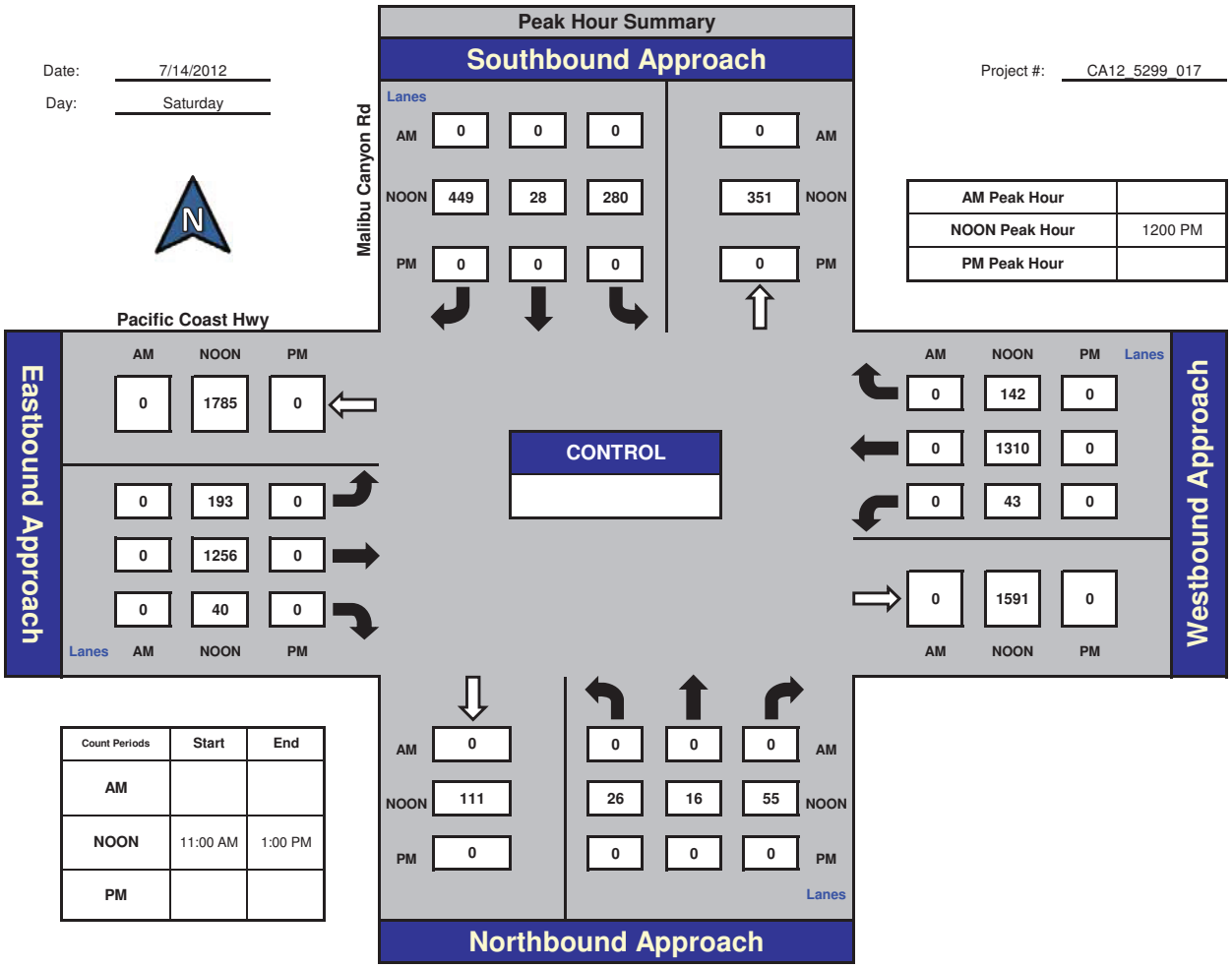
National Data & Surveying Services

Malibu Canyon Rd and Pacific Coast Hwy , City of Malibu

Date: 7/14/2012

Day: Saturday

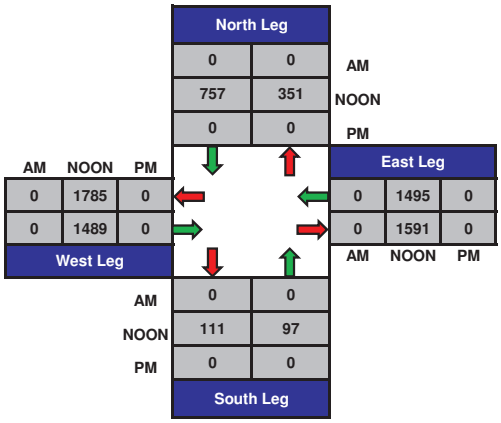
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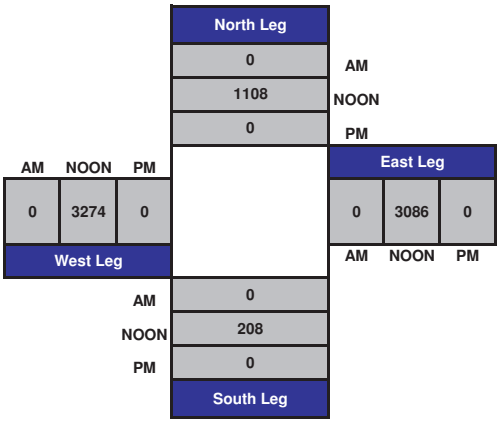
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

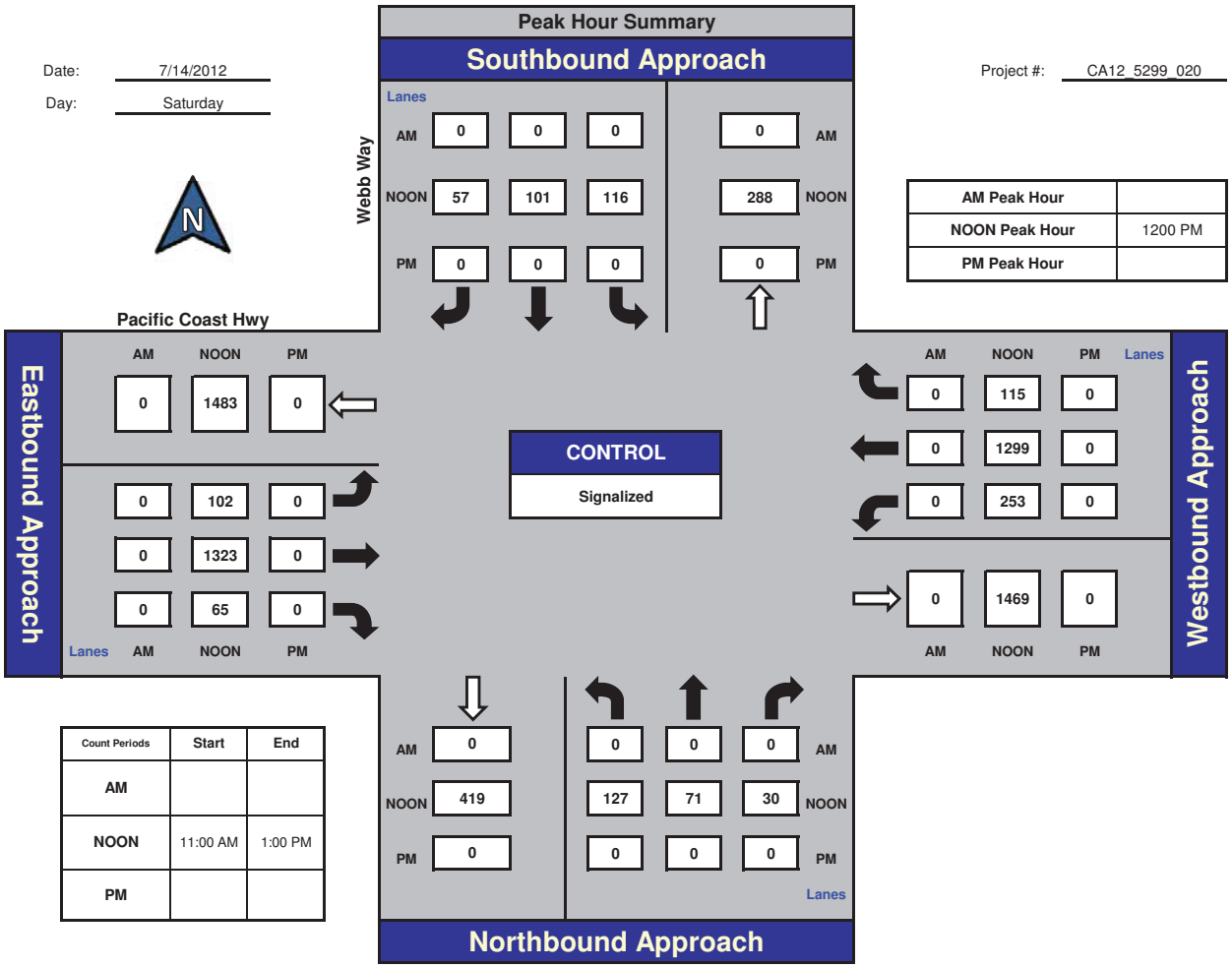
National Data & Surveying Services

Webb Way and Pacific Coast Hwy , City of Malibu

Date: 7/14/2012

Day: Saturday

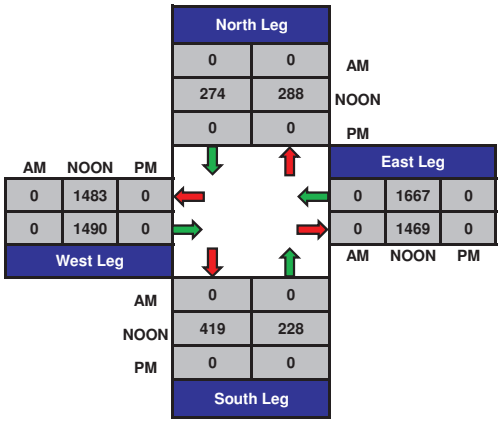
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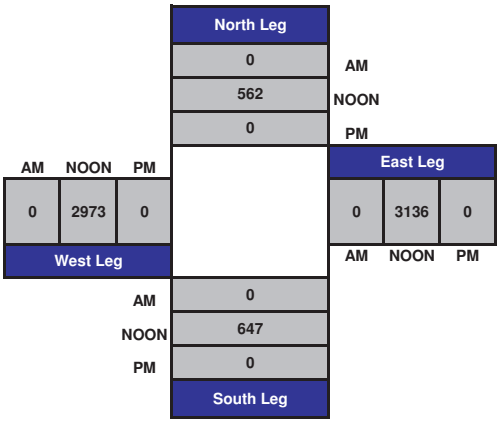
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

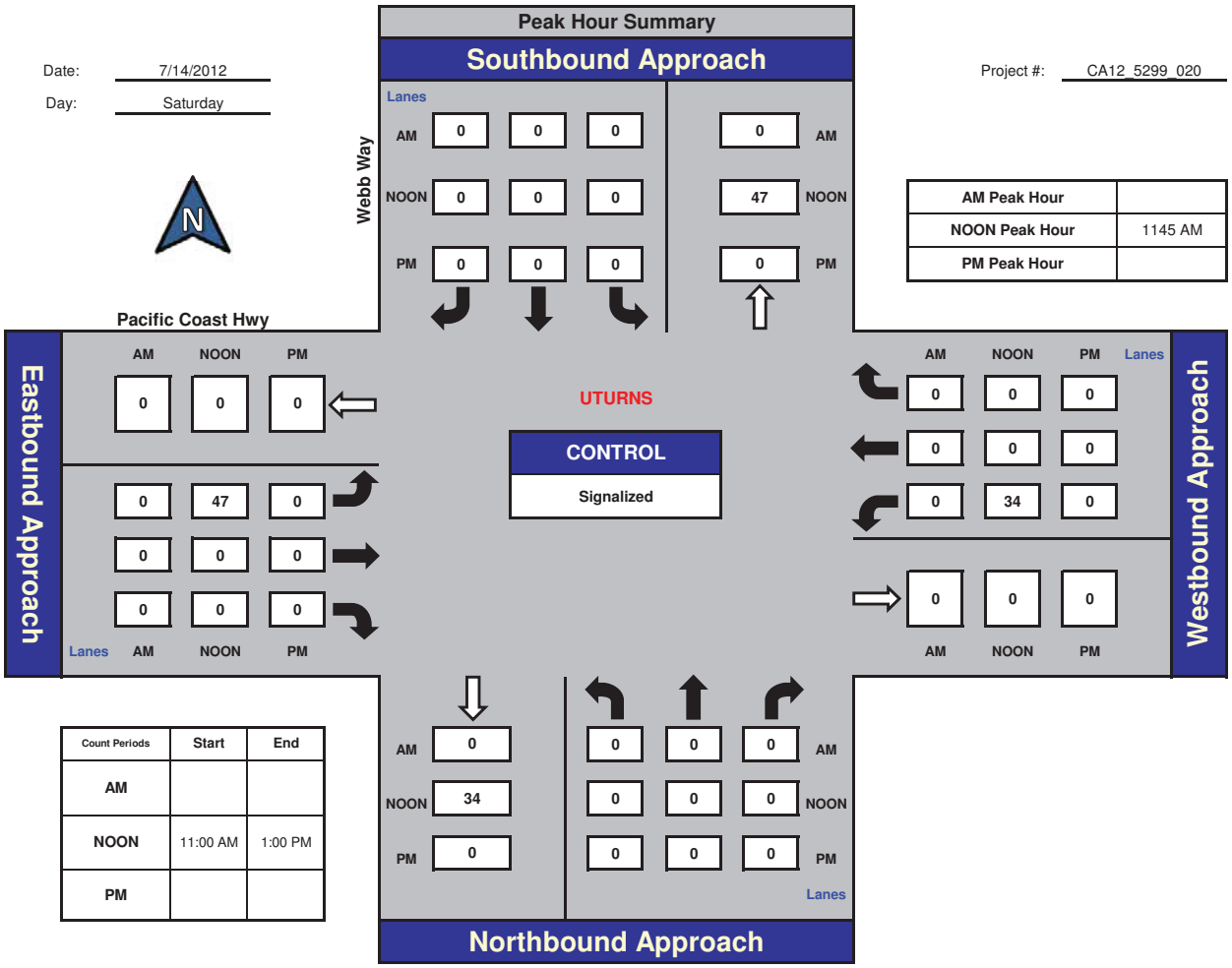
National Data & Surveying Services

Webb Way and Pacific Coast Hwy , City of Malibu

Date: 7/14/2012

Day: Saturday

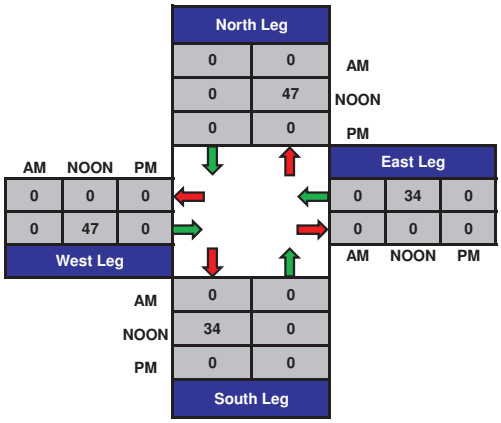
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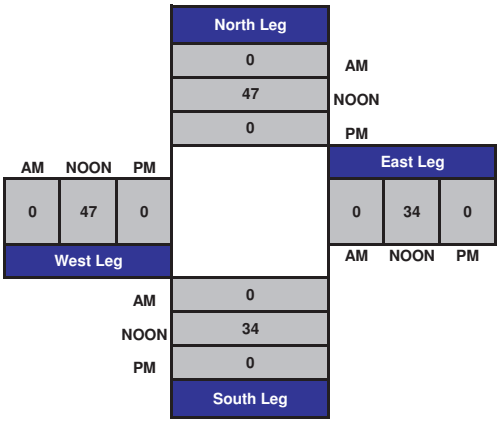
AM Peak Hour	
NOON Peak Hour	1145 AM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

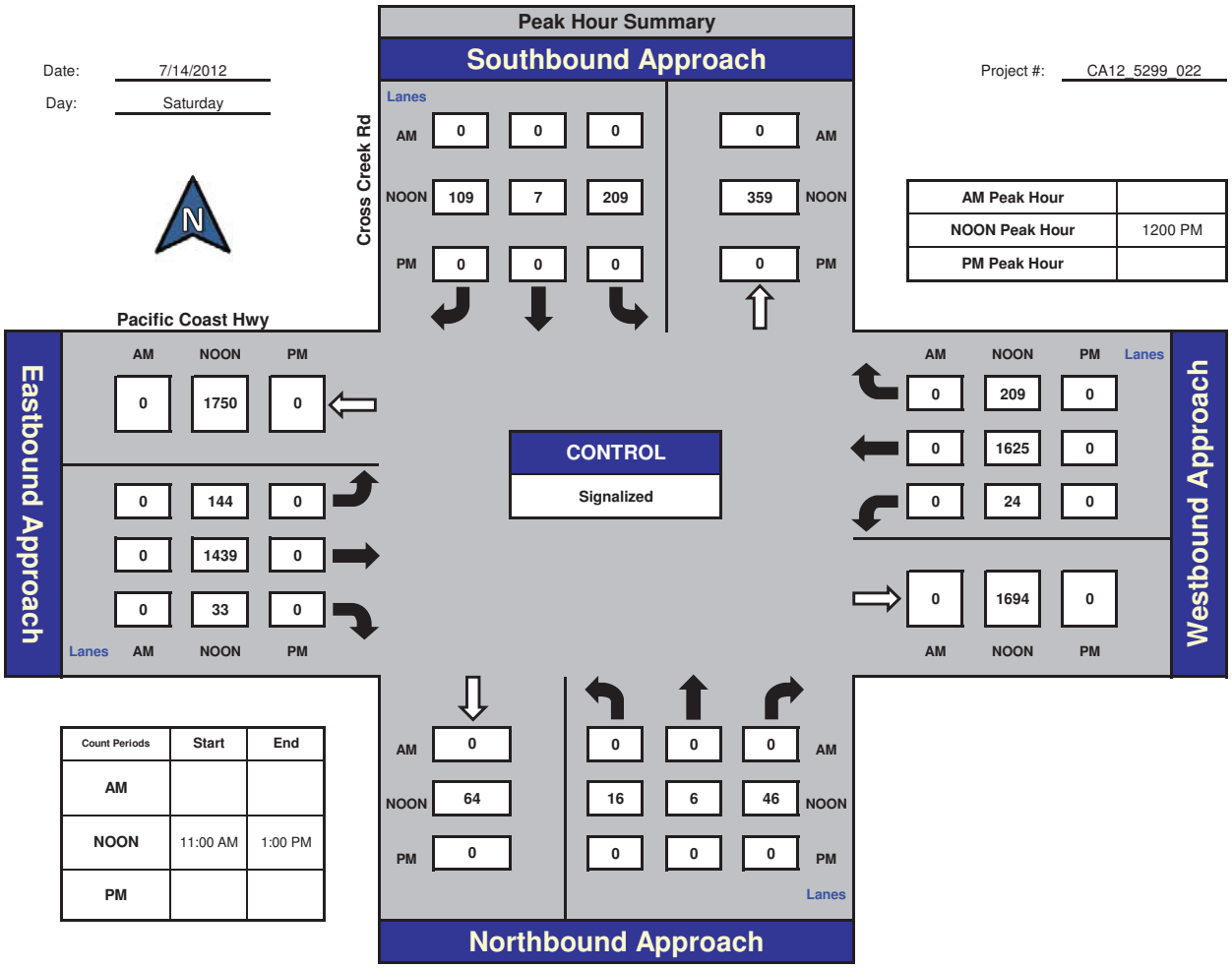
National Data & Surveying Services

Cross Creek Rd and Pacific Coast Hwy , City of Malibu

Date: 7/14/2012

Day: Saturday

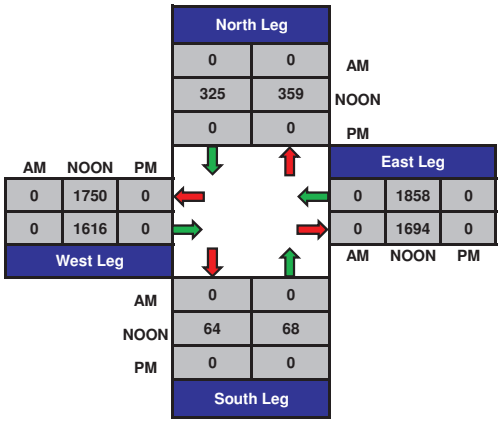
Project #: CA12_5299_022



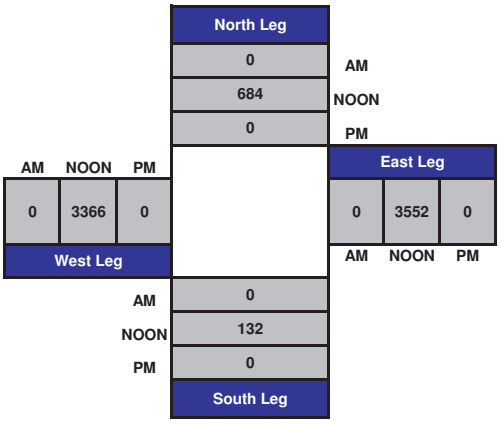
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Malibu Pier Signal and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

Project #: CA12_5299_024

AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Peak Hour Summary

Southbound Approach — Malibu Pier Signal

Lanes					
AM	0	0	0	0	AM
NOON	4	0	1	9	NOON
PM	0	0	0	0	PM

Eastbound Approach — Pacific Coast Highway

Lanes	AM	NOON	PM
	0	1879	0
	0	4	0
	0	1669	0
	0	0	0

Westbound Approach

Lanes	AM	NOON	PM
	0	5	0
	0	1875	0
	0	0	0
	0	1670	0

CONTROL

0

Northbound Approach

Lanes					
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs

North Leg		
0	0	AM
5	9	NOON
0	0	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
0	1879	0	0	1880	0
0	1673	0	0	1670	0

South Leg		
0	0	AM
0	0	NOON
0	0	PM

Total Volume Per Leg

North Leg	
0	AM
14	NOON
0	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
0	3552	0	0	3550	0

South Leg	
0	AM
0	NOON
0	PM

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Malibu Pier Signal and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

Project #: CA12_5299_024

AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Peak Hour Summary

Southbound Approach (Malibu Pier Signal)

Lanes					
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM

Eastbound Approach (Pacific Coast Highway)

Lanes	AM	NOON	PM
	0	0	0
	0	0	0
	0	0	0
	0	0	0

Westbound Approach

Lanes	AM	NOON	PM
	0	0	0
	0	0	0
	0	17	0
	0	0	0

UTURNS

CONTROL: 0

Northbound Approach

Lanes					
AM	0	0	0	0	AM
NOON	17	0	0	0	NOON
PM	0	0	0	0	PM

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs

	North Leg			East Leg			South Leg			West Leg		
	AM	NOON	PM	AM	NOON	PM	AM	NOON	PM	AM	NOON	PM
AM	0	0	0	0	17	0	0	0	0	0	0	0
NOON	0	0	0	0	0	0	17	0	0	0	0	0
PM	0	0	0									

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	0	0	0	0
NOON	0	17	17	0
PM	0	0	0	0

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

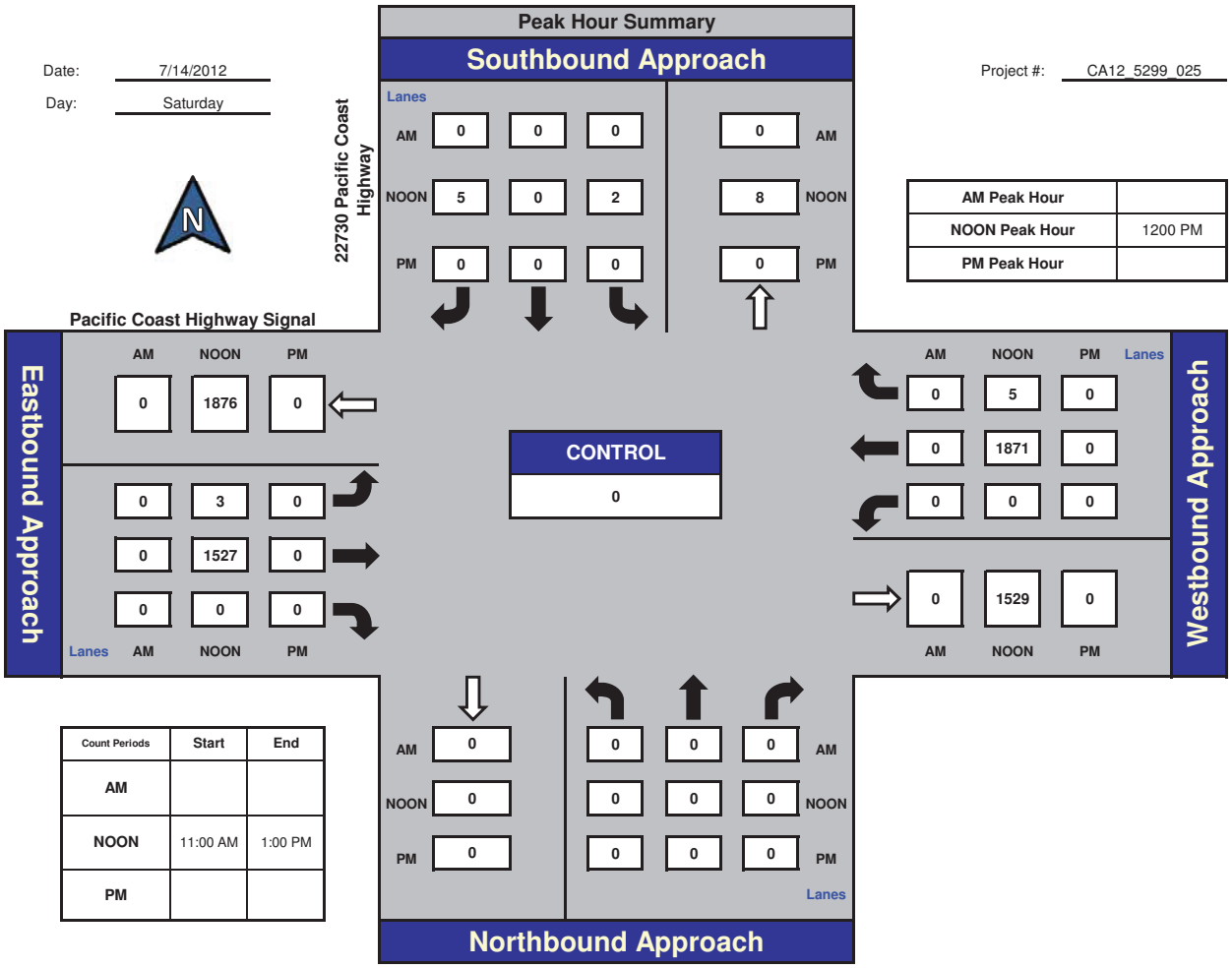
22730 Pacific Coast Highway and Pacific Coast Highway Signal , City of Malibu

Date: 7/14/2012

Day: Saturday

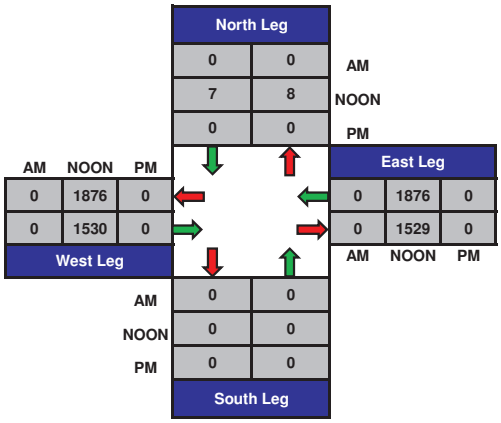
Project #: CA12_5299_025

AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

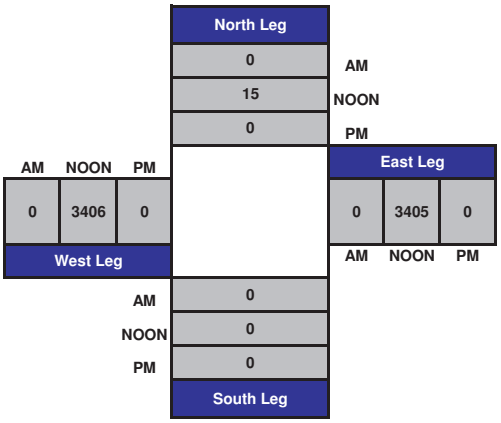


Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

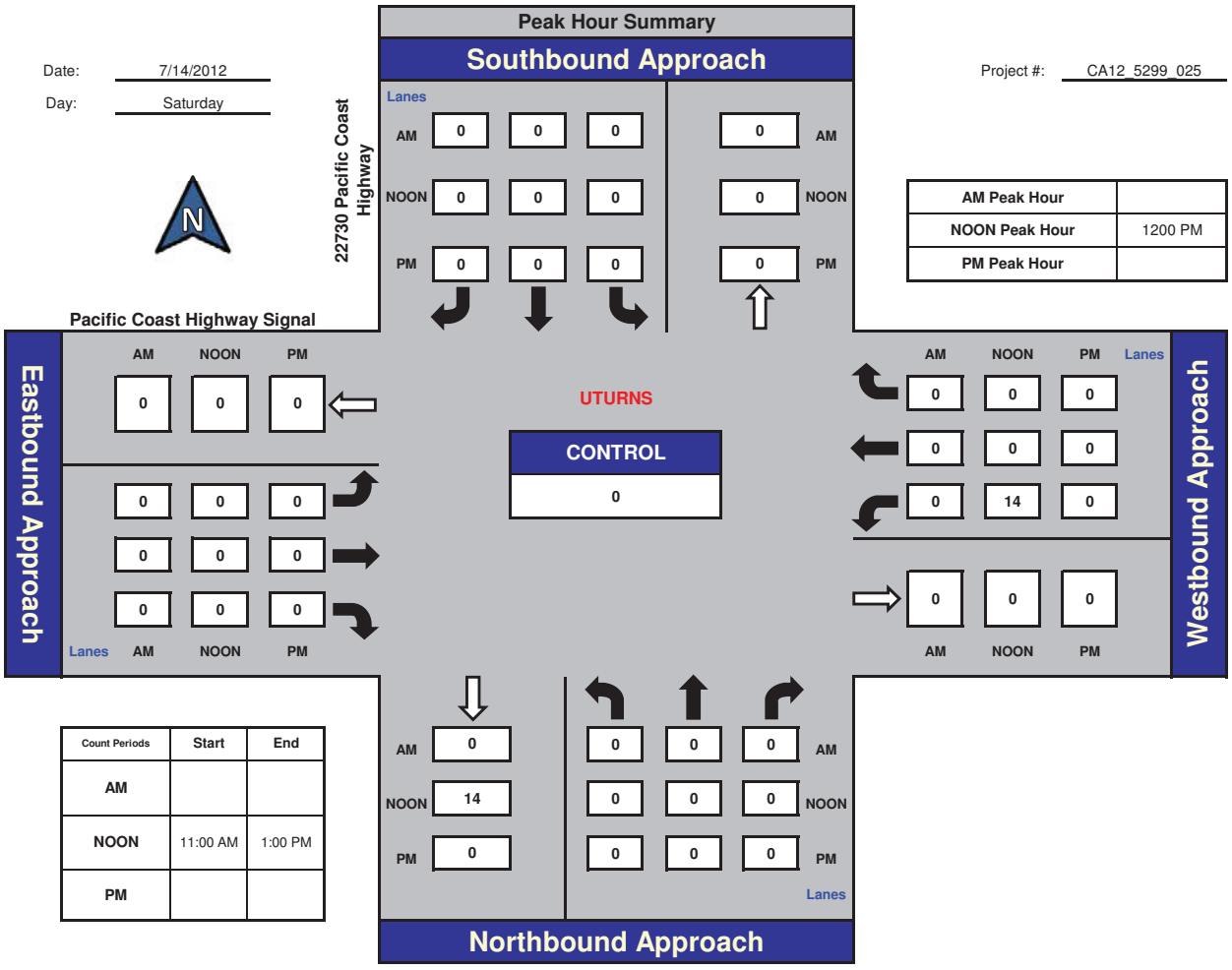
National Data & Surveying Services

22730 Pacific Coast Highway and Pacific Coast Highway Signal , City of Malibu

Date: 7/14/2012

Day: Saturday

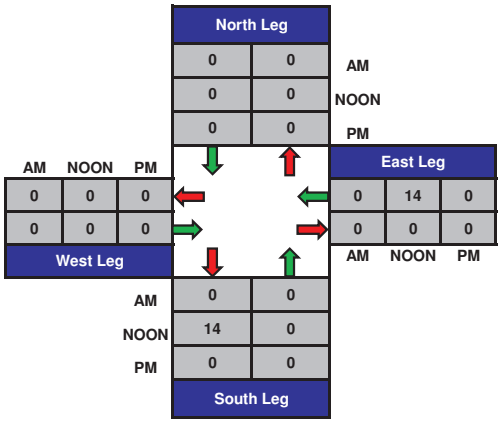
Project #: CA12_5299_025



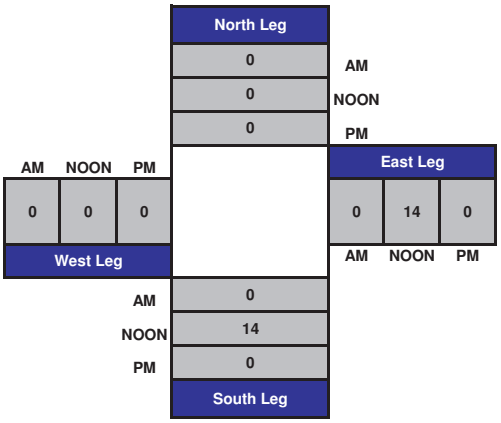
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

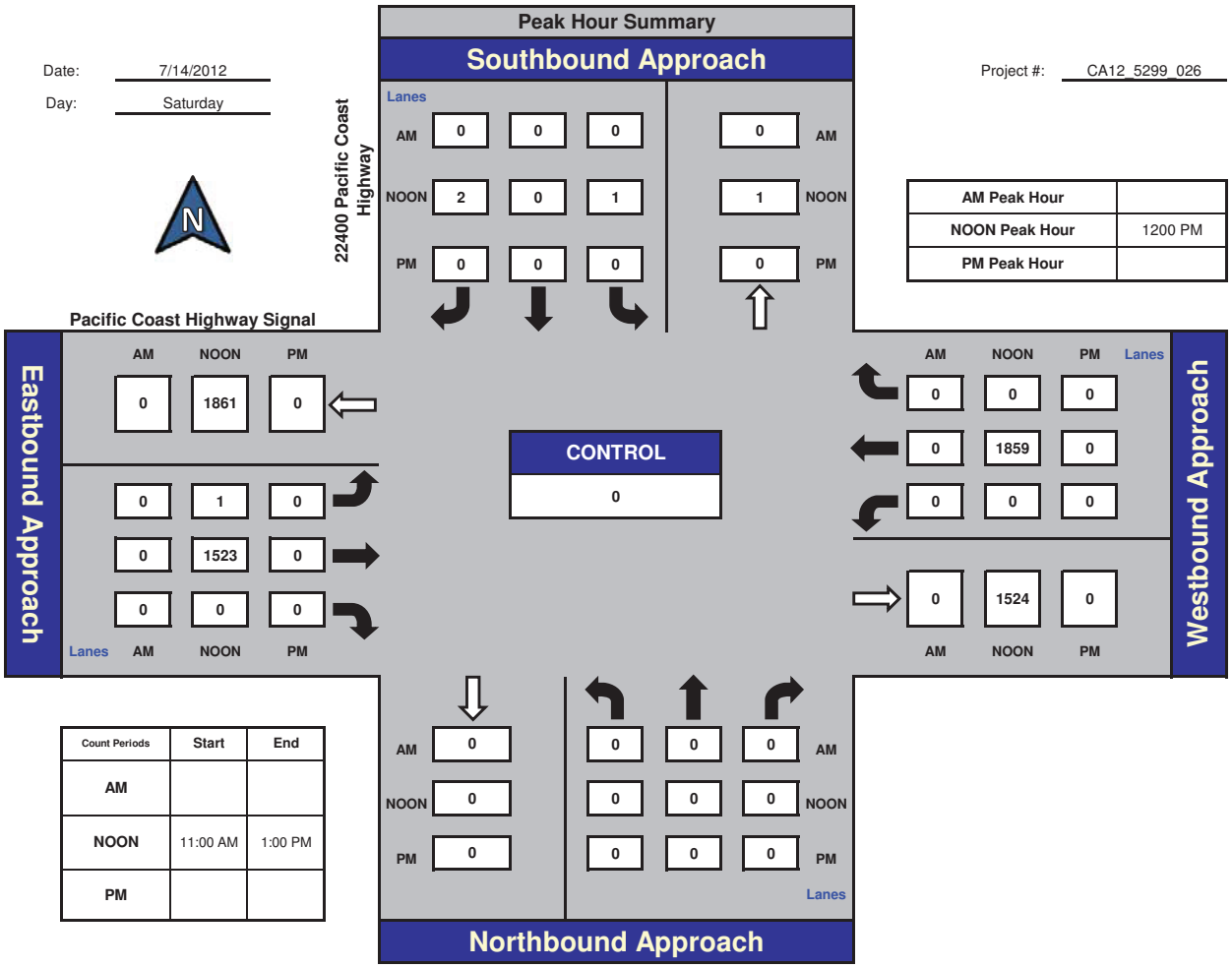
22400 Pacific Coast Highway and Pacific Coast Highway Signal , City of Malibu

Date: 7/14/2012

Day: Saturday

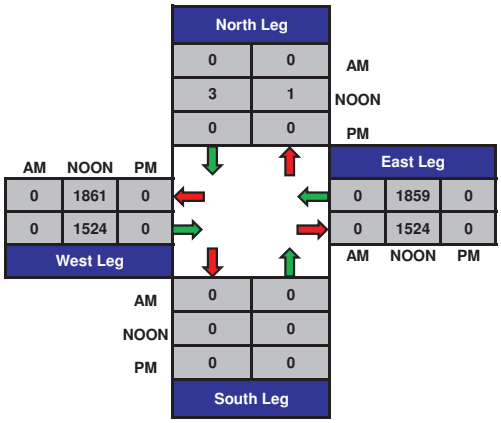
Project #: CA12_5299_026

AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

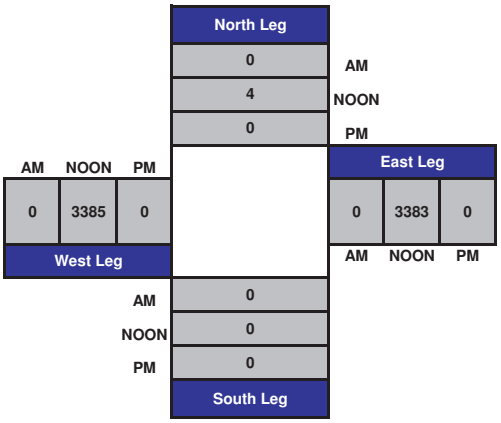


Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

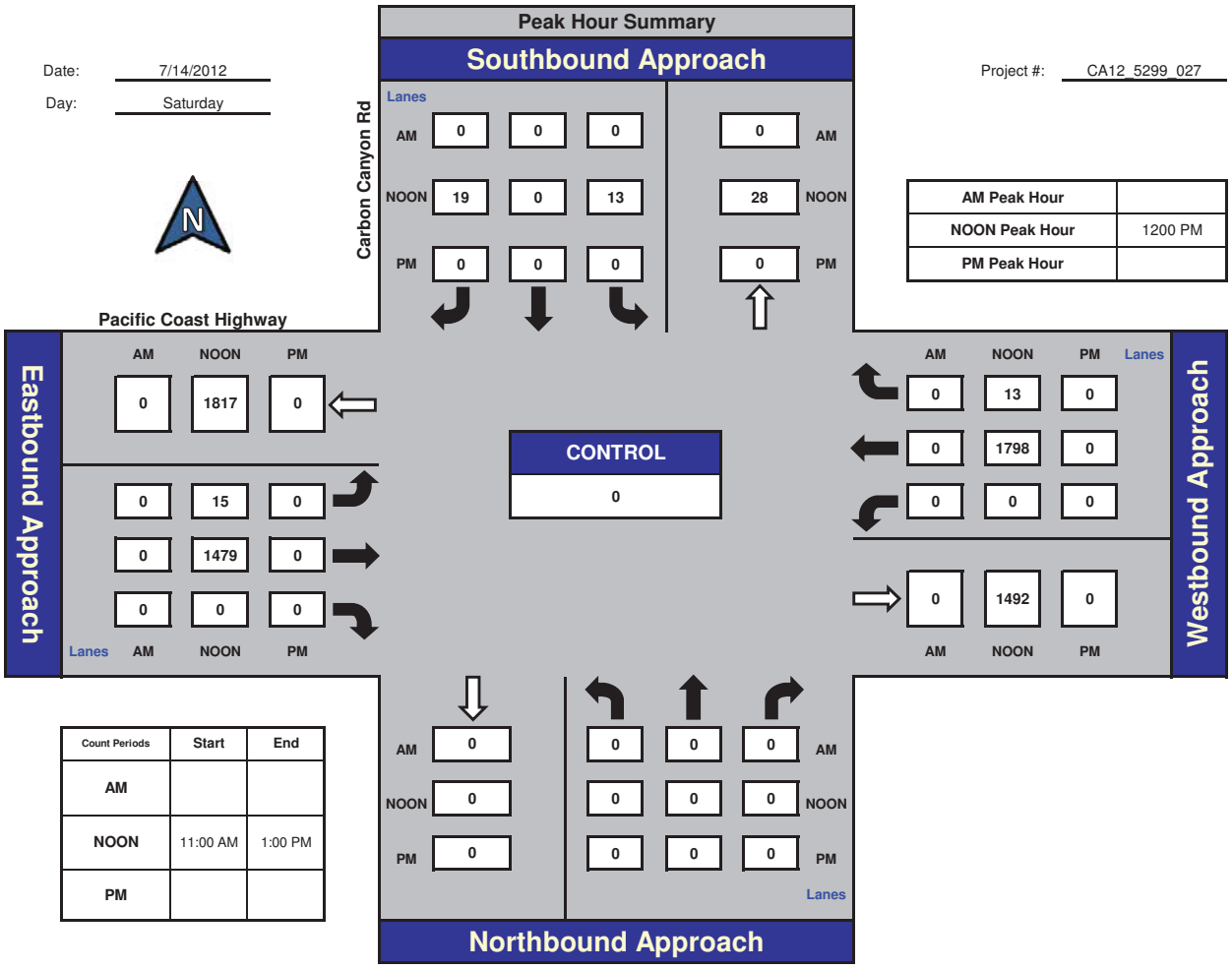
National Data & Surveying Services

Carbon Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

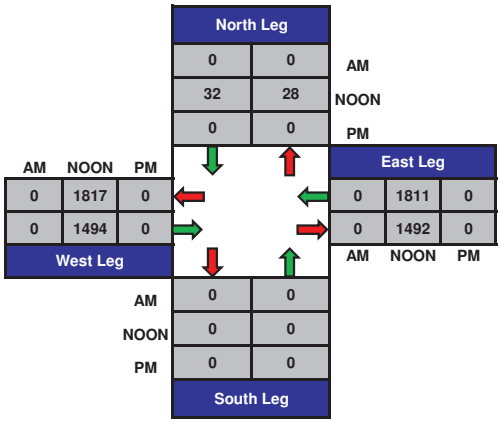
Project #: CA12_5299_027



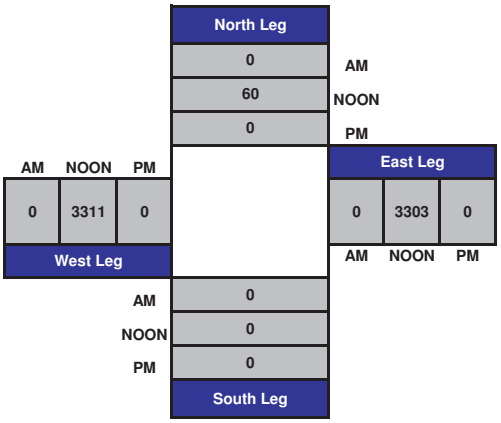
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

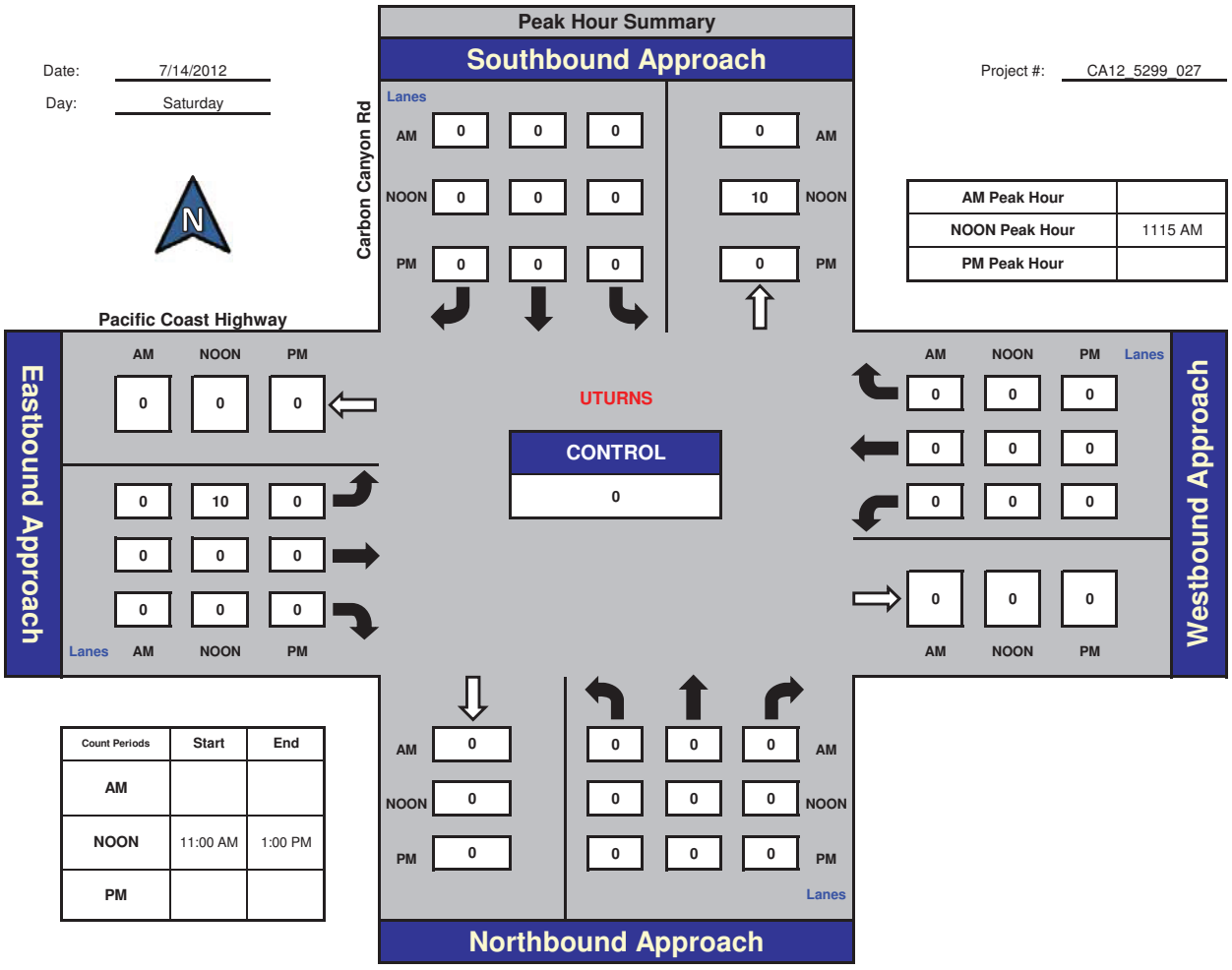
National Data & Surveying Services

Carbon Canyon Rd and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

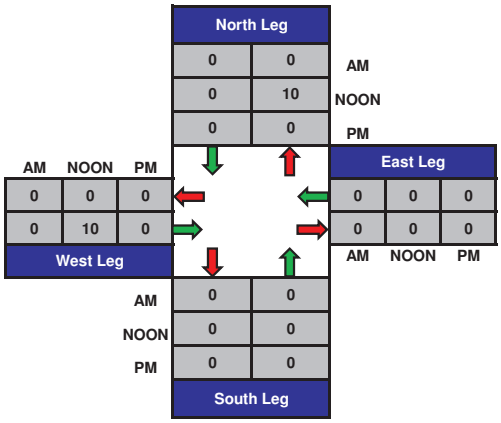
Project #: CA12_5299_027



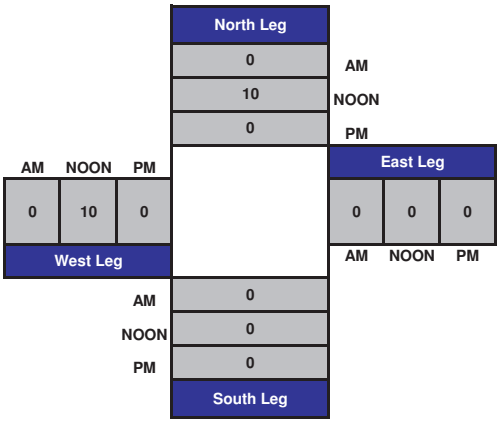
AM Peak Hour	
NOON Peak Hour	1115 AM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

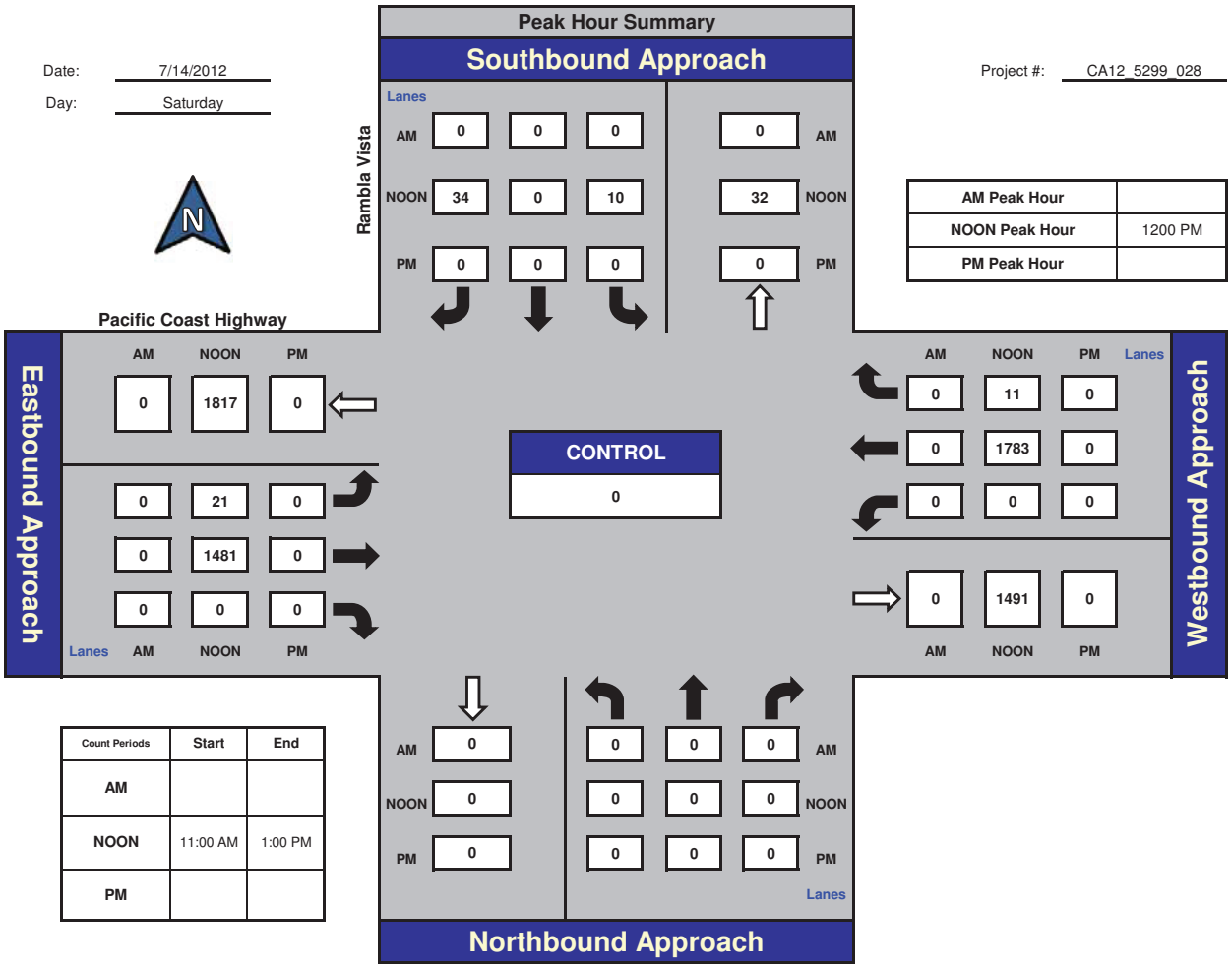
National Data & Surveying Services

Rambla Vista and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

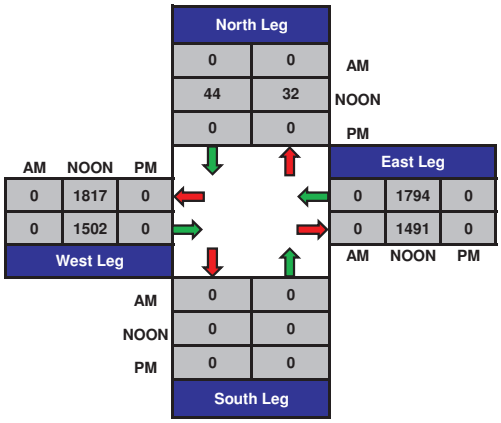
Project #: CA12_5299_028



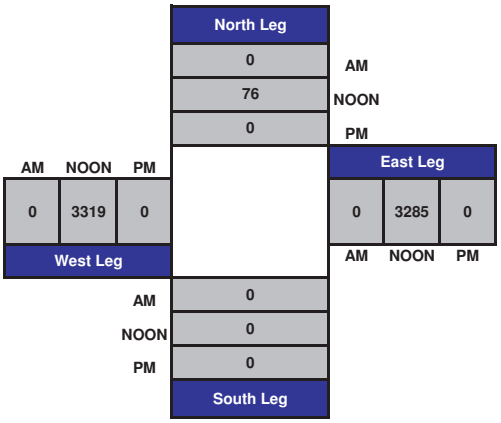
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

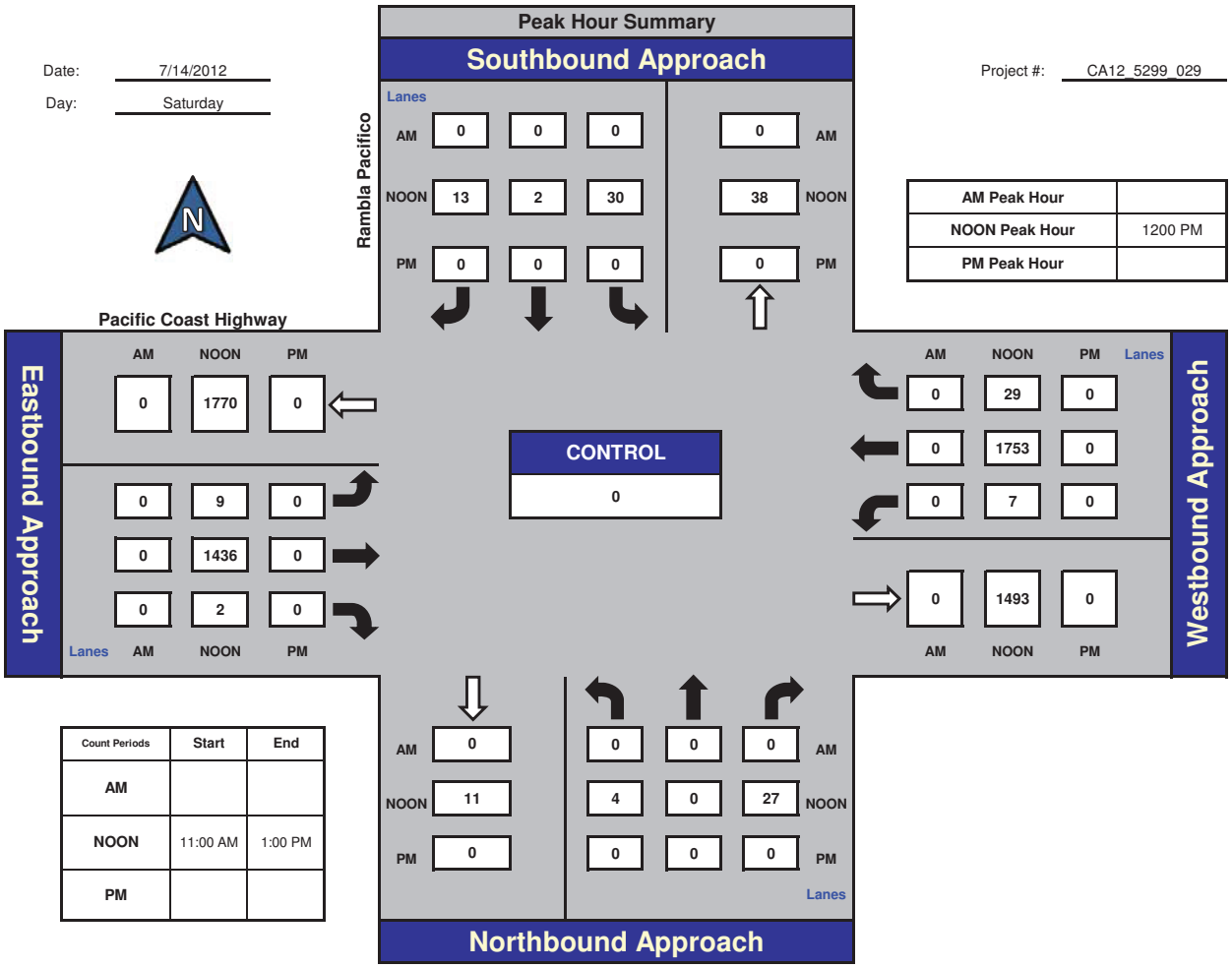
National Data & Surveying Services

Rambla Pacifico and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

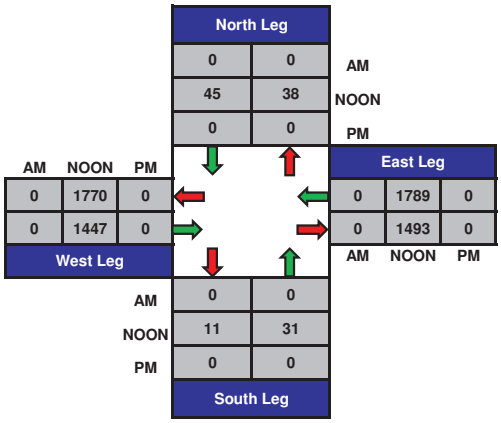
Project #: CA12_5299_029



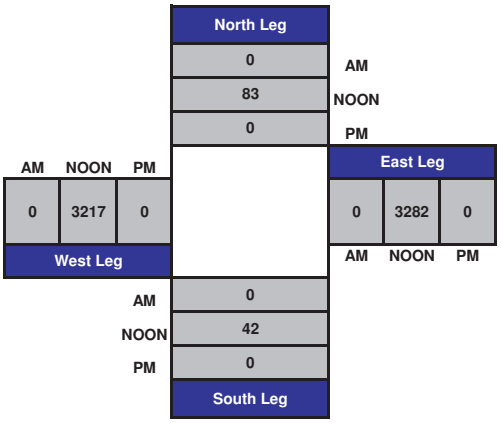
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

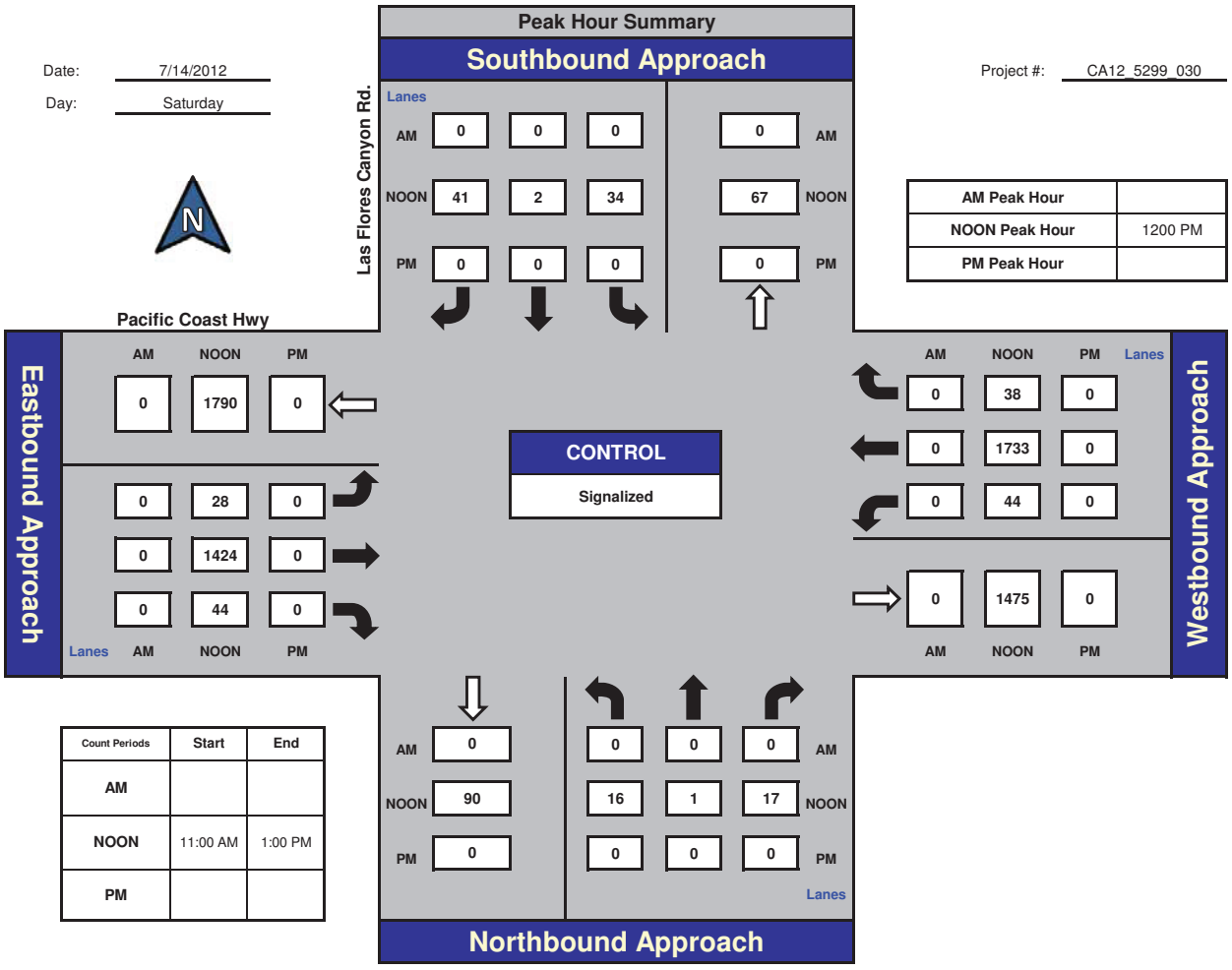
National Data & Surveying Services

Las Flores Canyon Rd. and Pacific Coast Hwy , City of Malibu

Date: 7/14/2012

Day: Saturday

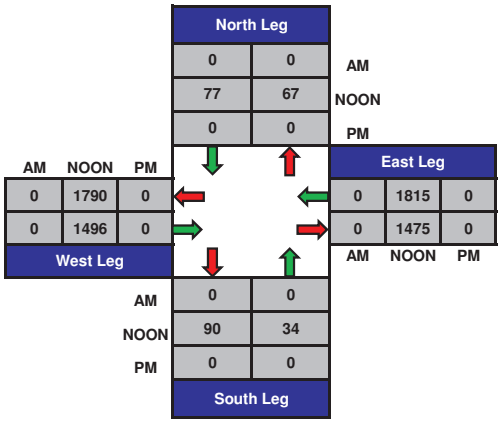
Project #: CA12_5299_030



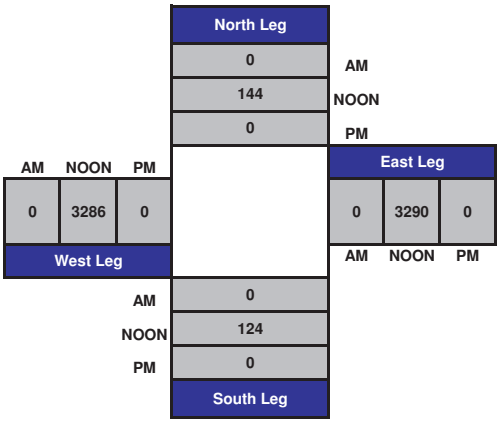
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

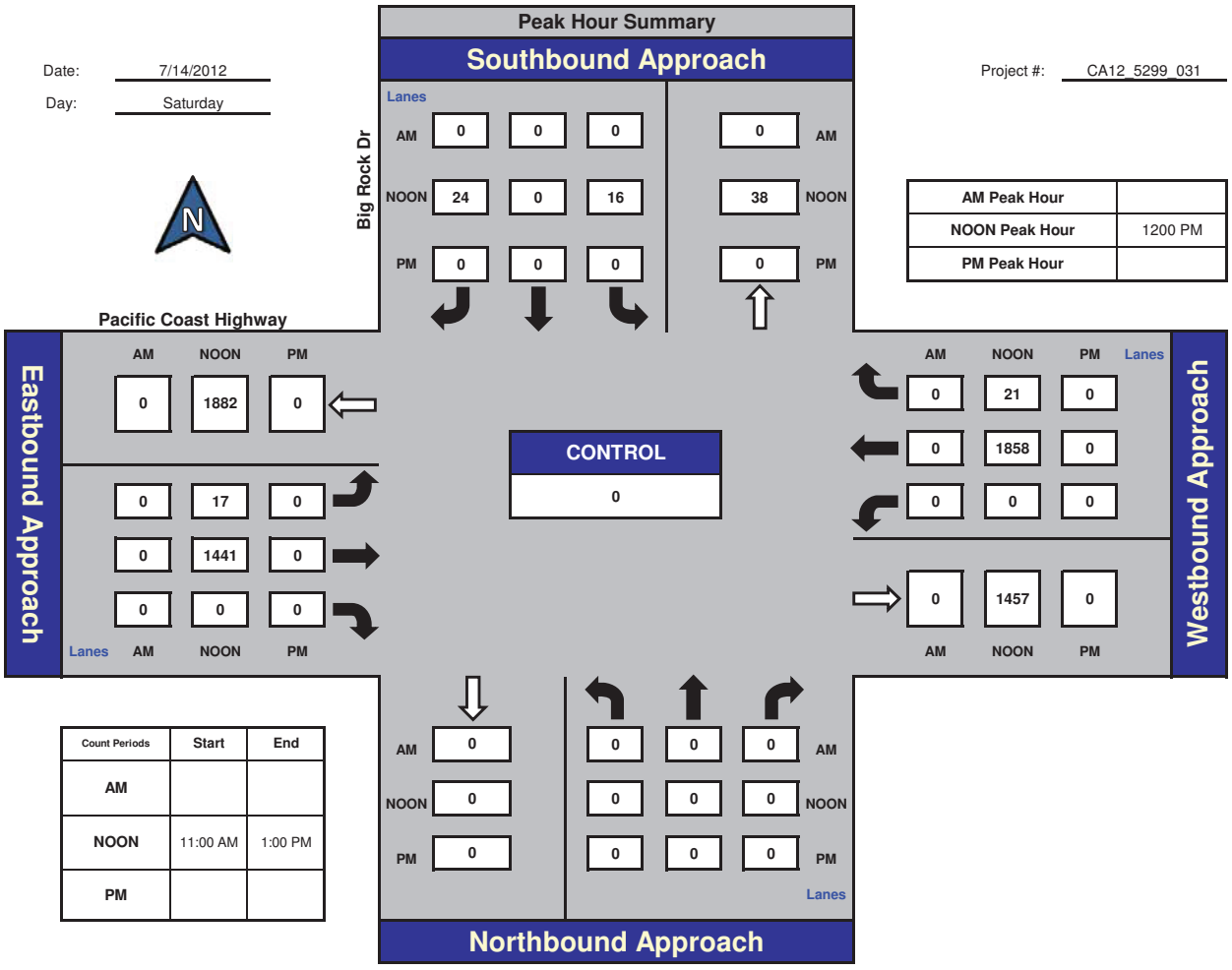
National Data & Surveying Services

Big Rock Dr and Pacific Coast Highway , City of Malibu

Date: 7/14/2012

Day: Saturday

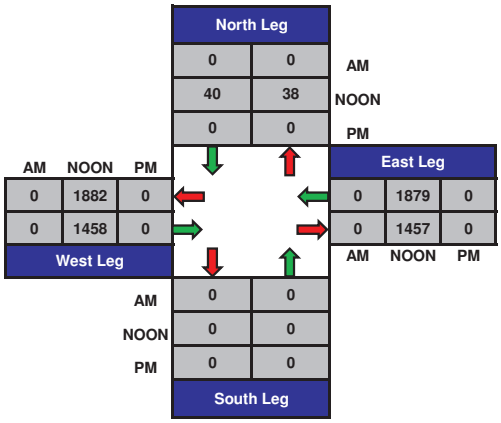
Project #: CA12_5299_031



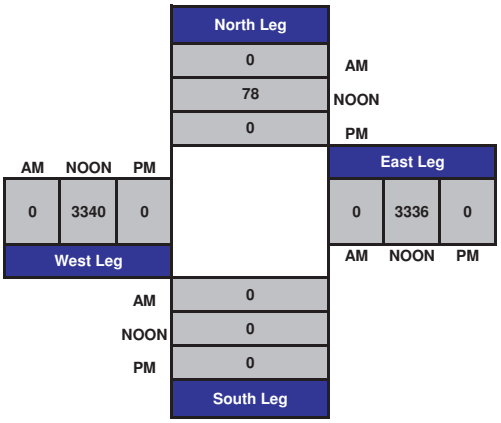
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

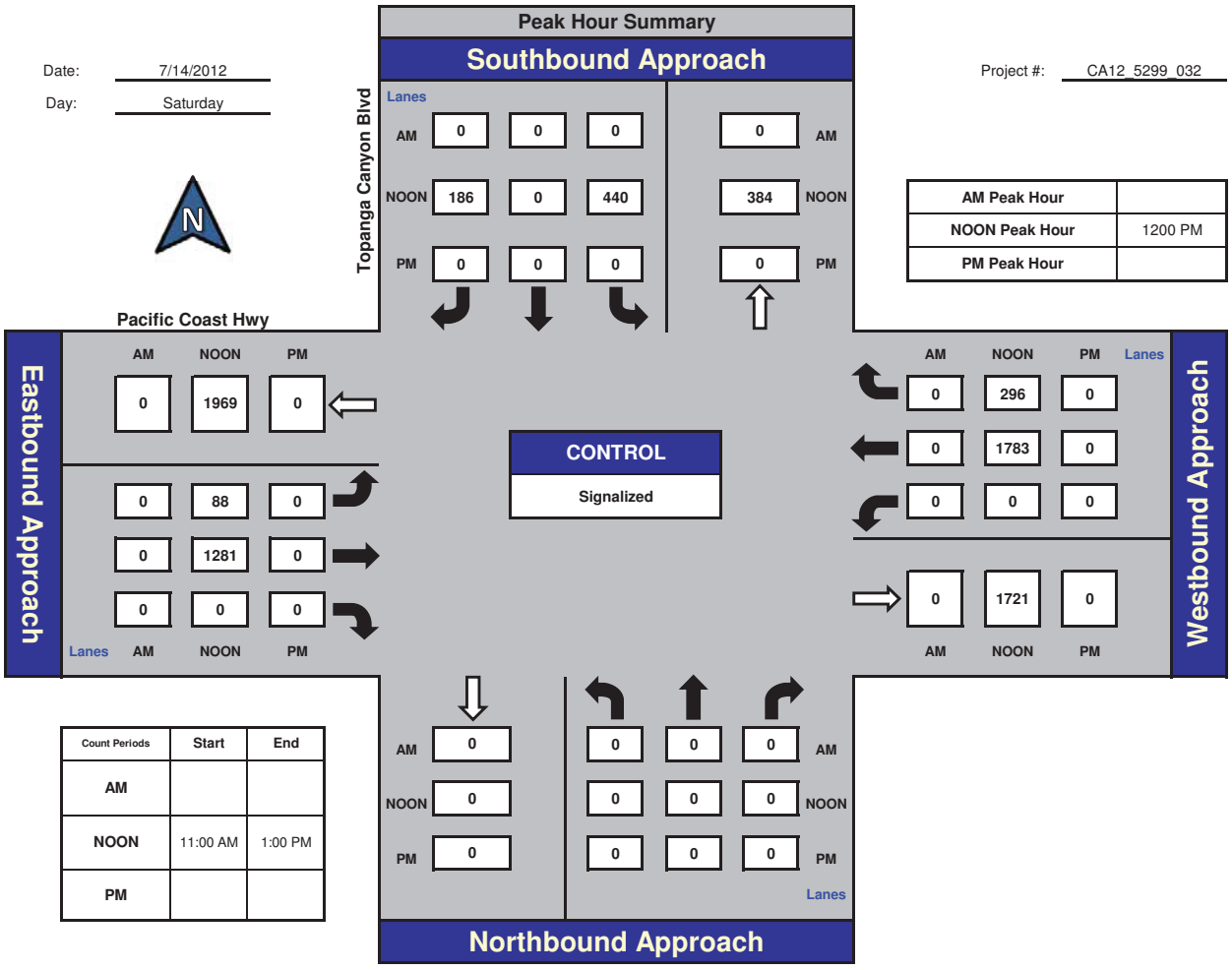
National Data & Surveying Services

Topanga Canyon Blvd and Pacific Coast Hwy , City of Malibu

Date: 7/14/2012

Day: Saturday

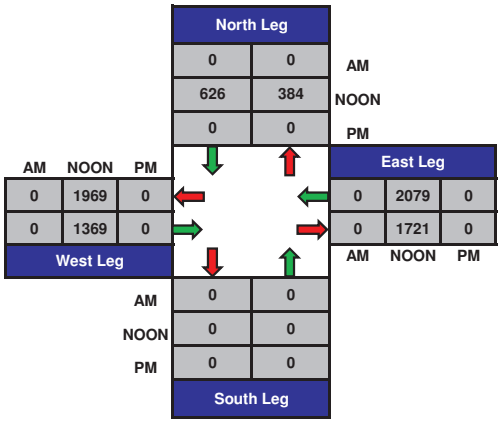
Project #: CA12_5299_032



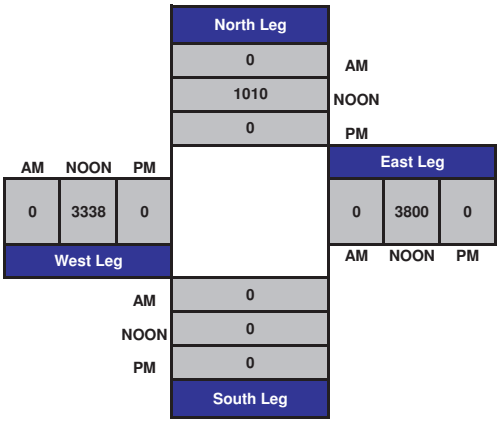
AM Peak Hour	
NOON Peak Hour	1200 PM
PM Peak Hour	

Count Periods	Start	End
AM		
NOON	11:00 AM	1:00 PM
PM		

Total Ins & Outs



Total Volume Per Leg



Prepared by NDS/ATD

VOLUME

Pacific Coast Hwy e/o Broad Beach Rd

Day: Thursday
Date: 7/12/2012

City: Malibu
Project #: CA12_5300_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,388	10,438	20,826

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			8		20		28		12:00			201		209		410	
00:15			7		13		20		12:15			203		195		398	
00:30			5		17		22		12:30			194		200		394	
00:45			5	25	13	63	18	88	12:45			201	799	227	831	428	1630
01:00			2		11		13		13:00			201		194		395	
01:15			9		8		17		13:15			203		204		407	
01:30			7		13		20		13:30			196		212		408	
01:45			7	25	4	36	11	61	13:45			209	809	184	794	393	1603
02:00			6		5		11		14:00			172		209		381	
02:15			5		2		7		14:15			173		222		395	
02:30			4		4		8		14:30			191		231		422	
02:45			3	18	4	15	7	33	14:45			199	735	235	897	434	1632
03:00			1		3		4		15:00			204		216		420	
03:15			2		6		8		15:15			209		253		462	
03:30			2		5		7		15:30			183		233		416	
03:45			14	19	5	19	19	38	15:45			197	793	230	932	427	1725
04:00			13		1		14		16:00			211		246		457	
04:15			12		7		19		16:15			168		233		401	
04:30			16		5		21		16:30			188		221		409	
04:45			22	63	4	17	26	80	16:45			172	739	242	942	414	1681
05:00			14		14		28		17:00			194		222		416	
05:15			38		16		54		17:15			155		203		358	
05:30			59		25		84		17:30			171		218		389	
05:45			54	165	27	82	81	247	17:45			167	687	202	845	369	1532
06:00			93		42		135		18:00			142		164		306	
06:15			88		61		149		18:15			153		161		314	
06:30			145		59		204		18:30			147		154		301	
06:45			156	482	75	237	231	719	18:45			116	558	182	661	298	1219
07:00			131		78		209		19:00			117		138		255	
07:15			147		72		219		19:15			111		144		255	
07:30			155		86		241		19:30			92		118		210	
07:45			198	631	91	327	289	958	19:45			82	402	101	501	183	903
08:00			140		91		231		20:00			97		94		191	
08:15			177		93		270		20:15			84		100		184	
08:30			164		118		282		20:30			62		86		148	
08:45			177	658	127	429	304	1087	20:45			62	305	84	364	146	669
09:00			169		134		303		21:00			42		75		117	
09:15			174		126		300		21:15			41		80		121	
09:30			188		137		325		21:30			45		63		108	
09:45			170	701	140	537	310	1238	21:45			42	170	68	286	110	456
10:00			174		129		303		22:00			33		56		89	
10:15			157		134		291		22:15			36		45		81	
10:30			153		151		304		22:30			25		40		65	
10:45			187	671	181	595	368	1266	22:45			23	117	45	186	68	303
11:00			172		203		375		23:00			29		25		54	
11:15			192		165		357		23:15			12		30		42	
11:30			193		196		389		23:30			15		19		34	
11:45			192	749	178	742	370	1491	23:45			11	67	26	100	37	167
TOTALS				4207		3099		7306	TOTALS				6181		7339		13520
SPLIT %				57.6%		42.4%		35.1%	SPLIT %				45.7%		54.3%		64.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,388	10,438	20,826

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			13:00	15:15	15:15
AM Pk Volume			790	782	1572	PM Pk Volume			809	962	1762
Pk Hr Factor			0.973	0.935	0.959	Pk Hr Factor			0.968	0.951	0.953
7 - 9 Volume	0	0	1289	756	2045	4 - 6 Volume	0	0	1426	1787	3213
7 - 9 Peak Hour			07:45	08:00	08:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	679	429	1087	4 - 6 Pk Volume	0	0	739	942	1681
Pk Hr Factor	0.000	0.000	0.857	0.844	0.894	Pk Hr Factor	0.000	0.000	0.876	0.957	0.920

Prepared by NDS/ATD

VOLUME

Pacific Coast Hwy e/o Paradise Cove Rd

Day: Thursday
Date: 7/12/2012

City: Malibu
Project #: CA12_5300_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,572	15,727	31,299

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			18		37		55		12:00			299		272		571	
00:15			10		23		33		12:15			295		290		585	
00:30			12		23		35		12:30			283		294		577	
00:45			7	47	18	101	25	148	12:45			300	1177	272	1128	572	2305
01:00			6		15		21		13:00			278		291		569	
01:15			5		16		21		13:15			312		290		602	
01:30			9		19		28		13:30			331		309		640	
01:45			8	28	8	58	16	86	13:45			297	1218	325	1215	622	2433
02:00			6		8		14		14:00			303		300		603	
02:15			5		9		14		14:15			282		305		587	
02:30			6		6		12		14:30			235		307		542	
02:45			6	23	8	31	14	54	14:45			274	1094	367	1279	641	2373
03:00			6		7		13		15:00			331		351		682	
03:15			5		3		8		15:15			312		334		646	
03:30			4		4		8		15:30			337		332		669	
03:45			9	24	9	23	18	47	15:45			311	1291	319	1336	630	2627
04:00			24		2		26		16:00			317		295		612	
04:15			20		1		21		16:15			315		359		674	
04:30			18		5		23		16:30			314		328		642	
04:45			26	88	7	15	33	103	16:45			280	1226	313	1295	593	2521
05:00			21		13		34		17:00			267		339		606	
05:15			38		26		64		17:15			323		325		648	
05:30			67		29		96		17:30			232		329		561	
05:45			72	198	45	113	117	311	17:45			260	1082	277	1270	537	2352
06:00			97		60		157		18:00			253		246		499	
06:15			124		80		204		18:15			251		288		539	
06:30			162		84		246		18:30			190		237		427	
06:45			196	579	110	334	306	913	18:45			188	882	268	1039	456	1921
07:00			176		130		306		19:00			199		237		436	
07:15			213		121		334		19:15			196		208		404	
07:30			218		147		365		19:30			158		185		343	
07:45			245	852	175	573	420	1425	19:45			119	672	152	782	271	1454
08:00			244		162		406		20:00			127		140		267	
08:15			204		194		398		20:15			111		156		267	
08:30			241		201		442		20:30			117		133		250	
08:45			259	948	213	770	472	1718	20:45			102	457	139	568	241	1025
09:00			237		182		419		21:00			97		110		207	
09:15			276		184		460		21:15			87		130		217	
09:30			245		206		451		21:30			85		94		179	
09:45			262	1020	207	779	469	1799	21:45			77	346	102	436	179	782
10:00			261		188		449		22:00			62		125		187	
10:15			248		215		463		22:15			73		78		151	
10:30			214		219		433		22:30			51		93		144	
10:45			228	951	293	915	521	1866	22:45			42	228	55	351	97	579
11:00			223		250		473		23:00			46		58		104	
11:15			241		316		557		23:15			29		33		62	
11:30			288		272		560		23:30			22		36		58	
11:45			271	1023	310	1148	581	2171	23:45			21	118	41	168	62	286
TOTALS				5781		4860		10641	TOTALS				9791		10867		20658
SPLIT %				54.3%		45.7%		34.0%	SPLIT %				47.4%		52.6%		66.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,572	15,727	31,299

AM Peak Hour			11:30	11:15	11:45	PM Peak Hour			15:00	14:45	14:45
AM Pk Volume			1153	1170	2314	PM Pk Volume			1291	1384	2638
Pk Hr Factor			0.964	0.926	0.989	Pk Hr Factor			0.958	0.943	0.967
7 - 9 Volume	0	0	1800	1343	3143	4 - 6 Volume	0	0	2308	2565	4873
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:00	16:15	16:00
7 - 9 Pk Volume	0	0	948	770	1718	4 - 6 Pk Volume	0	0	1226	1339	2521
Pk Hr Factor	0.000	0.000	0.915	0.904	0.910	Pk Hr Factor	0.000	0.000	0.967	0.932	0.935

Prepared by NDS/ATD

VOLUME

Pacific Coast Hwy e/o Corral Canyon Rd

Day: Thursday
Date: 7/12/2012

City: Malibu
Project #: CA12_5300_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,026	17,375	34,401

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			20		44		64		12:00			315		319		634	
00:15			10		26		36		12:15			280		307		587	
00:30			13		28		41		12:30			326		334		660	
00:45			9	52	21	119	30	171	12:45			306	1227	306	1266	612	2493
01:00			7		16		23		13:00			287		314		601	
01:15			6		19		25		13:15			331		308		639	
01:30			10		23		33		13:30			364		339		703	
01:45			10	33	9	67	19	100	13:45			338	1320	331	1292	669	2612
02:00			8		11		19		14:00			324		329		653	
02:15			6		9		15		14:15			332		343		675	
02:30			5		6		11		14:30			264		356		620	
02:45			10	29	9	35	19	64	14:45			305	1225	387	1415	692	2640
03:00			6		6		12		15:00			374		352		726	
03:15			7		2		9		15:15			363		366		729	
03:30			5		4		9		15:30			397		337		734	
03:45			7	25	11	23	18	48	15:45			341	1475	348	1403	689	2878
04:00			26		6		32		16:00			331		291		622	
04:15			18		9		27		16:15			362		395		757	
04:30			23		5		28		16:30			329		332		661	
04:45			22	89	11	31	33	120	16:45			353	1375	350	1368	703	2743
05:00			33		20		53		17:00			308		373		681	
05:15			32		21		53		17:15			354		358		712	
05:30			75		29		104		17:30			264		352		616	
05:45			92	232	61	131	153	363	17:45			276	1202	280	1363	556	2565
06:00			85		77		162		18:00			271		289		560	
06:15			141		113		254		18:15			255		296		551	
06:30			157		115		272		18:30			242		277		519	
06:45			201	584	149	454	350	1038	18:45			216	984	286	1148	502	2132
07:00			209		158		367		19:00			201		261		462	
07:15			209		160		369		19:15			188		224		412	
07:30			236		182		418		19:30			185		196		381	
07:45			270	924	207	707	477	1631	19:45			143	717	190	871	333	1588
08:00			271		170		441		20:00			137		170		307	
08:15			214		213		427		20:15			130		177		307	
08:30			253		215		468		20:30			117		147		264	
08:45			263	1001	240	838	503	1839	20:45			108	492	144	638	252	1130
09:00			257		216		473		21:00			99		133		232	
09:15			294		214		508		21:15			95		144		239	
09:30			270		224		494		21:30			101		112		213	
09:45			274	1095	204	858	478	1953	21:45			81	376	122	511	203	887
10:00			303		230		533		22:00			68		111		179	
10:15			258		241		499		22:15			71		99		170	
10:30			246		235		481		22:30			58		92		150	
10:45			253	1060	304	1010	557	2070	22:45			46	243	61	363	107	606
11:00			226		284		510		23:00			50		67		117	
11:15			268		314		582		23:15			37		41		78	
11:30			291		323		614		23:30			29		47		76	
11:45			334	1119	345	1266	679	2385	23:45			31	147	43	198	74	345
TOTALS				6243		5539		11782	TOTALS				10783		11836		22619
SPLIT %				53.0%		47.0%		34.2%	SPLIT %				47.7%		52.3%		65.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	17,026	17,375	34,401

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			15:00	14:30	14:45
AM Pk Volume			1255	1305	2560	PM Pk Volume			1475	1461	2881
Pk Hr Factor			0.939	0.946	0.943	Pk Hr Factor			0.929	0.944	0.981
7 - 9 Volume	0	0	1925	1545	3470	4 - 6 Volume	0	0	2577	2731	5308
7 - 9 Peak Hour			07:45	08:00	08:00	4 - 6 Peak Hour			16:00	16:15	16:15
7 - 9 Pk Volume	0	0	1008	838	1839	4 - 6 Pk Volume	0	0	1375	1450	2802
Pk Hr Factor	0.000	0.000	0.930	0.873	0.914	Pk Hr Factor	0.000	0.000	0.950	0.918	0.925

Prepared by NDS/ATD

VOLUME

Pacific Coast Hwy btwn Malibu Canyon Rd & John Tyler Dr

Day: Thursday
Date: 7/12/2012

City: Malibu
Project #: CA12_5300_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,096	17,562	35,658

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			29		40		69		12:00			355		336		691	
00:15			11		27		38		12:15			309		309		618	
00:30			11		28		39		12:30			321		354		675	
00:45			9	60	22	117	31	177	12:45			310	1295	300	1299	610	2594
01:00			9		16		25		13:00			359		312		671	
01:15			9		29		38		13:15			349		299		648	
01:30			8		15		23		13:30			336		314		650	
01:45			15	41	11	71	26	112	13:45			365	1409	335	1260	700	2669
02:00			7		13		20		14:00			333		321		654	
02:15			9		11		20		14:15			363		352		715	
02:30			6		5		11		14:30			292		355		647	
02:45			9	31	8	37	17	68	14:45			317	1305	352	1380	669	2685
03:00			5		6		11		15:00			365		357		722	
03:15			10		5		15		15:15			387		382		769	
03:30			5		8		13		15:30			455		304		759	
03:45			3	23	8	27	11	50	15:45			367	1574	352	1395	719	2969
04:00			29		3		32		16:00			362		311		673	
04:15			18		10		28		16:15			397		342		739	
04:30			21		6		27		16:30			340		334		674	
04:45			20	88	15	34	35	122	16:45			397	1496	351	1338	748	2834
05:00			25		12		37		17:00			381		358		739	
05:15			35		24		59		17:15			340		339		679	
05:30			68		35		103		17:30			324		340		664	
05:45			97	225	73	144	170	369	17:45			297	1342	291	1328	588	2670
06:00			93		102		195		18:00			284		279		563	
06:15			129		117		246		18:15			278		288		566	
06:30			155		145		300		18:30			280		283		563	
06:45			209	586	181	545	390	1131	18:45			241	1083	264	1114	505	2197
07:00			195		174		369		19:00			229		268		497	
07:15			216		161		377		19:15			201		230		431	
07:30			252		203		455		19:30			199		192		391	
07:45			218	881	234	772	452	1653	19:45			156	785	179	869	335	1654
08:00			279		200		479		20:00			151		170		321	
08:15			229		218		447		20:15			153		162		315	
08:30			253		201		454		20:30			133		157		290	
08:45			277	1038	252	871	529	1909	20:45			121	558	145	634	266	1192
09:00			275		230		505		21:00			112		144		256	
09:15			289		218		507		21:15			107		134		241	
09:30			280		216		496		21:30			88		111		199	
09:45			280	1124	237	901	517	2025	21:45			99	406	138	527	237	933
10:00			315		239		554		22:00			85		106		191	
10:15			272		238		510		22:15			60		98		158	
10:30			281		278		559		22:30			72		93		165	
10:45			269	1137	297	1052	566	2189	22:45			45	262	65	362	110	624
11:00			266		296		562		23:00			50		73		123	
11:15			302		312		614		23:15			42		37		79	
11:30			299		338		637		23:30			28		47		75	
11:45			332	1199	334	1280	666	2479	23:45			28	148	48	205	76	353
TOTALS				6433		5851		12284	TOTALS				11663		11711		23374
SPLIT %				52.4%		47.6%		34.4%	SPLIT %				49.9%		50.1%		65.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,096	17,562	35,658

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			15:30	14:30	15:00
AM Pk Volume			1317	1333	2650	PM Pk Volume			1581	1446	2969
Pk Hr Factor			0.927	0.941	0.959	Pk Hr Factor			0.869	0.946	0.965
7 - 9 Volume	0	0	1919	1643	3562	4 - 6 Volume	0	0	2838	2666	5504
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:15	16:45	16:15
7 - 9 Pk Volume	0	0	1038	871	1909	4 - 6 Pk Volume	0	0	1515	1388	2900
Pk Hr Factor	0.000	0.000	0.930	0.864	0.902	Pk Hr Factor	0.000	0.000	0.954	0.969	0.969

Prepared by NDS/ATD

VOLUME

Pacific Coast Hwy e/o Cross Creek Rd

Day: Thursday
Date: 7/12/2012

City: Malibu
Project #: CA12_5300_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,014	23,378	46,392

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			27		47		74		12:00			371		382		753	
00:15			22		32		54		12:15			381		382		763	
00:30			20		37		57		12:30			378		361		739	
00:45			15	84	32	148	47	232	12:45			404	1534	419	1544	823	3078
01:00			10		25		35		13:00			381		396		777	
01:15			16		26		42		13:15			386		388		774	
01:30			13		16		29		13:30			371		411		782	
01:45			11	50	15	82	26	132	13:45			390	1528	408	1603	798	3131
02:00			8		14		22		14:00			388		369		757	
02:15			11		10		21		14:15			385		434		819	
02:30			8		11		19		14:30			356		468		824	
02:45			17	44	11	46	28	90	14:45			368	1497	473	1744	841	3241
03:00			6		10		16		15:00			363		432		795	
03:15			9		9		18		15:15			456		462		918	
03:30			9		11		20		15:30			455		483		938	
03:45			6	30	10	40	16	70	15:45			409	1683	473	1850	882	3533
04:00			21		6		27		16:00			442		444		886	
04:15			28		10		38		16:15			420		477		897	
04:30			23		12		35		16:30			384		465		849	
04:45			27	99	28	56	55	155	16:45			423	1669	492	1878	915	3547
05:00			40		37		77		17:00			461		533		994	
05:15			48		44		92		17:15			438		484		922	
05:30			91		65		156		17:30			418		436		854	
05:45			110	289	97	243	207	532	17:45			398	1715	472	1925	870	3640
06:00			150		119		269		18:00			369		466		835	
06:15			217		145		362		18:15			358		473		831	
06:30			287		206		493		18:30			376		408		784	
06:45			348	1002	236	706	584	1708	18:45			324	1427	447	1794	771	3221
07:00			415		179		594		19:00			256		392		648	
07:15			354		213		567		19:15			258		385		643	
07:30			419		280		699		19:30			233		298		531	
07:45			378	1566	348	1020	726	2586	19:45			191	938	237	1312	428	2250
08:00			429		286		715		20:00			164		241		405	
08:15			404		312		716		20:15			174		228		402	
08:30			437		253		690		20:30			144		218		362	
08:45			391	1661	327	1178	718	2839	20:45			162	644	212	899	374	1543
09:00			387		275		662		21:00			152		187		339	
09:15			390		295		685		21:15			139		165		304	
09:30			374		294		668		21:30			132		137		269	
09:45			358	1509	295	1159	653	2668	21:45			144	567	151	640	295	1207
10:00			406		286		692		22:00			111		129		240	
10:15			370		271		641		22:15			103		126		229	
10:30			317		368		685		22:30			91		96		187	
10:45			334	1427	325	1250	659	2677	22:45			84	389	76	427	160	816
11:00			341		385		726		23:00			62		90		152	
11:15			345		385		730		23:15			58		54		112	
11:30			384		389		773		23:30			28		71		99	
11:45			406	1476	404	1563	810	3039	23:45			38	186	56	271	94	457
TOTALS				9237		7491		16728	TOTALS				13777		15887		29664
SPLIT %				55.2%		44.8%		36.1%	SPLIT %				46.4%		53.6%		63.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,014	23,378	46,392

AM Peak Hour			08:00	11:00	11:30	PM Peak Hour			15:15	16:30	16:45
AM Pk Volume			1661	1563	3099	PM Pk Volume			1762	1974	3685
Pk Hr Factor			0.950	0.967	0.956	Pk Hr Factor			0.966	0.926	0.927
7 - 9 Volume	0	0	3227	2198	5425	4 - 6 Volume	0	0	3384	3803	7187
7 - 9 Peak Hour			08:00	07:30	07:30	4 - 6 Peak Hour			16:45	16:30	16:45
7 - 9 Pk Volume	0	0	1661	1226	2856	4 - 6 Pk Volume	0	0	1740	1974	3685
Pk Hr Factor	0.000	0.000	0.950	0.881	0.983	Pk Hr Factor	0.000	0.000	0.944	0.926	0.927

Prepared by NDS/ATD

VOLUME

Pacific Coast Highway w/o Las Tunas

Day: Thursday
Date: 7/12/2012

City: Malibu
Project #: CA12_5300_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,982	22,350	45,332

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			36		47		83		12:00			347		308		655	
00:15			34		41		75		12:15			406		338		744	
00:30			23		37		60		12:30			339		364		703	
00:45			22	115	28	153	50	268	12:45			348	1440	337	1347	685	2787
01:00			29		29		58		13:00			349		327		676	
01:15			20		29		49		13:15			375		369		744	
01:30			11		18		29		13:30			355		349		704	
01:45			14	74	18	94	32	168	13:45			338	1417	349	1394	687	2811
02:00			13		10		23		14:00			392		367		759	
02:15			10		14		24		14:15			354		392		746	
02:30			12		12		24		14:30			375		415		790	
02:45			7	42	11	47	18	89	14:45			335	1456	374	1548	709	3004
03:00			10		15		25		15:00			452		386		838	
03:15			7		9		16		15:15			423		377		800	
03:30			10		10		20		15:30			411		415		826	
03:45			8	35	10	44	18	79	15:45			450	1736	424	1602	874	3338
04:00			14		10		24		16:00			489		449		938	
04:15			28		11		39		16:15			430		484		914	
04:30			26		28		54		16:30			427		476		903	
04:45			30	98	34	83	64	181	16:45			435	1781	493	1902	928	3683
05:00			39		41		80		17:00			406		488		894	
05:15			49		56		105		17:15			451		500		951	
05:30			83		77		160		17:30			434		452		886	
05:45			109	280	132	306	241	586	17:45			413	1704	446	1886	859	3590
06:00			116		159		275		18:00			403		431		834	
06:15			210		208		418		18:15			420		422		842	
06:30			273		236		509		18:30			368		420		788	
06:45			333	932	232	835	565	1767	18:45			359	1550	421	1694	780	3244
07:00			375		229		604		19:00			273		358		631	
07:15			402		307		709		19:15			265		332		597	
07:30			415		299		714		19:30			236		207		443	
07:45			413	1605	360	1195	773	2800	19:45			217	991	245	1142	462	2133
08:00			367		264		631		20:00			173		219		392	
08:15			447		323		770		20:15			175		208		383	
08:30			387		347		734		20:30			158		186		344	
08:45			418	1619	312	1246	730	2865	20:45			160	666	200	813	360	1479
09:00			275		272		547		21:00			130		177		307	
09:15			418		307		725		21:15			155		154		309	
09:30			374		269		643		21:30			132		145		277	
09:45			342	1409	280	1128	622	2537	21:45			147	564	167	643	314	1207
10:00			359		276		635		22:00			140		134		274	
10:15			355		300		655		22:15			118		124		242	
10:30			356		304		660		22:30			116		99		215	
10:45			333	1403	314	1194	647	2597	22:45			100	474	96	453	196	927
11:00			342		323		665		23:00			82		62		144	
11:15			278		323		601		23:15			74		78		152	
11:30			379		380		759		23:30			44		69		113	
11:45			336	1335	316	1342	652	2677	23:45			56	256	50	259	106	515
TOTALS				8947		7667		16614	TOTALS				14035		14683		28718
SPLIT %				53.9%		46.1%		36.6%	SPLIT %				48.9%		51.1%		63.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	22,982	22,350	45,332

AM Peak Hour			07:30	11:00	07:45	PM Peak Hour			15:45	16:30	16:00
AM Pk Volume			1642	1342	2908	PM Pk Volume			1796	1957	3683
Pk Hr Factor			0.918	0.883	0.940	Pk Hr Factor			0.918	0.979	0.982
7 - 9 Volume	0	0	3224	2441	5665	4 - 6 Volume	0	0	3485	3788	7273
7 - 9 Peak Hour			07:30	07:45	07:45	4 - 6 Peak Hour			16:00	16:30	16:00
7 - 9 Pk Volume	0	0	1642	1294	2908	4 - 6 Pk Volume	0	0	1781	1957	3683
Pk Hr Factor	0.000	0.000	0.918	0.899	0.940	Pk Hr Factor	0.000	0.000	0.911	0.979	0.982

Prepared by NDS/ATD

VOLUME

Pacific Coast Hwy e/o Broad Beach Rd

Day: Saturday
Date: 7/14/2012

City: Malibu
Project #: CA12_5300_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,252	12,885	25,137

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			11		30		41		12:00			246		238		484	
00:15			7		25		32		12:15			226		239		465	
00:30			11		27		38		12:30			222		273		495	
00:45			13	42	22	104	35	146	12:45			204	898	268	1018	472	1916
01:00			7		13		20		13:00			250		261		511	
01:15			9		7		16		13:15			230		263		493	
01:30			5		15		20		13:30			204		277		481	
01:45			12	33	11	46	23	79	13:45			234	918	284	1085	518	2003
02:00			7		17		24		14:00			219		266		485	
02:15			2		4		6		14:15			234		262		496	
02:30			2		12		14		14:30			221		296		517	
02:45			4	15	2	35	6	50	14:45			215	889	283	1107	498	1996
03:00			6		7		13		15:00			247		249		496	
03:15			7		6		13		15:15			229		253		482	
03:30			5		7		12		15:30			262		284		546	
03:45			3	21	3	23	6	44	15:45			251	989	268	1054	519	2043
04:00			7		5		12		16:00			247		239		486	
04:15			13		3		16		16:15			235		258		493	
04:30			9		4		13		16:30			234		274		508	
04:45			12	41	9	21	21	62	16:45			248	964	232	1003	480	1967
05:00			9		12		21		17:00			269		247		516	
05:15			28		21		49		17:15			250		204		454	
05:30			19		16		35		17:30			226		228		454	
05:45			28	84	25	74	53	158	17:45			219	964	249	928	468	1892
06:00			38		44		82		18:00			236		180		416	
06:15			41		44		85		18:15			253		193		446	
06:30			57		71		128		18:30			209		169		378	
06:45			68	204	72	231	140	435	18:45			194	892	172	714	366	1606
07:00			91		69		160		19:00			138		137		275	
07:15			85		97		182		19:15			217		165		382	
07:30			105		94		199		19:30			196		152		348	
07:45			119	400	122	382	241	782	19:45			164	715	126	580	290	1295
08:00			135		137		272		20:00			131		109		240	
08:15			126		148		274		20:15			157		113		270	
08:30			138		155		293		20:30			151		81		232	
08:45			162	561	170	610	332	1171	20:45			143	582	91	394	234	976
09:00			137		164		301		21:00			118		85		203	
09:15			180		210		390		21:15			106		90		196	
09:30			155		179		334		21:30			72		81		153	
09:45			200	672	270	823	470	1495	21:45			67	363	82	338	149	701
10:00			222		221		443		22:00			57		62		119	
10:15			225		244		469		22:15			60		65		125	
10:30			236		225		461		22:30			57		69		126	
10:45			205	888	213	903	418	1791	22:45			37	211	56	252	93	463
11:00			209		238		447		23:00			44		66		110	
11:15			185		217		402		23:15			36		53		89	
11:30			195		209		404		23:30			23		48		71	
11:45			192	781	281	945	473	1726	23:45			22	125	48	215	70	340
TOTALS				3742		4197		7939	TOTALS				8510		8688		17198
SPLIT %				47.1%		52.9%		31.6%	SPLIT %				49.5%		50.5%		68.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,252	12,885	25,137

AM Peak Hour			10:00	11:45	11:45	PM Peak Hour			16:30	13:45	15:30
AM Pk Volume			888	1031	1917	PM Pk Volume			1001	1108	2044
Pk Hr Factor			0.941	0.917	0.968	Pk Hr Factor			0.930	0.936	0.936
7 - 9 Volume	0	0	961	992	1953	4 - 6 Volume	0	0	1928	1931	3859
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	16:15	16:15
7 - 9 Pk Volume	0	0	561	610	1171	4 - 6 Pk Volume	0	0	1001	1011	1997
Pk Hr Factor	0.000	0.000	0.866	0.897	0.882	Pk Hr Factor	0.000	0.000	0.930	0.922	0.968

Prepared by NDS/ATD

VOLUME

Pacific Coast Hwy e/o Paradise Cove Rd

Day: Saturday
Date: 7/14/2012

City: Malibu
Project #: CA12_5300_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,299	19,169	37,468

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			29		66		95		12:00			300		342		642	
00:15			30		57		87		12:15			316		397		713	
00:30			17		43		60		12:30			362		382		744	
00:45			30	106	40	206	70	312	12:45			361	1339	414	1535	775	2874
01:00			20		49		69		13:00			336		490		826	
01:15			13		33		46		13:15			370		420		790	
01:30			16		28		44		13:30			298		431		729	
01:45			15	64	20	130	35	194	13:45			329	1333	407	1748	736	3081
02:00			11		17		28		14:00			358		443		801	
02:15			5		10		15		14:15			346		444		790	
02:30			9		9		18		14:30			374		417		791	
02:45			5	30	13	49	18	79	14:45			308	1386	425	1729	733	3115
03:00			7		9		16		15:00			320		371		691	
03:15			11		9		20		15:15			369		395		764	
03:30			9		5		14		15:30			346		435		781	
03:45			9	36	6	29	15	65	15:45			357	1392	372	1573	729	2965
04:00			4		4		8		16:00			381		383		764	
04:15			14		8		22		16:15			415		383		798	
04:30			9		7		16		16:30			406		334		740	
04:45			9	36	11	30	20	66	16:45			438	1640	344	1444	782	3084
05:00			14		15		29		17:00			435		319		754	
05:15			29		18		47		17:15			405		277		682	
05:30			23		22		45		17:30			388		340		728	
05:45			26	92	29	84	55	176	17:45			435	1663	300	1236	735	2899
06:00			47		40		87		18:00			420		286		706	
06:15			61		55		116		18:15			374		277		651	
06:30			50		61		111		18:30			408		256		664	
06:45			57	215	73	229	130	444	18:45			293	1495	228	1047	521	2542
07:00			81		107		188		19:00			297		244		541	
07:15			93		154		247		19:15			307		227		534	
07:30			82		170		252		19:30			308		213		521	
07:45			116	372	211	642	327	1014	19:45			243	1155	210	894	453	2049
08:00			122		192		314		20:00			242		181		423	
08:15			125		264		389		20:15			229		159		388	
08:30			144		194		338		20:30			241		135		376	
08:45			161	552	197	847	358	1399	20:45			210	922	150	625	360	1547
09:00			195		245		440		21:00			198		122		320	
09:15			184		253		437		21:15			174		126		300	
09:30			211		244		455		21:30			178		126		304	
09:45			236	826	290	1032	526	1858	21:45			134	684	121	495	255	1179
10:00			264		290		554		22:00			132		111		243	
10:15			229		331		560		22:15			118		118		236	
10:30			258		328		586		22:30			135		129		264	
10:45			287	1038	320	1269	607	2307	22:45			118	503	108	466	226	969
11:00			267		366		633		23:00			87		99		186	
11:15			279		363		642		23:15			85		93		178	
11:30			295		363		658		23:30			59		85		144	
11:45			294	1135	392	1484	686	2619	23:45			54	285	69	346	123	631
TOTALS				4502		6031		10533	TOTALS				13797		13138		26935
SPLIT %				42.7%		57.3%		28.1%	SPLIT %				51.2%		48.8%		71.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	18,299	19,169	37,468

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			16:15	12:45	12:30
AM Pk Volume			1272	1513	2785	PM Pk Volume			1694	1755	3135
Pk Hr Factor			0.878	0.953	0.936	Pk Hr Factor			0.967	0.895	0.949
7 - 9 Volume	0	0	924	1489	2413	4 - 6 Volume	0	0	3303	2680	5983
7 - 9 Peak Hour			08:00	07:45	08:00	4 - 6 Peak Hour			16:15	16:00	16:00
7 - 9 Pk Volume	0	0	552	861	1399	4 - 6 Pk Volume	0	0	1694	1444	3084
Pk Hr Factor	0.000	0.000	0.857	0.815	0.899	Pk Hr Factor	0.000	0.000	0.967	0.943	0.966

Prepared by NDS/ATD

VOLUME

Pacific Coast Hwy e/o Corral Canyon Rd

Day: Saturday
Date: 7/14/2012

City: Malibu
Project #: CA12_5300_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,393	20,944	41,337

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			39		51		90		12:00			329		360		689	
00:15			30		38		68		12:15			315		438		753	
00:30			17		43		60		12:30			388		441		829	
00:45			24	110	41	173	65	283	12:45			394	1426	431	1670	825	3096
01:00			26		21		47		13:00			331		471		802	
01:15			15		23		38		13:15			381		431		812	
01:30			15		22		37		13:30			352		489		841	
01:45			14	70	30	96	44	166	13:45			332	1396	414	1805	746	3201
02:00			11		24		35		14:00			417		483		900	
02:15			4		19		23		14:15			389		444		833	
02:30			11		15		26		14:30			392		444		836	
02:45			7	33	11	69	18	102	14:45			364	1562	450	1821	814	3383
03:00			8		12		20		15:00			363		423		786	
03:15			9		12		21		15:15			380		433		813	
03:30			8		8		16		15:30			395		434		829	
03:45			12	37	15	47	27	84	15:45			424	1562	410	1700	834	3262
04:00			5		2		7		16:00			440		400		840	
04:15			16		2		18		16:15			435		430		865	
04:30			11		10		21		16:30			446		367		813	
04:45			9	41	23	37	32	78	16:45			470	1791	396	1593	866	3384
05:00			21		23		44		17:00			459		338		797	
05:15			27		18		45		17:15			477		350		827	
05:30			25		41		66		17:30			460		355		815	
05:45			32	105	53	135	85	240	17:45			472	1868	322	1365	794	3233
06:00			49		68		117		18:00			491		318		809	
06:15			50		76		126		18:15			422		281		703	
06:30			50		110		160		18:30			433		274		707	
06:45			60	209	140	394	200	603	18:45			374	1720	257	1130	631	2850
07:00			80		141		221		19:00			342		296		638	
07:15			106		192		298		19:15			328		238		566	
07:30			93		184		277		19:30			335		258		593	
07:45			117	396	247	764	364	1160	19:45			273	1278	212	1004	485	2282
08:00			141		224		365		20:00			305		200		505	
08:15			148		248		396		20:15			254		169		423	
08:30			150		218		368		20:30			301		176		477	
08:45			181	620	251	941	432	1561	20:45			239	1099	147	692	386	1791
09:00			208		283		491		21:00			237		145		382	
09:15			207		247		454		21:15			193		132		325	
09:30			218		276		494		21:30			231		152		383	
09:45			235	868	289	1095	524	1963	21:45			164	825	133	562	297	1387
10:00			264		309		573		22:00			162		121		283	
10:15			261		361		622		22:15			144		118		262	
10:30			283		339		622		22:30			168		115		283	
10:45			272	1080	355	1364	627	2444	22:45			154	628	121	475	275	1103
11:00			301		407		708		23:00			132		111		243	
11:15			308		416		724		23:15			104		87		191	
11:30			293		410		703		23:30			93		92		185	
11:45			364	1266	415	1648	779	2914	23:45			74	403	74	364	148	767
TOTALS				4835		6763		11598	TOTALS				15558		14181		29739
SPLIT %				41.7%		58.3%		28.1%	SPLIT %				52.3%		47.7%		71.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,393	20,944	41,337

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			17:15	13:30	16:00
AM Pk Volume			1396	1654	3050	PM Pk Volume			1900	1830	3384
Pk Hr Factor			0.899	0.938	0.920	Pk Hr Factor			0.967	0.936	0.977
7 - 9 Volume	0	0	1016	1705	2721	4 - 6 Volume	0	0	3659	2958	6617
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			17:00	16:00	16:00
7 - 9 Pk Volume	0	0	620	941	1561	4 - 6 Pk Volume	0	0	1868	1593	3384
Pk Hr Factor	0.000	0.000	0.856	0.937	0.903	Pk Hr Factor	0.000	0.000	0.979	0.926	0.977

Prepared by NDS/ATD

VOLUME

Pacific Coast Hwy btwn Malibu Canyon Rd & John Tyler Dr

Day: Saturday
Date: 7/14/2012

City: Malibu
Project #: CA12_5300_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,151	21,244	42,395

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			35		57		92		12:00			337		404		741	
00:15			44		35		79		12:15			344		409		753	
00:30			18		48		66		12:30			364		473		837	
00:45			21	118	41	181	62	299	12:45			406	1451	475	1761	881	3212
01:00			33		26		59		13:00			365		465		830	
01:15			15		26		41		13:15			397		472		869	
01:30			17		26		43		13:30			344		499		843	
01:45			12	77	37	115	49	192	13:45			343	1449	441	1877	784	3326
02:00			16		21		37		14:00			431		482		913	
02:15			5		24		29		14:15			382		446		828	
02:30			11		15		26		14:30			381		453		834	
02:45			5	37	15	75	20	112	14:45			403	1597	458	1839	861	3436
03:00			9		9		18		15:00			386		432		818	
03:15			9		14		23		15:15			364		441		805	
03:30			10		9		19		15:30			424		461		885	
03:45			13	41	13	45	26	86	15:45			469	1643	427	1761	896	3404
04:00			6		3		9		16:00			456		408		864	
04:15			12		5		17		16:15			464		408		872	
04:30			10		11		21		16:30			477		376		853	
04:45			12	40	27	46	39	86	16:45			470	1867	389	1581	859	3448
05:00			18		25		43		17:00			502		329		831	
05:15			22		24		46		17:15			505		347		852	
05:30			30		39		69		17:30			468		382		850	
05:45			28	98	58	146	86	244	17:45			493	1968	264	1322	757	3290
06:00			42		64		106		18:00			502		319		821	
06:15			53		90		143		18:15			452		280		732	
06:30			58		124		182		18:30			426		297		723	
06:45			63	216	135	413	198	629	18:45			429	1809	261	1157	690	2966
07:00			79		162		241		19:00			372		289		661	
07:15			108		184		292		19:15			334		235		569	
07:30			96		213		309		19:30			333		256		589	
07:45			112	395	245	804	357	1199	19:45			294	1333	204	984	498	2317
08:00			131		233		364		20:00			305		194		499	
08:15			164		202		366		20:15			296		170		466	
08:30			150		218		368		20:30			306		176		482	
08:45			180	625	221	874	401	1499	20:45			277	1184	144	684	421	1868
09:00			206		245		451		21:00			279		133		412	
09:15			216		227		443		21:15			207		135		342	
09:30			211		279		490		21:30			225		142		367	
09:45			220	853	298	1049	518	1902	21:45			189	900	137	547	326	1447
10:00			264		323		587		22:00			170		145		315	
10:15			272		354		626		22:15			146		129		275	
10:30			243		341		584		22:30			166		125		291	
10:45			310	1089	389	1407	699	2496	22:45			165	647	131	530	296	1177
11:00			301		424		725		23:00			135		102		237	
11:15			321		397		718		23:15			111		92		203	
11:30			300		437		737		23:30			109		88		197	
11:45			355	1277	426	1684	781	2961	23:45			82	437	80	362	162	799
TOTALS				4866		6839		11705	TOTALS				16285		14405		30690
SPLIT %				41.6%		58.4%		27.6%	SPLIT %				53.1%		46.9%		72.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	21,151	21,244	42,395

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour		17:00	12:45	15:30
AM Pk Volume			1400	1712	3112	PM Pk Volume		1968	1911	3517
Pk Hr Factor			0.962	0.905	0.930	Pk Hr Factor		0.974	0.957	0.981
7 - 9 Volume	0	0	1020	1678	2698	4 - 6 Volume	0	3835	2903	6738
7 - 9 Peak Hour			08:00	07:45	08:00	4 - 6 Peak Hour		17:00	16:00	16:00
7 - 9 Pk Volume	0	0	625	898	1499	4 - 6 Pk Volume	0	1968	1581	3448
Pk Hr Factor	0.000	0.000	0.868	0.916	0.935	Pk Hr Factor	0.000	0.974	0.969	0.989

Prepared by NDS/ATD

VOLUME

Pacific Coast Hwy e/o Cross Creek Rd

Day: Saturday
Date: 7/14/2012

City: Malibu
Project #: CA12_5300_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,049	23,741	46,790

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			49		66		115		12:00			396		432		828	
00:15			54		55		109		12:15			419		479		898	
00:30			31		54		85		12:30			427		447		874	
00:45			29	163	49	224	78	387	12:45			443	1685	498	1856	941	3541
01:00			39		39		78		13:00			396		443		839	
01:15			22		41		63		13:15			405		442		847	
01:30			18		27		45		13:30			380		490		870	
01:45			15	94	45	152	60	246	13:45			415	1596	433	1808	848	3404
02:00			10		32		42		14:00			456		479		935	
02:15			8		34		42		14:15			474		439		913	
02:30			9		22		31		14:30			431		442		873	
02:45			6	33	15	103	21	136	14:45			428	1789	498	1858	926	3647
03:00			16		16		32		15:00			431		450		881	
03:15			11		13		24		15:15			421		485		906	
03:30			10		12		22		15:30			463		438		901	
03:45			12	49	13	54	25	103	15:45			469	1784	479	1852	948	3636
04:00			5		8		13		16:00			461		422		883	
04:15			11		9		20		16:15			466		484		950	
04:30			9		12		21		16:30			498		425		923	
04:45			17	42	29	58	46	100	16:45			467	1892	460	1791	927	3683
05:00			27		30		57		17:00			518		408		926	
05:15			41		27		68		17:15			489		414		903	
05:30			49		32		81		17:30			447		419		866	
05:45			35	152	47	136	82	288	17:45			457	1911	387	1628	844	3539
06:00			65		55		120		18:00			477		339		816	
06:15			59		64		123		18:15			469		368		837	
06:30			67		82		149		18:30			446		333		779	
06:45			79	270	133	334	212	604	18:45			417	1809	365	1405	782	3214
07:00			98		183		281		19:00			386		386		772	
07:15			109		175		284		19:15			380		318		698	
07:30			124		252		376		19:30			356		280		636	
07:45			138	469	245	855	383	1324	19:45			328	1450	250	1234	578	2684
08:00			156		297		453		20:00			301		241		542	
08:15			155		248		403		20:15			272		208		480	
08:30			182		345		527		20:30			325		213		538	
08:45			181	674	311	1201	492	1875	20:45			294	1192	166	828	460	2020
09:00			239		271		510		21:00			275		190		465	
09:15			273		277		550		21:15			246		183		429	
09:30			242		323		565		21:30			226		156		382	
09:45			270	1024	395	1266	665	2290	21:45			195	942	154	683	349	1625
10:00			296		381		677		22:00			200		170		370	
10:15			309		386		695		22:15			183		127		310	
10:30			306		415		721		22:30			153		144		297	
10:45			375	1286	450	1632	825	2918	22:45			203	739	151	592	354	1331
11:00			369		434		803		23:00			148		129		277	
11:15			366		422		788		23:15			125		118		243	
11:30			354		452		806		23:30			141		123		264	
11:45			415	1504	398	1706	813	3210	23:45			86	500	115	485	201	985
TOTALS				5760		7721		13481	TOTALS				17289		16020		33309
SPLIT %				42.7%		57.3%		28.8%	SPLIT %				51.9%		48.1%		71.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,049	23,741	46,790

AM Peak Hour			11:45	11:30	11:45	PM Peak Hour			16:30	14:30	16:15
AM Pk Volume			1657	1761	3413	PM Pk Volume			1972	1875	3726
Pk Hr Factor			0.970	0.919	0.950	Pk Hr Factor			0.952	0.941	0.981
7 - 9 Volume	0	0	1143	2056	3199	4 - 6 Volume	0	0	3803	3419	7222
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	16:00	16:15
7 - 9 Pk Volume	0	0	674	1201	1875	4 - 6 Pk Volume	0	0	1972	1791	3726
Pk Hr Factor	0.000	0.000	0.926	0.870	0.889	Pk Hr Factor	0.000	0.000	0.952	0.925	0.981

Prepared by NDS/ATD

VOLUME

Pacific Coast Highway w/o Las Tunas

Day: Saturday
Date: 7/14/2012

City: Malibu
Project #: CA12_5300_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,881	23,607	47,488

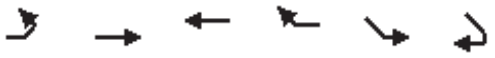
AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			73		70		143		12:00			365		435		800	
00:15			67		56		123		12:15			351		479		830	
00:30			54		48		102		12:30			355		465		820	
00:45			38	232	50	224	88	456	12:45			383	1454	464	1843	847	3297
01:00			53		38		91		13:00			407		446		853	
01:15			58		38		96		13:15			404		479		883	
01:30			36		37		73		13:30			600		449		1049	
01:45			26	173	40	153	66	326	13:45			412	1823	485	1859	897	3682
02:00			24		35		59		14:00			390		489		879	
02:15			16		32		48		14:15			419		465		884	
02:30			11		15		26		14:30			450		415		865	
02:45			9	60	18	100	27	160	14:45			414	1673	491	1860	905	3533
03:00			11		14		25		15:00			456		421		877	
03:15			12		14		26		15:15			449		444		893	
03:30			10		15		25		15:30			423		444		867	
03:45			10	43	8	51	18	94	15:45			464	1792	424	1733	888	3525
04:00			11		5		16		16:00			448		441		889	
04:15			2		14		16		16:15			462		459		921	
04:30			20		27		47		16:30			469		387		856	
04:45			10	43	25	71	35	114	16:45			532	1911	432	1719	964	3630
05:00			16		40		56		17:00			479		407		886	
05:15			30		40		70		17:15			577		415		992	
05:30			54		63		117		17:30			531		378		909	
05:45			37	137	85	228	122	365	17:45			483	2070	336	1536	819	3606
06:00			47		101		148		18:00			435		331		766	
06:15			74		119		193		18:15			494		367		861	
06:30			76		161		237		18:30			395		289		684	
06:45			62	259	176	557	238	816	18:45			447	1771	387	1374	834	3145
07:00			91		187		278		19:00			422		302		724	
07:15			107		238		345		19:15			493		306		799	
07:30			127		287		414		19:30			442		225		667	
07:45			138	463	263	975	401	1438	19:45			438	1795	235	1068	673	2863
08:00			132		286		418		20:00			368		222		590	
08:15			167		330		497		20:15			334		230		564	
08:30			168		232		400		20:30			330		163		493	
08:45			177	644	293	1141	470	1785	20:45			352	1384	169	784	521	2168
09:00			192		264		456		21:00			322		160		482	
09:15			239		304		543		21:15			323		173		496	
09:30			300		348		648		21:30			255		175		430	
09:45			244	975	351	1267	595	2242	21:45			234	1134	157	665	391	1799
10:00			252		365		617		22:00			226		150		376	
10:15			312		386		698		22:15			223		151		374	
10:30			265		384		649		22:30			187		151		338	
10:45			343	1172	413	1548	756	2720	22:45			202	838	151	603	353	1441
11:00			301		421		722		23:00			213		128		341	
11:15			347		445		792		23:15			169		136		305	
11:30			352		413		765		23:30			172		120		292	
11:45			350	1350	462	1741	812	3091	23:45			131	685	123	507	254	1192
TOTALS				5551		8056		13607	TOTALS				18330		15551		33881
SPLIT %				40.8%		59.2%		28.7%	SPLIT %				54.1%		45.9%		71.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,881	23,607	47,488

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			16:45	13:15	16:45
AM Pk Volume			1421	1841	3262	PM Pk Volume			2119	1902	3751
Pk Hr Factor			0.973	0.961	0.983	Pk Hr Factor			0.918	0.972	0.945
7 - 9 Volume	0	0	1107	2116	3223	4 - 6 Volume	0	0	3981	3255	7236
7 - 9 Peak Hour			08:00	07:30	08:00	4 - 6 Peak Hour			16:45	16:00	16:45
7 - 9 Pk Volume	0	0	644	1166	1785	4 - 6 Pk Volume	0	0	2119	1719	3751
Pk Hr Factor	0.000	0.000	0.910	0.883	0.898	Pk Hr Factor	0.000	0.000	0.918	0.936	0.945

APPENDIX C

LEVEL OF SERVICE AND QUEUING WORKSHEETS



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (veh/h)	4	454	236	4	14	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	493	257	4	15	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	261				514	130
vC1, stage 1 conf vol					259	
vC2, stage 2 conf vol					255	
vCu, unblocked vol	261				514	130
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)	2.3				3.6	3.4
p0 queue free %	100				98	100
cM capacity (veh/h)	1272				643	882

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SE 1
Volume Total	4	247	247	171	90	18
Volume Left	4	0	0	0	0	15
Volume Right	0	0	0	0	4	3
cSH	1272	1700	1700	1700	1700	676
Volume to Capacity	0.00	0.15	0.15	0.10	0.05	0.03
Queue Length 95th (ft)	0	0	0	0	0	2
Control Delay (s)	7.8	0.0	0.0	0.0	0.0	10.5
Lane LOS	A					B
Approach Delay (s)	0.1			0.0		10.5
Approach LOS						B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	22.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	23	448	242	22	39	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	487	263	24	42	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	287				557	132
vC1, stage 1 conf vol					263	
vC2, stage 2 conf vol					293	
vCu, unblocked vol	287				557	132
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)	2.3				3.6	3.4
p0 queue free %	98				93	99
cM capacity (veh/h)	1243				614	881

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	25	243	243	132	132	24	53
Volume Left	25	0	0	0	0	0	42
Volume Right	0	0	0	0	0	24	11
cSH	1243	1700	1700	1700	1700	1700	655
Volume to Capacity	0.02	0.14	0.14	0.08	0.08	0.01	0.08
Queue Length 95th (ft)	2	0	0	0	0	0	7
Control Delay (s)	8.0	0.0	0.0	0.0	0.0	0.0	11.0
Lane LOS	A						B
Approach Delay (s)	0.4			0.0			11.0
Approach LOS							B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	23.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	490	10	11	292	3	14
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	533	11	12	317	3	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			543		721	272
vC1, stage 1 conf vol					538	
vC2, stage 2 conf vol					183	
vCu, unblocked vol			543		721	272
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)			2.3		3.6	3.4
p0 queue free %			99		99	98
cM capacity (veh/h)			994		506	714

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	355	188	12	159	159	18
Volume Left	0	0	12	0	0	3
Volume Right	0	11	0	0	0	15
cSH	1700	1700	994	1700	1700	666
Volume to Capacity	0.21	0.11	0.01	0.09	0.09	0.03
Queue Length 95th (ft)	0	0	1	0	0	2
Control Delay (s)	0.0	0.0	8.7	0.0	0.0	10.6
Lane LOS			A			B
Approach Delay (s)	0.0		0.3			10.6
Approach LOS						B

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	23.9%	ICU Level of Service		A
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	43	557	33	379	29	152
v/c Ratio	0.14	0.50	0.12	0.41	0.04	0.27
Control Delay	17.3	12.8	18.4	12.6	7.7	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	12.8	18.4	12.6	7.7	11.6
Queue Length 50th (ft)	7	43	5	23	1	14
Queue Length 95th (ft)	32	113	m28	71	16	73
Internal Link Dist (ft)		6118		1607	171	873
Turn Bay Length (ft)	180		165			
Base Capacity (vph)	712	1513	712	1412	688	570
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.37	0.05	0.27	0.04	0.27

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	510	3	30	271	77	2	8	17	116	7	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	0.97			0.92			0.98	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.96	
Satd. Flow (prot)	1703	3403		1703	3292			1637			1694	
Flt Permitted	0.95	1.00		0.95	1.00			0.99			0.77	
Satd. Flow (perm)	1703	3403		1703	3292			1621			1350	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	554	3	33	295	84	2	9	18	126	8	18
RTOR Reduction (vph)	0	1	0	0	45	0	0	11	0	0	7	0
Lane Group Flow (vph)	43	556	0	33	334	0	0	18	0	0	145	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	5	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	3.5	13.0		1.2	10.7			16.6			16.6	
Effective Green, g (s)	3.5	13.0		1.2	10.7			16.6			16.6	
Actuated g/C Ratio	0.08	0.30		0.03	0.25			0.39			0.39	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	139	1034		48	823			629			524	
v/s Ratio Prot	0.03	c0.16		0.02	c0.10							
v/s Ratio Perm								0.01			c0.11	
v/c Ratio	0.31	0.54		0.69	0.41			0.03			0.28	
Uniform Delay, d1	18.5	12.4		20.6	13.4			8.1			9.0	
Progression Factor	1.00	1.00		1.01	1.00			1.00			1.00	
Incremental Delay, d2	1.3	0.5		33.8	0.3			0.1			1.3	
Delay (s)	19.8	12.9		54.6	13.8			8.2			10.3	
Level of Service	B	B		D	B			A			B	
Approach Delay (s)		13.4			17.0			8.2			10.3	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	42.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEU	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL
Lane Configurations												
Volume (veh/h)	16	24	612	0	1	0	411	17	0	0	0	13
Sign Control			Free				Free			Stop		
Grade			0%				0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	26	665	0	0	0	447	18	0	0	0	14
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type			None				None					
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked	0.00				0.00							
vC, conflicting volume	0	465			0	665			966	1183	333	841
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	465			0	665			966	1183	333	841
tC, single (s)	0.0	4.2			0.0	4.2			7.6	6.6	7.0	7.6
tC, 2 stage (s)												
tF (s)	0.0	2.3			0.0	2.3			3.6	4.1	3.4	3.6
p0 queue free %	0	98			0	100			100	100	100	94
cM capacity (veh/h)	0	1065			0	893			193	178	652	247

Direction, Lane #	SE 1	SE 2	SE 3	NW 1	NW 2	NW 3	NE 1	SW 1
Volume Total	26	443	222	0	298	167	0	39
Volume Left	26	0	0	0	0	0	0	14
Volume Right	0	0	0	0	0	18	0	25
cSH	1065	1700	1700	1700	1700	1700	1700	433
Volume to Capacity	0.02	0.26	0.13	0.00	0.18	0.10	0.00	0.09
Queue Length 95th (ft)	2	0	0	0	0	0	0	7
Control Delay (s)	8.5	0.0	0.0	0.0	0.0	0.0	0.0	14.1
Lane LOS	A						A	B
Approach Delay (s)	0.3			0.0			0.0	14.1
Approach LOS							A	B

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	33.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	SWT	SWR
Lane Configurations		
Volume (veh/h)	0	23
Sign Control	Stop	
Grade	0%	
Peak Hour Factor	0.92	0.92
Hourly flow rate (vph)	0	25
Pedestrians		
Lane Width (ft)		
Walking Speed (ft/s)		
Percent Blockage		
Right turn flare (veh)		
Median type		
Median storage veh)		
Upstream signal (ft)		
pX, platoon unblocked		
vC, conflicting volume	1173	233
vC1, stage 1 conf vol		
vC2, stage 2 conf vol		
vCu, unblocked vol	1173	233
tC, single (s)	6.6	7.0
tC, 2 stage (s)		
tF (s)	4.1	3.4
p0 queue free %	100	97
cM capacity (veh/h)	180	757
Direction, Lane #		



Lane Group	SEL	SET	NWT	SWL
Lane Group Flow (vph)	35	671	634	105
v/c Ratio	0.24	0.25	0.26	0.35
Control Delay	23.9	3.3	4.5	17.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.9	3.3	4.5	17.4
Queue Length 50th (ft)	10	30	24	24
Queue Length 95th (ft)	28	60	84	47
Internal Link Dist (ft)		4399	3005	678
Turn Bay Length (ft)	150			
Base Capacity (vph)	147	2667	2484	593
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.24	0.25	0.26	0.18

Intersection Summary



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	32	617	466	117	80	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	0.97		0.98	
Flt Protected	0.95	1.00	1.00		0.96	
Satd. Flow (prot)	1703	3406	3303		1681	
Flt Permitted	0.95	1.00	1.00		0.96	
Satd. Flow (perm)	1703	3406	3303		1681	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	35	671	507	127	87	18
RTOR Reduction (vph)	0	0	24	0	16	0
Lane Group Flow (vph)	35	671	610	0	89	0
Turn Type	Prot					
Protected Phases	1	6	2		8	
Permitted Phases						
Actuated Green, G (s)	0.8	37.8	33.0		5.3	
Effective Green, g (s)	0.8	37.8	33.0		5.3	
Actuated g/C Ratio	0.02	0.74	0.65		0.10	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	27	2520	2133		174	
v/s Ratio Prot	c0.02	c0.20	0.18		c0.05	
v/s Ratio Perm						
v/c Ratio	1.30	0.27	0.29		0.51	
Uniform Delay, d1	25.2	2.2	3.9		21.7	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	274.8	0.3	0.3		2.5	
Delay (s)	300.0	2.4	4.3		24.2	
Level of Service	F	A	A		C	
Approach Delay (s)		17.2	4.3		24.2	
Approach LOS		B	A		C	

Intersection Summary			
HCM Average Control Delay	12.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	51.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	27	704	728	114	15
v/c Ratio	0.16	0.57	0.45	0.15	0.02
Control Delay	21.9	12.2	11.3	9.3	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	12.2	11.3	9.3	5.5
Queue Length 50th (ft)	6	64	39	14	0
Queue Length 95th (ft)	26	98	83	50	9
Internal Link Dist (ft)		231	520	653	
Turn Bay Length (ft)	50				
Base Capacity (vph)	167	2009	1932	753	682
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.16	0.35	0.38	0.15	0.02

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	25	648	587	83	105	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.91		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1703	3406	4803		1703	1524
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1703	3406	4803		1703	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	704	638	90	114	15
RTOR Reduction (vph)	0	0	37	0	0	9
Lane Group Flow (vph)	27	704	691	0	114	6
Turn Type	Prot					Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	0.7	18.3	13.6		18.2	18.2
Effective Green, g (s)	0.7	18.3	13.6		18.2	18.2
Actuated g/C Ratio	0.02	0.41	0.31		0.41	0.41
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	27	1401	1468		697	623
v/s Ratio Prot	0.02	c0.21	0.14		c0.07	
v/s Ratio Perm						0.00
v/c Ratio	1.00	0.50	0.47		0.16	0.01
Uniform Delay, d1	21.9	9.7	12.5		8.3	7.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	173.2	0.3	0.2		0.5	0.0
Delay (s)	195.1	10.0	12.8		8.8	7.8
Level of Service	F	B	B		A	A
Approach Delay (s)		16.8	12.8		8.7	
Approach LOS		B	B		A	

Intersection Summary			
HCM Average Control Delay	14.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	44.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	32.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (veh/h)	8	726	30	17	48	657	15	25	2	37	0	1
Sign Control		Free				Free			Stop			Stop
Grade		0%				0%			0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	789	33	0	52	714	16	27	2	40	0	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL				None						
Median storage veh)		2										
Upstream signal (ft)		600										
pX, platoon unblocked				0.00	0.86			0.86	0.86	0.86	0.86	0.86
vC, conflicting volume	730			0	822			1288	1658	411	1280	1666
vC1, stage 1 conf vol								823	823		827	827
vC2, stage 2 conf vol								465	835		453	839
vCu, unblocked vol	730			0	475			1016	1444	0	1006	1454
tC, single (s)	4.2			0.0	4.2			7.6	6.6	7.0	7.6	6.6
tC, 2 stage (s)								6.6	5.6		6.6	5.6
tF (s)	2.3			0.0	2.3			3.6	4.1	3.4	3.6	4.1
p0 queue free %	99			0	94			92	99	96	100	100
cM capacity (veh/h)	844			0	911			355	285	924	289	277

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1
Volume Total	9	526	296	52	476	254	29	40	4
Volume Left	9	0	0	52	0	0	27	0	0
Volume Right	0	0	33	0	0	16	0	40	3
cSH	844	1700	1700	911	1700	1700	349	924	474
Volume to Capacity	0.01	0.31	0.17	0.06	0.28	0.15	0.08	0.04	0.01
Queue Length 95th (ft)	1	0	0	5	0	0	7	3	1
Control Delay (s)	9.3	0.0	0.0	9.2	0.0	0.0	16.3	9.1	12.7
Lane LOS	A			A			C	A	B
Approach Delay (s)	0.1			0.6			12.1		12.7
Approach LOS							B		B

Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	44.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	SBR
Lane Configurations	
Volume (veh/h)	3
Sign Control	
Grade	
Peak Hour Factor	0.92
Hourly flow rate (vph)	3
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh)	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	365
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	365
tC, single (s)	7.0
tC, 2 stage (s)	
tF (s)	3.4
p0 queue free %	99
cM capacity (veh/h)	620
Direction, Lane #	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	721	109	187	700	108	171
v/c Ratio	0.71	0.20	0.89	0.41	0.19	0.28
Control Delay	19.6	4.7	67.1	8.3	13.4	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.6	4.7	67.1	8.3	13.4	4.1
Queue Length 50th (ft)	94	0	56	58	22	0
Queue Length 95th (ft)	143	26	#152	88	51	32
Internal Link Dist (ft)	2821			1799	675	
Turn Bay Length (ft)		170	250			
Base Capacity (vph)	1123	576	211	1825	562	617
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.19	0.89	0.38	0.19	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	663	100	172	644	99	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3406	1524	1703	3406	1703	1524
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3406	1524	1703	3406	1703	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	721	109	187	700	108	171
RTOR Reduction (vph)	0	76	0	0	0	115
Lane Group Flow (vph)	721	33	187	700	108	56
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	14.6	14.6	6.0	24.6	16.0	16.0
Effective Green, g (s)	14.6	14.6	6.0	24.6	16.0	16.0
Actuated g/C Ratio	0.30	0.30	0.12	0.51	0.33	0.33
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1023	458	210	1724	561	502
v/s Ratio Prot	c0.21		c0.11	0.21	c0.06	
v/s Ratio Perm		0.02				0.04
v/c Ratio	0.70	0.07	0.89	0.41	0.19	0.11
Uniform Delay, d1	15.1	12.2	21.0	7.5	11.7	11.4
Progression Factor	1.01	1.05	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.2	0.1	34.0	0.2	0.8	0.5
Delay (s)	17.5	12.9	55.0	7.6	12.4	11.8
Level of Service	B	B	D	A	B	B
Approach Delay (s)	16.9			17.6	12.0	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	48.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	151	730	653	115	216	272
v/c Ratio	0.66	0.46	0.64	0.21	0.18	0.38
Control Delay	39.8	8.9	17.5	4.5	12.4	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.8	8.9	17.5	4.5	12.4	4.0
Queue Length 50th (ft)	43	61	82	0	22	0
Queue Length 95th (ft)	#121	92	126	26	42	40
Internal Link Dist (ft)		1799	1900		811	
Turn Bay Length (ft)	330			170		
Base Capacity (vph)	228	1975	1216	618	1179	719
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.37	0.54	0.19	0.18	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	139	672	601	106	199	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1703	3406	3406	1524	3303	1524
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1703	3406	3406	1524	3303	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	151	730	653	115	216	272
RTOR Reduction (vph)	0	0	0	81	0	177
Lane Group Flow (vph)	151	730	653	34	216	95
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	4.5	22.4	13.9	13.9	16.4	16.4
Effective Green, g (s)	4.5	22.4	13.9	13.9	16.4	16.4
Actuated g/C Ratio	0.10	0.48	0.30	0.30	0.35	0.35
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	164	1630	1012	453	1157	534
v/s Ratio Prot	c0.09	0.21	c0.19		c0.07	
v/s Ratio Perm				0.02		0.06
v/c Ratio	0.92	0.45	0.65	0.08	0.19	0.18
Uniform Delay, d1	21.0	8.1	14.3	11.8	10.6	10.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	47.6	0.2	1.4	0.1	0.4	0.7
Delay (s)	68.6	8.3	15.7	11.9	10.9	11.3
Level of Service	E	A	B	B	B	B
Approach Delay (s)		18.6	15.2		11.1	
Approach LOS		B	B		B	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	46.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	9	882	38	116	716	47	89	17
v/c Ratio	0.10	0.97	0.09	0.85	0.56	0.12	0.21	0.05
Control Delay	36.2	52.8	8.1	83.8	21.0	24.1	7.4	16.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	52.8	8.1	83.8	21.0	24.1	7.4	16.8
Queue Length 50th (ft)	4	213	0	55	128	18	0	3
Queue Length 95th (ft)	18	#334	21	#145	215	44	34	18
Internal Link Dist (ft)		1900			3107	76		1327
Turn Bay Length (ft)	300		170	315				
Base Capacity (vph)	91	908	434	136	1289	388	414	356
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.97	0.09	0.85	0.56	0.12	0.21	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	811	35	107	652	6	41	2	82	4	3	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	1703	3406	1524	1703	3401			1711	1524		1631	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.99	
Satd. Flow (perm)	1703	3406	1524	1703	3401			1711	1524		1631	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	882	38	116	709	7	45	2	89	4	3	10
RTOR Reduction (vph)	0	0	27	0	1	0	0	0	70	0	8	0
Lane Group Flow (vph)	9	882	11	116	715	0	0	47	19	0	9	0
Turn Type	Prot		Perm	Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	0.8	23.2	23.2	6.0	28.4			17.0	17.0		16.0	
Effective Green, g (s)	0.8	23.2	23.2	6.0	28.4			17.0	17.0		16.0	
Actuated g/C Ratio	0.01	0.30	0.30	0.08	0.36			0.22	0.22		0.20	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	17	1010	452	131	1235			372	331		334	
v/s Ratio Prot	0.01	c0.26		c0.07	0.21			c0.03			c0.01	
v/s Ratio Perm			0.01						0.01			
v/c Ratio	0.53	0.87	0.02	0.89	0.58			0.13	0.06		0.03	
Uniform Delay, d1	38.5	26.1	19.5	35.8	20.1			24.6	24.3		24.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	26.7	8.5	0.0	45.6	0.7			0.7	0.3		0.1	
Delay (s)	65.2	34.6	19.5	81.3	20.7			25.3	24.6		25.0	
Level of Service	E	C	B	F	C			C	C		C	
Approach Delay (s)		34.3			29.2			24.8			25.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	31.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	78.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	1017	27	799	87
v/c Ratio	0.38	0.08	0.28	0.16
Control Delay	5.0	15.5	2.8	8.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.0	15.5	2.8	8.6
Queue Length 50th (ft)	0	2	0	3
Queue Length 95th (ft)	156	23	66	36
Internal Link Dist (ft)	3107		9849	713
Turn Bay Length (ft)		100		
Base Capacity (vph)	2604	337	2987	1203
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.39	0.08	0.27	0.07

Intersection Summary



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	910	26	25	735	45	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	1.00		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3392		1703	3406	1641	
Flt Permitted	1.00		0.95	1.00	0.97	
Satd. Flow (perm)	3392		1703	3406	1641	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	989	28	27	799	49	38
RTOR Reduction (vph)	3	0	0	0	35	0
Lane Group Flow (vph)	1014	0	27	799	52	0
Turn Type			Prot			
Protected Phases	4		3	8	2	
Permitted Phases						
Actuated Green, G (s)	15.8		0.5	20.3	2.1	
Effective Green, g (s)	15.8		0.5	20.3	2.1	
Actuated g/C Ratio	0.52		0.02	0.67	0.07	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1763		28	2274	113	
v/s Ratio Prot	c0.30		0.02	c0.23	c0.03	
v/s Ratio Perm						
v/c Ratio	0.58		0.96	0.35	0.46	
Uniform Delay, d1	5.0		14.9	2.2	13.6	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.5		153.8	0.1	2.9	
Delay (s)	5.5		168.7	2.3	16.5	
Level of Service	A		F	A	B	
Approach Delay (s)	5.5			7.7	16.5	
Approach LOS	A			A	B	

Intersection Summary			
HCM Average Control Delay	6.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	30.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	37.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	16	930	780	24	27	17
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	1011	848	26	29	18
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	874				1401	437
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	874				1401	437
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	98				76	97
cM capacity (veh/h)	743				123	557

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	17	505	505	565	309	48
Volume Left	17	0	0	0	0	29
Volume Right	0	0	0	0	26	18
cSH	743	1700	1700	1700	1700	177
Volume to Capacity	0.02	0.30	0.30	0.33	0.18	0.27
Queue Length 95th (ft)	2	0	0	0	0	26
Control Delay (s)	10.0	0.0	0.0	0.0	0.0	32.8
Lane LOS	A					D
Approach Delay (s)	0.2			0.0		32.8
Approach LOS						D

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	35.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	22	1039	894	60	24
v/c Ratio	0.14	0.68	0.63	0.10	0.04
Control Delay	22.9	12.0	12.9	11.5	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	12.0	12.9	11.5	6.0
Queue Length 50th (ft)	5	98	78	10	0
Queue Length 95th (ft)	23	145	171	32	12
Internal Link Dist (ft)		3601	3575	874	
Turn Bay Length (ft)	70				
Base Capacity (vph)	157	2037	1519	627	576
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.14	0.51	0.59	0.10	0.04

Intersection Summary



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	20	956	0	791	31	55	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.99		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1703	3406		3386		1703	1524
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1703	3406		3386		1703	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	1039	0	860	34	60	24
RTOR Reduction (vph)	0	0	0	6	0	0	16
Lane Group Flow (vph)	22	1039	0	888	0	60	8
Turn Type	Prot		Prot				custom
Protected Phases	7	4	3	8			
Permitted Phases						6	6
Actuated Green, G (s)	0.7	21.9		17.2		16.1	16.1
Effective Green, g (s)	0.7	21.9		17.2		16.1	16.1
Actuated g/C Ratio	0.02	0.48		0.37		0.35	0.35
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	26	1622		1266		596	533
v/s Ratio Prot	0.01	c0.31		0.26			
v/s Ratio Perm						c0.04	0.01
v/c Ratio	0.85	0.64		0.70		0.10	0.02
Uniform Delay, d1	22.6	9.1		12.2		10.1	9.8
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	109.6	0.9		1.8		0.3	0.1
Delay (s)	132.2	10.0		14.0		10.4	9.8
Level of Service	F	A		B		B	A
Approach Delay (s)		12.5		14.0		10.2	
Approach LOS		B		B		B	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	46.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1015	0	0	834	0	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1103	0	0	907	0	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1103		1557	552
vC1, stage 1 conf vol					1103	
vC2, stage 2 conf vol					453	
vCu, unblocked vol			1103		1557	552
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)			2.3		3.6	3.4
p0 queue free %			100		100	95
cM capacity (veh/h)			606		251	468

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	736	368	453	453	22
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	22
cSH	1700	1700	1700	1700	468
Volume to Capacity	0.43	0.22	0.27	0.27	0.05
Queue Length 95th (ft)	0	0	0	0	4
Control Delay (s)	0.0	0.0	0.0	0.0	13.1
Lane LOS					B
Approach Delay (s)	0.0		0.0		13.1
Approach LOS					B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	72	1072	880	76	62	28
v/c Ratio	0.40	0.80	0.66	0.12	0.05	0.05
Control Delay	16.5	17.0	12.7	3.2	6.3	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.5	17.0	12.7	3.2	6.3	4.0
Queue Length 50th (ft)	11	103	78	0	3	0
Queue Length 95th (ft)	38	#174	123	16	10	10
Internal Link Dist (ft)		2552	1883		493	
Turn Bay Length (ft)	300			115		
Base Capacity (vph)	188	1381	1381	663	1320	579
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.78	0.64	0.11	0.05	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	66	986	810	70	44	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	0.91
Frt	1.00	1.00	1.00	0.85	0.97	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.96	1.00
Satd. Flow (prot)	1703	3406	3406	1524	3234	1386
Flt Permitted	0.26	1.00	1.00	1.00	0.96	1.00
Satd. Flow (perm)	463	3406	3406	1524	3234	1386
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	1072	880	76	48	42
RTOR Reduction (vph)	0	0	0	46	8	17
Lane Group Flow (vph)	72	1072	880	30	54	11
Turn Type	Perm			Perm		Perm
Protected Phases		4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	15.5	15.5	15.5	15.5	16.0	16.0
Effective Green, g (s)	15.5	15.5	15.5	15.5	16.0	16.0
Actuated g/C Ratio	0.39	0.39	0.39	0.39	0.41	0.41
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	182	1337	1337	598	1310	561
v/s Ratio Prot		c0.31	0.26		c0.02	
v/s Ratio Perm	0.16			0.02		0.01
v/c Ratio	0.40	0.80	0.66	0.05	0.04	0.02
Uniform Delay, d1	8.6	10.6	9.8	7.4	7.1	7.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	3.6	1.2	0.0	0.1	0.1
Delay (s)	10.0	14.2	11.0	7.5	7.2	7.1
Level of Service	B	B	B	A	A	A
Approach Delay (s)		13.9	10.7		7.2	
Approach LOS		B	B		A	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	39.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	147	970	4	708	134	19	530	525	235
v/c Ratio	0.78	0.85	0.05	0.83	0.28	0.03	1.00	0.98	0.36
Control Delay	70.3	36.7	42.8	40.6	6.5	23.0	70.0	66.7	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.3	36.7	42.8	40.6	6.5	23.0	70.0	66.7	4.9
Queue Length 50th (ft)	43	252	2	195	0	2	~325	~313	0
Queue Length 95th (ft)	#94	#438	13	263	42	12	#544	#534	50
Internal Link Dist (ft)		1883		3570		209		690	
Turn Bay Length (ft)	310		250		650				
Base Capacity (vph)	188	1141	78	928	513	581	532	534	659
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.85	0.05	0.76	0.26	0.03	1.00	0.98	0.36

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	135	884	8	4	651	123	3	7	7	956	15	216
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.95	1.00
Satd. Flow (prot)	3303	3401		1703	3406	1524		3166		1618	1624	1524
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.95	1.00
Satd. Flow (perm)	3303	3401		1703	3406	1524		3166		1618	1624	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	147	961	9	4	708	134	3	8	8	1039	16	235
RTOR Reduction (vph)	0	1	0	0	0	97	0	7	0	0	0	160
Lane Group Flow (vph)	147	969	0	4	708	37	0	12	0	530	525	75
Turn Type	Prot			Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8						6
Actuated Green, G (s)	5.0	29.6		0.8	25.4	25.4		16.0		29.0	29.0	29.0
Effective Green, g (s)	5.0	29.6		0.8	25.4	25.4		16.0		29.0	29.0	29.0
Actuated g/C Ratio	0.05	0.32		0.01	0.28	0.28		0.18		0.32	0.32	0.32
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
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)	181	1101		15	947	424		554		513	515	484
v/s Ratio Prot	c0.04	c0.29		0.00	0.21			c0.00		c0.33	0.32	
v/s Ratio Perm						0.02						0.05
v/c Ratio	0.81	0.88		0.27	0.75	0.09		0.02		1.03	1.02	0.15
Uniform Delay, d1	42.7	29.2		45.0	30.1	24.4		31.2		31.2	31.2	22.4
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	23.4	8.4		9.3	3.3	0.1		0.1		48.5	44.6	0.7
Delay (s)	66.2	37.6		54.3	33.3	24.5		31.3		79.7	75.8	23.1
Level of Service	E	D		D	C	C		C		E	E	C
Approach Delay (s)		41.4			32.0			31.3			67.8	
Approach LOS		D			C			C			E	

Intersection Summary			
HCM Average Control Delay	49.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	91.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	142	1695	74	143	749	251	58	64	53	43	35
v/c Ratio	0.99	1.08	0.14	0.99	0.69	0.38	0.14	0.11	0.13	0.08	0.07
Control Delay	102.8	68.8	4.7	104.6	18.7	4.2	13.2	11.0	13.1	12.4	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	102.8	68.8	4.7	104.6	18.7	4.2	13.2	11.0	13.1	12.4	5.5
Queue Length 50th (ft)	43	~213	0	43	98	0	12	10	11	9	0
Queue Length 95th (ft)	#131	#295	21	#133	148	38	32	31	31	25	15
Internal Link Dist (ft)		3570			1730			56		388	
Turn Bay Length (ft)	250		145	340		280					
Base Capacity (vph)	144	1566	538	144	1090	658	418	566	410	573	511
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	1.08	0.14	0.99	0.69	0.38	0.14	0.11	0.13	0.08	0.07

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	9	121	1559	68	13	119	689	231	53	48	11	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91	1.00		1.00	0.95	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.97		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1703	4893	1524		1703	3406	1524	1703	1742		1703
Flt Permitted		0.67	1.00	1.00		0.67	1.00	1.00	0.73	1.00		0.72
Satd. Flow (perm)		1195	4893	1524		1195	3406	1524	1307	1742		1282
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	132	1695	74	14	129	749	251	58	52	12	53
RTOR Reduction (vph)	0	0	0	50	0	0	0	171	0	8	0	0
Lane Group Flow (vph)	0	142	1695	24	0	143	749	80	58	56	0	53
Turn Type	custom	Prot		Perm	custom	Prot		Perm	Perm			Perm
Protected Phases		7	4			3	8			2		
Permitted Phases	7			4	3			8	2			6
Actuated Green, G (s)		6.0	16.0	16.0		6.0	16.0	16.0	16.0	16.0		16.0
Effective Green, g (s)		6.0	16.0	16.0		6.0	16.0	16.0	16.0	16.0		16.0
Actuated g/C Ratio		0.12	0.32	0.32		0.12	0.32	0.32	0.32	0.32		0.32
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
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)		143	1566	488		143	1090	488	418	557		410
v/s Ratio Prot			c0.35				0.22			0.03		
v/s Ratio Perm		0.12		0.02		c0.12		0.05	c0.04			0.04
v/c Ratio		0.99	1.08	0.05		1.00	0.69	0.16	0.14	0.10		0.13
Uniform Delay, d1		22.0	17.0	11.7		22.0	14.8	12.2	12.1	11.9		12.1
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		72.8	48.6	0.0		75.3	1.8	0.2	0.7	0.4		0.7
Delay (s)		94.8	65.6	11.8		97.3	16.6	12.4	12.8	12.3		12.7
Level of Service		F	E	B		F	B	B	B	B		B
Approach Delay (s)			65.7				25.8			12.5		
Approach LOS			E				C			B		

Intersection Summary			
HCM Average Control Delay	47.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Volume (vph)	40	32
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1792	1524
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1792	1524
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	43	35
RTOR Reduction (vph)	0	24
Lane Group Flow (vph)	43	11
Turn Type		Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	16.0	16.0
Effective Green, g (s)	16.0	16.0
Actuated g/C Ratio	0.32	0.32
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	573	488
v/s Ratio Prot	0.02	
v/s Ratio Perm		0.01
v/c Ratio	0.08	0.02
Uniform Delay, d1	11.8	11.6
Progression Factor	1.00	1.00
Incremental Delay, d2	0.3	0.1
Delay (s)	12.1	11.7
Level of Service	B	B
Approach Delay (s)	12.2	
Approach LOS	B	

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	100	1776	3	1230	5	2	43	44	68
v/c Ratio	0.67	0.98	0.04	0.87	0.02	0.01	0.16	0.17	0.22
Control Delay	66.1	40.0	47.7	33.4	35.8	25.5	38.0	38.0	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.1	40.0	47.7	33.4	35.8	25.5	38.0	38.0	11.3
Queue Length 50th (ft)	63	516	2	356	3	0	25	25	0
Queue Length 95th (ft)	#137	#816	11	452	13	7	58	60	37
Internal Link Dist (ft)		1730		2767	61			517	
Turn Bay Length (ft)	300		150						
Base Capacity (vph)	157	1814	70	1485	283	252	265	265	307
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.98	0.04	0.83	0.02	0.01	0.16	0.17	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	1623	11	3	1001	131	4	1	2	80	0	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	0.95	0.95	1.00
Frt	1.00	1.00		1.00	0.98			1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00	0.95	0.95	1.00
Satd. Flow (prot)	1703	3402		1703	3347			1724	1524	1618	1618	1524
Flt Permitted	0.95	1.00		0.95	1.00			0.96	1.00	0.95	0.95	1.00
Satd. Flow (perm)	1703	3402		1703	3347			1724	1524	1618	1618	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	100	1764	12	3	1088	142	4	1	2	87	0	68
RTOR Reduction (vph)	0	0	0	0	10	0	0	0	2	0	0	57
Lane Group Flow (vph)	100	1776	0	3	1220	0	0	5	0	43	44	11
Turn Type	Prot			Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			6
Actuated Green, G (s)	8.6	52.1		0.8	44.3			16.0	16.0	16.0	16.0	16.0
Effective Green, g (s)	8.6	52.1		0.8	44.3			16.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.09	0.52		0.01	0.44			0.16	0.16	0.16	0.16	0.16
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	4.0
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)	145	1757		14	1469			273	242	257	257	242
v/s Ratio Prot	c0.06	c0.52		0.00	0.36			c0.00		0.03	c0.03	
v/s Ratio Perm									0.00			0.01
v/c Ratio	0.69	1.01		0.21	0.83			0.02	0.00	0.17	0.17	0.04
Uniform Delay, d1	44.9	24.4		49.7	25.0			35.8	35.7	36.7	36.7	36.0
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.8	24.1		7.6	4.1			0.1	0.0	1.4	1.4	0.3
Delay (s)	57.7	48.5		57.3	29.1			35.9	35.7	38.1	38.2	36.3
Level of Service	E	D		E	C			D	D	D	D	D
Approach Delay (s)		49.0			29.2			35.9			37.3	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	40.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT
Lane Group Flow (vph)	2	1817	5	1308
v/c Ratio	0.01	0.89	0.04	0.68
Control Delay	23.0	19.3	30.4	15.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.0	19.3	30.4	15.2
Queue Length 50th (ft)	1	257	2	140
Queue Length 95th (ft)	6	#561	12	#448
Internal Link Dist (ft)		2767		1067
Turn Bay Length (ft)	100		100	
Base Capacity (vph)	429	2040	113	1923
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.00	0.89	0.04	0.68

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	2	1672	0	5	0	1202	1	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0						
Lane Util. Factor	1.00	0.95			1.00	0.95						
Frt	1.00	1.00			1.00	1.00						
Flt Protected	0.95	1.00			0.95	1.00						
Satd. Flow (prot)	1703	3406			1703	3405						
Flt Permitted	0.95	1.00			1.00	1.00						
Satd. Flow (perm)	1703	3406			1792	3405						
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	1817	0	5	0	1307	1	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	2	1817	0	0	5	1308	0	0	0	0	0	0
Turn Type	Prot			custom	Prot			Perm			Perm	
Protected Phases	8	4			3	7			2			6
Permitted Phases		4		3				2			6	
Actuated Green, G (s)	2.9	38.1			0.7	35.9						
Effective Green, g (s)	2.9	38.1			0.7	35.9						
Actuated g/C Ratio	0.04	0.57			0.01	0.54						
Clearance Time (s)	4.0	4.0			4.0	4.0						
Vehicle Extension (s)	3.0	3.0			3.0	3.0						
Lane Grp Cap (vph)	74	1943			19	1830						
v/s Ratio Prot	0.00	c0.53				c0.38						
v/s Ratio Perm					0.00							
v/c Ratio	0.03	0.94			0.26	0.71						
Uniform Delay, d1	30.6	13.2			32.8	11.6						
Progression Factor	1.00	1.00			1.00	1.00						
Incremental Delay, d2	0.1	9.1			7.3	1.4						
Delay (s)	30.7	22.3			40.1	13.0						
Level of Service	C	C			D	B						
Approach Delay (s)		22.3				13.1			0.0			0.0
Approach LOS		C				B			A			A

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	66.8	Sum of lost time (s)	28.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Volume (vph)	0
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	0
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	1776	1	1313	1	4
v/c Ratio	0.91	0.01	0.62	0.00	0.01
Control Delay	21.5	30.0	8.9	20.0	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	21.5	30.0	8.9	20.0	15.0
Queue Length 50th (ft)	258	0	141	0	0
Queue Length 95th (ft)	#562	5	191	4	7
Internal Link Dist (ft)	1067		4459	19	749
Turn Bay Length (ft)		100			
Base Capacity (vph)	1944	113	2469	341	398
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.91	0.01	0.53	0.00	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	4	1630	0	1	0	1206	2	1	0	0	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0			4.0			4.0
Lane Util. Factor		0.95			1.00	0.95			1.00			1.00
Frt		1.00			1.00	1.00			1.00			0.90
Flt Protected		1.00			0.95	1.00			0.95			0.99
Satd. Flow (prot)		3405			1703	3405			1703			1591
Flt Permitted		0.95			1.00	1.00			0.76			0.97
Satd. Flow (perm)		3244			1792	3405			1354			1567
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	1772	0	1	0	1311	2	1	0	0	1	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	2
Lane Group Flow (vph)	0	1776	0	0	1	1313	0	0	1	0	0	2
Turn Type	Perm			custom	Prot			Perm			Perm	
Protected Phases		4			3	8			2			6
Permitted Phases	4			3				2			6	
Actuated Green, G (s)		38.1			0.7	42.8			16.0			16.0
Effective Green, g (s)		38.1			0.7	42.8			16.0			16.0
Actuated g/C Ratio		0.57			0.01	0.64			0.24			0.24
Clearance Time (s)		4.0			4.0	4.0			4.0			4.0
Vehicle Extension (s)		3.0			3.0	3.0			3.0			3.0
Lane Grp Cap (vph)		1850			19	2182			324			375
v/s Ratio Prot						c0.39						
v/s Ratio Perm		c0.55			0.00				0.00			c0.00
v/c Ratio		0.96			0.05	0.60			0.00			0.00
Uniform Delay, d1		13.6			32.7	7.0			19.3			19.3
Progression Factor		1.00			1.00	1.00			1.00			1.00
Incremental Delay, d2		12.6			1.2	0.5			0.0			0.0
Delay (s)		26.3			33.9	7.5			19.3			19.4
Level of Service		C			C	A			B			B
Approach Delay (s)		26.3				7.5			19.3			19.4
Approach LOS		C				A			B			B

Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	66.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Volume (vph)	3
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	3
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Lane Group	EBT	WBT
Lane Group Flow (vph)	1676	1350
v/c Ratio	0.84	0.67
Control Delay	14.4	10.2
Queue Delay	0.0	0.0
Total Delay	14.4	10.2
Queue Length 50th (ft)	217	147
Queue Length 95th (ft)	304	204
Internal Link Dist (ft)	4459	2514
Turn Bay Length (ft)		
Base Capacity (vph)	2012	2392
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.83	0.56

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1542	0	0	1242	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0							
Lane Util. Factor		0.95			0.95							
Frt		1.00			1.00							
Flt Protected		1.00			1.00							
Satd. Flow (prot)		3406			3406							
Flt Permitted		1.00			1.00							
Satd. Flow (perm)		3406			3406							
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1676	0	0	1350	0	0	0	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1676	0	0	1350	0	0	0	0	0	0	0
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)		34.5			34.5							
Effective Green, g (s)		34.5			34.5							
Actuated g/C Ratio		0.59			0.59							
Clearance Time (s)		4.0			4.0							
Vehicle Extension (s)		3.0			3.0							
Lane Grp Cap (vph)		2009			2009							
v/s Ratio Prot		c0.49			0.40							
v/s Ratio Perm												
v/c Ratio		0.83			0.67							
Uniform Delay, d1		9.7			8.2							
Progression Factor		1.00			1.00							
Incremental Delay, d2		3.1			0.9							
Delay (s)		12.8			9.1							
Level of Service		B			A							
Approach Delay (s)		12.8			9.1			0.0			0.0	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	58.5	Sum of lost time (s)	24.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	30	1639	1310	9	29
v/c Ratio	0.24	0.83	0.73	0.01	0.06
Control Delay	31.4	14.3	14.7	6.0	11.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	14.3	14.7	6.0	11.9
Queue Length 50th (ft)	11	208	140	0	4
Queue Length 95th (ft)	33	296	#287	7	20
Internal Link Dist (ft)		2514	3573		627
Turn Bay Length (ft)	120			100	
Base Capacity (vph)	126	2153	1822	818	468
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.24	0.76	0.72	0.01	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	3	25	1508	1205	8	13	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	0.95	0.95	1.00	1.00	
Frt		1.00	1.00	1.00	0.85	0.93	
Flt Protected		0.95	1.00	1.00	1.00	0.98	
Satd. Flow (prot)		1703	3406	3406	1524	1628	
Flt Permitted		1.00	1.00	1.00	1.00	0.98	
Satd. Flow (perm)		1792	3406	3406	1524	1628	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	27	1639	1310	9	14	15
RTOR Reduction (vph)	0	0	0	0	3	11	0
Lane Group Flow (vph)	0	30	1639	1310	6	18	0
Turn Type	custom	Prot			Perm		
Protected Phases		7	4	8		6	
Permitted Phases	7				8		
Actuated Green, G (s)		1.5	35.6	30.1	30.1	16.1	
Effective Green, g (s)		1.5	35.6	30.1	30.1	16.1	
Actuated g/C Ratio		0.03	0.60	0.50	0.50	0.27	
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		45	2031	1717	768	439	
v/s Ratio Prot			c0.48	0.38		c0.01	
v/s Ratio Perm		0.02			0.00		
v/c Ratio		0.67	0.81	0.76	0.01	0.04	
Uniform Delay, d1		28.9	9.4	11.9	7.4	16.1	
Progression Factor		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		31.5	2.5	2.1	0.0	0.2	
Delay (s)		60.3	11.8	14.0	7.4	16.3	
Level of Service		E	B	B	A	B	
Approach Delay (s)			12.7	13.9		16.3	
Approach LOS			B	B		B	

Intersection Summary			
HCM Average Control Delay	13.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	59.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	16	1508	1202	8	4	24
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	17	1639	1307	9	4	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)			410			
pX, platoon unblocked	0.69				0.69	0.69
vC, conflicting volume	1315				2165	658
vC1, stage 1 conf vol					1311	
vC2, stage 2 conf vol					854	
vCu, unblocked vol	572				1797	0
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)	2.3				3.6	3.4
p0 queue free %	97				98	96
cM capacity (veh/h)	673				249	743

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	17	820	820	871	444	30
Volume Left	17	0	0	0	0	4
Volume Right	0	0	0	0	9	26
cSH	673	1700	1700	1700	1700	579
Volume to Capacity	0.03	0.48	0.48	0.51	0.26	0.05
Queue Length 95th (ft)	2	0	0	0	0	4
Control Delay (s)	10.5	0.0	0.0	0.0	0.0	11.6
Lane LOS	B					B
Approach Delay (s)	0.1			0.0		11.6
Approach LOS						B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	2	1637	8	1313	32	26	37
v/c Ratio	0.02	0.83	0.06	0.70	0.04	0.06	0.09
Control Delay	26.5	14.3	9.0	12.8	5.1	9.2	14.3
Queue Delay	0.0	0.0	0.0	37.7	0.0	0.0	0.0
Total Delay	26.5	14.3	9.0	50.5	5.1	9.2	14.3
Queue Length 50th (ft)	1	207	1	141	2	1	8
Queue Length 95th (ft)	6	295	9	#290	15	16	27
Internal Link Dist (ft)		330		153		42	764
Turn Bay Length (ft)	70		50		50		
Base Capacity (vph)	120	2155	128	1913	863	458	426
Starvation Cap Reductn	0	0	0	689	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.76	0.06	1.07	0.04	0.06	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	1506	0	7	1208	29	2	2	20	23	3	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.89			0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1703	3406		1703	3406	1524		1582			1677	
Flt Permitted	0.95	1.00		0.13	1.00	1.00		0.99			0.86	
Satd. Flow (perm)	1703	3406		227	3406	1524		1570			1491	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	1637	0	8	1313	32	2	2	22	25	3	9
RTOR Reduction (vph)	0	0	0	0	0	8	0	16	0	0	7	0
Lane Group Flow (vph)	2	1637	0	8	1313	24	0	10	0	0	30	0
Turn Type	Prot			Perm		Perm	Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8		8	2			6		
Actuated Green, G (s)	0.8	36.4		31.6	31.6	31.6		16.1			16.1	
Effective Green, g (s)	0.8	36.4		31.6	31.6	31.6		16.1			16.1	
Actuated g/C Ratio	0.01	0.60		0.52	0.52	0.52		0.27			0.27	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	23	2049		119	1779	796		418			397	
v/s Ratio Prot	0.00	c0.48			0.39							
v/s Ratio Perm				0.04		0.02		0.01			c0.02	
v/c Ratio	0.09	0.80		0.07	0.74	0.03		0.02			0.08	
Uniform Delay, d1	29.5	9.2		7.2	11.2	7.0		16.4			16.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.6	2.3		0.2	1.6	0.0		0.1			0.4	
Delay (s)	31.1	11.5		7.4	12.9	7.0		16.5			17.0	
Level of Service	C	B		A	B	A		B			B	
Approach Delay (s)		11.5			12.7			16.5			17.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	60.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	25	1668	3	1301	29	1	82
v/c Ratio	0.11	0.85	0.03	0.70	0.03	0.00	0.19
Control Delay	5.8	17.6	29.0	13.1	4.8	18.0	13.1
Queue Delay	0.0	82.1	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	99.8	29.0	13.1	4.8	18.0	13.1
Queue Length 50th (ft)	3	215	1	138	1	0	11
Queue Length 95th (ft)	10	#484	9	277	12	4	45
Internal Link Dist (ft)		153		3781		138	585
Turn Bay Length (ft)	70		150		80		
Base Capacity (vph)	226	1966	114	1882	851	370	421
Starvation Cap Reductn	0	553	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	1.18	0.03	0.69	0.03	0.00	0.19

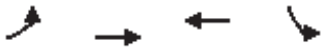
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	23	1535	0	3	1197	27	1	0	0	40	1	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		1.00			0.94	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.95			0.97	
Satd. Flow (prot)	1703	3406		1703	3406	1524		1703			1637	
Flt Permitted	0.12	1.00		0.95	1.00	1.00		0.77			0.87	
Satd. Flow (perm)	215	3406		1703	3406	1524		1381			1469	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	25	1668	0	3	1301	29	1	0	0	43	1	38
RTOR Reduction (vph)	0	0	0	0	0	9	0	0	0	0	28	0
Lane Group Flow (vph)	25	1668	0	3	1301	20	0	1	0	0	54	0
Turn Type	pm+pt			Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4					8	2			6		
Actuated Green, G (s)	35.9	34.4		0.7	33.6	33.6		16.1			16.1	
Effective Green, g (s)	35.9	34.4		0.7	33.6	33.6		16.1			16.1	
Actuated g/C Ratio	0.57	0.54		0.01	0.53	0.53		0.25			0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	157	1854		19	1811	810		352			374	
v/s Ratio Prot	c0.00	c0.49		0.00	0.38							
v/s Ratio Perm	0.09					0.01		0.00			c0.04	
v/c Ratio	0.16	0.90		0.16	0.72	0.02		0.00			0.14	
Uniform Delay, d1	7.9	12.9		31.0	11.2	7.0		17.6			18.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.5	6.3		3.9	1.4	0.0		0.0			0.8	
Delay (s)	8.4	19.2		34.8	12.6	7.0		17.6			19.0	
Level of Service	A	B		C	B	A		B			B	
Approach Delay (s)		19.0			12.5			17.6			19.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	63.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	5	1786	1428	45
v/c Ratio	0.04	0.89	0.71	0.10
Control Delay	6.0	17.5	10.8	14.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	6.0	17.5	10.8	14.0
Queue Length 50th (ft)	1	246	161	9
Queue Length 95th (ft)	4	#380	228	30
Internal Link Dist (ft)		4586	3918	683
Turn Bay Length (ft)	150			
Base Capacity (vph)	128	2086	2081	462
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.04	0.86	0.69	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	5	1643	1290	24	30	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.96	
Flt Protected	0.95	1.00	1.00		0.96	
Satd. Flow (prot)	1703	3406	3396		1667	
Flt Permitted	0.12	1.00	1.00		0.96	
Satd. Flow (perm)	207	3406	3396		1667	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1786	1402	26	33	12
RTOR Reduction (vph)	0	0	2	0	9	0
Lane Group Flow (vph)	5	1786	1426	0	36	0
Turn Type	Perm					
Protected Phases		4	8		6	
Permitted Phases	4					
Actuated Green, G (s)	34.8	34.8	34.8		16.0	
Effective Green, g (s)	34.8	34.8	34.8		16.0	
Actuated g/C Ratio	0.59	0.59	0.59		0.27	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	123	2016	2010		454	
v/s Ratio Prot		c0.52	0.42		c0.02	
v/s Ratio Perm	0.02					
v/c Ratio	0.04	0.89	0.71		0.08	
Uniform Delay, d1	5.0	10.3	8.4		15.9	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.1	5.1	1.2		0.3	
Delay (s)	5.2	15.4	9.6		16.3	
Level of Service	A	B	A		B	
Approach Delay (s)		15.4	9.6		16.3	
Approach LOS		B	A		B	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	58.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	17	1879	1536	1277	73
v/c Ratio	0.17	1.03	0.60	1.02	0.12
Control Delay	15.8	52.8	15.0	60.6	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.8	52.8	15.0	60.6	11.1
Queue Length 50th (ft)	5	~610	199	~402	13
Queue Length 95th (ft)	19	#747	244	#529	41
Internal Link Dist (ft)		4876	752	1233	
Turn Bay Length (ft)	300				
Base Capacity (vph)	102	1817	2580	1248	599
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	1.03	0.60	1.02	0.12

Intersection Summary

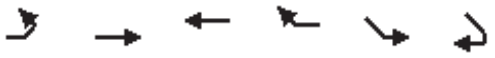
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	16	1729	1228	185	1175	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.91		0.97	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1703	3406	4797		3303	1524
Flt Permitted	0.11	1.00	1.00		0.95	1.00
Satd. Flow (perm)	192	3406	4797		3303	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	1879	1335	201	1277	73
RTOR Reduction (vph)	0	0	22	0	0	23
Lane Group Flow (vph)	17	1879	1514	0	1277	50
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)	48.0	48.0	48.0		34.0	34.0
Effective Green, g (s)	48.0	48.0	48.0		34.0	34.0
Actuated g/C Ratio	0.53	0.53	0.53		0.38	0.38
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	102	1817	2558		1248	576
v/s Ratio Prot		c0.55	0.32		c0.39	
v/s Ratio Perm	0.09					0.03
v/c Ratio	0.17	1.03	0.59		1.02	0.09
Uniform Delay, d1	10.8	21.0	14.3		28.0	18.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.8	30.5	0.4		31.5	0.1
Delay (s)	11.5	51.5	14.7		59.5	18.1
Level of Service	B	D	B		E	B
Approach Delay (s)		51.1	14.7		57.3	
Approach LOS		D	B		E	

Intersection Summary			
HCM Average Control Delay	41.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (veh/h)	7	494	746	13	6	7
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	537	811	14	7	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	825				1102	412
vC1, stage 1 conf vol					818	
vC2, stage 2 conf vol					284	
vCu, unblocked vol	825				1102	412
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)	2.3				3.6	3.4
p0 queue free %	99				98	99
cM capacity (veh/h)	776				359	577

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SE 1
Volume Total	8	268	268	541	284	14
Volume Left	8	0	0	0	0	7
Volume Right	0	0	0	0	14	8
cSH	776	1700	1700	1700	1700	451
Volume to Capacity	0.01	0.16	0.16	0.32	0.17	0.03
Queue Length 95th (ft)	1	0	0	0	0	2
Control Delay (s)	9.7	0.0	0.0	0.0	0.0	13.2
Lane LOS	A					B
Approach Delay (s)	0.1			0.0		13.2
Approach LOS						B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	31.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	12	499	743	49	32	27
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	542	808	53	35	29
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	861				1105	404
vC1, stage 1 conf vol					808	
vC2, stage 2 conf vol					297	
vCu, unblocked vol	861				1105	404
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)	2.3				3.6	3.4
p0 queue free %	98				90	95
cM capacity (veh/h)	752				362	585

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	13	271	271	404	404	53	64
Volume Left	13	0	0	0	0	0	35
Volume Right	0	0	0	0	0	53	29
cSH	752	1700	1700	1700	1700	1700	438
Volume to Capacity	0.02	0.16	0.16	0.24	0.24	0.03	0.15
Queue Length 95th (ft)	1	0	0	0	0	0	13
Control Delay (s)	9.9	0.0	0.0	0.0	0.0	0.0	14.6
Lane LOS	A						B
Approach Delay (s)	0.2			0.0			14.6
Approach LOS							B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	30.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	571	14	15	785	14	16
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	621	15	16	853	15	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			636		1088	318
vC1, stage 1 conf vol					628	
vC2, stage 2 conf vol					459	
vCu, unblocked vol			636		1088	318
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)			2.3		3.6	3.4
p0 queue free %			98		96	97
cM capacity (veh/h)			917		405	666

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	414	222	16	427	427	33
Volume Left	0	0	16	0	0	15
Volume Right	0	15	0	0	0	17
cSH	1700	1700	917	1700	1700	512
Volume to Capacity	0.24	0.13	0.02	0.25	0.25	0.06
Queue Length 95th (ft)	0	0	1	0	0	5
Control Delay (s)	0.0	0.0	9.0	0.0	0.0	12.5
Lane LOS			A			B
Approach Delay (s)	0.0		0.2			12.5
Approach LOS						B

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	31.7%	ICU Level of Service		A
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	42	609	48	995	72	179
v/c Ratio	0.16	0.49	0.18	0.81	0.12	0.37
Control Delay	19.8	14.1	20.0	22.6	6.3	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	14.1	20.0	22.6	6.3	14.0
Queue Length 50th (ft)	8	48	9	90	2	22
Queue Length 95th (ft)	33	127	37	#274	26	86
Internal Link Dist (ft)		6118		1607	171	873
Turn Bay Length (ft)	180		165			
Base Capacity (vph)	617	1234	617	1228	606	480
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.49	0.08	0.81	0.12	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	551	9	44	804	111	5	9	52	127	3	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	0.98			0.89			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.96	
Satd. Flow (prot)	1703	3397		1703	3344			1595			1676	
Flt Permitted	0.95	1.00		0.95	1.00			0.98			0.74	
Satd. Flow (perm)	1703	3397		1703	3344			1574			1286	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	42	599	10	48	874	121	5	10	57	138	3	38
RTOR Reduction (vph)	0	2	0	0	16	0	0	37	0	0	14	0
Lane Group Flow (vph)	42	607	0	48	979	0	0	35	0	0	165	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	5	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	2.8	16.3		2.8	16.3			16.3			16.3	
Effective Green, g (s)	2.8	16.3		2.8	16.3			16.3			16.3	
Actuated g/C Ratio	0.06	0.34		0.06	0.34			0.34			0.34	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	101	1168		101	1150			541			442	
v/s Ratio Prot	0.02	c0.18		0.03	c0.29							
v/s Ratio Perm								0.02			c0.13	
v/c Ratio	0.42	0.52		0.48	0.85			0.06			0.37	
Uniform Delay, d1	21.5	12.4		21.6	14.4			10.4			11.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	2.8	0.4		3.5	6.2			0.2			2.4	
Delay (s)	24.3	12.8		25.1	20.6			10.7			14.1	
Level of Service	C	B		C	C			B			B	
Approach Delay (s)		13.6			20.8			10.7			14.1	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	47.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEU	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL
Lane Configurations												
Volume (veh/h)	9	24	703	0	4	0	920	15	0	0	0	10
Sign Control			Free				Free			Stop		
Grade			0%				0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	26	764	0	0	0	1000	16	0	0	0	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type			None				None					
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked	0.00				0.00							
vC, conflicting volume	0	1016			0	764			1357	1833	382	1442
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	1016			0	764			1357	1833	382	1442
tC, single (s)	0.0	4.2			0.0	4.2			7.6	6.6	7.0	7.6
tC, 2 stage (s)												
tF (s)	0.0	2.3			0.0	2.3			3.6	4.1	3.4	3.6
p0 queue free %	0	96			0	100			100	100	100	87
cM capacity (veh/h)	0	655			0	819			93	69	605	87

Direction, Lane #	SE 1	SE 2	SE 3	NW 1	NW 2	NW 3	NE 1	SW 1
Volume Total	26	509	255	0	667	350	0	51
Volume Left	26	0	0	0	0	0	0	11
Volume Right	0	0	0	0	0	16	0	40
cSH	655	1700	1700	1700	1700	1700	1700	248
Volume to Capacity	0.04	0.30	0.15	0.00	0.39	0.21	0.00	0.21
Queue Length 95th (ft)	3	0	0	0	0	0	0	19
Control Delay (s)	10.7	0.0	0.0	0.0	0.0	0.0	0.0	23.2
Lane LOS	B						A	C
Approach Delay (s)	0.4			0.0			0.0	23.2
Approach LOS							A	C

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	37.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	SWT	SWR
Lane Configurations		
Volume (veh/h)	0	37
Sign Control	Stop	
Grade	0%	
Peak Hour Factor	0.92	0.92
Hourly flow rate (vph)	0	40
Pedestrians		
Lane Width (ft)		
Walking Speed (ft/s)		
Percent Blockage		
Right turn flare (veh)		
Median type		
Median storage veh)		
Upstream signal (ft)		
pX, platoon unblocked		
vC, conflicting volume	1824	508
vC1, stage 1 conf vol		
vC2, stage 2 conf vol		
vCu, unblocked vol	1824	508
tC, single (s)	6.6	7.0
tC, 2 stage (s)		
tF (s)	4.1	3.4
p0 queue free %	100	92
cM capacity (veh/h)	70	500
Direction, Lane #		



Lane Group	SEL	SET	NWT	SWL
Lane Group Flow (vph)	21	859	1078	152
v/c Ratio	0.15	0.36	0.48	0.46
Control Delay	22.3	4.8	8.3	19.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.3	4.8	8.3	19.1
Queue Length 50th (ft)	6	46	63	34
Queue Length 95th (ft)	21	92	#228	65
Internal Link Dist (ft)		4399	3005	678
Turn Bay Length (ft)	150			
Base Capacity (vph)	141	2402	2265	572
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.15	0.36	0.48	0.27

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	19	790	921	71	120	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	0.99		0.98	
Flt Protected	0.95	1.00	1.00		0.96	
Satd. Flow (prot)	1703	3406	3369		1685	
Flt Permitted	0.95	1.00	1.00		0.96	
Satd. Flow (perm)	1703	3406	3369		1685	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	859	1001	77	130	22
RTOR Reduction (vph)	0	0	7	0	15	0
Lane Group Flow (vph)	21	859	1071	0	137	0
Turn Type	Prot					
Protected Phases	1	6	2		8	
Permitted Phases						
Actuated Green, G (s)	0.8	36.5	31.7		8.0	
Effective Green, g (s)	0.8	36.5	31.7		8.0	
Actuated g/C Ratio	0.02	0.70	0.60		0.15	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	26	2368	2034		257	
v/s Ratio Prot	0.01	c0.25	c0.32		c0.08	
v/s Ratio Perm						
v/c Ratio	0.81	0.36	0.53		0.53	
Uniform Delay, d1	25.8	3.3	6.0		20.5	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	94.5	0.4	1.0		2.1	
Delay (s)	120.3	3.7	7.0		22.6	
Level of Service	F	A	A		C	
Approach Delay (s)		6.5	7.0		22.6	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	52.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	16	1030	1192	171	23
v/c Ratio	0.11	0.70	0.61	0.25	0.04
Control Delay	22.9	13.5	12.6	12.0	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	13.5	12.6	12.0	5.5
Queue Length 50th (ft)	4	107	76	30	0
Queue Length 95th (ft)	19	159	150	71	11
Internal Link Dist (ft)		231	520	653	
Turn Bay Length (ft)	50				
Base Capacity (vph)	149	1792	2001	672	615
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.11	0.57	0.60	0.25	0.04

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	15	948	979	118	157	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.91		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1703	3406	4815		1703	1524
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1703	3406	4815		1703	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	1030	1064	128	171	23
RTOR Reduction (vph)	0	0	28	0	0	15
Lane Group Flow (vph)	16	1030	1164	0	171	8
Turn Type	Prot					Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	0.7	23.0	18.3		18.1	18.1
Effective Green, g (s)	0.7	23.0	18.3		18.1	18.1
Actuated g/C Ratio	0.01	0.47	0.37		0.37	0.37
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	24	1595	1795		628	562
v/s Ratio Prot	0.01	c0.30	0.24		c0.10	
v/s Ratio Perm						0.01
v/c Ratio	0.67	0.65	0.65		0.27	0.02
Uniform Delay, d1	24.1	9.9	12.7		10.9	9.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	52.8	0.9	0.8		1.1	0.0
Delay (s)	76.9	10.9	13.6		11.9	9.9
Level of Service	E	B	B		B	A
Approach Delay (s)		11.9	13.6		11.7	
Approach LOS		B	B		B	

Intersection Summary			
HCM Average Control Delay	12.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	49.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (veh/h)	0	1054	53	20	81	1044	18	47	1	185	3	4
Sign Control		Free				Free			Stop			Stop
Grade		0%				0%			0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1146	58	0	88	1135	20	51	1	201	3	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL				None						
Median storage veh)		2										
Upstream signal (ft)		600										
pX, platoon unblocked				0.00	0.77			0.77	0.77	0.77	0.77	0.77
vC, conflicting volume	1154			0	1203			1926	2505	602	2095	2524
vC1, stage 1 conf vol								1174	1174		1321	1321
vC2, stage 2 conf vol								751	1330		774	1203
vCu, unblocked vol	1154			0	666			1605	2357	0	1825	2382
tC, single (s)	4.2			0.0	4.2			7.6	6.6	7.0	7.6	6.6
tC, 2 stage (s)								6.6	5.6		6.6	5.6
tF (s)	2.3			0.0	2.3			3.6	4.1	3.4	3.6	4.1
p0 queue free %	100			0	87			77	99	76	97	97
cM capacity (veh/h)	579			0	687			220	160	825	129	147

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1
Volume Total	0	764	439	88	757	398	52	201	13
Volume Left	0	0	0	88	0	0	51	0	3
Volume Right	0	0	58	0	0	20	0	201	5
cSH	1700	1700	1700	687	1700	1700	218	825	195
Volume to Capacity	0.00	0.45	0.26	0.13	0.45	0.23	0.24	0.24	0.07
Queue Length 95th (ft)	0	0	0	11	0	0	23	24	5
Control Delay (s)	0.0	0.0	0.0	11.0	0.0	0.0	26.6	10.8	24.8
Lane LOS				B			D	B	C
Approach Delay (s)	0.0			0.8			14.0		24.8
Approach LOS							B		C

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	64.5%	ICU Level of Service		C
Analysis Period (min)	15			



Movement	SBR
Lane Configurations	
Volume (veh/h)	5
Sign Control	
Grade	
Peak Hour Factor	0.92
Hourly flow rate (vph)	5
Pedestrians	
Lane Width (ft)	
Walking Speed (ft/s)	
Percent Blockage	
Right turn flare (veh)	
Median type	
Median storage veh)	
Upstream signal (ft)	
pX, platoon unblocked	
vC, conflicting volume	577
vC1, stage 1 conf vol	
vC2, stage 2 conf vol	
vCu, unblocked vol	577
tC, single (s)	7.0
tC, 2 stage (s)	
tF (s)	3.4
p0 queue free %	99
cM capacity (veh/h)	450
Direction, Lane #	



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1192	134	236	1083	180	255
v/c Ratio	0.95	0.21	0.93	0.55	0.37	0.41
Control Delay	37.3	3.8	70.2	8.9	20.0	5.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.3	3.8	70.2	8.9	20.0	5.1
Queue Length 50th (ft)	213	0	86	110	52	0
Queue Length 95th (ft)	#348	m29	#203	155	100	45
Internal Link Dist (ft)	2821			1799	675	
Turn Bay Length (ft)		170	250			
Base Capacity (vph)	1249	644	255	1987	483	615
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.21	0.93	0.55	0.37	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1097	123	217	996	166	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3406	1524	1703	3406	1703	1524
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3406	1524	1703	3406	1703	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1192	134	236	1083	180	255
RTOR Reduction (vph)	0	85	0	0	0	183
Lane Group Flow (vph)	1192	49	236	1083	180	72
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	22.0	22.0	9.0	35.0	17.0	17.0
Effective Green, g (s)	22.0	22.0	9.0	35.0	17.0	17.0
Actuated g/C Ratio	0.37	0.37	0.15	0.58	0.28	0.28
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1249	559	255	1987	483	432
v/s Ratio Prot	c0.35		c0.14	0.32	c0.11	
v/s Ratio Perm		0.03				0.05
v/c Ratio	0.95	0.09	0.93	0.55	0.37	0.17
Uniform Delay, d1	18.5	12.4	25.2	7.6	17.2	16.2
Progression Factor	0.99	0.99	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.7	0.1	36.6	0.3	2.2	0.8
Delay (s)	34.1	12.4	61.7	7.9	19.4	17.0
Level of Service	C	B	E	A	B	B
Approach Delay (s)	31.9			17.6	18.0	
Approach LOS	C			B	B	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	374	1057	1093	268	168	211
v/c Ratio	0.95	0.50	0.99	0.40	0.19	0.38
Control Delay	63.2	8.0	50.0	4.5	19.4	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	8.0	50.0	4.5	19.4	5.6
Queue Length 50th (ft)	146	106	223	0	26	0
Queue Length 95th (ft)	#300	148	#355	45	48	45
Internal Link Dist (ft)		1799	1900		811	
Turn Bay Length (ft)	330			170		
Base Capacity (vph)	393	2096	1100	674	864	554
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.50	0.99	0.40	0.19	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	344	972	1006	247	155	194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1703	3406	3406	1524	3303	1524
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1703	3406	3406	1524	3303	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	374	1057	1093	268	168	211
RTOR Reduction (vph)	0	0	0	181	0	156
Lane Group Flow (vph)	374	1057	1093	87	168	55
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	15.0	40.0	21.0	21.0	17.0	17.0
Effective Green, g (s)	15.0	40.0	21.0	21.0	17.0	17.0
Actuated g/C Ratio	0.23	0.62	0.32	0.32	0.26	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	393	2096	1100	492	864	399
v/s Ratio Prot	c0.22	0.31	c0.32		c0.05	
v/s Ratio Perm				0.06		0.04
v/c Ratio	0.95	0.50	0.99	0.18	0.19	0.14
Uniform Delay, d1	24.6	7.0	21.9	15.8	18.7	18.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	33.0	0.2	25.4	0.2	0.5	0.7
Delay (s)	57.6	7.2	47.4	16.0	19.2	19.1
Level of Service	E	A	D	B	B	B
Approach Delay (s)		20.3	41.2		19.1	
Approach LOS		C	D		B	

Intersection Summary			
HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	3	1192	25	64	1335	50	111	15
v/c Ratio	0.04	0.87	0.04	0.55	0.83	0.16	0.30	0.05
Control Delay	42.3	32.7	8.3	59.6	25.9	32.9	9.1	19.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.3	32.7	8.3	59.6	25.9	32.9	9.1	19.4
Queue Length 50th (ft)	2	321	1	36	305	24	0	2
Queue Length 95th (ft)	11	#449	17	#90	#520	57	44	19
Internal Link Dist (ft)		1900			3107	76		1327
Turn Bay Length (ft)	300		170	315				
Base Capacity (vph)	79	1415	646	118	1671	316	372	303
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.84	0.04	0.54	0.80	0.16	0.30	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	3	1097	23	59	1221	7	43	3	102	4	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.96	1.00		0.99	
Satd. Flow (prot)	1703	3406	1524	1703	3403			1712	1524		1594	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.96	1.00		0.99	
Satd. Flow (perm)	1703	3406	1524	1703	3403			1712	1524		1594	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	1192	25	64	1327	8	47	3	111	4	0	11
RTOR Reduction (vph)	0	0	12	0	1	0	0	0	91	0	9	0
Lane Group Flow (vph)	3	1192	13	64	1334	0	0	50	20	0	6	0
Turn Type	Prot		Perm	Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	0.8	37.5	37.5	4.6	41.3			16.1	16.1		16.1	
Effective Green, g (s)	0.8	37.5	37.5	4.6	41.3			16.1	16.1		16.1	
Actuated g/C Ratio	0.01	0.42	0.42	0.05	0.46			0.18	0.18		0.18	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	15	1414	633	87	1556			305	272		284	
v/s Ratio Prot	0.00	0.35		c0.04	c0.39			c0.03			c0.00	
v/s Ratio Perm			0.01						0.01			
v/c Ratio	0.20	0.84	0.02	0.74	0.86			0.16	0.07		0.02	
Uniform Delay, d1	44.4	23.8	15.6	42.3	21.9			31.4	30.9		30.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	6.5	4.8	0.0	27.3	4.9			1.2	0.5		0.1	
Delay (s)	50.9	28.5	15.6	69.5	26.8			32.6	31.4		30.7	
Level of Service	D	C	B	E	C			C	C		C	
Approach Delay (s)		28.3			28.7			31.8			30.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	1273	64	1407	173
v/c Ratio	0.60	0.31	0.58	0.40
Control Delay	9.7	29.8	5.8	11.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.7	29.8	5.8	11.7
Queue Length 50th (ft)	129	19	83	17
Queue Length 95th (ft)	236	#65	179	60
Internal Link Dist (ft)	3107		9849	713
Turn Bay Length (ft)		100		
Base Capacity (vph)	2269	205	2725	853
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.56	0.31	0.52	0.20

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1121	51	59	1294	59	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	0.99		1.00	1.00	0.91	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3384		1703	3406	1610	
Flt Permitted	1.00		0.95	1.00	0.98	
Satd. Flow (perm)	3384		1703	3406	1610	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1218	55	64	1407	64	109
RTOR Reduction (vph)	5	0	0	0	94	0
Lane Group Flow (vph)	1268	0	64	1407	79	0
Turn Type			Prot			
Protected Phases	4		3	8	2	
Permitted Phases						
Actuated Green, G (s)	23.8		1.9	29.7	5.9	
Effective Green, g (s)	23.8		1.9	29.7	5.9	
Actuated g/C Ratio	0.55		0.04	0.68	0.14	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1847		74	2320	218	
v/s Ratio Prot	c0.37		0.04	c0.41	c0.05	
v/s Ratio Perm						
v/c Ratio	0.69		0.86	0.61	0.36	
Uniform Delay, d1	7.2		20.7	3.8	17.1	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	1.1		60.5	0.5	1.0	
Delay (s)	8.3		81.3	4.2	18.2	
Level of Service	A		F	A	B	
Approach Delay (s)	8.3			7.6	18.2	
Approach LOS	A			A	B	

Intersection Summary			
HCM Average Control Delay	8.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	43.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	12	1291	1364	25	25	13
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	1403	1483	27	27	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1510				2224	755
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1510				2224	755
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.3				3.6	3.4
p0 queue free %	97				19	96
cM capacity (veh/h)	420				34	343

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	13	702	702	988	521	41
Volume Left	13	0	0	0	0	27
Volume Right	0	0	0	0	27	14
cSH	420	1700	1700	1700	1700	49
Volume to Capacity	0.03	0.41	0.41	0.58	0.31	0.85
Queue Length 95th (ft)	2	0	0	0	0	87
Control Delay (s)	13.8	0.0	0.0	0.0	0.0	215.7
Lane LOS	B					F
Approach Delay (s)	0.1			0.0		215.7
Approach LOS						F

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	45	1402	1550	66	22
v/c Ratio	0.37	0.72	0.92	0.14	0.05
Control Delay	35.8	11.1	26.2	17.5	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	11.1	26.2	17.5	8.3
Queue Length 50th (ft)	16	156	270	18	0
Queue Length 95th (ft)	#45	221	#434	44	14
Internal Link Dist (ft)		3601	3575	874	
Turn Bay Length (ft)	70				
Base Capacity (vph)	121	2170	1681	482	447
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.37	0.65	0.92	0.14	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	41	1290	0	1363	63	61	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.99		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1703	3406		3383		1703	1524
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1703	3406		3383		1703	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	1402	0	1482	68	66	22
RTOR Reduction (vph)	0	0	0	5	0	0	16
Lane Group Flow (vph)	45	1402	0	1545	0	66	6
Turn Type	Prot		Prot				custom
Protected Phases	7	4	3	8			
Permitted Phases						6	6
Actuated Green, G (s)	2.3	34.4		28.1		16.1	16.1
Effective Green, g (s)	2.3	34.4		28.1		16.1	16.1
Actuated g/C Ratio	0.04	0.59		0.48		0.28	0.28
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	67	2003		1625		469	419
v/s Ratio Prot	0.03	c0.41		c0.46			
v/s Ratio Perm						c0.04	0.00
v/c Ratio	0.67	0.70		0.95		0.14	0.01
Uniform Delay, d1	27.7	8.4		14.5		16.0	15.4
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	23.3	1.1		12.5		0.6	0.1
Delay (s)	51.1	9.5		27.1		16.6	15.5
Level of Service	D	A		C		B	B
Approach Delay (s)		10.8		27.1		16.3	
Approach LOS		B		C		B	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	58.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1416	1	0	1447	0	36
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1539	1	0	1573	0	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1540		2326	770
vC1, stage 1 conf vol					1540	
vC2, stage 2 conf vol					786	
vCu, unblocked vol			1540		2326	770
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)			2.3		3.6	3.4
p0 queue free %			100		100	88
cM capacity (veh/h)			409		143	335

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	1026	514	786	786	39
Volume Left	0	0	0	0	0
Volume Right	0	1	0	0	39
cSH	1700	1700	1700	1700	335
Volume to Capacity	0.60	0.30	0.46	0.46	0.12
Queue Length 95th (ft)	0	0	0	0	10
Control Delay (s)	0.0	0.0	0.0	0.0	17.2
Lane LOS					C
Approach Delay (s)	0.0		0.0		17.2
Approach LOS					C

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	26	1571	1465	88	109	48
v/c Ratio	0.19	0.84	0.78	0.10	0.11	0.11
Control Delay	10.1	15.4	13.2	1.9	13.7	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	15.4	13.2	1.9	13.7	8.6
Queue Length 50th (ft)	4	192	169	0	12	4
Queue Length 95th (ft)	16	279	245	14	27	25
Internal Link Dist (ft)		2552	1883		493	
Turn Bay Length (ft)	300			115		
Base Capacity (vph)	144	1985	1985	924	994	440
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.79	0.74	0.10	0.11	0.11

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	24	1445	1348	81	92	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	0.91
Frt	1.00	1.00	1.00	0.85	0.99	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.96	1.00
Satd. Flow (prot)	1703	3406	3406	1524	3284	1386
Flt Permitted	0.14	1.00	1.00	1.00	0.96	1.00
Satd. Flow (perm)	245	3406	3406	1524	3284	1386
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	26	1571	1465	88	100	57
RTOR Reduction (vph)	0	0	0	40	6	23
Lane Group Flow (vph)	26	1571	1465	48	103	25
Turn Type	Perm			Perm		Perm
Protected Phases		4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	29.3	29.3	29.3	29.3	16.1	16.1
Effective Green, g (s)	29.3	29.3	29.3	29.3	16.1	16.1
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.30	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	134	1869	1869	836	990	418
v/s Ratio Prot		c0.46	0.43		c0.03	
v/s Ratio Perm	0.11			0.03		0.02
v/c Ratio	0.19	0.84	0.78	0.06	0.10	0.06
Uniform Delay, d1	6.1	10.1	9.5	5.6	13.4	13.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	3.6	2.2	0.0	0.2	0.3
Delay (s)	6.8	13.7	11.8	5.6	13.7	13.5
Level of Service	A	B	B	A	B	B
Approach Delay (s)		13.6	11.4		13.6	
Approach LOS		B	B		B	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	53.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	346	1249	16	1336	283	32	181	182	199
v/c Ratio	1.05	0.77	0.21	1.07	0.38	0.06	0.63	0.63	0.46
Control Delay	103.9	24.7	48.1	75.5	4.2	19.2	45.1	45.1	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.9	24.7	48.1	75.5	4.2	19.2	45.1	45.1	8.7
Queue Length 50th (ft)	~111	273	9	~447	0	3	101	102	0
Queue Length 95th (ft)	#197	#438	30	#578	50	16	#175	#175	57
Internal Link Dist (ft)		1883		3570		209		690	
Turn Bay Length (ft)	310		250		650				
Base Capacity (vph)	330	1616	76	1249	738	561	288	289	435
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.77	0.21	1.07	0.38	0.06	0.63	0.63	0.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	318	1128	21	15	1229	260	9	4	17	320	14	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.96	1.00
Satd. Flow (prot)	3303	3396		1703	3406	1524		3070		1618	1628	1524
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.98		0.95	0.96	1.00
Satd. Flow (perm)	3303	3396		1703	3406	1524		3070		1618	1628	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	346	1226	23	16	1336	283	10	4	18	348	15	199
RTOR Reduction (vph)	0	2	0	0	0	175	0	15	0	0	0	165
Lane Group Flow (vph)	346	1247	0	16	1336	108	0	17	0	181	182	34
Turn Type	Prot			Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8						6
Actuated Green, G (s)	9.0	42.8		1.6	35.4	35.4		16.0		16.0	16.0	16.0
Effective Green, g (s)	9.0	42.8		1.6	35.4	35.4		16.0		16.0	16.0	16.0
Actuated g/C Ratio	0.10	0.46		0.02	0.38	0.38		0.17		0.17	0.17	0.17
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
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)	322	1573		29	1305	584		532		280	282	264
v/s Ratio Prot	c0.10	0.37		0.01	c0.39			c0.01		c0.11	0.11	
v/s Ratio Perm						0.07						0.02
v/c Ratio	1.07	0.79		0.55	1.02	0.19		0.03		0.65	0.65	0.13
Uniform Delay, d1	41.7	21.0		45.0	28.5	18.9		31.8		35.6	35.6	32.3
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	71.4	2.8		20.8	31.1	0.2		0.1		11.0	10.9	1.0
Delay (s)	113.1	23.9		65.8	59.6	19.1		31.9		46.6	46.4	33.3
Level of Service	F	C		E	E	B		C		D	D	C
Approach Delay (s)		43.2			52.7			31.9			41.8	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	47.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	92.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	101	1383	59	245	1342	413	161	110	242	83	75
v/c Ratio	0.78	0.97	0.12	1.88	0.88	0.45	0.44	0.21	0.68	0.16	0.15
Control Delay	66.9	39.7	5.7	447.5	24.4	3.2	20.5	12.4	29.3	15.5	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.9	39.7	5.7	447.5	24.4	3.2	20.5	12.4	29.3	15.5	5.4
Queue Length 50th (ft)	33	161	0	~127	210	0	42	19	69	20	0
Queue Length 95th (ft)	#104	#254	21	#243	#348	42	89	50	#160	47	24
Internal Link Dist (ft)		3570			1732			56		388	
Turn Bay Length (ft)	250		145	340		280					
Base Capacity (vph)	130	1423	485	130	1523	910	367	521	358	521	497
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.97	0.12	1.88	0.88	0.45	0.44	0.21	0.68	0.16	0.15

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	37	56	1272	54	21	204	1235	380	148	72	29	223
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91	1.00		1.00	0.95	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.96		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1703	4893	1524		1703	3406	1524	1703	1714		1703
Flt Permitted		1.00	1.00	1.00		0.36	1.00	1.00	0.70	1.00		0.69
Satd. Flow (perm)		1792	4893	1524		652	3406	1524	1260	1714		1230
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	61	1383	59	23	222	1342	413	161	78	32	242
RTOR Reduction (vph)	0	0	0	41	0	0	0	231	0	23	0	0
Lane Group Flow (vph)	0	101	1383	18	0	245	1342	182	161	87	0	242
Turn Type	custom	Prot		Perm	custom	Prot		Perm	Perm			Perm
Protected Phases		7	4			3	8			2		
Permitted Phases	7			4	3			8	2			6
Actuated Green, G (s)		3.2	16.8	16.8		11.0	24.6	24.6	16.0	16.0		16.0
Effective Green, g (s)		3.2	16.8	16.8		11.0	24.6	24.6	16.0	16.0		16.0
Actuated g/C Ratio		0.06	0.30	0.30		0.20	0.44	0.44	0.29	0.29		0.29
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
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)		103	1473	459		129	1502	672	361	491		353
v/s Ratio Prot			0.28				c0.39			0.05		
v/s Ratio Perm		0.06		0.01		c0.38		0.12	0.13			c0.20
v/c Ratio		0.98	0.94	0.04		1.90	0.89	0.27	0.45	0.18		0.69
Uniform Delay, d1		26.3	19.0	13.8		22.4	14.4	9.9	16.3	15.0		17.7
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		82.1	11.7	0.0		432.2	7.2	0.2	4.0	0.8		10.4
Delay (s)		108.4	30.7	13.8		454.6	21.6	10.1	20.2	15.7		28.0
Level of Service		F	C	B		F	C	B	C	B		C
Approach Delay (s)			35.1				72.3			18.4		
Approach LOS			D				E			B		

Intersection Summary			
HCM Average Control Delay	50.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	55.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Volume (vph)	76	69
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1792	1524
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1792	1524
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	83	75
RTOR Reduction (vph)	0	53
Lane Group Flow (vph)	83	22
Turn Type		Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	16.0	16.0
Effective Green, g (s)	16.0	16.0
Actuated g/C Ratio	0.29	0.29
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	514	437
v/s Ratio Prot	0.05	
v/s Ratio Perm		0.01
v/c Ratio	0.16	0.05
Uniform Delay, d1	14.9	14.4
Progression Factor	1.00	1.00
Incremental Delay, d2	0.7	0.2
Delay (s)	15.6	14.6
Level of Service	B	B
Approach Delay (s)	22.9	
Approach LOS	C	

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	102	1758	16	2062	24	21	101	103	143
v/c Ratio	0.94	0.78	0.26	1.03	0.12	0.11	0.55	0.56	0.48
Control Delay	134.3	20.7	76.5	57.7	57.5	21.7	70.5	71.0	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	134.3	20.7	76.5	57.7	57.5	21.7	70.5	71.0	14.2
Queue Length 50th (ft)	94	505	15	~1056	20	0	92	94	0
Queue Length 95th (ft)	#212	736	40	#1193	50	27	161	163	66
Internal Link Dist (ft)		1732		2767	61			517	
Turn Bay Length (ft)	300		150						
Base Capacity (vph)	109	2245	61	1995	199	193	185	185	301
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.78	0.26	1.03	0.12	0.11	0.55	0.56	0.48

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	1603	15	15	1711	186	14	8	19	187	1	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	0.95	0.95	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.95	1.00
Satd. Flow (prot)	1703	3401		1703	3356			1738	1524	1618	1622	1524
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.95	1.00
Satd. Flow (perm)	1703	3401		1703	3356			1738	1524	1618	1622	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	102	1742	16	16	1860	202	15	9	21	203	1	143
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	19	0	0	127
Lane Group Flow (vph)	102	1758	0	16	2056	0	0	24	2	101	103	16
Turn Type	Prot			Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			6
Actuated Green, G (s)	9.0	92.4		2.0	85.4			16.0	16.0	16.0	16.0	16.0
Effective Green, g (s)	9.0	92.4		2.0	85.4			16.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.06	0.65		0.01	0.60			0.11	0.11	0.11	0.11	0.11
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	4.0
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)	108	2207		24	2013			195	171	182	182	171
v/s Ratio Prot	c0.06	0.52		0.01	c0.61			c0.01		0.06	c0.06	
v/s Ratio Perm									0.00			0.01
v/c Ratio	0.94	0.80		0.67	1.02			0.12	0.01	0.55	0.57	0.09
Uniform Delay, d1	66.5	18.2		69.9	28.5			56.9	56.2	59.8	59.9	56.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	68.5	2.1		52.8	25.7			1.3	0.1	11.7	12.1	1.1
Delay (s)	134.9	20.2		122.7	54.2			58.2	56.3	71.5	72.0	57.8
Level of Service	F	C		F	D			E	E	E	E	E
Approach Delay (s)		26.5			54.7			57.3			66.0	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM Average Control Delay	43.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	142.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	WBL	WBT	SBT
Lane Group Flow (vph)	1956	14	2106	6
v/c Ratio	0.83	0.17	0.85	0.02
Control Delay	14.3	49.5	12.9	28.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.3	49.5	12.9	28.0
Queue Length 50th (ft)	302	7	363	1
Queue Length 95th (ft)	557	30	469	13
Internal Link Dist (ft)	2767		1067	428
Turn Bay Length (ft)		100		
Base Capacity (vph)	2663	83	2466	290
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.73	0.17	0.85	0.02

Intersection Summary



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	0	1799	1	13	0	1937	1	0	0	0	3	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0						4.0
Lane Util. Factor		0.95			1.00	0.95						1.00
Frt		1.00			1.00	1.00						0.93
Flt Protected		1.00			0.95	1.00						0.98
Satd. Flow (prot)		3405			1703	3405						1631
Flt Permitted		1.00			1.00	1.00						0.94
Satd. Flow (perm)		3405			1792	3405						1565
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1955	1	14	0	2105	1	0	0	0	3	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	2
Lane Group Flow (vph)	0	1956	0	0	14	2106	0	0	0	0	0	4
Turn Type	Prot			custom	Prot			Perm			Perm	
Protected Phases	8	4			3	7			2			6
Permitted Phases		4		3				2			6	
Actuated Green, G (s)		60.9			1.4	66.3						16.2
Effective Green, g (s)		60.9			1.4	66.3						16.2
Actuated g/C Ratio		0.67			0.02	0.73						0.18
Clearance Time (s)		4.0			4.0	4.0						4.0
Vehicle Extension (s)		3.0			3.0	3.0						3.0
Lane Grp Cap (vph)		2291			28	2494						280
v/s Ratio Prot		0.57				c0.62						
v/s Ratio Perm					0.01							c0.00
v/c Ratio		0.85			0.50	0.84						0.01
Uniform Delay, d1		11.4			44.2	8.5						30.6
Progression Factor		1.00			1.00	1.00						1.00
Incremental Delay, d2		3.3			13.4	2.8						0.1
Delay (s)		14.7			57.6	11.3						30.7
Level of Service		B			E	B						C
Approach Delay (s)		14.7				11.6			0.0			30.7
Approach LOS		B				B			A			C

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Volume (vph)	3
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	3
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Lane Group	EBT	WBL	WBT	SBT
Lane Group Flow (vph)	1982	9	2015	5
v/c Ratio	0.92	0.10	0.86	0.02
Control Delay	20.5	38.6	14.1	22.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	20.5	38.6	14.1	22.2
Queue Length 50th (ft)	337	4	325	1
Queue Length 95th (ft)	#698	19	442	10
Internal Link Dist (ft)	1067		4459	749
Turn Bay Length (ft)		100		
Base Capacity (vph)	2159	94	2480	329
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.92	0.10	0.81	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	5	1819	0	8	0	1854	0	0	0	0	3	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0						4.0
Lane Util. Factor		0.95			1.00	0.95						1.00
Frt		1.00			1.00	1.00						0.95
Flt Protected		1.00			0.95	1.00						0.97
Satd. Flow (prot)		3405			1703	3406						1646
Flt Permitted		0.95			1.00	1.00						0.93
Satd. Flow (perm)		3231			1792	3406						1572
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	1977	0	9	0	2015	0	0	0	0	3	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	2
Lane Group Flow (vph)	0	1982	0	0	9	2015	0	0	0	0	0	3
Turn Type	Perm			custom	Prot			Perm			Perm	
Protected Phases		4			3	8			2			6
Permitted Phases	4			3				2			6	
Actuated Green, G (s)		51.5			0.8	56.3						16.0
Effective Green, g (s)		51.5			0.8	56.3						16.0
Actuated g/C Ratio		0.64			0.01	0.70						0.20
Clearance Time (s)		4.0			4.0	4.0						4.0
Vehicle Extension (s)		3.0			3.0	3.0						3.0
Lane Grp Cap (vph)		2072			18	2388						313
v/s Ratio Prot						c0.59						
v/s Ratio Perm		c0.61			0.01							c0.00
v/c Ratio		0.96			0.50	0.84						0.01
Uniform Delay, d1		13.4			39.6	8.8						25.8
Progression Factor		1.00			1.00	1.00						1.00
Incremental Delay, d2		11.2			20.2	2.9						0.1
Delay (s)		24.6			59.7	11.7						25.9
Level of Service		C			E	B						C
Approach Delay (s)		24.6				11.9			0.0			25.9
Approach LOS		C				B			A			C

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Volume (vph)	2
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	2
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	1964	1943	4
v/c Ratio	0.86	0.85	0.01
Control Delay	14.6	14.1	0.0
Queue Delay	0.0	0.0	0.0
Total Delay	14.6	14.1	0.0
Queue Length 50th (ft)	306	297	0
Queue Length 95th (ft)	421	410	0
Internal Link Dist (ft)	4459	2514	732
Turn Bay Length (ft)			
Base Capacity (vph)	2274	2406	362
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.86	0.81	0.01

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1807	0	0	1787	1	0	0	0	0	0	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		0.95			0.95						1.00	
Frt		1.00			1.00						0.86	
Flt Protected		1.00			1.00						1.00	
Satd. Flow (prot)		3406			3405						1550	
Flt Permitted		1.00			1.00						1.00	
Satd. Flow (perm)		3406			3405						1550	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1964	0	0	1942	1	0	0	0	0	0	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	1964	0	0	1943	0	0	0	0	0	1	0
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)		48.3			48.3						16.0	
Effective Green, g (s)		48.3			48.3						16.0	
Actuated g/C Ratio		0.67			0.67						0.22	
Clearance Time (s)		4.0			4.0						4.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		2275			2275						343	
v/s Ratio Prot		c0.58			0.57						c0.00	
v/s Ratio Perm												
v/c Ratio		0.86			0.85						0.00	
Uniform Delay, d1		9.4			9.3						21.9	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		3.7			3.3						0.0	
Delay (s)		13.1			12.6						21.9	
Level of Service		B			B						C	
Approach Delay (s)		13.1			12.6			0.0			21.9	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	72.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	16	1822	1962	10	37
v/c Ratio	0.16	0.81	0.90	0.01	0.10
Control Delay	37.4	12.3	19.1	4.6	14.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	12.3	19.1	4.6	14.1
Queue Length 50th (ft)	7	257	305	1	5
Queue Length 95th (ft)	26	351	#645	7	27
Internal Link Dist (ft)		2514	3573		627
Turn Bay Length (ft)	120			100	
Base Capacity (vph)	101	2447	2182	978	381
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.16	0.74	0.90	0.01	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	4	11	1676	1805	9	12	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	0.95	0.95	1.00	1.00	
Frt		1.00	1.00	1.00	0.85	0.91	
Flt Protected		0.95	1.00	1.00	1.00	0.98	
Satd. Flow (prot)		1703	3406	3406	1524	1607	
Flt Permitted		1.00	1.00	1.00	1.00	0.98	
Satd. Flow (perm)		1792	3406	3406	1524	1607	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	12	1822	1962	10	13	24
RTOR Reduction (vph)	0	0	0	0	2	19	0
Lane Group Flow (vph)	0	16	1822	1962	8	18	0
Turn Type	custom	Prot			Perm		
Protected Phases		7	4	8		6	
Permitted Phases	7				8		
Actuated Green, G (s)		0.8	50.4	45.6	45.6	16.0	
Effective Green, g (s)		0.8	50.4	45.6	45.6	16.0	
Actuated g/C Ratio		0.01	0.68	0.61	0.61	0.22	
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		19	2307	2088	934	346	
v/s Ratio Prot			c0.53	c0.58		c0.01	
v/s Ratio Perm		0.01			0.01		
v/c Ratio		0.84	0.79	0.94	0.01	0.05	
Uniform Delay, d1		36.7	8.3	13.1	5.6	23.2	
Progression Factor		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		131.7	1.9	9.0	0.0	0.3	
Delay (s)		168.5	10.2	22.1	5.6	23.5	
Level of Service		F	B	C	A	C	
Approach Delay (s)			11.6	22.0		23.5	
Approach LOS			B	C		C	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	74.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	20	1693	1777	8	4	37
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	1840	1932	9	4	40
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)			410			
pX, platoon unblocked	0.46				0.46	0.46
vC, conflicting volume	1940				2899	970
vC1, stage 1 conf vol					1936	
vC2, stage 2 conf vol					964	
vCu, unblocked vol	682				2780	0
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)	2.3				3.6	3.4
p0 queue free %	95				97	92
cM capacity (veh/h)	402				161	490

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	22	920	920	1288	653	45
Volume Left	22	0	0	0	0	4
Volume Right	0	0	0	0	9	40
cSH	402	1700	1700	1700	1700	409
Volume to Capacity	0.05	0.54	0.54	0.76	0.38	0.11
Queue Length 95th (ft)	4	0	0	0	0	9
Control Delay (s)	14.5	0.0	0.0	0.0	0.0	14.9
Lane LOS	B					B
Approach Delay (s)	0.2			0.0		14.9
Approach LOS						B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	8	1824	15	1909	49	41	50
v/c Ratio	0.08	0.81	0.15	0.87	0.05	0.11	0.15
Control Delay	35.6	12.3	10.4	17.5	4.3	13.2	19.9
Queue Delay	0.0	0.0	0.0	106.5	0.0	0.0	0.0
Total Delay	35.6	12.3	10.4	124.0	4.3	13.2	19.9
Queue Length 50th (ft)	4	258	2	286	4	4	13
Queue Length 95th (ft)	17	352	14	#617	19	29	41
Internal Link Dist (ft)		330		153		42	764
Turn Bay Length (ft)	70		50		50		
Base Capacity (vph)	96	2446	101	2182	982	371	329
Starvation Cap Reductn	0	0	0	638	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.75	0.15	1.24	0.05	0.11	0.15

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	1678	0	14	1756	45	3	0	35	33	0	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.87			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		1.00			0.97	
Satd. Flow (prot)	1703	3406		1703	3406	1524		1562			1665	
Flt Permitted	0.95	1.00		0.09	1.00	1.00		0.99			0.82	
Satd. Flow (perm)	1703	3406		157	3406	1524		1549			1411	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	1824	0	15	1909	49	3	0	38	36	0	14
RTOR Reduction (vph)	0	0	0	0	0	6	0	23	0	0	11	0
Lane Group Flow (vph)	8	1824	0	15	1909	43	0	18	0	0	39	0
Turn Type	Prot			Perm		Perm	Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8		8	2			6		
Actuated Green, G (s)	0.8	50.4		45.6	45.6	45.6		16.0			16.0	
Effective Green, g (s)	0.8	50.4		45.6	45.6	45.6		16.0			16.0	
Actuated g/C Ratio	0.01	0.68		0.61	0.61	0.61		0.22			0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	18	2307		96	2088	934		333			303	
v/s Ratio Prot	0.00	c0.54			c0.56							
v/s Ratio Perm				0.10		0.03		0.01			c0.03	
v/c Ratio	0.44	0.79		0.16	0.91	0.05		0.05			0.13	
Uniform Delay, d1	36.6	8.3		6.2	12.7	5.7		23.2			23.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	16.5	1.9		0.8	6.7	0.0		0.3			0.9	
Delay (s)	53.1	10.3		6.9	19.4	5.8		23.5			24.4	
Level of Service	D	B		A	B	A		C			C	
Approach Delay (s)		10.4			19.0			23.5			24.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	74.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	45	1865	20	1942	42	28	72
v/c Ratio	0.24	0.88	0.21	0.95	0.05	0.08	0.20
Control Delay	7.2	19.2	39.3	26.9	4.9	15.9	15.8
Queue Delay	0.0	133.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.2	152.2	39.3	26.9	4.9	15.9	15.8
Queue Length 50th (ft)	6	271	9	430	4	5	13
Queue Length 95th (ft)	15	#596	30	#635	16	24	46
Internal Link Dist (ft)		153		3781		138	585
Turn Bay Length (ft)	70		150		80		
Base Capacity (vph)	189	2117	95	2046	923	350	357
Starvation Cap Reductn	0	678	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	1.30	0.21	0.95	0.05	0.08	0.20

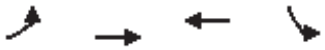
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	1699	17	18	1787	39	10	1	15	30	2	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.92			0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98			0.98	
Satd. Flow (prot)	1703	3401		1703	3406	1524		1622			1631	
Flt Permitted	0.09	1.00		0.95	1.00	1.00		0.91			0.88	
Satd. Flow (perm)	160	3401		1703	3406	1524		1512			1470	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	1847	18	20	1942	42	11	1	16	33	2	37
RTOR Reduction (vph)	0	1	0	0	0	8	0	13	0	0	29	0
Lane Group Flow (vph)	45	1864	0	20	1942	34	0	15	0	0	43	0
Turn Type	pm+pt			Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4					8	2			6		
Actuated Green, G (s)	47.0	44.7		1.5	43.9	43.9		16.0			16.0	
Effective Green, g (s)	47.0	44.7		1.5	43.9	43.9		16.0			16.0	
Actuated g/C Ratio	0.63	0.60		0.02	0.59	0.59		0.22			0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	149	2049		34	2015	902		326			317	
v/s Ratio Prot	0.01	0.55		c0.01	c0.57							
v/s Ratio Perm	0.18					0.02		0.01			c0.03	
v/c Ratio	0.30	0.91		0.59	0.96	0.04		0.05			0.14	
Uniform Delay, d1	14.6	13.0		36.0	14.4	6.3		23.1			23.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	1.1	6.4		23.4	12.6	0.0		0.3			0.9	
Delay (s)	15.8	19.4		59.4	27.0	6.3		23.3			24.4	
Level of Service	B	B		E	C	A		C			C	
Approach Delay (s)		19.3			26.8			23.3			24.4	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	74.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	27	1926	2053	59
v/c Ratio	0.23	0.94	1.01	0.13
Control Delay	11.3	23.1	35.9	15.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	11.3	23.1	35.9	15.3
Queue Length 50th (ft)	4	292	~348	13
Queue Length 95th (ft)	18	#497	#556	37
Internal Link Dist (ft)		4586	3918	683
Turn Bay Length (ft)	150			
Base Capacity (vph)	119	2044	2039	446
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.23	0.94	1.01	0.13

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	25	1772	1854	35	31	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.94	
Flt Protected	0.95	1.00	1.00		0.97	
Satd. Flow (prot)	1703	3406	3396		1643	
Flt Permitted	0.11	1.00	1.00		0.97	
Satd. Flow (perm)	199	3406	3396		1643	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	1926	2015	38	34	25
RTOR Reduction (vph)	0	0	2	0	8	0
Lane Group Flow (vph)	27	1926	2051	0	51	0
Turn Type	Perm					
Protected Phases		4	8		6	
Permitted Phases	4					
Actuated Green, G (s)	36.0	36.0	36.0		16.0	
Effective Green, g (s)	36.0	36.0	36.0		16.0	
Actuated g/C Ratio	0.60	0.60	0.60		0.27	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	119	2044	2038		438	
v/s Ratio Prot		0.57	c0.60		c0.03	
v/s Ratio Perm	0.14					
v/c Ratio	0.23	0.94	1.01		0.12	
Uniform Delay, d1	5.6	11.0	12.0		16.6	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	1.0	9.5	21.5		0.5	
Delay (s)	6.5	20.6	33.5		17.2	
Level of Service	A	C	C		B	
Approach Delay (s)		20.4	33.5		17.2	
Approach LOS		C	C		B	

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	187	1858	3541	351	80
v/c Ratio	2.28	0.73	1.09dr	0.67	0.31
Control Delay	632.5	8.4	23.3	41.7	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	632.5	8.4	23.3	41.7	28.9
Queue Length 50th (ft)	~128	246	523	95	30
Queue Length 95th (ft)	#265	350	#843	140	71
Internal Link Dist (ft)		4876	752	1233	
Turn Bay Length (ft)	300				
Base Capacity (vph)	82	2558	3580	601	294
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	2.28	0.73	0.99	0.58	0.27

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

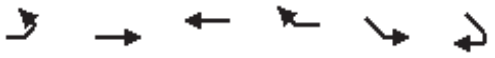


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	172	1709	1971	1287	323	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.91		0.97	1.00
Frt	1.00	1.00	0.94		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1703	3406	4603		3303	1524
Flt Permitted	0.06	1.00	1.00		0.95	1.00
Satd. Flow (perm)	109	3406	4603		3303	1524
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	1858	2142	1399	351	80
RTOR Reduction (vph)	0	0	122	0	0	17
Lane Group Flow (vph)	187	1858	3419	0	351	63
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)	66.0	66.0	66.0		13.9	13.9
Effective Green, g (s)	66.0	66.0	66.0		13.9	13.9
Actuated g/C Ratio	0.75	0.75	0.75		0.16	0.16
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	82	2557	3456		522	241
v/s Ratio Prot		0.55	0.74		c0.11	
v/s Ratio Perm	c1.72					0.04
v/c Ratio	2.28	0.73	1.09dr		0.67	0.26
Uniform Delay, d1	11.0	6.0	10.6		34.9	32.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	613.0	1.1	12.8		3.4	0.6
Delay (s)	623.9	7.1	23.4		38.3	33.1
Level of Service	F	A	C		D	C
Approach Delay (s)		63.5	23.4		37.3	
Approach LOS		E	C		D	

Intersection Summary			
HCM Average Control Delay	38.0	HCM Level of Service	D
HCM Volume to Capacity ratio	2.00		
Actuated Cycle Length (s)	87.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (veh/h)	5	550	713	11	21	14
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	598	775	12	23	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	787				1091	393
vC1, stage 1 conf vol					781	
vC2, stage 2 conf vol					310	
vCu, unblocked vol	787				1091	393
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)	2.2				3.5	3.3
p0 queue free %	99				94	97
cM capacity (veh/h)	822				379	603

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SE 1
Volume Total	5	299	299	517	270	38
Volume Left	5	0	0	0	0	23
Volume Right	0	0	0	0	12	15
cSH	822	1700	1700	1700	1700	445
Volume to Capacity	0.01	0.18	0.18	0.30	0.16	0.09
Queue Length 95th (ft)	0	0	0	0	0	7
Control Delay (s)	9.4	0.0	0.0	0.0	0.0	13.8
Lane LOS	A					B
Approach Delay (s)	0.1			0.0		13.8
Approach LOS						B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	30.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	21	568	706	43	32	32
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	617	767	47	35	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	814				1122	384
vC1, stage 1 conf vol					767	
vC2, stage 2 conf vol					354	
vCu, unblocked vol	814				1122	384
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)	2.2				3.5	3.3
p0 queue free %	97				91	94
cM capacity (veh/h)	802				377	612

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	SB 1
Volume Total	23	309	309	384	384	47	70
Volume Left	23	0	0	0	0	0	35
Volume Right	0	0	0	0	0	47	35
cSH	802	1700	1700	1700	1700	1700	466
Volume to Capacity	0.03	0.18	0.18	0.23	0.23	0.03	0.15
Queue Length 95th (ft)	2	0	0	0	0	0	13
Control Delay (s)	9.6	0.0	0.0	0.0	0.0	0.0	14.1
Lane LOS	A						B
Approach Delay (s)	0.3			0.0			14.1
Approach LOS							B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	29.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	614	13	26	788	10	19
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	667	14	28	857	11	21
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			682		1159	341
vC1, stage 1 conf vol					674	
vC2, stage 2 conf vol					485	
vCu, unblocked vol			682		1159	341
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)			2.2		3.5	3.3
p0 queue free %			97		97	97
cM capacity (veh/h)			900		388	652

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	445	237	28	428	428	32
Volume Left	0	0	28	0	0	11
Volume Right	0	14	0	0	0	21
cSH	1700	1700	900	1700	1700	528
Volume to Capacity	0.26	0.14	0.03	0.25	0.25	0.06
Queue Length 95th (ft)	0	0	2	0	0	5
Control Delay (s)	0.0	0.0	9.1	0.0	0.0	12.3
Lane LOS			A			B
Approach Delay (s)	0.0		0.3			12.3
Approach LOS						B

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	31.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	40	674	64	986	66	179
v/c Ratio	0.15	0.56	0.24	0.73	0.11	0.37
Control Delay	20.4	16.2	21.3	19.5	5.7	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	16.2	21.3	19.5	5.7	15.2
Queue Length 50th (ft)	11	88	17	87	1	36
Queue Length 95th (ft)	32	144	45	#270	23	87
Internal Link Dist (ft)		6118		1607	171	873
Turn Bay Length (ft)	180		165			
Base Capacity (vph)	603	1205	603	1344	592	480
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.56	0.11	0.73	0.11	0.37

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	612	8	59	796	111	2	3	56	119	15	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	0.98			0.88			0.97	
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.97	
Satd. Flow (prot)	1752	3498		1752	3440			1612			1735	
Flt Permitted	0.95	1.00		0.95	1.00			0.99			0.76	
Satd. Flow (perm)	1752	3498		1752	3440			1604			1359	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	665	9	64	865	121	2	3	61	129	16	34
RTOR Reduction (vph)	0	1	0	0	16	0	0	41	0	0	13	0
Lane Group Flow (vph)	40	673	0	64	970	0	0	25	0	0	166	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	5	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	3.2	17.0		4.5	18.3			16.3			16.3	
Effective Green, g (s)	3.2	17.0		4.5	18.3			16.3			16.3	
Actuated g/C Ratio	0.06	0.34		0.09	0.37			0.33			0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	113	1194		158	1264			525			445	
v/s Ratio Prot	0.02	c0.19		0.04	c0.28							
v/s Ratio Perm								0.02			c0.12	
v/c Ratio	0.35	0.56		0.41	0.77			0.05			0.37	
Uniform Delay, d1	22.3	13.4		21.4	13.9			11.4			12.8	
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2	1.9	0.6		1.7	2.9			0.2			2.4	
Delay (s)	24.2	14.0		23.1	16.7			11.6			15.2	
Level of Service	C	B		C	B			B			B	
Approach Delay (s)		14.6			17.1			11.6			15.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	49.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEU	SEL	SET	SER	NWU	NWL	NWT	NWR	NEL	NET	NER	SWL
Lane Configurations												
Volume (veh/h)	11	18	816	0	73	0	1022	14	0	0	0	12
Sign Control			Free				Free			Stop		
Grade			0%				0%			0%		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	20	887	0	0	0	1111	15	0	0	0	13
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type			None				None					
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked	0.00				0.00							
vC, conflicting volume	0	1126			0	887			1501	2052	443	1601
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0	1126			0	887			1501	2052	443	1601
tC, single (s)	0.0	4.2			0.0	4.2			7.6	6.6	7.0	7.6
tC, 2 stage (s)												
tF (s)	0.0	2.2			0.0	2.2			3.5	4.0	3.3	3.5
p0 queue free %	0	97			0	100			100	100	100	81
cM capacity (veh/h)	0	610			0	753			78	52	559	68

Direction, Lane #	SE 1	SE 2	SE 3	NW 1	NW 2	NW 3	NE 1	SW 1
Volume Total	20	591	296	0	741	386	0	33
Volume Left	20	0	0	0	0	0	0	13
Volume Right	0	0	0	0	0	15	0	20
cSH	610	1700	1700	1700	1700	1700	1700	140
Volume to Capacity	0.03	0.35	0.17	0.00	0.44	0.23	0.00	0.23
Queue Length 95th (ft)	2	0	0	0	0	0	0	21
Control Delay (s)	11.1	0.0	0.0	0.0	0.0	0.0	0.0	38.3
Lane LOS	B						A	E
Approach Delay (s)	0.2			0.0			0.0	38.3
Approach LOS							A	E

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	45.4%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	SWT	SWR
Lane Configurations		
Volume (veh/h)	0	18
Sign Control	Stop	
Grade	0%	
Peak Hour Factor	0.92	0.92
Hourly flow rate (vph)	0	20
Pedestrians		
Lane Width (ft)		
Walking Speed (ft/s)		
Percent Blockage		
Right turn flare (veh)		
Median type		
Median storage veh)		
Upstream signal (ft)		
pX, platoon unblocked		
vC, conflicting volume	2045	563
vC1, stage 1 conf vol		
vC2, stage 2 conf vol		
vCu, unblocked vol	2045	563
tC, single (s)	6.6	7.0
tC, 2 stage (s)		
tF (s)	4.0	3.3
p0 queue free %	100	96
cM capacity (veh/h)	53	467

Direction, Lane #



Lane Group	SEL	SET	NWT	SWL
Lane Group Flow (vph)	33	1070	1379	143
v/c Ratio	0.28	0.41	0.57	0.48
Control Delay	31.6	4.4	8.9	23.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	31.6	4.4	8.9	23.8
Queue Length 50th (ft)	12	60	94	40
Queue Length 95th (ft)	m33	116	271	77
Internal Link Dist (ft)		4399	3005	678
Turn Bay Length (ft)	150			
Base Capacity (vph)	120	2629	2407	489
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.28	0.41	0.57	0.29

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.



Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	30	984	1172	97	106	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	0.99		0.97	
Flt Protected	0.95	1.00	1.00		0.96	
Satd. Flow (prot)	1752	3505	3465		1726	
Flt Permitted	0.95	1.00	1.00		0.96	
Satd. Flow (perm)	1752	3505	3465		1726	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	1070	1274	105	115	28
RTOR Reduction (vph)	0	0	7	0	17	0
Lane Group Flow (vph)	33	1070	1372	0	126	0
Turn Type	Prot					
Protected Phases	1	6	2		8	
Permitted Phases						
Actuated Green, G (s)	1.7	45.4	39.7		8.3	
Effective Green, g (s)	1.7	45.4	39.7		8.3	
Actuated g/C Ratio	0.03	0.74	0.64		0.13	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	48	2579	2230		232	
v/s Ratio Prot	0.02	c0.31	c0.40		c0.07	
v/s Ratio Perm						
v/c Ratio	0.69	0.41	0.62		0.54	
Uniform Delay, d1	29.7	3.1	6.5		24.9	
Progression Factor	1.01	0.99	1.00		1.00	
Incremental Delay, d2	33.8	0.5	1.3		2.6	
Delay (s)	63.8	3.6	7.8		27.5	
Level of Service	E	A	A		C	
Approach Delay (s)		5.4	7.8		27.5	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	61.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	46	1034	1591	161	45
v/c Ratio	0.32	0.60	0.74	0.26	0.08
Control Delay	29.7	10.6	14.5	14.7	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	10.6	14.5	14.7	5.7
Queue Length 50th (ft)	12	102	110	30	0
Queue Length 95th (ft)	41	146	208	80	18
Internal Link Dist (ft)		231	520	653	
Turn Bay Length (ft)	50				
Base Capacity (vph)	143	2152	2257	610	575
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.48	0.70	0.26	0.08

Intersection Summary



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	42	951	1332	132	148	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.91		1.00	1.00
Frt	1.00	1.00	0.99		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	4968		1752	1568
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1752	3505	4968		1752	1568
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	46	1034	1448	143	161	45
RTOR Reduction (vph)	0	0	21	0	0	30
Lane Group Flow (vph)	46	1034	1570	0	161	15
Turn Type	Prot					Perm
Protected Phases	7	4	8		6	
Permitted Phases						6
Actuated Green, G (s)	1.4	26.6	21.2		17.2	17.2
Effective Green, g (s)	1.4	26.6	21.2		17.2	17.2
Actuated g/C Ratio	0.03	0.51	0.41		0.33	0.33
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	47	1800	2033		582	521
v/s Ratio Prot	0.03	c0.30	c0.32		c0.09	
v/s Ratio Perm						0.01
v/c Ratio	0.98	0.57	0.77		0.28	0.03
Uniform Delay, d1	25.2	8.7	13.2		12.7	11.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	122.0	0.4	1.9		1.2	0.1
Delay (s)	147.2	9.1	15.1		13.9	11.8
Level of Service	F	A	B		B	B
Approach Delay (s)		15.0	15.1		13.4	
Approach LOS		B	B		B	

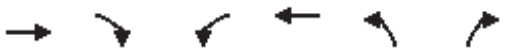
Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	51.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	49.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	2	1038	64	264	1406	17	52	4	180	3	1	7
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	1128	70	287	1528	18	57	4	196	3	1	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			None							
Median storage veh)		2										
Upstream signal (ft)		600										
pX, platoon unblocked				0.79			0.79	0.79	0.79	0.79	0.79	
vC, conflicting volume	1547			1198			2514	3288	599	2878	3314	773
vC1, stage 1 conf vol							1167	1167		2111	2111	
vC2, stage 2 conf vol							1346	2121		766	1202	
vCu, unblocked vol	1547			728			2387	3363	0	2846	3395	773
tC, single (s)	4.2			4.2			7.6	6.6	7.0	7.6	6.6	7.0
tC, 2 stage (s)							6.6	5.6		6.6	5.6	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			58			29	91	77	89	97	98
cM capacity (veh/h)	420			686			80	47	858	29	33	339

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	SB 1
Volume Total	2	752	446	287	1019	528	61	196	12
Volume Left	2	0	0	287	0	0	57	0	3
Volume Right	0	0	70	0	0	18	0	196	8
cSH	420	1700	1700	686	1700	1700	76	858	71
Volume to Capacity	0.01	0.44	0.26	0.42	0.60	0.31	0.80	0.23	0.17
Queue Length 95th (ft)	0	0	0	52	0	0	98	22	14
Control Delay (s)	13.6	0.0	0.0	14.0	0.0	0.0	144.2	10.4	65.9
Lane LOS	B			B			F	B	F
Approach Delay (s)	0.0			2.2			42.2		65.9
Approach LOS							E		F

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1171	159	249	1657	225	258
v/c Ratio	0.95	0.24	0.85	0.81	0.45	0.41
Control Delay	38.1	3.9	53.9	14.0	21.3	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.1	3.9	53.9	14.0	21.3	5.0
Queue Length 50th (ft)	212	0	89	218	66	0
Queue Length 95th (ft)	#341	32	#202	308	122	46
Internal Link Dist (ft)	2821			1799	675	
Turn Bay Length (ft)		170	250			
Base Capacity (vph)	1227	652	292	2045	496	629
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.24	0.85	0.81	0.45	0.41

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1077	146	229	1524	207	237
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3505	1568	1752	3505	1752	1568
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3505	1568	1752	3505	1752	1568
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1171	159	249	1657	225	258
RTOR Reduction (vph)	0	103	0	0	0	185
Lane Group Flow (vph)	1171	56	249	1657	225	73
Turn Type		Perm	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		4				2
Actuated Green, G (s)	21.0	21.0	10.0	35.0	17.0	17.0
Effective Green, g (s)	21.0	21.0	10.0	35.0	17.0	17.0
Actuated g/C Ratio	0.35	0.35	0.17	0.58	0.28	0.28
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1227	549	292	2045	496	444
v/s Ratio Prot	c0.33		0.14	c0.47	c0.13	
v/s Ratio Perm		0.04				0.05
v/c Ratio	0.95	0.10	0.85	0.81	0.45	0.16
Uniform Delay, d1	19.0	13.1	24.3	9.9	17.7	16.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.9	0.1	20.7	2.5	3.0	0.8
Delay (s)	34.9	13.2	45.0	12.4	20.7	17.0
Level of Service	C	B	D	B	C	B
Approach Delay (s)	32.3			16.7	18.7	
Approach LOS	C			B	B	

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	328	1117	1327	187	309	637
v/c Ratio	0.91	0.49	0.94	0.26	0.35	0.92
Control Delay	65.0	8.8	40.6	6.6	28.7	34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.0	8.8	40.6	6.6	28.7	34.4
Queue Length 50th (ft)	182	150	374	17	74	154
Queue Length 95th (ft)	#334	193	#524	58	111	#383
Internal Link Dist (ft)		1799	1900		811	
Turn Bay Length (ft)	330			170		
Base Capacity (vph)	373	2315	1413	715	876	689
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.48	0.94	0.26	0.35	0.92

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	302	1028	1221	172	284	586
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	3505	3505	1568	3400	1568
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752	3505	3505	1568	3400	1568
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	328	1117	1327	187	309	637
RTOR Reduction (vph)	0	0	0	83	0	285
Lane Group Flow (vph)	328	1117	1327	104	309	352
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	18.4	58.3	35.9	35.9	23.0	23.0
Effective Green, g (s)	18.4	58.3	35.9	35.9	23.0	23.0
Actuated g/C Ratio	0.21	0.65	0.40	0.40	0.26	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	361	2288	1409	630	876	404
v/s Ratio Prot	c0.19	0.32	c0.38		0.09	
v/s Ratio Perm				0.07		c0.22
v/c Ratio	0.91	0.49	0.94	0.16	0.35	0.87
Uniform Delay, d1	34.6	7.9	25.7	17.1	27.1	31.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.6	0.2	12.6	0.1	1.1	21.9
Delay (s)	60.3	8.1	38.3	17.2	28.2	53.6
Level of Service	E	A	D	B	C	D
Approach Delay (s)		19.9	35.7		45.3	
Approach LOS		B	D		D	

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	89.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	10	1327	45	63	1444	38	73	12
v/c Ratio	0.13	0.90	0.07	0.64	0.85	0.12	0.21	0.04
Control Delay	45.0	34.1	7.7	71.0	27.0	32.3	9.9	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	34.1	7.7	71.0	27.0	32.3	9.9	21.4
Queue Length 50th (ft)	6	366	4	36	341	18	0	2
Queue Length 95th (ft)	22	#512	24	#98	#578	46	36	17
Internal Link Dist (ft)		1900			3107	76		1327
Turn Bay Length (ft)	300		170	315				
Base Capacity (vph)	79	1478	681	99	1694	317	344	307
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.90	0.07	0.64	0.85	0.12	0.21	0.04

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	1221	41	58	1319	9	35	0	67	3	1	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00		1.00	
Frt	1.00	1.00	0.85	1.00	1.00			1.00	0.85		0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.99	
Satd. Flow (prot)	1752	3505	1568	1752	3501			1752	1568		1658	
Flt Permitted	0.95	1.00	1.00	0.95	1.00			0.95	1.00		0.99	
Satd. Flow (perm)	1752	3505	1568	1752	3501			1752	1568		1658	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	1327	45	63	1434	10	38	0	73	3	1	8
RTOR Reduction (vph)	0	0	19	0	1	0	0	0	60	0	7	0
Lane Group Flow (vph)	10	1327	26	63	1443	0	0	38	13	0	5	0
Turn Type	Prot		Perm	Prot			Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases			4						2			
Actuated Green, G (s)	0.8	39.7	39.7	3.9	42.8			16.0	16.0		16.0	
Effective Green, g (s)	0.8	39.7	39.7	3.9	42.8			16.0	16.0		16.0	
Actuated g/C Ratio	0.01	0.43	0.43	0.04	0.47			0.17	0.17		0.17	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	15	1519	680	75	1636			306	274		290	
v/s Ratio Prot	0.01	0.38		c0.04	c0.41			c0.02			c0.00	
v/s Ratio Perm			0.02						0.01			
v/c Ratio	0.67	0.87	0.04	0.84	0.88			0.12	0.05		0.02	
Uniform Delay, d1	45.3	23.7	14.9	43.5	22.1			31.9	31.5		31.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00			1.00	1.00		1.00	
Incremental Delay, d2	75.9	5.9	0.0	52.9	6.0			0.8	0.3		0.1	
Delay (s)	121.1	29.5	15.0	96.4	28.1			32.7	31.8		31.4	
Level of Service	F	C	B	F	C			C	C		C	
Approach Delay (s)		29.7			31.0			32.1			31.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	91.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	1450	148	1510	153
v/c Ratio	0.80	0.60	0.56	0.46
Control Delay	15.9	38.2	5.1	15.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	15.9	38.2	5.1	15.3
Queue Length 50th (ft)	183	48	92	19
Queue Length 95th (ft)	#367	#133	191	62
Internal Link Dist (ft)	3107		9849	713
Turn Bay Length (ft)		100		
Base Capacity (vph)	2015	245	2684	626
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.72	0.60	0.56	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	1223	111	136	1389	56	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	0.99		1.00	1.00	0.92	
Flt Protected	1.00		0.95	1.00	0.98	
Satd. Flow (prot)	3461		1752	3505	1662	
Flt Permitted	1.00		0.95	1.00	0.98	
Satd. Flow (perm)	3461		1752	3505	1662	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1329	121	148	1510	61	92
RTOR Reduction (vph)	9	0	0	0	81	0
Lane Group Flow (vph)	1441	0	148	1510	72	0
Turn Type			Prot			
Protected Phases	4		3	8	2	
Permitted Phases						
Actuated Green, G (s)	27.4		7.3	38.7	6.3	
Effective Green, g (s)	27.4		7.3	38.7	6.3	
Actuated g/C Ratio	0.52		0.14	0.73	0.12	
Clearance Time (s)	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	1789		241	2559	198	
v/s Ratio Prot	c0.42		0.08	c0.43	c0.04	
v/s Ratio Perm						
v/c Ratio	0.81		0.61	0.59	0.36	
Uniform Delay, d1	10.6		21.5	3.4	21.5	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	2.7		4.6	0.4	1.1	
Delay (s)	13.3		26.1	3.8	22.6	
Level of Service	B		C	A	C	
Approach Delay (s)	13.3			5.8	22.6	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	9.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	53.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	25	1311	1607	27	26	31
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	1425	1747	29	28	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1776				2528	888
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1776				2528	888
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				0	88
cM capacity (veh/h)	342				21	285

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	27	712	712	1164	612	62
Volume Left	27	0	0	0	0	28
Volume Right	0	0	0	0	29	34
cSH	342	1700	1700	1700	1700	41
Volume to Capacity	0.08	0.42	0.42	0.68	0.36	1.49
Queue Length 95th (ft)	6	0	0	0	0	157
Control Delay (s)	16.4	0.0	0.0	0.0	0.0	469.1
Lane LOS	C					F
Approach Delay (s)	0.3			0.0		469.1
Approach LOS						F

Intersection Summary			
Average Delay	9.0		
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	58	1403	1848	109	40
v/c Ratio	0.55	0.63	0.93	0.26	0.10
Control Delay	53.9	8.7	24.7	23.7	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	8.7	24.7	23.7	8.6
Queue Length 50th (ft)	25	154	373	39	0
Queue Length 95th (ft)	#76	207	#568	79	22
Internal Link Dist (ft)		3601	3575	874	
Turn Bay Length (ft)	70				
Base Capacity (vph)	105	2422	1989	421	407
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	0.58	0.93	0.26	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	53	1291	0	1604	97	100	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		0.95		1.00	1.00
Frt	1.00	1.00		0.99		1.00	0.85
Flt Protected	0.95	1.00		1.00		0.95	1.00
Satd. Flow (prot)	1752	3505		3475		1752	1568
Flt Permitted	0.95	1.00		1.00		0.95	1.00
Satd. Flow (perm)	1752	3505		3475		1752	1568
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	58	1403	0	1743	105	109	40
RTOR Reduction (vph)	0	0	0	6	0	0	31
Lane Group Flow (vph)	58	1403	0	1842	0	109	9
Turn Type	Prot		Prot				custom
Protected Phases	7	4	3	8			
Permitted Phases						6	6
Actuated Green, G (s)	2.3	44.4		38.1		16.1	16.1
Effective Green, g (s)	2.3	44.4		38.1		16.1	16.1
Actuated g/C Ratio	0.03	0.65		0.56		0.24	0.24
Clearance Time (s)	4.0	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	59	2272		1933		412	369
v/s Ratio Prot	0.03	c0.40		c0.53			
v/s Ratio Perm						c0.06	0.01
v/c Ratio	0.98	0.62		0.95		0.26	0.03
Uniform Delay, d1	33.1	7.1		14.4		21.4	20.2
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	110.5	0.5		11.3		1.6	0.1
Delay (s)	143.6	7.6		25.6		22.9	20.3
Level of Service	F	A		C		C	C
Approach Delay (s)		13.0		25.6		22.2	
Approach LOS		B		C		C	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	68.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	1399	0	0	1746	0	47
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1521	0	0	1898	0	51
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			1521		2470	760
vC1, stage 1 conf vol					1521	
vC2, stage 2 conf vol					949	
vCu, unblocked vol			1521		2470	760
tC, single (s)			4.2		6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	85
cM capacity (veh/h)			430		144	346

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	1014	507	949	949	51
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	51
cSH	1700	1700	1700	1700	346
Volume to Capacity	0.60	0.30	0.56	0.56	0.15
Queue Length 95th (ft)	0	0	0	0	13
Control Delay (s)	0.0	0.0	0.0	0.0	17.2
Lane LOS					C
Approach Delay (s)	0.0		0.0		17.2
Approach LOS					C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	32	1508	1871	82	98	44
v/c Ratio	0.26	0.72	0.90	0.09	0.11	0.11
Control Delay	12.1	11.1	18.2	2.1	16.4	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	11.1	18.2	2.1	16.4	13.3
Queue Length 50th (ft)	5	174	264	2	12	8
Queue Length 95th (ft)	22	244	#462	14	28	31
Internal Link Dist (ft)		2552	1883		493	
Turn Bay Length (ft)	300			115		
Base Capacity (vph)	127	2130	2130	980	919	397
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.71	0.88	0.08	0.11	0.11

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	29	1387	1721	75	86	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	0.91
Frt	1.00	1.00	1.00	0.85	0.99	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752	3505	3505	1568	3390	1427
Flt Permitted	0.11	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	209	3505	3505	1568	3390	1427
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	1508	1871	82	93	49
RTOR Reduction (vph)	0	0	0	28	4	11
Lane Group Flow (vph)	32	1508	1871	54	94	33
Turn Type	Perm			Perm		Perm
Protected Phases		4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	35.3	35.3	35.3	35.3	16.0	16.0
Effective Green, g (s)	35.3	35.3	35.3	35.3	16.0	16.0
Actuated g/C Ratio	0.60	0.60	0.60	0.60	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	124	2086	2086	933	915	385
v/s Ratio Prot		0.43	c0.53		c0.03	
v/s Ratio Perm	0.15			0.03		0.02
v/c Ratio	0.26	0.72	0.90	0.06	0.10	0.09
Uniform Delay, d1	5.7	8.5	10.4	5.0	16.3	16.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.1	1.3	5.5	0.0	0.2	0.4
Delay (s)	6.8	9.8	15.9	5.1	16.5	16.6
Level of Service	A	A	B	A	B	B
Approach Delay (s)		9.7	15.5		16.5	
Approach LOS		A	B		B	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	59.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	210	1408	47	1424	154	105	167	167	488
v/c Ratio	0.93	0.92	0.60	1.02	0.21	0.17	0.56	0.56	0.88
Control Delay	86.9	35.3	74.3	56.1	3.9	16.3	42.1	41.9	30.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.9	35.3	74.3	56.1	3.9	16.3	42.1	41.9	30.0
Queue Length 50th (ft)	62	396	27	~432	0	11	92	92	82
Queue Length 95th (ft)	#130	#555	#80	#587	36	34	161	161	#268
Internal Link Dist (ft)		1883		3570		209		690	
Turn Bay Length (ft)	310		250		650				
Base Capacity (vph)	227	1537	78	1402	720	611	296	299	557
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.92	0.60	1.02	0.21	0.17	0.56	0.56	0.88

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	193	1256	40	43	1310	142	26	16	55	280	28	449
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.95		1.00	0.95	1.00		0.95		0.95	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85		0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.96	1.00
Satd. Flow (prot)	3400	3489		1752	3505	1568		3162		1665	1683	1568
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99		0.95	0.96	1.00
Satd. Flow (perm)	3400	3489		1752	3505	1568		3162		1665	1683	1568
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	210	1365	43	47	1424	154	28	17	60	304	30	488
RTOR Reduction (vph)	0	2	0	0	0	92	0	49	0	0	0	278
Lane Group Flow (vph)	210	1406	0	47	1424	62	0	56	0	167	167	210
Turn Type	Prot			Prot		Perm	Split			Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases						8						6
Actuated Green, G (s)	6.0	39.6		3.2	36.8	36.8		16.0		16.0	16.0	16.0
Effective Green, g (s)	6.0	39.6		3.2	36.8	36.8		16.0		16.0	16.0	16.0
Actuated g/C Ratio	0.07	0.44		0.04	0.41	0.41		0.18		0.18	0.18	0.18
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0		4.0	4.0	4.0
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)	225	1522		62	1421	635		557		293	297	276
v/s Ratio Prot	c0.06	c0.40		0.03	c0.41			c0.02		0.10	0.10	
v/s Ratio Perm						0.04						c0.13
v/c Ratio	0.93	0.92		0.76	1.00	0.10		0.10		0.57	0.56	0.76
Uniform Delay, d1	42.2	24.2		43.4	27.0	16.7		31.4		34.2	34.2	35.6
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	41.6	9.7		40.5	24.4	0.1		0.4		7.8	7.5	17.7
Delay (s)	83.8	33.9		83.9	51.4	16.8		31.7		42.1	41.7	53.3
Level of Service	F	C		F	D	B		C		D	D	D
Approach Delay (s)		40.4			49.0			31.7			48.6	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	45.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.8	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	162	1438	71	312	1412	125	138	110	126	110	62
v/c Ratio	1.09	0.89	0.13	2.11	1.12	0.19	0.34	0.19	0.31	0.19	0.11
Control Delay	132.3	25.6	4.7	541.0	84.4	3.7	16.0	10.3	15.5	13.4	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	132.3	25.6	4.7	541.0	84.4	3.7	16.0	10.3	15.5	13.4	4.8
Queue Length 50th (ft)	~56	143	0	~152	~263	0	30	16	27	23	0
Queue Length 95th (ft)	#149	#226	21	#275	#374	25	68	43	62	51	19
Internal Link Dist (ft)		3570			1729			56		388	
Turn Bay Length (ft)	250		145	340		280					
Base Capacity (vph)	148	1612	550	148	1262	644	405	586	405	590	544
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.89	0.13	2.11	1.12	0.19	0.34	0.19	0.31	0.19	0.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Volume (vph)	47	102	1323	65	34	253	1299	115	127	71	30	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
Lane Util. Factor		1.00	0.91	1.00		1.00	0.95	1.00	1.00	1.00		1.00
Frt		1.00	1.00	0.85		1.00	1.00	0.85	1.00	0.95		1.00
Flt Protected		0.95	1.00	1.00		0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1752	5036	1568		1752	3505	1568	1752	1762		1752
Flt Permitted		1.00	1.00	1.00		0.67	1.00	1.00	0.69	1.00		0.69
Satd. Flow (perm)		1845	5036	1568		1230	3505	1568	1266	1762		1266
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	111	1438	71	37	275	1412	125	138	77	33	126
RTOR Reduction (vph)	0	0	0	48	0	0	0	80	0	22	0	0
Lane Group Flow (vph)	0	162	1438	23	0	312	1412	45	138	88	0	126
Turn Type	custom	Prot		Perm	custom	Prot		Perm	Perm			Perm
Protected Phases		7	4			3	8			2		
Permitted Phases	7			4	3			8	2			6
Actuated Green, G (s)		4.0	16.0	16.0		6.0	18.0	18.0	16.0	16.0		16.0
Effective Green, g (s)		4.0	16.0	16.0		6.0	18.0	18.0	16.0	16.0		16.0
Actuated g/C Ratio		0.08	0.32	0.32		0.12	0.36	0.36	0.32	0.32		0.32
Clearance Time (s)		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0
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)		148	1612	502		148	1262	564	405	564		405
v/s Ratio Prot			0.29				c0.40			0.05		
v/s Ratio Perm		0.09		0.01		c0.25		0.03	c0.11			0.10
v/c Ratio		1.09	0.89	0.05		2.11	1.12	0.08	0.34	0.16		0.31
Uniform Delay, d1		23.0	16.2	11.7		22.0	16.0	10.5	13.0	12.2		12.8
Progression Factor		1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		101.6	6.7	0.0		520.8	64.6	0.1	2.3	0.6		2.0
Delay (s)		124.6	22.9	11.8		542.8	80.6	10.6	15.3	12.7		14.8
Level of Service		F	C	B		F	F	B	B	B		B
Approach Delay (s)			32.3				153.9			14.1		
Approach LOS			C				F			B		

Intersection Summary			
HCM Average Control Delay	85.1	HCM Level of Service	F
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBT	SBR
Lane Configurations		
Volume (vph)	101	57
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	4.0	4.0
Lane Util. Factor	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1845	1568
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1845	1568
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	110	62
RTOR Reduction (vph)	0	42
Lane Group Flow (vph)	110	20
Turn Type		Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	16.0	16.0
Effective Green, g (s)	16.0	16.0
Actuated g/C Ratio	0.32	0.32
Clearance Time (s)	4.0	4.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	590	502
v/s Ratio Prot	0.06	
v/s Ratio Perm		0.01
v/c Ratio	0.19	0.04
Uniform Delay, d1	12.3	11.7
Progression Factor	1.00	1.00
Incremental Delay, d2	0.7	0.1
Delay (s)	13.0	11.9
Level of Service	B	B
Approach Delay (s)	13.5	
Approach LOS	B	

Intersection Summary



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	157	1600	26	1993	24	50	118	117	118
v/c Ratio	0.97	0.74	0.33	1.07	0.11	0.21	0.58	0.57	0.40
Control Delay	121.6	21.2	71.2	72.0	52.1	16.0	65.8	65.4	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	121.6	21.2	71.2	72.0	52.1	16.0	65.8	65.4	13.1
Queue Length 50th (ft)	134	517	22	~976	18	0	100	98	0
Queue Length 95th (ft)	#277	614	54	#1114	46	39	170	169	57
Internal Link Dist (ft)		1729		2767	61			517	
Turn Bay Length (ft)	300		150						
Base Capacity (vph)	162	2151	81	1863	219	237	205	206	296
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.74	0.32	1.07	0.11	0.21	0.58	0.57	0.40

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	1439	33	24	1625	209	16	6	46	209	7	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00	0.95	0.95	1.00
Frt	1.00	1.00		1.00	0.98			1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.96	1.00
Satd. Flow (prot)	1752	3493		1752	3445			1782	1568	1665	1674	1568
Flt Permitted	0.95	1.00		0.95	1.00			0.97	1.00	0.95	0.96	1.00
Satd. Flow (perm)	1752	3493		1752	3445			1782	1568	1665	1674	1568
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	157	1564	36	26	1766	227	17	7	50	227	8	118
RTOR Reduction (vph)	0	1	0	0	8	0	0	0	44	0	0	104
Lane Group Flow (vph)	157	1599	0	26	1985	0	0	24	6	118	117	14
Turn Type	Prot			Prot			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases									2			6
Actuated Green, G (s)	12.0	80.0		3.6	71.6			16.0	16.0	16.0	16.0	16.0
Effective Green, g (s)	12.0	80.0		3.6	71.6			16.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.09	0.61		0.03	0.54			0.12	0.12	0.12	0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0	4.0	4.0	4.0
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)	160	2123		48	1874			217	191	202	204	191
v/s Ratio Prot	c0.09	0.46		0.01	c0.58			c0.01		c0.07	0.07	
v/s Ratio Perm									0.00			0.01
v/c Ratio	0.98	0.75		0.54	1.06			0.11	0.03	0.58	0.57	0.08
Uniform Delay, d1	59.7	18.7		63.2	30.0			51.5	51.0	54.7	54.6	51.2
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	65.3	1.6		11.9	38.6			1.0	0.3	11.8	11.2	0.8
Delay (s)	124.9	20.2		75.1	68.6			52.5	51.3	66.4	65.8	52.0
Level of Service	F	C		E	E			D	D	E	E	D
Approach Delay (s)		29.6			68.7			51.7			61.4	
Approach LOS		C			E			D			E	

Intersection Summary			
HCM Average Control Delay	51.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	131.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	SBT
Lane Group Flow (vph)	4	1814	18	2043	5
v/c Ratio	0.03	0.77	0.12	0.85	0.02
Control Delay	38.5	13.7	42.2	16.8	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	13.7	42.2	16.8	24.6
Queue Length 50th (ft)	2	247	8	323	0
Queue Length 95th (ft)	12	535	33	#883	11
Internal Link Dist (ft)		2767		1067	428
Turn Bay Length (ft)	100		100		
Base Capacity (vph)	322	2539	191	2398	299
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.01	0.71	0.09	0.85	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	4	1669	0	17	0	1875	5	0	0	0	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0						4.0
Lane Util. Factor	1.00	0.95			1.00	0.95						1.00
Frt	1.00	1.00			1.00	1.00						0.89
Flt Protected	0.95	1.00			0.95	1.00						0.99
Satd. Flow (prot)	1752	3505			1752	3504						1629
Flt Permitted	0.95	1.00			1.00	1.00						0.98
Satd. Flow (perm)	1752	3505			1845	3504						1608
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	1814	0	18	0	2038	5	0	0	0	1	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	3
Lane Group Flow (vph)	4	1814	0	0	18	2043	0	0	0	0	0	2
Turn Type	Prot			custom	Prot			Perm			Perm	
Protected Phases	8	4			3	7			2			6
Permitted Phases		4		3				2			6	
Actuated Green, G (s)	2.8	59.8			3.2	60.2						16.2
Effective Green, g (s)	2.8	59.8			3.2	60.2						16.2
Actuated g/C Ratio	0.03	0.66			0.04	0.66						0.18
Clearance Time (s)	4.0	4.0			4.0	4.0						4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0						3.0
Lane Grp Cap (vph)	54	2298			65	2313						286
v/s Ratio Prot	0.00	c0.52				c0.58						
v/s Ratio Perm					0.01							c0.00
v/c Ratio	0.07	0.79			0.28	0.88						0.01
Uniform Delay, d1	42.9	11.2			42.9	12.6						30.9
Progression Factor	1.00	1.00			1.00	1.00						1.00
Incremental Delay, d2	0.6	1.9			2.3	4.4						0.0
Delay (s)	43.5	13.1			45.2	17.0						30.9
Level of Service	D	B			D	B						C
Approach Delay (s)		13.1				17.3			0.0			30.9
Approach LOS		B				B			A			C

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	91.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Volume (vph)	4
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	4
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	



Lane Group	EBT	WBL	WBT	SBT
Lane Group Flow (vph)	1663	15	2039	7
v/c Ratio	0.82	0.13	0.92	0.02
Control Delay	16.3	31.6	19.9	13.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.3	31.6	19.9	13.8
Queue Length 50th (ft)	218	6	320	1
Queue Length 95th (ft)	#491	22	#549	9
Internal Link Dist (ft)	1067		4459	749
Turn Bay Length (ft)		100		
Base Capacity (vph)	2016	114	2219	401
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.82	0.13	0.92	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	3	1527	0	14	0	1871	5	0	0	0	2	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0						4.0
Lane Util. Factor		0.95			1.00	0.95						1.00
Frt		1.00			1.00	1.00						0.90
Flt Protected		1.00			0.95	1.00						0.99
Satd. Flow (prot)		3505			1752	3504						1643
Flt Permitted		0.95			1.00	1.00						0.97
Satd. Flow (perm)		3334			1845	3504						1610
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	1660	0	15	0	2034	5	0	0	0	2	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	4
Lane Group Flow (vph)	0	1663	0	0	15	2039	0	0	0	0	0	3
Turn Type	Perm			custom	Prot			Perm			Perm	
Protected Phases		4			3	8			2			6
Permitted Phases	4			3				2			6	
Actuated Green, G (s)		39.2			0.8	44.0						16.0
Effective Green, g (s)		39.2			0.8	44.0						16.0
Actuated g/C Ratio		0.58			0.01	0.65						0.24
Clearance Time (s)		4.0			4.0	4.0						4.0
Vehicle Extension (s)		3.0			3.0	3.0						3.0
Lane Grp Cap (vph)		1922			22	2267						379
v/s Ratio Prot						c0.58						
v/s Ratio Perm		0.50			0.01							c0.00
v/c Ratio		0.87			0.68	0.90						0.01
Uniform Delay, d1		12.2			33.5	10.1						19.9
Progression Factor		1.00			1.00	1.00						1.00
Incremental Delay, d2		4.4			62.1	5.2						0.0
Delay (s)		16.5			95.6	15.4						20.0
Level of Service		B			F	B						B
Approach Delay (s)		16.5				16.0			0.0			20.0
Approach LOS		B				B			A			B

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	68.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	SBR
Lane Configurations	
Volume (vph)	5
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	5
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary



Lane Group	EBL	EBT	WBT	SBT
Lane Group Flow (vph)	1	1655	2021	3
v/c Ratio	0.01	0.79	0.96	0.01
Control Delay	5.0	12.6	25.6	13.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.0	12.6	25.6	13.3
Queue Length 50th (ft)	0	206	315	0
Queue Length 95th (ft)	2	292	#525	6
Internal Link Dist (ft)		4459	2514	732
Turn Bay Length (ft)	100			
Base Capacity (vph)	123	2103	2103	433
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.01	0.79	0.96	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	1523	0	0	1859	0	0	0	0	1	0	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0						4.0	
Lane Util. Factor	1.00	0.95			0.95						1.00	
Frt	1.00	1.00			1.00						0.91	
Flt Protected	0.95	1.00			1.00						0.98	
Satd. Flow (prot)	1752	3505			3505						1651	
Flt Permitted	0.11	1.00			1.00						0.97	
Satd. Flow (perm)	205	3505			3505						1620	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	1655	0	0	2021	0	0	0	0	1	0	2
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	1	1655	0	0	2021	0	0	0	0	0	2	0
Turn Type	Perm			Prot			Perm			Perm		
Protected Phases		4		3	8			2			6	
Permitted Phases	4						2			6		
Actuated Green, G (s)	36.0	36.0			36.0						16.0	
Effective Green, g (s)	36.0	36.0			36.0						16.0	
Actuated g/C Ratio	0.60	0.60			0.60						0.27	
Clearance Time (s)	4.0	4.0			4.0						4.0	
Vehicle Extension (s)	3.0	3.0			3.0						3.0	
Lane Grp Cap (vph)	123	2103			2103						432	
v/s Ratio Prot		0.47			c0.58							
v/s Ratio Perm	0.00										c0.00	
v/c Ratio	0.01	0.79			0.96						0.00	
Uniform Delay, d1	4.8	9.1			11.3						16.1	
Progression Factor	1.00	1.00			1.00						1.00	
Incremental Delay, d2	0.0	2.0			11.8						0.0	
Delay (s)	4.8	11.1			23.1						16.2	
Level of Service	A	B			C						B	
Approach Delay (s)		11.1			23.1			0.0			16.2	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	WBR	SBL
Lane Group Flow (vph)	27	1608	1954	14	35
v/c Ratio	0.26	0.70	0.91	0.01	0.09
Control Delay	39.5	9.6	21.2	4.9	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	9.6	21.2	4.9	14.8
Queue Length 50th (ft)	11	195	291	1	4
Queue Length 95th (ft)	36	261	#626	8	27
Internal Link Dist (ft)		2514	3573		627
Turn Bay Length (ft)	120			100	
Base Capacity (vph)	105	2560	2159	969	397
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.63	0.91	0.01	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBU	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations							
Volume (vph)	10	15	1479	1798	13	13	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	0.95	0.95	1.00	1.00	
Frt		1.00	1.00	1.00	0.85	0.92	
Flt Protected		0.95	1.00	1.00	1.00	0.98	
Satd. Flow (prot)		1752	3505	3505	1568	1662	
Flt Permitted		1.00	1.00	1.00	1.00	0.98	
Satd. Flow (perm)		1845	3505	3505	1568	1662	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	16	1608	1954	14	14	21
RTOR Reduction (vph)	0	0	0	0	3	16	0
Lane Group Flow (vph)	0	27	1608	1954	11	19	0
Turn Type	custom	Prot			Perm		
Protected Phases		7	4	8		6	
Permitted Phases	7				8		
Actuated Green, G (s)		1.5	48.5	43.0	43.0	16.1	
Effective Green, g (s)		1.5	48.5	43.0	43.0	16.1	
Actuated g/C Ratio		0.02	0.67	0.59	0.59	0.22	
Clearance Time (s)		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		38	2341	2076	929	369	
v/s Ratio Prot			c0.46	c0.56		c0.01	
v/s Ratio Perm		0.01			0.01		
v/c Ratio		0.71	0.69	0.94	0.01	0.05	
Uniform Delay, d1		35.3	7.4	13.6	6.1	22.2	
Progression Factor		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		47.3	0.9	9.3	0.0	0.3	
Delay (s)		82.6	8.2	22.9	6.1	22.5	
Level of Service		F	A	C	A	C	
Approach Delay (s)			9.5	22.8		22.5	
Approach LOS			A	C		C	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	72.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	21	1481	1783	11	10	34
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	1610	1938	12	11	37
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage veh)		2	2			
Upstream signal (ft)			410			
pX, platoon unblocked	0.46				0.46	0.46
vC, conflicting volume	1950				2795	975
vC1, stage 1 conf vol					1944	
vC2, stage 2 conf vol					851	
vCu, unblocked vol	725				2555	0
tC, single (s)	4.2				6.9	7.0
tC, 2 stage (s)					5.9	
tF (s)	2.2				3.5	3.3
p0 queue free %	94				94	93
cM capacity (veh/h)	400				168	499

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	23	805	805	1292	658	48
Volume Left	23	0	0	0	0	11
Volume Right	0	0	0	0	12	37
cSH	400	1700	1700	1700	1700	344
Volume to Capacity	0.06	0.47	0.47	0.76	0.39	0.14
Queue Length 95th (ft)	5	0	0	0	0	12
Control Delay (s)	14.5	0.0	0.0	0.0	0.0	17.1
Lane LOS	B					C
Approach Delay (s)	0.2			0.0		17.1
Approach LOS						C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	10	1563	8	1905	32	33	49
v/c Ratio	0.10	0.69	0.06	0.88	0.03	0.08	0.13
Control Delay	34.1	9.7	7.3	17.5	4.5	10.9	18.2
Queue Delay	0.0	0.0	0.0	89.2	0.0	0.0	0.0
Total Delay	34.1	9.7	7.3	106.7	4.5	10.9	18.2
Queue Length 50th (ft)	4	185	1	274	3	1	11
Queue Length 95th (ft)	19	248	8	#601	14	23	40
Internal Link Dist (ft)		330		153		42	764
Turn Bay Length (ft)	115		50		50		
Base Capacity (vph)	105	2663	140	2246	1009	401	365
Starvation Cap Reductn	0	0	0	654	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.59	0.06	1.20	0.03	0.08	0.13

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	1436	2	7	1753	29	4	0	27	30	2	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.88			0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99			0.97	
Satd. Flow (prot)	1752	3504		1752	3505	1568		1616			1716	
Flt Permitted	0.95	1.00		0.12	1.00	1.00		0.98			0.84	
Satd. Flow (perm)	1752	3504		217	3505	1568		1592			1486	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	1561	2	8	1905	32	4	0	29	33	2	14
RTOR Reduction (vph)	0	0	0	0	0	4	0	22	0	0	11	0
Lane Group Flow (vph)	10	1563	0	8	1905	28	0	11	0	0	38	0
Turn Type	Prot			Perm		Perm	Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8		8	2			6		
Actuated Green, G (s)	0.7	46.6		41.9	41.9	41.9		16.1			16.1	
Effective Green, g (s)	0.7	46.6		41.9	41.9	41.9		16.1			16.1	
Actuated g/C Ratio	0.01	0.66		0.59	0.59	0.59		0.23			0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	17	2310		129	2077	929		363			338	
v/s Ratio Prot	0.01	c0.45			c0.54							
v/s Ratio Perm				0.04		0.02		0.01			c0.03	
v/c Ratio	0.59	0.68		0.06	0.92	0.03		0.03			0.11	
Uniform Delay, d1	34.9	7.4		6.1	12.9	6.0		21.2			21.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	42.8	0.8		0.2	6.9	0.0		0.1			0.7	
Delay (s)	77.6	8.2		6.3	19.8	6.0		21.4			22.3	
Level of Service	E	A		A	B	A		C			C	
Approach Delay (s)		8.7			19.5			21.4			22.3	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM Average Control Delay	14.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	30	1596	48	1884	41	36	84
v/c Ratio	0.14	0.80	0.46	0.91	0.04	0.09	0.21
Control Delay	5.9	16.2	47.1	21.6	4.8	14.9	13.9
Queue Delay	0.0	84.2	0.0	0.0	0.0	0.0	0.0
Total Delay	5.9	100.4	47.1	21.6	4.8	14.9	13.9
Queue Length 50th (ft)	4	278	21	268	3	6	13
Queue Length 95th (ft)	11	377	#61	#581	16	28	47
Internal Link Dist (ft)		153		3781		138	585
Turn Bay Length (ft)	70		150		80		
Base Capacity (vph)	209	1994	105	2081	939	380	397
Starvation Cap Reductn	0	646	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	1.18	0.46	0.91	0.04	0.09	0.21

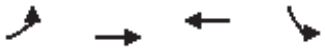
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	1424	44	44	1733	38	16	1	17	34	2	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00			1.00	
Frt	1.00	1.00		1.00	1.00	0.85		0.93			0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98			0.98	
Satd. Flow (prot)	1752	3489		1752	3505	1568		1680			1674	
Flt Permitted	0.10	1.00		0.95	1.00	1.00		0.89			0.88	
Satd. Flow (perm)	190	3489		1752	3505	1568		1523			1507	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	30	1548	48	48	1884	41	17	1	18	37	2	45
RTOR Reduction (vph)	0	3	0	0	0	9	0	14	0	0	35	0
Lane Group Flow (vph)	30	1593	0	48	1884	32	0	22	0	0	49	0
Turn Type	pm+pt			Prot		Perm	Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4					8	2			6		
Actuated Green, G (s)	40.4	38.9		2.3	39.7	39.7		16.1			16.1	
Effective Green, g (s)	40.4	38.9		2.3	39.7	39.7		16.1			16.1	
Actuated g/C Ratio	0.58	0.56		0.03	0.57	0.57		0.23			0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	145	1958		58	2008	898		354			350	
v/s Ratio Prot	0.00	0.46		c0.03	c0.54							
v/s Ratio Perm	0.12					0.02		0.01			c0.03	
v/c Ratio	0.21	0.81		0.83	0.94	0.04		0.06			0.14	
Uniform Delay, d1	13.5	12.3		33.3	13.7	6.5		20.7			21.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00			1.00	
Incremental Delay, d2	0.7	2.7		59.9	9.1	0.0		0.3			0.8	
Delay (s)	14.2	15.0		93.2	22.8	6.5		21.1			22.0	
Level of Service	B	B		F	C	A		C			C	
Approach Delay (s)		15.0			24.2			21.1			22.0	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	69.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	18	1566	2043	43
v/c Ratio	0.15	0.74	0.97	0.10
Control Delay	8.7	11.5	27.7	14.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	8.7	11.5	27.7	14.2
Queue Length 50th (ft)	3	186	323	9
Queue Length 95th (ft)	12	262	#538	29
Internal Link Dist (ft)		4586	3918	683
Turn Bay Length (ft)	150			
Base Capacity (vph)	123	2103	2100	451
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.15	0.74	0.97	0.10

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	17	1441	1858	21	16	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95	0.95		1.00	
Frt	1.00	1.00	1.00		0.92	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1752	3505	3499		1661	
Flt Permitted	0.11	1.00	1.00		0.98	
Satd. Flow (perm)	205	3505	3499		1661	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	1566	2020	23	17	26
RTOR Reduction (vph)	0	0	1	0	8	0
Lane Group Flow (vph)	18	1566	2042	0	35	0
Turn Type	Perm					
Protected Phases		4	8		6	
Permitted Phases	4					
Actuated Green, G (s)	36.0	36.0	36.0		16.0	
Effective Green, g (s)	36.0	36.0	36.0		16.0	
Actuated g/C Ratio	0.60	0.60	0.60		0.27	
Clearance Time (s)	4.0	4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)	123	2103	2099		443	
v/s Ratio Prot		0.45	c0.58		c0.02	
v/s Ratio Perm	0.09					
v/c Ratio	0.15	0.74	0.97		0.08	
Uniform Delay, d1	5.3	8.7	11.5		16.5	
Progression Factor	1.00	1.00	1.00		1.00	
Incremental Delay, d2	0.6	1.5	13.7		0.3	
Delay (s)	5.8	10.1	25.3		16.8	
Level of Service	A	B	C		B	
Approach Delay (s)		10.1	25.3		16.8	
Approach LOS		B	C		B	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	96	1392	2260	478	202
v/c Ratio	0.85	0.60	0.68	0.67	0.59
Control Delay	70.7	7.6	7.8	29.4	29.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	70.7	7.6	7.8	29.4	29.3
Queue Length 50th (ft)	26	141	167	95	69
Queue Length 95th (ft)	#77	205	228	141	131
Internal Link Dist (ft)		4876	752	1233	
Turn Bay Length (ft)	300				
Base Capacity (vph)	122	2502	3547	844	405
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.79	0.56	0.64	0.57	0.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	88	1281	1783	296	440	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.91		0.97	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1752	3505	4928		3400	1568
Flt Permitted	0.09	1.00	1.00		0.95	1.00
Satd. Flow (perm)	169	3505	4928		3400	1568
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	96	1392	1938	322	478	202
RTOR Reduction (vph)	0	0	32	0	0	16
Lane Group Flow (vph)	96	1392	2228	0	478	186
Turn Type	Perm					Perm
Protected Phases		4	8		6	
Permitted Phases	4					6
Actuated Green, G (s)	43.6	43.6	43.6		13.7	13.7
Effective Green, g (s)	43.6	43.6	43.6		13.7	13.7
Actuated g/C Ratio	0.67	0.67	0.67		0.21	0.21
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	113	2340	3290		713	329
v/s Ratio Prot		0.40	0.45		c0.14	
v/s Ratio Perm	c0.57					0.12
v/c Ratio	0.85	0.59	0.68		0.67	0.57
Uniform Delay, d1	8.3	6.0	6.6		23.7	23.1
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	41.5	0.4	0.6		2.5	2.2
Delay (s)	49.8	6.4	7.1		26.2	25.4
Level of Service	D	A	A		C	C
Approach Delay (s)		9.2	7.1		26.0	
Approach LOS		A	A		C	

Intersection Summary			
HCM Average Control Delay	10.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	65.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX D

COLLISION REPORTS

TRAFFIC STATISTIC for the CITY of MALIBU

The traffic statistics listed below include data from the CHP for three years prior to the incorporation of Malibu as well as for the entire period that the Sheriff's Department has provided traffic services to the City (07/01/91-12/31/94). The data has been summarized for your review. The graphs and tables that follow that help to document the traffic program in Malibu.

COLLISIONS:

YEAR	TOTAL COLLISIONS	FATAL COLLISIONS	INJURY COLLISIONS	PROPERTY COLLISIONS
88	572	10	300	262
89	762	11	395	356
90	742	9	341	392
		(DATA IS FROM C.H.P.)		
91 (6 Mo.)	222	2	67	153
92	411	3	134	274
93	439	5	136	291
94	392	2	147	243
TOTAL	1464	12	484	961

Additionally, there were 177 collision reports on private property taken within the city. This would give us a total of 1641 collision reports completed by the Sheriff's Department in the City for the 42 month period.

There has been a significant reduction in total collisions, injury collisions and fatal collisions since the Sheriff's Department began to provide traffic services to the City. We believe that some of this reduction can be attributed to the high volume of hazardous citations our deputies have been issuing.

The collision index (the ratio of non-injury collisions to injury/fatal collisions) for the 42 months is 1.94:1. The State Office of Traffic Safety suggests that the collision index for a suburban city should be in the range of 2.0:1 to 2.5:1. Given the higher speeds and the volume of commuter traffic on the State highway one might expect a greater number of injury accidents than would be see in a non-commuter area. This would cause the collision index ratio to be somewhat lower than the ratio seen in a non-commuter city. For Malibu, the current index is at an acceptable level.

This ratio is an important indication that the Department is reporting a sufficient number of non-injury collisions. This is significant because it validates our collision reporting, giving the Traffic Engineers for the City and Caltrans confidence that the collision data they are using to plan the City's transportation system is reliable.

The areas or locations with the highest numbers of traffic collisions were:

SR 1 at or near Serra Rd.	140
SR 1 at or near Big Rock Dr.	92
SR 1 at or near Carbon Cyn Rd.	91
SR 1 at or near Las Flores Cyn Rd.	87
SR 1 at or near Cross Creek Rd.	69
SR 1 at or near Sweetwater Cyn Rd.	69

All of these locations are along the State highway and we can assume that over 2/3 of them involve commuter traffic. The leading locations not on P.C.H. were:

Malibu Cyn Rd. at or near Civic Ctr Way	21
Heathercliff Rd. @ 29211 (Pri. Prop)	14
Malibu Cyn Rd. near SR 1	11
Malibu Rd. at Webb Way	10

The violations which resulted in the most traffic collisions were:

Unsafe Speed	495
Failure to Yield	178
Unsafe Turn	148
Drunk Driving	116
Following too Closely	98

The high number of speed related collisions within the community is directly related to the nature and usage of SR 1. Stop and go traffic and merging vehicles do not blend well with a roadway that is being used like a freeway. The high number of following too close collisions seems to also be related to the nature of this road.

The percentage of D.U.I. collisions is at the statewide average. There has been a marked decrease in the number of drunk drivers statewide and in Malibu. This is probably a result of a combination of the growing public intolerance for this crime and the enforcement and checkpoints that are much more publicized. Half of the 116 D.U.I. caused collisions in the City of Malibu resulted in injury or death to one or more of the parties or their passengers.

Traffic Safety Evaluation For Malibu, California February, 2000



Engineering and Enforcement Analyses

Funded by: California Office of Traffic Safety

California Institute of Transportation Safety

San Diego State University

Department of Civil and Environmental Engineering

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California Institute of Transportation Safety

This report is an analysis of existing conditions. The Team that conducted the study has considerable experience evaluating traffic safety programs in a large number of cities and counties. The findings and recommendations contained within the report are intended as thought-provokers for management in its efforts to enhance traffic safety in the City of Malibu. The EEE Team engineering and enforcement consultants spent only a short time in the City and to further investigate the validity of the recommendations the City is welcome to conduct additional engineering and enforcement analyses. We sincerely hope you will receive these thoughts in the manner in which they were intended and make implementation decisions based on your resource capabilities.

City of Malibu

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Public Works Department

Wednesday 11 August 1999

Sheila Sarker, Director
EEE Team Project
Department of Civil Engineering
College of Engineering
5500 Campanile Drive
San Diego, California 92182-1324 / fax 619-594-8074

Re: Pacific Coast Highway, Traffic Safety Evaluation

Dear Ms Sarkar,

Please consider this letter the City's official request for a traffic safety evaluation of Pacific Coast Highway in the City of Malibu. Pacific Coast Highway in Malibu is nearly thirty miles long and suffers an inordinate number of traffic accidents. Of particular interest is the difficulty of driver turning movements on this road that is constrained by mountains and the ocean. Contact for this study will be the undersigned.

Should there be any questions, please contact this office.

Yours truly,

CHARLES BERGSON
Public Works Director

CB

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1. Executive Summary

The City of Malibu contacted the California Institute of Transportation Safety and expressed interest in a Traffic Safety Evaluation. The City stated that there are an inordinate number of traffic collisions on Pacific Coast Highway (PCH) due mostly to unsafe turning movements. The Director of Public Works requested that the CITS analyze collision data and observe traffic conditions along Pacific Coast Highway with particular emphasis on those locations with a high collision rate.

The city of Malibu is a 27 mile long linear city bordered by the Pacific Ocean to the west and the Santa Monica mountains to the east. The main access roadway into and out of Malibu is State Route 1 commonly known as Pacific Coast Highway which is under the jurisdiction of Caltrans. The City of Malibu maintains all local roads including one traffic signal located at the intersection of Malibu Canyon Road and Civic Center Road. Therein lies an enigma, with the statistical collision rate of Malibu being in the 2nd percentile of all California cities, yet 77% of the total collisions are occurring on Pacific Coast Highway, which is not under the jurisdiction of the City of Malibu. There appears to be two separate issues that make mitigation of the high collision rate a difficult task: 1) The general topography of Malibu and specifically Pacific Coast Highway and secondly and 2) The coordination required between City personnel and State personnel.

The CITS Team conducted numerous site visits to the City and met with key personnel to obtain statistical data and supplementary information. During analysis of the collision data, seven key areas were noted as having a high propensity for traffic collisions. The key areas include segments adjacent to the intersections along Pacific Coast Highway at Big Rock Drive, Las Flores Canyon Road, Carbon Canyon Road, Sweetwater Canyon Road, Serra Drive, Cross Creek Road and Webb Way These segments were examined for the causation factors of the traffic collisions. It was determined that unsafe speeds followed closely by unsafe turning movements were the primary source of 60% of all collisions occurring in Malibu.

Based on the results of the analysis, it is apparent that a reduction in the number of angle type collisions can be achieved by limiting the number of access points thereby controlling turning movements along PCH. The section from Las Flores Canyon Road to Serra Road is characterized by numerous driveways which provide access to businesses and residences on both sides of PCH. This section was recently repaved by Caltrans and was striped with a two-way left-turn center median to permit left turn and u-turn movements. From a traffic safety standpoint, a raised median would eliminate most of the angle type collisions. However, it is recognized that it may be difficult

to replace the existing striped median with a raised median because of potential strong opposition by businesses and residents. The City may be required to conduct an effective public education program on the safety advantages of raised medians vs. two-way left-turn medians. In many instances, cities have the difficult task of trade-off or compromise; convenience, aesthetic attraction, or safety. The analysis confirmed potential solutions are viable if an understanding between the City, the State, the business owners, and the residents of Malibu could be reached. Further discussion on this issue is contained in the Engineering Evaluation Section of this report.

Enforcement personnel recognize the problems on PCH and are taking a proactive approach to reducing the collisions. However effective, enforcement methods are transitory resolutions and the potential to permanently reduce speeds and unsafe turning movements are limited. Enforcement along with Education and Engineering methods may have a much larger impact on a continuous solution. An OTS grant (PT9971) has been awarded to assist in the reduction of collisions for this specific Pacific Coast Highway Corridor. The grant will require a multi-agency effort including the; Los Angeles Sheriff Department, Los Angeles Police Department, and the California Highway Patrol. The goal of the grant is to reduce reportable traffic collisions on PCH by 15 percent. The project objectives are to convene a task force, identify contributory factors, develop a Safety Action Plan, and finally implement at least two solutions identified in the plan.

The key to the selection of countermeasures at a particular site, route, area, or for mass application, is to concentrate on the particular collision types which have been identified in the diagnosis phase as amenable to treatment with road or traffic engineering measures. However, there will often be a number of remedial treatments, which could be applied individually or in combination. The final choice will generally be based upon judgement and experience, utilizing countermeasures that have been successful in similar circumstances elsewhere.

- Malibu ranks 8th out of 471 cities throughout California by vehicle miles and 9th out of 471 cities by population for high-collision rates, which suggests Malibu should take active measures to reduce the number of collisions.
- The Public Works Department and the Department of Transportation (Caltrans) must coordinate for mitigation actions of collisions along Pacific Coast Highway (77% of all collisions in Malibu).
- Cut-through traffic from neighboring cities (Calabasas, Agoura Hills, Santa Monica, and Los Angeles.) may be a contributing factor to the collision rate, based on population.

- Malibu is a mature, established community. Development of new neighborhoods and businesses is occurring, increasing traffic volumes and residential capacities.
- The Sheriff Department takes a proactive and 'preventative' approach to traffic safety. It appears that the traffic unit does understand the primary collision factors and directed enforcement procedures with 79% of citations written targeting either unsafe speed or unsafe turning movements.
- A field reconnaissance was made of seven selected intersections with several photographs taken at each location. Traffic Signal plans and aerial photos of the Pacific Coast Highway were obtained from Caltrans. Existing levels of service and weekday peak hour volumes were obtained from various reports. The information was used to develop a list of key engineering factors and recommendations.
- At the Big Rock Drive intersection, further sloping of the cliff at the northeast corner should be considered to enhance lateral visibility.
- At the Las Flores Canyon Road intersection, some of the shrubs, signs and posts should be removed or relocated to improve lateral visibility.
- At the Carbon Canyon Road intersection, the cliff at the northeast corner should be sloped further which may require construction of a retaining wall.
- At the Sweetwater Canyon Road intersection, the shrubs and trees on both sides of the driveway should be properly trimmed to ensure adequate lateral visibility.
- At the Malibu Pier intersection, Caltrans plans to install a "smart crosswalk" which should enhance pedestrian safety.
- At Serra Road, the shrubs at the northwest corner should be trimmed.
- At the Cross Creek Road intersection, a review of the signal phasing should be included as part of the planned study on left turns and u-turns.
- At the mid-block crosswalk on Cross Creek Road, consideration should be given to provide a more visible striping design or the City should consider applying to the Office of Traffic Safety for a grant to install a "smart crosswalk"
- The City should consider a compromise solution for reducing the number of angle type collisions within the section from Las Flores Canyon Drive to Serra Drive which would involve the design of a raised median with openings at each of the signalized intersections plus openings at ¼ mile intervals to permit left turns and u-turns under controlled conditions.

Enforcement Evaluation

1 Introduction

1.1 California Institute of Transportation Safety Traffic Safety Evaluations

The California Institute of Transportation Safety (CITS) at San Diego State University, with funding from the California Office of Traffic Safety (OTS) provides Traffic Safety Evaluations free of charge to Cities in California south of and including San Luis Obispo County. The purpose of the program is to identify traffic safety issues in a community, provide technical assistance, and develop strategies and solutions for the enhancement of the community. The Team consists of a Traffic Engineer, and an Enforcement Specialist under the direction of Dr. Sheila Sarkar, an expert in the traffic-safety field.

The team conducts on-site visits typically taking two days. Field inspections are conducted during daytime and nighttime hours. Intersection and segment analysis, measurements, and photographs are taken. Interviews with local traffic engineers and law enforcement personnel are conducted as well as obtaining any pertinent traffic manuals, collision statistics, speed surveys, and any other traffic-safety materials.

Cities and counties are selected to receive evaluations based on the magnitude of traffic problems and how the city's traffic incident statistics compare to others similar in size. There are three types of evaluations available, depending on the needs of the community. Model I involves a comprehensive traffic safety analysis. Model II evaluates specific problems in the community. Model III provides ongoing assistance.

Motor vehicle collisions account for more deaths than all natural disasters combined. In fact, in the United States your chances of being injured in a motor vehicle collision is better than one in a thousand, in any one year. If you are a male, than you are twice as likely to die in a motor vehicle collision than if you are a female. Yet, if you are a female you are slightly more likely to be injured. The ages of 16 and 24 are the most dangerous for both sexes. Between the ages of 16 and 64 alcohol figures into over 20% of all fatal collisions, and between the ages of 21 and 44 almost 50% of all fatalities. Since 1966 the rate of fatalities by population has fallen around 40%, by numbers of drivers over 50%, and by numbers of miles driven by almost 70%. We are driving a lot more miles and driving is still safer. As we get older we are more likely to die as a pedestrian, but we are more likely to be injured the younger we are. Approximately 15% of people who die because of motor vehicle collisions are pedestrians, bicyclists or other wise not in motor vehicles. Over two-

thirds of people who die in vehicles are not properly wearing safety restraints. You are ten times more likely to die driving a motorcycle than if you are driving any other motor vehicle. [1]

[1] The disaster centers motor vehicle accident death and injury data index

1.2 Estimated Cost Per Person and Per Collision By Victim Severity and Property Damage Only Collisions 1997-1998

Table 1 - Estimated Cost of A Traffic Collision 1997-1998

	1997[1]		1998[2]	
Victim Severity	Cost Per	Total Cost	Cost Per	Total Cost
Killed	$ 2,785,000	$ 10,224,000,000	$ 2,792,000	$ 9,658,000,000
Injured Severely	193,000	2,471,000,000	193,000	2,422,000,000
Other Visible	39,000	3,405,000,000	39,000	3,380,000,000
Complaint of Pain	20,000	3,695,000,000	20,000	3,829,000,000
Property Damage Only Collisions	2,000	549,000,000	2,000	581,000,000
Total		$12,318		$20,344

[1] *Source of cost estimate: U.S. Department of Transportation, Federal Highway Administration, October 31, 1994. "Technical Advisory on Motor Vehicle Accident Costs." Costs have been updated to 1997 dollars using the Gross Domestic Product (GDP).*

[2] *Source of cost estimate: 1994 Study as indicated in footnote number (1). Costs have been updated to 1998 dollars using the Gross Domestic Product (GDP). Figure provided by the U.S. Department of Commerce-Bureau of Economic Analysis.*

1.3 Specific Concerns of Malibu

- Analyze high rank of fatal and injury collisions within its' statewide population group and recommend measures to improve it. (Malibu ranked 2/99 in total fatal and injury collisions by population group.)
- Analyze intersections with the highest collision rates and recommend ways to reduce collisions.
- Small residential community with high ADT ratio.
- Commuter traffic.
- Linear layout of roadway with Route 1, Pacific Coast Highway, used as main access route.
- Weekend traffic.

1.4 Evaluation Objectives

On November 4th and 5th, 1999, by invitation, a site visit to Malibu was conducted by the engineering and enforcement members of the Southern California EEE Team. During the visit, traffic safety concerns were discussed in depth with departmental heads from the public works department and the Sheriff Department. In addition to meeting with key personnel, the team photographed, measured, walked, drove and thoroughly analyzed each area of concern. After obtaining collision data, statistical information, speed survey information, level of service data, and enforcement records, the team members discussed high collision locations and attempted to demonstrate methods of reducing the collisions from both engineering and enforcement approaches. Enhancing traffic safety for the residents and tourists in the Malibu area is the primary objective for the EEE team.

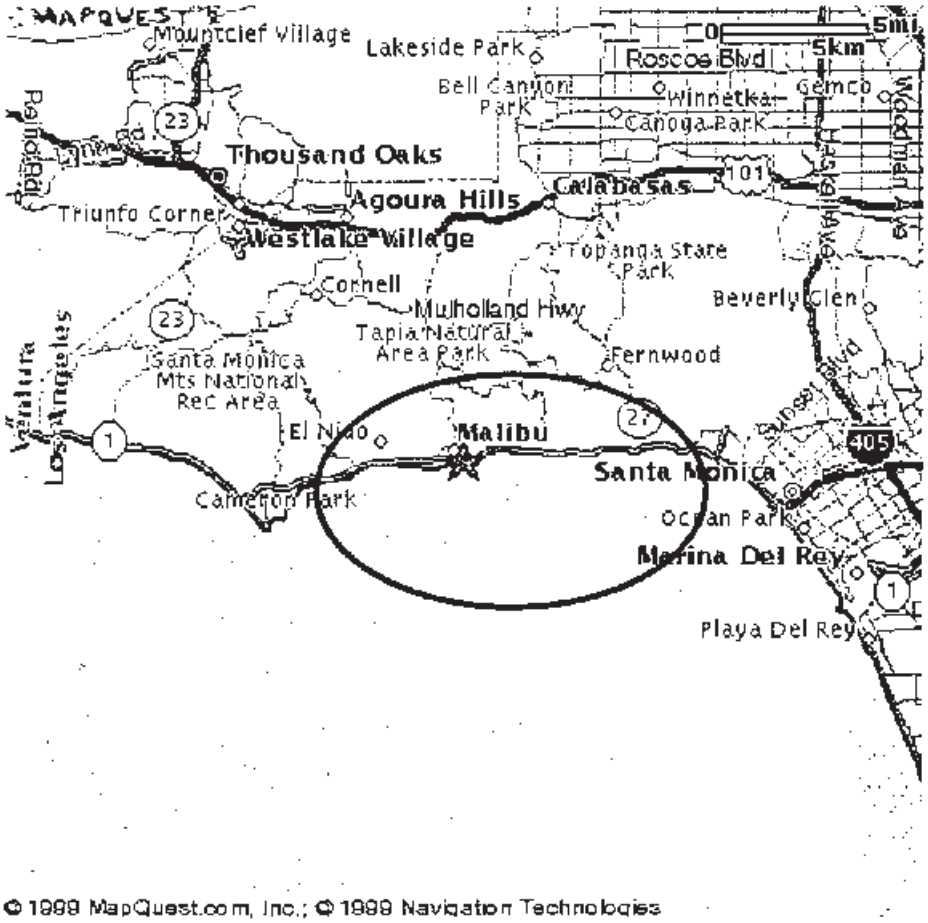
2. Profile

2.1 City Overview

The City of Malibu lies along Pacific Coast highway adjoining the city of Los Angeles to the east and Ventura County to the north. Lying between the Pacific Ocean and the Santa Monica Mountain Coastal Range, the city has an east west orientation and is twenty-seven miles long, one to eight miles wide and has a total population (1990) of 17,369.

The City was incorporated in March, 1991 with a City Council committed to creating an innovative modern city which preserves the open spaces and continues to attract people to its beaches, mesas and canyons that creates the unique natural environment of the City of Malibu.

Figure 1 - Malibu Area



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Malibu has one East-West arterial (Pacific Coast Highway, which is maintained by Caltrans), and seven North-South Canyon Roads connecting it with the nearby communities. Both the City and Caltrans are fairly active in its efforts to enhance the traffic safety of this beach community. The City is currently confronting the issue of providing improved access and parking to the Pt. Dume Headlands preserve at the demand of the State Coastal Commission. Work is also underway on PCH involving installation of permanent pavement striping between Topanga and Paradise cove, as well as re-paving between Carbon Canyon and Malibu Pier.

The City has announced funding commitments for various traffic safety improvement programs. These include the Traffic Information Emergency Radio system with repeater stations in the mountains to provide daily reports on weather and road conditions in the area between 101 and PCH. Turning Movement Safety Study – an engineering analysis of the report prepared by the Sheriff's department is underway to evaluate collisions related to left-turn movements and high accident locations on PCH.

A right turn deceleration lane is being installed by Caltrans on eastbound PCH at the Paradise Cove signal. Malibu Canyon/PCH signal upgrade is being undertaken by Caltrans to provide additional phasing for entering and exiting Bluffs Park to reduce the incidents related to turning movements at this location. Caltrans will also install video cameras to monitor and control signal operations at Malibu Canyon and PCH. In addition Caltrans is involved in installation of Smart Crosswalks that has imbedded lighting to illuminate crosswalks at three locations. Two are between Malibu Pier and La Costa Beach and the third would be in the Pt. Dume area to improve pedestrian crossing on PCH.



Fig 2 – Points of interest

2.2 Unique Topography and Fire-Hazard Concerns of Malibu

Due to the unusual geography of the Malibu area, some concerns regarding landslides, flooding and fire hazards should be discussed briefly. Malibu is linear in nature, with only one East-West access route, the circulation element and emergency preparedness are of primary importance.

The Santa Monica Mountains, as part of the transverse Range, are indeed unusual in their east-west orientation, as most of the mountain ranges in North America are oriented north-south. This east-west alignment is part of their long geologic history, the slow movement north from unknown locations, and the accretion of strange and complex terrain's that we see today. For the most part, the area is made up of igneous rocks (fire-formed), sedimentary rocks (secondary deposits of bits of pre-existing rocks), and metamorphic rocks, (rocks that were changed by heat). The area dates back to the Jurassic period (135-190 million years ago). The entire Malibu area is extensively faulted, folded, uplifted and undergoing intermittent but strong erosion.

The rocks of the transverse mountains are among the oldest in California. Landslides and cliff retreat are part of the natural process of coastal erosion along the California shore. Waves that undercut bluffs', often initiate landslides. Burin winter storms heavy surf drags sand offshore, denuding many beaches and exposing the cliff base to direct wave attack. Most cliff retreat occurs

at this time; powerful breakers crash into the cliffs, splintering the softer rocks into fragments that fall into the retreating surf. Incessant winter rains beating down on coastal bluffs slowly penetrate rock fractures, lubricating the joints between the rock layers. Fractured shale's, sandstone, and siltstones are most likely to slip and cause landslides, especially at locations where the land slants toward the beach. A coastal landslide of mud and rock can scrape a clean path, sweeping away roads and structures as it plunges seaward.[i] Development of coastal sites has increased the rate of coastal erosion by the introduction of drainpipes and septic tanks that saturate soils with runoff; the irrigation of lawns and gardens can cause even the most stable sedimentary bluffs to collapse and slide into the sea.[ii]

On November 3, 1993, the second of two, arson suspected fires burned out of control throughout substantial portions of the Santa Monica Mountains. At the same time, twenty-one wildland fires were burning throughout Southern California, from Santa Barbara to the Mexico border. Three of these fires, the Green Meadows, Old Topanga, and Laguna Hills Firestorm, were located within the coastal zone and consumed over 739 single-family residences (SFR). The Old Topanga Firestorm erupted near the southern limits of the City of Calabasas and consumed approximately 18,000 acres of watershed, took the lives of 3 people, and destroyed or damaged over 408 SFR. Over 208 SFR were lost in the City of Malibu alone. The cost of this fire was high in terms of property damage, loss of infrastructure, and in regards to its impact on environmental sensitive habitat and watershed coverage.

It is in the Santa Monica Mountains range where fires have crisscrossed the terrain so often that some residents not only have lost one home, but some sadly have lost three after rebuilding on the same site. The Santa Monica Mountains are a true design for disaster. In the fall and early winter months, as if on a regular schedule, strong Santa Ana winds howl throughout the canyons and out to sea and the relative humidity plummets to single digits. After the long hot summer has taken it's toll on chaparral, often stressed by repeated droughts, the winds set the scene for disaster. Once a fire gains a foothold, with Santa Ana winds blowing, it is virtually impossible to contain until the wind abates or it runs into the sea. The fires historically follow well-defined wildfire corridors. When large and damaging fires occur you'll find the wind and fire corridors perfectly aligned.

Since 1927, a total of 24 wildland fires have caused the loss of 1,052 homes, 830 other structures, 271,047 acres and five fatalities. Previous fires include the 1985 Malibu Fire, 1982 Dayton Fire, and the 1970 Malibu Canyon Fire.

Circulation elements should be scrutinized closely for emergency preparedness guidelines. This element consists of the general location of existing and planned transportation routes and public

utilities. Designations, policies and implementation measures in the element (and all others) must be correlated with the Land Use element. The information is usually shown on maps or other diagrams to show how the transportation system serves the various land use designations. This is the primary designator of access routes and road design requirements (not engineering standards). Government Code Section 14000 requires that the Circulation element provides transportation facilities that reduce hazards to human life and minimize damage to natural resources. This provides the opportunity to make strong recommendations about transportation routes and design requirements such as turnouts and safety zones. [iii]

2.3 Current OTS Grant Information

Corridor Safety Project- California Highway Patrol's West Valley Area office along with three allied agencies has applied the corridor approach to a specific 28-mile section identified as a problem roadway on SR 1 (Pacific Coast Highway). Funds provided by this grant will attempt to improve traffic safety. Representatives from entities with an interest or responsibility for traffic safety on the corridor will form a task force. The CHP will use grant funding to contract with the other three allied agencies along the corridor: Los Angeles Sheriff's Department, Los Angeles Police Department and Santa Monica Police Department. The goal of this project is to reduce reportable traffic collisions on the corridor by 15% from the 1997 total of 247 to 210 by March 31, 2000.

Project objectives are to:

- Convene a task force
- Identify four factors including conditions and behaviors contributing to the traffic safety problems
- Develop a Safety Action Plan
- Implement at least two solutions identified in the plan within six months after convening
- Expend 440 hours of CHP officer overtime to conduct traffic enforcement on the corridor
- Assist with the public awareness campaign.

Project funds provide for CHP enforcement and support overtime, allied agency contractual services, task- force travel, purchasing of four radar devices and two Preliminary Alcohol Screening devices for CHP and participating allied agencies, educational and promotional materials for a public awareness campaign and task force meeting facilities.[iv]

3. Enforcement

3.1 Primary Traffic Enforcement

The City has elected to contract with the Los Angeles Sheriff's Office for municipal-type law enforcement services. Lost Hills Sheriff Department is responsible for the administration and enforcement of traffic laws and investigation of traffic collisions. The station is located at 27050 Agoura Road in Agoura, and is under the command of Captain William J. McSweeney. There are 144 sworn personnel and 38 civilians working out of the Lost Hills Station. Malibu has 8 traffic units dedicated daily, 1- 40 hour DUI car and 1 special-enforcement vehicle. Clearly marked patrol units were observed during both day and nighttime field surveys, giving a strong impression of a law enforcement presence.



Figure 3- Lost Hills Sheriff Station

The Department is very proactive in traffic safety and promotes community involvement and feedback. The traffic unit regularly conducts occupant restraint, driver license and DUI checkpoints, as well as back-to-school and sober graduation programs. Routinely, there are articles written by the Department addressing traffic safety, published in the local school newsletters. In addition, Departmental staff works with the City to produce brochures and newsletters for the general public. Sergeant K. Mauch of the Traffic Unit serves as staff on the City Traffic and Transportation committee, as well as the School Safety Committee and regularly attends parent/faculty board meetings addressing traffic issues. Sgt. Mauch also participates on Pacific Coast Highway task force with all public safety agencies, cities, engineers and public officials.

3.2 Lost Hills Sheriff Station Staffing and Hours

Malibu has eight traffic cars from 0600-1400, then crime cars or DUI cars cover traffic issues. Most units are on 10-hour shifts to cover rush hours and school rushes. All field deputies have basic collision investigation training, two-thirds have intermediate collision investigation (Skid School) training, and several have advanced collision investigation training. The Sergeant and collision investigators have collision reconstruction, auto/Ped. , motorcycle, commercial and applied physics training. Traffic units are staffed 20 hours per day. Response times are approximately 10 minutes for routine calls and approximately 5 minutes for emergency calls (both traffic and crime cars).

3.3 Law Enforcement Staffing Comparisons

Lost Hills (Malibu) Sheriff Department-ratio of Sworn Officers per 1,000 inhabitants: (17000/10) =0.58

National Police Agency staffing average: 2.20

Eleven Western State Police Agency staffing average: 1.70

California Municipal Police Agency staffing average: 1.80

California contract city average, where supervision and management are factored into the contract : 0.80

A city of 17,000 similar to Malibu would require an additional 5 officers to be at parity with the California contract city average[v].

Table 2 - Ratio of Sworn Officers Serving Contract Cities of Similar Size 1992 Comparisons

City	Contracting Agency	Population	Sworn	Ratio
Hesperia	San Bernardino S.O.	60,000	42	0.70
Palmdale	LASO	48,000	28	0.58
San Ramon	Contra Costa S.O.	33,700	23	0.68
La Habra Heights	LASO	5,300	4	0.89
Susanville	Susanville PD.	7,000	13	1.86
Yreka	Yreka PD.	6,800	14	2.00
Avenal	Kings County	4,600	10	2.17

3.4 Officer Productivity Analysis

Officer productivity is based on 1996, 1997 and 1998 citation data. Traffic and general patrol citations were grouped for analysis purposes.

Citation Type	1996	1997	1998
Hazardous	15,835	12,917	12,850
Non-Hazardous	1,762	1,710	1,870
Parking	3,754	5,350	3,860
Total cites	21,351	19,977	18,580

Table 3 - Malibu officer productivity based on three- year analysis

2135 violations per officer per year, 177 citations per officer per month, 1.3 violation per hour for each 8 work hours.

Benchmark:
Traffic Units- Six primary collision factor violation (PCF) citations per eight-hour shift when assigned exclusively to traffic enforcement duties. Non-PCF violations such as, registration, tinted windows, or mechanical violations, while showing a police presence are not contributing to reducing the collision rate and are not included in the benchmark.
General Crime Units- one primary collision factor violation citation per eight-hour shift.

The National Highway Traffic Safety Administration believes that professional traffic law enforcement helps control all types of street crime.

Table 4 - General Crime vs. Traffic Collision Victims

Incident Type	1997	1998
Total Traffic Citations	12,917	12,850
Total Collisions	414	381
Fatal/Injury/PDO	4/148/260	3/124/247
Murder	1	0
Rape	2	0
Assaults	50	22

4. Statistics

4.1 Ranking Comparison

The Office of Traffic Safety ranking allows Cities and Counties an opportunity to contrast their rankings with similar sized agencies. A Statewide ranking of 1 is assigned to the city with the highest (poorest) rate. A Statewide ranking of 463 is assigned to the city with the lowest (best) rate.

Rank number 1 means the poorest record; therefore, Malibu is in the 2nd percentile by vehicle miles and 2nd percentile by population.

A. Statewide Comparisons (OTS rankings)

Malibu rank by vehicle miles (1000) **8 / 471**

Malibu rank by population (1000) **9 / 471**

City	NCIC	Year	County	Population (E) (10,001-25,000)
Malibu	1995	1997	Los Angeles	12,575

			Ranking by Vehicle Miles			Ranking by Population	
Fatal & Injury Collision Type	**TOTALS**		**STATEWIDE**	**POPULATION GROUP**		**STATEWIDE**	**POPULATION GROUP**
Total Fatal & Injury	152		8/471	1/99		9/471	2/99
Alcohol Involved	19		13/471	1/99		11/471	2/99
Speed Related	62		6/471	1/99		5/471	1/99
Nighttime	18		7/471	1/99		8/471	2/99
Hit & run	10		13/471	2/99		22/471	3/99
HBD Driver <21	**3**		12/471	3/99		11/471	3/99
HBD Driver 21-34	**4**		21/471	5/99		32/471	11/99
Composite			9/471	1/99		6/471	1/99

			Ranking by Vehicle Miles			Ranking by Population	
Killed and Injured Victim Type	**TOTALS**		**STATEWIDE**	**POPULATION GROUP**		**STATEWIDE**	**POPULATION GROUP**
Pedestrians	1		373/471	77/99		395/471	85/99
Pedestrians 65+	0		464/471	74/99		448/471	77/99
Pedestrians <15	0		432/471	98/99		413/471	90/99
Bicyclists	2		304/471	60/99		370/471	75/99
Bicyclists <15	0		435/471	98/99		413/471	99/99
DUI Arrests	**183**						

Table 5- OTS Rankings

Maintained Mileage and Daily Vehicle Miles of Travel Estimates by Jurisdiction

	Maintained Miles				Daily Vehicle Miles Of Travel (DVMT) (1,000)		
Jurisdiction	RURAL	URBAN	TOTAL		RURAL	URBAN	TOTAL
Malibu	12.9	33.9	46.8		17.7	56.7	74.4

Table 6- Maintained Miles and DVMT[i]

The Statewide AVMT is estimated by Caltrans, Transportation System Information Programs', and Statewide Travel Analysis Branch. This estimate is based upon travel on all roads, streets and highways that are open to the public. There are many locations in California that are actually counted continuously and are used to establish factors for the above variations. The Statewide estimate for calendar year 1996, is 278 billion AVMT.

4.2 Driving Under the Influence (DUI) Statistics

Table 7 - DUI Collision and Enforcement Trends

	1996	1997	1998
Total Collisions	384	414	381
Total DUI Collisions	30	22	23
% of Collisions attributed to DUI	8%	5%	6%
DUI Arrests	135	183	194
DUI Arrests from T/C's	25	21	22
% of DUI arrests from T/C's	19%	11%	11%

Lost Hills Sheriff Department is on the right course as far as DUI enforcement. A random check of Blood Alcohol levels of persons arrested showed an average of 15. This shows that the departmental DUI recognition training and efforts are successful. The DUI collision rates are well below 20%, which again shows a department that is proactive rather than reactive. In-house refresher training for drug/alcohol recognition and methods of DUI recognition will provide all deputies with the self-confidence to increase arrests for the .08-.12 BA drivers. The Sheriff Department has regular DUI checkpoints screening 600-1300 per night, 40 hour DUI car, regular meetings with Alcohol Beverage Control licensed locations regarding designated driver programs and rules of service.

4.3 Collisions involving Pedestrians[2]

Table 8 – Collisions Involving Pedestrians

1996			*1997*			*1998*		
Fatal	Injury	PDO	Fatal	Injury	PDO	Fatal	Injury	PDO
1	8	1	0	2	0	0	7	0

1 pedestrian fatal collisions

17 pedestrian injury collisions accounting for 4.0% of total injury collisions.

Statewide average for pedestrian injury collisions is **8.0%**

4.4 Collisions Involving Bicyclists[3]

Table 9 – Collisions Involving Bicyclists

1996			*1997*			*1998*		
Fatal	Injury	PDO	Fatal	Injury	PDO	Fatal	Injury	PDO
0	4	0	0	2	0	0	6	0

0 bicyclist fatal collisions

12 bicyclist injury collisions, accounting for **3.0%** of total injury collisions.

Statewide average for bicyclist injury collisions is **7.0%**

[2] SWITRS data, 1996, 1997, 1998.
[3] SWITRS data, 1996, 1997, 1998.

5. Roadways of Malibu

5.1 Observations and Findings

Field surveys indicate street maintenance, street lighting, and pavement delineation is adequate for traffic-enforcement purposes, however during the site visit, many portions of the center median delineation along Pacific Coast Highway (PCH) were under various stages of construction or repair. There was no uniformity of either solid or painted boundaries. One negative factor noted was the lack of protected left-turn movements at signalized intersections. It is evident that Malibu can reduce the number of "turning movement' collisions by installing protected-only phasing at high-volume intersections. PCH showed very high speeds (posted 45 mph, 85th% of 57+ mph), and areas with limited site distance due to horizontal and vertical curvature. The driving environment, with increased speed and an increased population requires above average attention and driver skill to negotiate safely. There are various directional orientations and acute angled intersections. These intersections have extended areas of potential vehicular conflict and reduced sight distances. Vehicle parking for local businesses appears inefficient and undirected. An additional concern was the lack of clearly marked pedestrian walkways or sidewalks. The beach accesses from a safety standpoint are extremely limited and the high speeds on PCH limit pedestrian's crossings to signalized intersections. The City of Malibu is virtually surrounded by either the Pacific Ocean or the Santa Monica Mountain range. Concerns regarding emergency access routes and detours should be addressed.

Figure 4 – Malibu Coastal Area

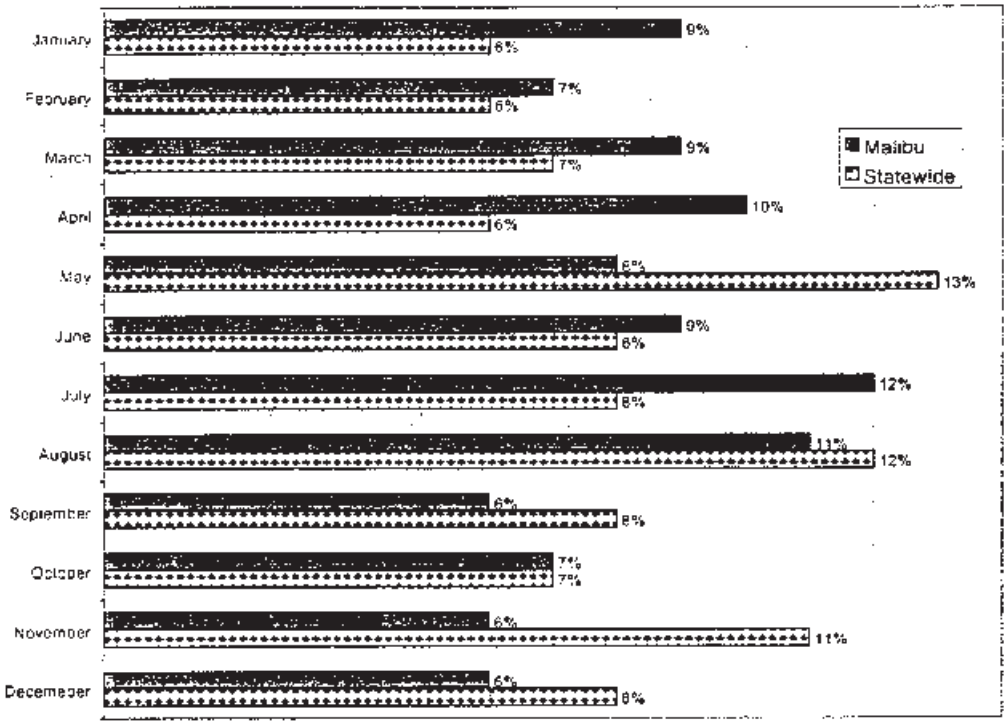


Table 10 - Malibu Collision Trends by 'Severity of Collisions

	1996 SWITRS	1997 SWITRS	% CHANGE 1996-1997	1998 SWITRS	% CHANGE 1997-1998
Total Collisions	384	414	+7.8%	381	-8.0%
Fatal	4	4	-	3	-25%
Injury	137	148	+8.0%	124	-16.3%
PDO	233	260	+11.6%	247	-5.0%
% Injury & Fatal	37%	37%		33%	
% PDO	61%	63%		65%	

As Illustrated below, the majority of the traffic collisions are occurring during the spring and summer months. Malibu is a tourist area, which attracts approximately one million beach-goers annually[4]. Typically, throughout California, the majority of collisions occur during October with the next highest frequency of collisions occurring in August.

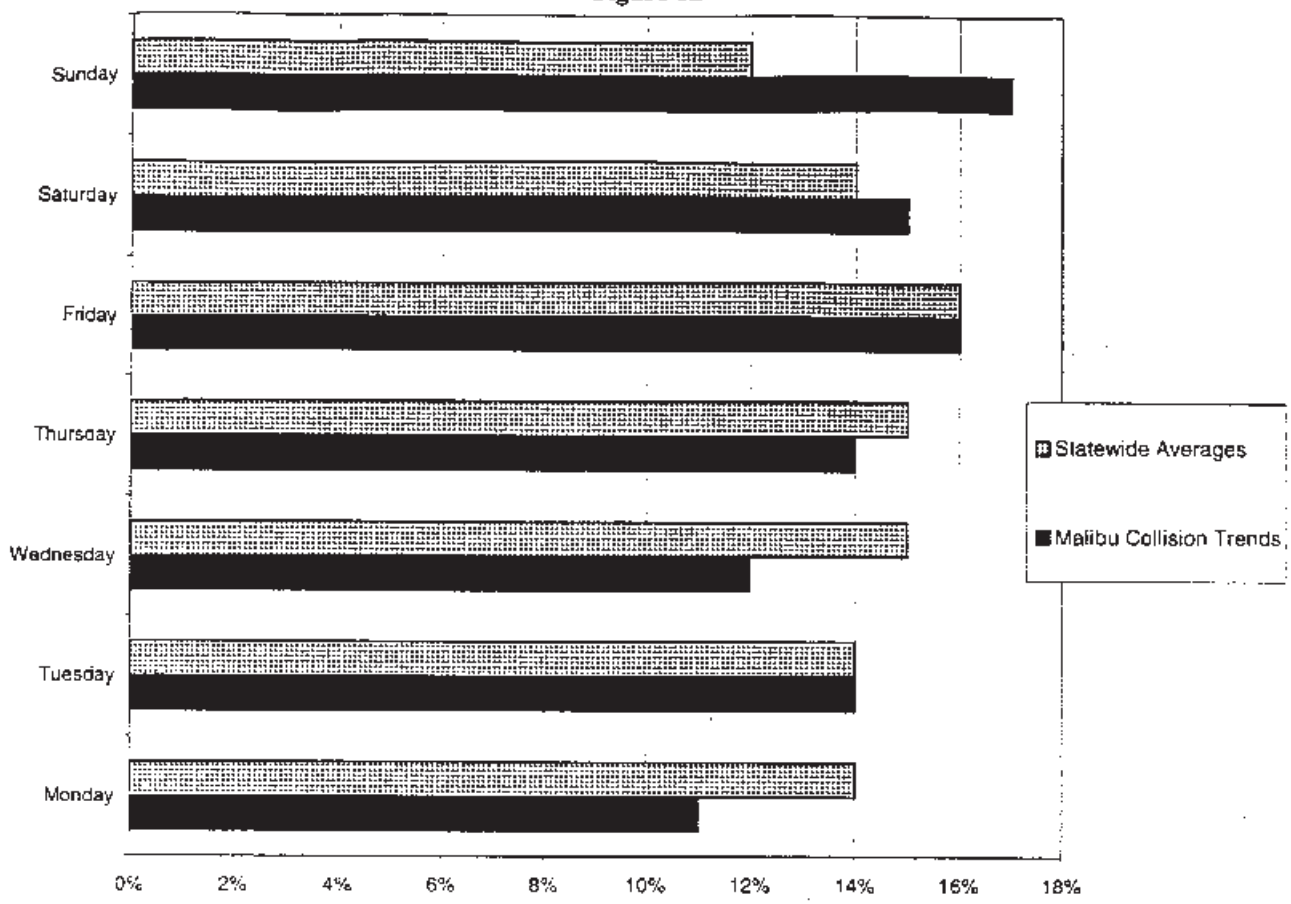
Figure 5 - Collisions by Month of Year - (Malibu- Statewide)



[4] Malibu Chamber of Commerce

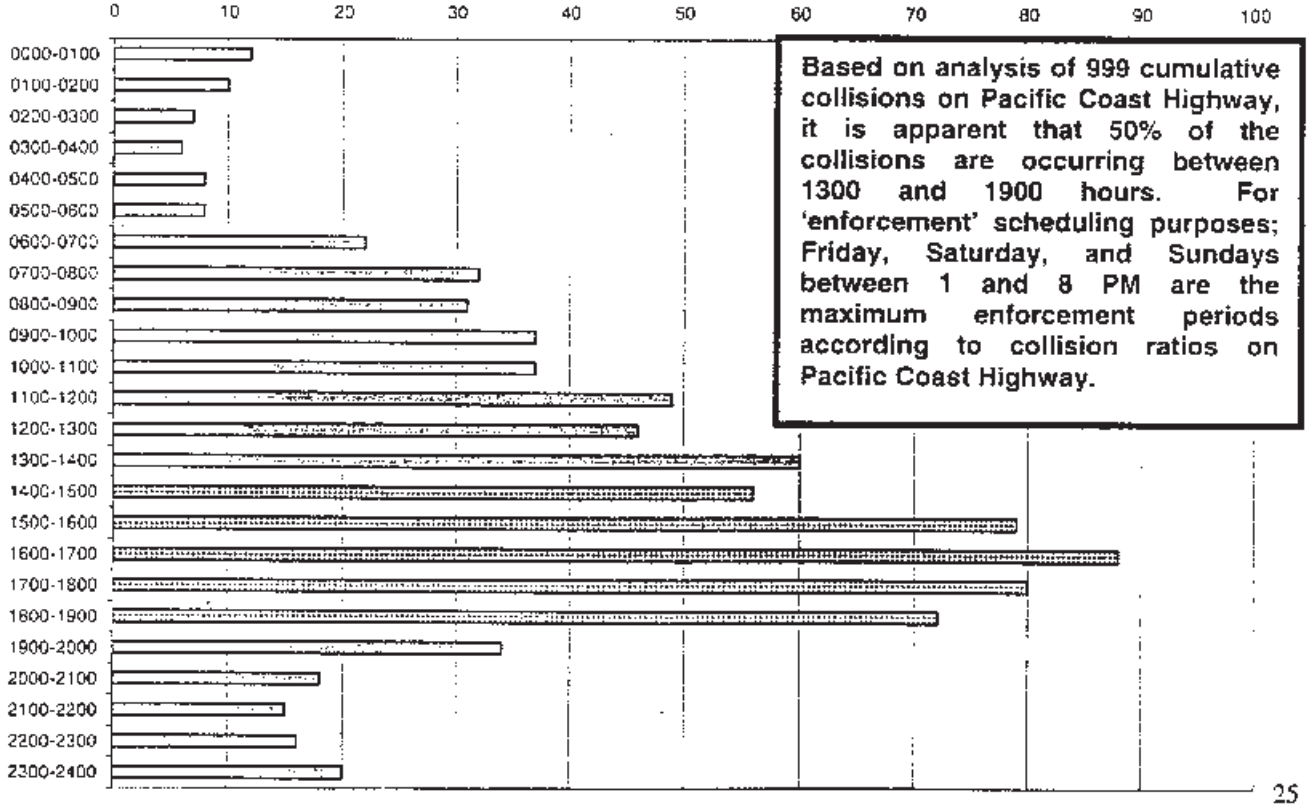
Day of Week Collision Trends (Malibu-Statewide)

Figure 6a



Collisions by Time of Day- Malibu

Figure 6b



Based on analysis of 999 cumulative collisions on Pacific Coast Highway, it is apparent that 50% of the collisions are occurring between 1300 and 1900 hours. For 'enforcement' scheduling purposes; Friday, Saturday, and Sundays between 1 and 8 PM are the maximum enforcement periods according to collision ratios on Pacific Coast Highway.

Cumulative Collision Factors for Malibu[1]

Type of Collision	1995	1996	1997	1998	
Fatal	6	4	4	3	
Injury/ Complaint of Pain	125	137	148	124	
Property damage collisions	201	233	260	247	
Pedestrian	Data not available	10	2	7	
Primary Collision Factor					**% collisions attributed to this PCF**
Unsafe speed	112	120	166	111	36%
Improper Turning	35	38	55	45	12%
Auto right-of-way	35	46	50	42	12%
Unsafe lane change	21	15	14	26	5%
Following too closely	20	33	13	25	6%
DUI	34	30	22	23	8%
Unsafe starting or backing	11	13	13	16	4%
Unknown	19	21	21	16	5%
Other than driver	7	18	10	14	3%
Traffic signals and signs	7	6	9	11	2%
Impeding traffic	4	1	2	8	< 1%
Wrong side of rdwy.	9	3	8	7	1%
Improper passing	3	3	4	6	< 1%
Pedestrian violation	2	5	1	3	< 1%
Brake failure	1	1	0	1	< 1%
Hazardous Parking	0	3	1	0	< 1%
Pedestrian or "other" DUI	0	2	0	0	< 1%
Other improper driving	0	1	3	0	< 1%
Fell asleep	8	0	0	0	< 1%
TOTAL	328	359	392	354	100%

Table 11- Cumulative Collision factors

As illustrated in Table 11, the primary collision factor most prevalent is unsafe speed, followed by improper turning and auto right-of-way violations. Depending on the officer documenting the collision report, either improper turning or right-of-way violation PCF can be utilized alternatively thus reflecting 24% of total collision factors.

There is a 3% variance between Sheriff Department collision data and SWITRS data. This is typical for collision statistics. For 'Type of Collision' analysis, the Sheriff data was used. For Primary Collision Factor analysis, both sets of data were used. The numbers do not correspond, due to collision duplication, allied agency involvement, counter reports, subsequent late reported deaths/injuries, and human error.

5.2 High Collision Areas

There are seven areas shown to have a high propensity for traffic collisions. The seven areas were analyzed by the team for causation factors and possible mitigation measures. From 1995 through 1998, there were approximately 1,000 traffic collisions on Pacific Coast Highway. 515 of the collisions occurred on PCH at or near: Las Flores (97), Big Rock (87), Serra (74), Sweetwater (68), Carbon Canyon (64), Cross creek (63), and Webb way

Collision Locations by Secondary Streets with >20 collisions on PCH
(1995 through 1998)
(1000 total collisions)

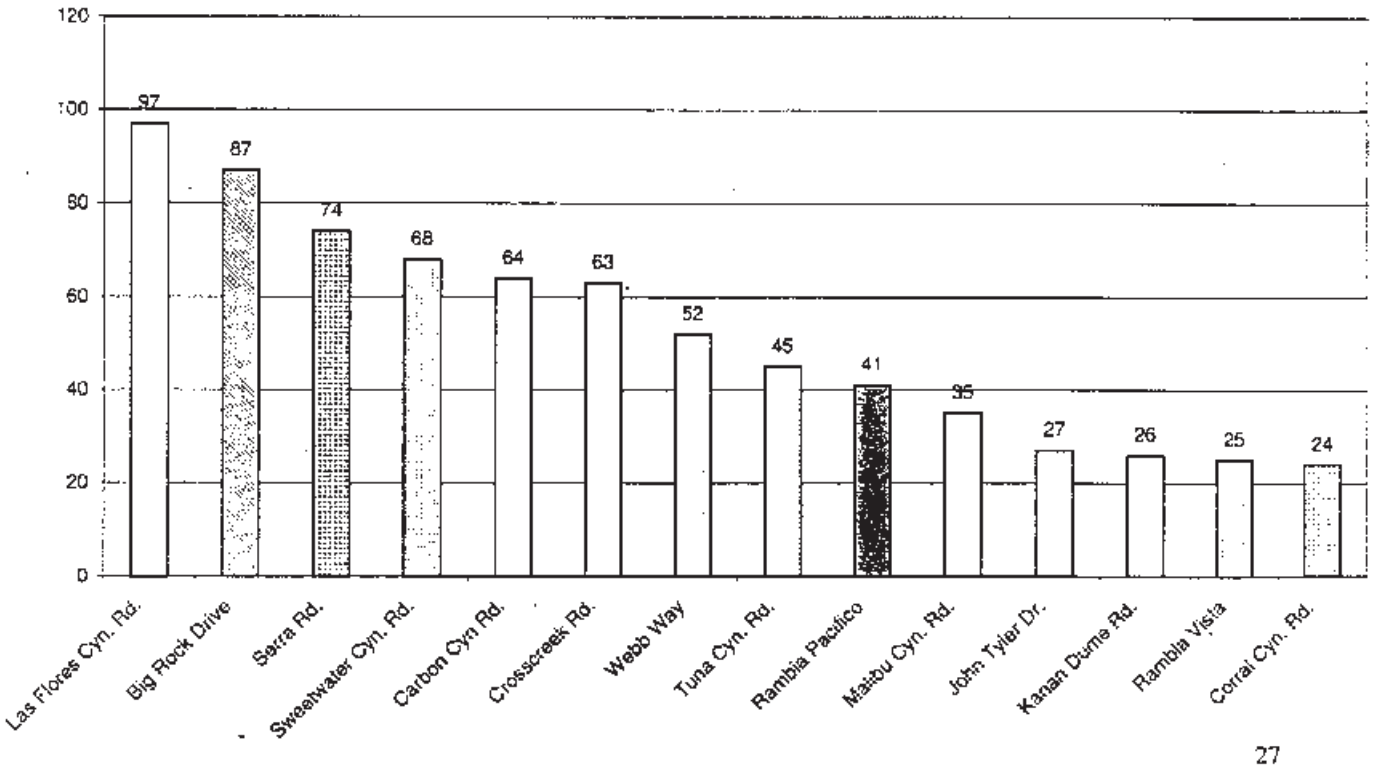
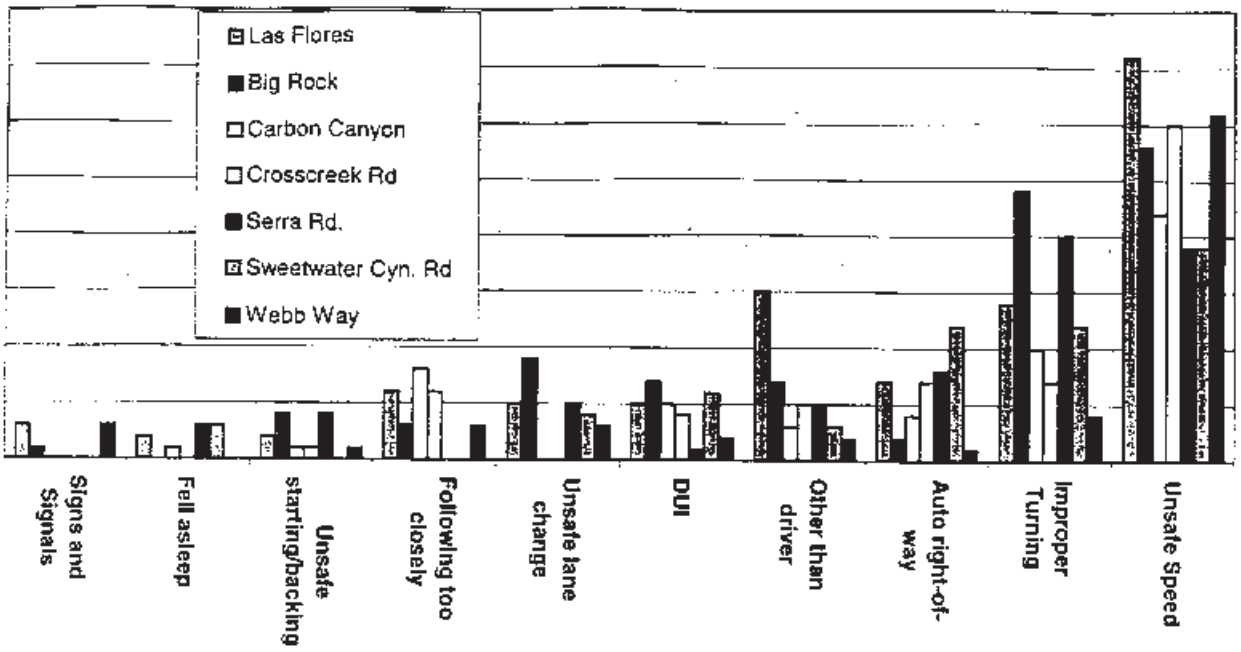


Figure 7

Collision Trend Comparison

Figure 8



5.3 Collision Trend Comparison

This collision trend comparison for the cross streets on Pacific Coast Highway, shows that despite the location or design of each intersection or segment, all of the high collision areas have a common thread. Each one shows a predisposition for unsafe speed and unsafe turning movement collisions. This comparison chart can assist law enforcement and traffic engineers in directing their focus while establishing mitigation measures for the high collision areas.

An excerpt from Safer Roads, A Guide to Road Safety Engineering; Ogden, 1996

Central to the concept of hazardous road locations is that certain types of collisions are over represented at specific sites. In order to identify this clustering, and thus develop a program to treat high collision frequency sites, a cluster analysis needs to be performed.

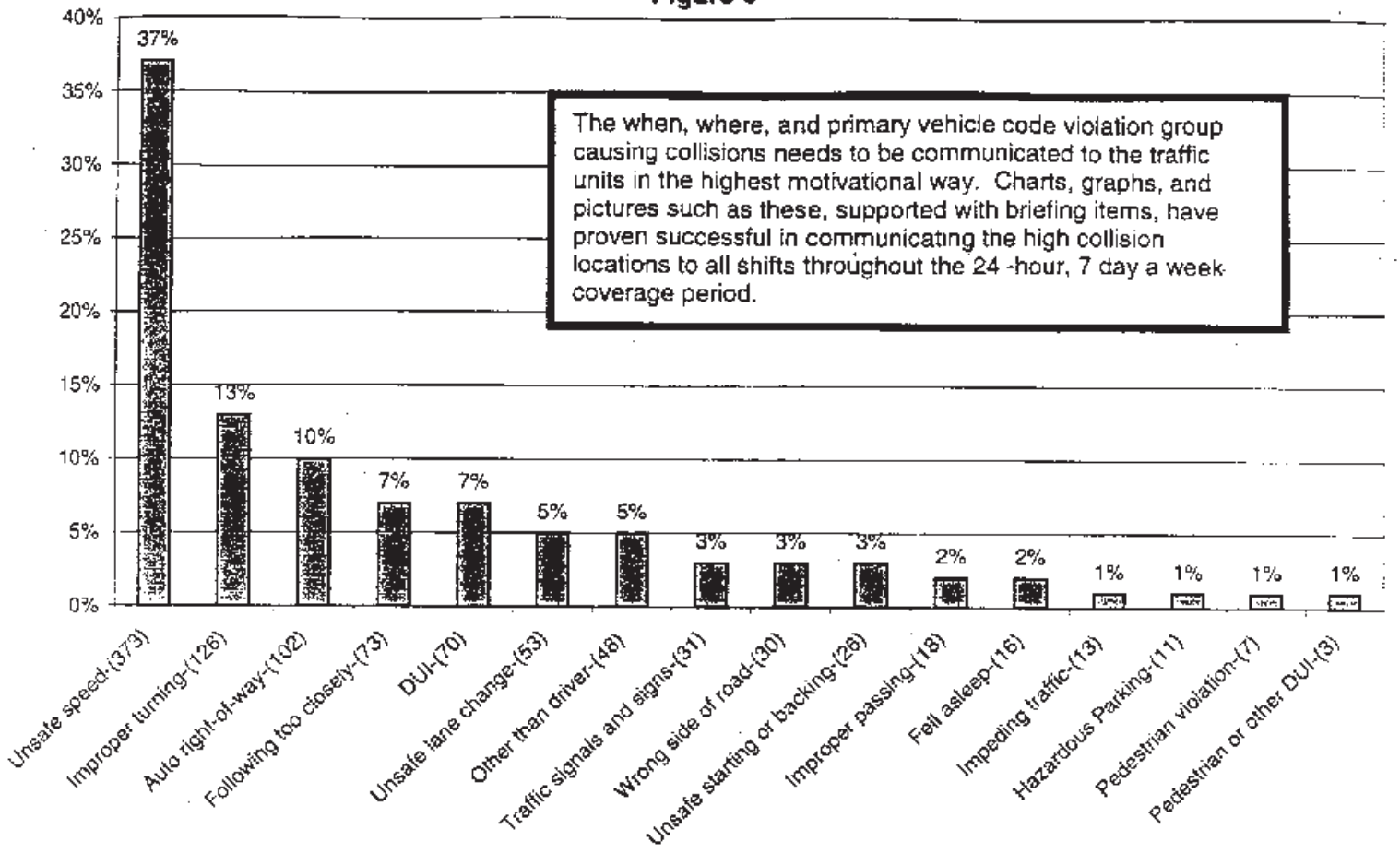
The cumulative percentage of collisions and the cumulative percentage of sites are plotted. This sort of clustering is important to identify, because when a relatively few sites (7 In Malibu) account for a large proportion of the collisions (52%), improvements at these sites is most likely to give a big overall reduction in collisions.

Table 12- Fatal Collisions on Pacific Coast Highway 1995 – 1998

Date	Time	Day of Week	Primary Road	Secondary Road	Distance	Direction	Intersection	Post Mile	# killed	Violation Category	Collision Type
11/26/95	1800	Sunday	RT 1	DECKER CYN RD	7920	N	Segment	61450	1	Unknown	Hit Object
8/6/96	1611	Tuesday	RT 1	BROAD BCH RD	0	-	Intersection	58450	1	Fell asleep	Hit Object
11/27/95	2150	Monday	RT 1	LUNITA RD	3432	N	Segment	58040	1	Pedestrian violation	Auto/Ped
2/2/96	1855	Friday	RT 1	CAVALLERI RD	280	N	Segment	54160	2	Driving DUI	Hit Object
11/25/96	1840	Monday	RT 1	KANAN DUME RD	1056	S	Segment	53820	1	Pedestrian DUI	Auto/Ped
11/29/95	0710	Wed.	RT 1	ZUMIREZ DR	0	-	Intersection	53671	1	Auto-Right-of-way	Broadside
9/5/97	1030	Friday	RT 1	ZUMIREZ DR S	0	-	Intersection	53671	1	Improper turning	Broadside
7/15/96	0149	Monday	RT 1	PARADISE COVE RD	0	-	Intersection	53031	1	Driving DUI	Hit Object
10/19/97	0304	Sunday	RT 1	WINDING WY	270	S	Segment	52800	1	Driving DUI	Hit Object
3/3/98	0725	Tuesday	RT 1	ESCONDIDO BCH RD	1584	N	Segment	52110	1	Driving DUI	head-on
11/29/95	2350	Wed.	RT 1	SERRA RD	1531	E	Segment	47100	1	Pedestrian DUI	Auto/Ped
12/9/97	1905	Tuesday	RT 1	SWEETWATER CYN RD	176	S	Segment	46340	2	Driving DUI	head-on
1/24/98	1635	Saturday	RT 1	SWEETWATER CYN RD	1456	E	Segment	46090	1	Auto-Right-of-way	Broadside
4/12/97	0450	Saturday	RT 1	LAS FLORES CYN RD	1056	N	Segment	44320	1	Improper turning	Hit Object
8/14/95	0015	Monday	RT 1	BIG ROCK DR	1584	E	Segment	42790	1	Unsafe speed	Broadside
2/4/95	1505	Saturday	RT 1	TUNA CYN RD	7392	N	Segment	42760	3	Auto-Right-of-way	Broadside

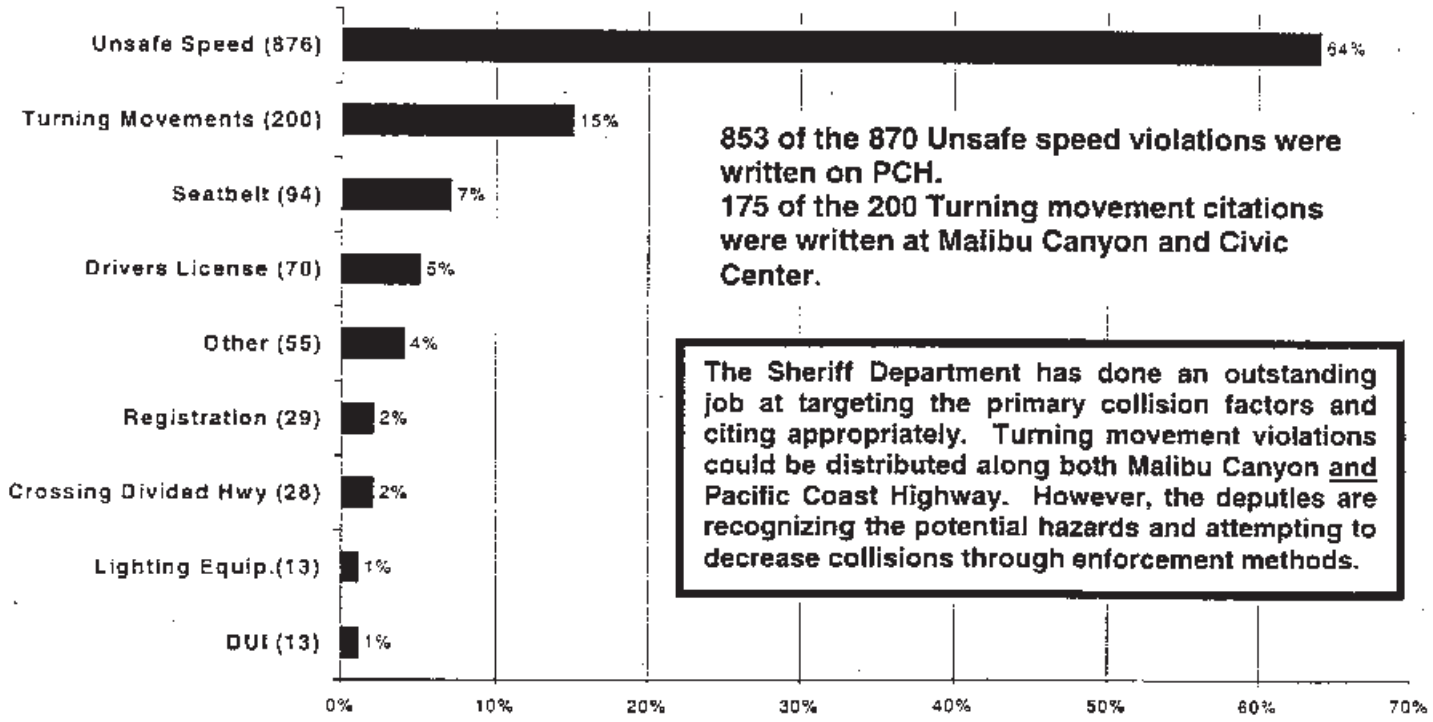
Primary Collision Factors on PCH (1995 through 1998)

Figure 9



The when, where, and primary vehicle code violation group causing collisions needs to be communicated to the traffic units in the highest motivational way. Charts, graphs, and pictures such as these, supported with briefing items, have proven successful in communicating the high collision locations to all shifts throughout the 24 -hour, 7 day a week coverage period.

Citation/PCF Comparison



853 of the 870 Unsafe speed violations were written on PCH.
175 of the 200 Turning movement citations were written at Malibu Canyon and Civic Center.

The Sheriff Department has done an outstanding job at targeting the primary collision factors and citing appropriately. Turning movement violations could be distributed along both Malibu Canyon and Pacific Coast Highway. However, the deputies are recognizing the potential hazards and attempting to decrease collisions through enforcement methods.

Figure 10

Table 13 illustrates the citations written at the seven high-collision intersections. Obviously, the violations are occurring along the segments rather than within the intersections. This is also reflected in the collision analysis showing that 76% of the collisions are within the segments and 24% are within the intersections (Engineering table 1). Although enforcement has addressed the two primary collision factors of speed and unsafe turning movements, the distribution of those cites must be spread correspondingly to the high collision locations.

Table 13 - Intersection Citations

Violation	Big Rock	Carbon Canyon	Cross Creek	Las Flores	Serra Road	Sweetwater Canyon	Webb Way
Unsafe Speed	6 (17%)	20 (56%)	2 (6%)	4 (11%)	1 (3%)	0	3 (8%)
Turning Movements	1	0	1	0	1	0	1
Seatbelt	0	2 (11%)	7 (37%)	4 (21%)	0	0	6 (32%)
Drivers License	0	2 (9%)	5 (23%)	1 (5%)	0	0	14 (64%)
Registration	0	0	3 (50%)	1 (17%)	0	0	2 (33%)
Crossing Divided Hwy.	0	0	1	0	0	0	0
DUI	0	2	0	0	0	0	1
Crossing Double Yellow	0	0	0	0	0	0	0
Red Light	0	1	0	1	0	0	2
Traffic Control Device	0	0	0	1	0	0	2
Unsafe Lane change	0	0	0	0	0	0	1

175 of the 200 turning movement citations were written at Malibu Canyon and Civic Center. It is recognized that these types of violations are occurring throughout the PCH corridor and need to be addressed by enforcement personnel.

5.4 Collision Factors and Enforcement on Pacific Coast Highway

Pacific Coast Highway (Rt. 1) throughout the Malibu area is utilized by residents, commuters, tourists, and businesses all along the West Coast. It is the main thoroughfare connecting Malibu to Santa Monica and the Los Angeles area. The average posted speed limit is 45 mph, the 85th percentile speed is 53 mph, and the average ADT is 48,000. As illustrated by the SWITRS data, graphs and charts, one of the primary causes for collisions on PCH is UNSAFE SPEED. Traditionally, the underlying assumption has been that more police enforcement would result in a reduction in mean speed and in the spread of speeds, and this in turn would lead to a reduction in collision numbers and severity. Bearing in mind that the prime enforcement-related factor affecting driver behavior is the **probability of detection**, the actual impact that enforcement alone makes on speed reduction on PCH is minimal and temporary at best. The ability of motorists to observe marked units prior to detection and the lack of safe areas to make a traffic stop, highly restricts the effectiveness of enforcement personnel. Perhaps saturated patrol assignments with highly publicized advertisement of speed enforcement along the Route 1 corridor would be the most far-reaching and effective method of handling speed from an enforcement means.

The second most common cause of collisions along PCH is UNSAFE TURNING MOVEMENTS. Without actually analyzing each collision report, it is difficult to speculate on the reasoning behind the behavior of the drivers attempt to make the unsafe turning movement. However, it appears that some of the causes may be due to;

- Drivers searching for parking along the beach route and making U-turns in haste to beat out the competition for limited parking.
- Residents along PCH pulling out onto the high-speed, high volume arterial roadway, misjudging the approaching vehicles speed and distance.
- Motorists turning into oncoming traffic at uncontrolled intersections such as Serra Road, or the lack of protected only left turn phases at Big Rock and Las Flores.
- Motorists miscalculating opposing traffics speed and distance while turning into or from local businesses along PCH.

It is imperative that enforcement personnel recognize that unsafe turning movements and failure to yield right-of-way, may be being used in the field interchangeably. This is important when collision clustering and causation factoring are utilized to identify 'high collision locations' and possible mitigation measures. Some statisticians or analyst may be unfamiliar with the numeric codes and may fail to recognize that vehicles are making unsafe turning movements regardless of the vehicle code section cited. Enforcement may make an impact on targeting unsafe turning movements with saturated enforcement along segment areas and intersections, highly advertised campaigns, and

in-view patrolling. It was noted that 88% of Malibu's unsafe turning citations were written on Malibu Canyon Road. The number of unsafe turning movement citations is impressive, yet the location of the enforcement needs to be distributed along PCH as well, where 52% of the collisions are occurring.

6. Summary of studies

6.1 Safety and Left-Turn Phasing

A summary of studies *(Datta 1991, Warren 1985, Agent 1985, and Perfater 1985)*[viii] regarding left-turn phasing and the effect on traffic collisions indicated that warrants/guidelines developed should not be absolute but should allow for engineering judgment. Most of the studies indicated that warrants or guidelines should include a volume cross-product of the left-turn volume and the opposing volume divided by the number of opposing lanes, consideration of left turn collisions, and delay. Protected left-turn phases were recommended at locations when one or more of the following conditions exists:

- Opposing speeds exceed 45 mph
- There were three or more opposing lanes
- Double left-turn lanes
- Restricted sight distance
- A severe collision problem exists involving left-turn operations.

Most of the studies found that there was a large increase in left-turn collisions when protected only phasing was changed to protected/permitted phasing. Also, confusion exists on the part of many drivers when they first encounter protected/permitted left-turn phasing. One study concluded that when there is an increase in left-turn volumes, there is also an increase in the collision involvement ratio for the elderly driver. Overall intersection delay is usually increased when left-turn phasing is added, but left-turn collisions and conflicts are reduced. Protected/permitted left-turn phasing as compared to protected only phasing will reduce overall intersection delay but may result in a higher number of left-turn collisions.

6.2 Safety and the Older Driver

"The increasing numbers and percentages of older drivers using the Nation's highways in the decades ahead will pose many challenges to transportation engineers, who must ensure system safety while increasing operational efficiency. The 65 and older age group, which numbered 33.5 million in the United States in 1995, will grow to more than 36 million by 2005 and will exceed 50 million by 2020, accounting for roughly one-fifth of the population of driving age in this country. In effect, if design is controlled by even 85th percentile performance requirements, the 'design driver' of the early 21st century will be an individual over the age of 65." (Older Driver Highway Design Handbook, 1998, FHA)

Older road users do not necessarily react more slowly to events that are expected, but they take significantly longer to make decisions about the appropriate response than younger road users, and this difference becomes more exaggerated in complex situations. Although the cognitive aspects of safe intersection negotiation depend upon a host of specific functional capabilities, the net result is response slowing. There is a general consensus among investigators that older adults tend to process information more slowly than younger adults, and that this slowing not only transcends the slower reaction times often observed in older adults but may, in part, explain them (Anders, Fozard, and Lillyquist, 1972; Eriksen, Hamil, and Daye, 1973)[ix] Also, research has shown that older persons have greater difficulty in situations where planned actions must be rapidly altered (Stelmach, Goggin, and Amrhein, 1988.)[x] The difficulty older persons experience in making extensive and repeated head movements further increases the decision and response times of older drivers at intersections.

Studies examining older driver crashes and the types of maneuvers being performed just prior to the collision have consistently found this group to be over-involved in left-turning collisions at both rural and urban signalized intersections and have indicated that failure to yield the right-of-way (as the turning driver) was the principal violation type (Staplin and Lyles, 1991; Council and Zegeer, 1992)[xi] Underlying problems for the maneuver errors include the misjudgment of oncoming vehicle speed, misjudgment of available gap, assuming the oncoming vehicle was going to stop or turn, and simply not seeing the other vehicle. Joshua and Saka (1992)[xii] noted that sight distance problems at intersections, which result from queued vehicles in opposite left-turn lanes, pose safety and capacity deficiencies, particularly for unprotected left-turn movements.

Engineering Evaluation

1. Introduction

This section of the California Institute of Transportation Safety (CITS) project report addresses the concerns of the City of Malibu with respect to traffic safety and engineering on Pacific Coast Highway, State Route 1. In a letter to the CITS at San Diego State University, the Director of Public Works cited that there are an inordinate number of traffic collisions on Pacific Coast Highway and that the difficulty of driver turning movements is of particular interest.

In response to the Director's concerns, it is the purpose of the Engineering Evaluation to review the collision history, traffic volumes, turning movements, existing pavement markings and traffic control devices and their impact on traffic safety on Pacific Coast Highway. The report includes a summary on the findings and recommendations for consideration of the City. The Enforcement Evaluation section of the report presents a more detailed analysis of the collision history.

1.1 Legal Authority

Pacific Coast Highway is State Route 1 and is under the jurisdiction of the California Department of Transportation (Caltrans). In consultation with the City, Caltrans plans and designs improvement projects and conducts certain studies to determine whether and at what location particular traffic control devices and signs are required on Route 1. Currently, Caltrans maintains 14 signalized intersections and 3 signalized mid-block crosswalks.

The City of Malibu maintains all of the local roads under its jurisdiction, including the traffic signal at the intersection of Civic Center Drive/Malibu Canyon Drive. Title 15, Vehicle and Traffic, Division 1, Traffic Code of the Los Angeles County Code, as amended and in effect on July 16, 1991, was adopted on July 2, 1997 as the Code to regulate traffic laws in the City of Malibu. The Malibu Public Safety Commission reviews all traffic matters and makes recommendations to the City Council. By contract, the LA County Sheriff's Department provides enforcement of traffic laws.

1.2 Database

The Director of the Department of Public Works provided the CITS staff with a list and bar graph on the number of collisions reported at 43 intersections along Pacific Coast Highway for the period from January, 1995 through June, 1998 as shown in Figure 15 of the Engineering Appendix at the end of this report. Figure 15 shows that there were seven intersections with more than 72 or more

Figure 11

SKETCH SHOWING LOCATION OF SIDE ROADS ALONG PCH

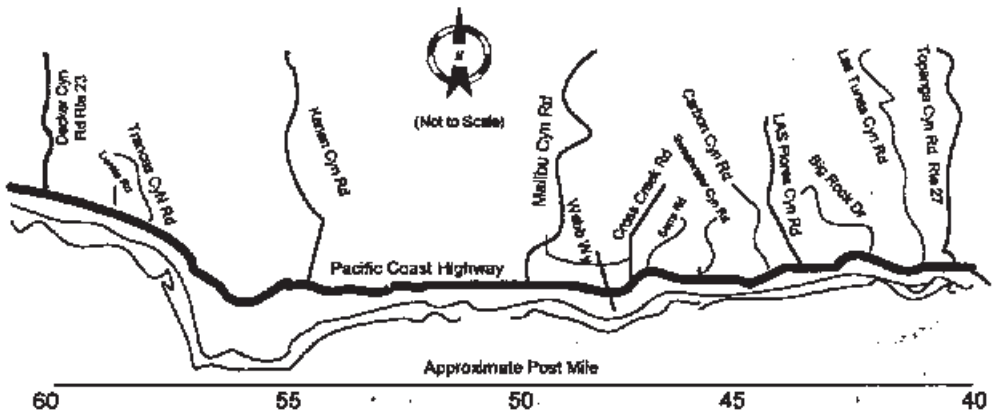
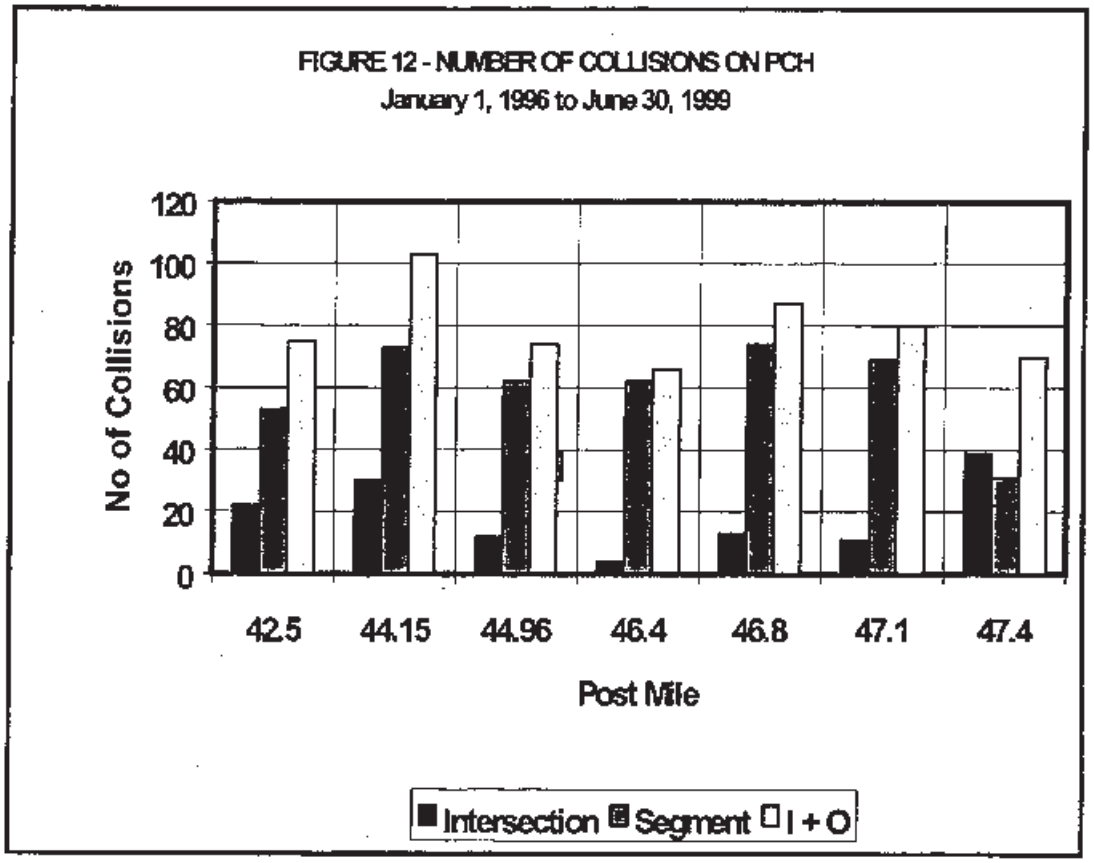


TABLE 14

NUMBER OF COLLISIONS ON PACIFIC COAST HIGHWAY JANUARY 1, 1996 THRU JUNE, 1999

Post Mile	Cross Street	1996		1997		1998		1999		Total		
		Int	Other	Int	Other	Int	Other	Int	Other	Int	Other	I + O
42.50	Big Rock Dr	10	13	7	19	4	15	1	6	22	53	75
44.15	Las Flores Cyn Rd	9	16	8	21	8	30	5	6	30	73	103
44.96	Carbon Cyn Rd	5	20	1	22	3	14	3	7	12	62	74
46.40	Sweetwater Cyn Rd	1	27	0	16	3	13	0	5	4	62	66
46.80	Serra Rd	3	22	6	23	3	23	1	6	13	74	87
47.10	Cross Creek Rd	7	19	2	27	1	17	1	6	11	69	80
47.40	Webb Way	10	8	10	11	12	5	7	7	39	31	70
Total		45	125	34	139	34	117	18	43	131	424	555



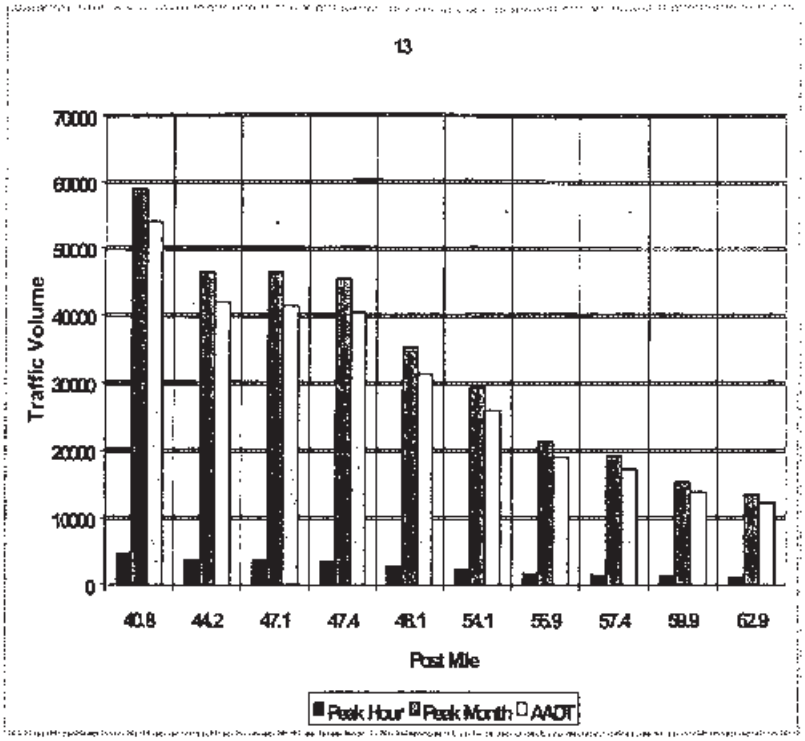
2.2 ADT along Pacific Coast Highway

The next step in the analysis was to determine the daily traffic volumes at intersections along Pacific Coast Highway from Topanga Canyon Boulevard to the LA County/Ventura County boundary. The results are shown in Table 15 and includes only those intersections listed in the Caltrans 1998 Traffic and Vehicle Data Systems Unit Web Page. Table 15 shows the peak hour, the peak month and the Annual Average Daily Traffic (AADT) ***back and ahead*** of each intersection. **The purpose of this step is to establish a pattern of traffic volumes from the east to west City Limits.** The graph clearly shows a pattern which indicates that daily traffic volumes decrease along Pacific Coast Highway from east to west. **Back means the volume east of the intersection and ahead means west of the intersection.** Figure 13 shows the back AADT peak hour, peak month and AADT.

TABLE 15
1998 TRAFFIC VOLUMES ON PACIFIC COAST HIGHWAY

Post Mile	Location	Back			Ahead		
		Peak Hour	Peak Month	AADT	Peak Hour	Peak Month	AADT
40.8	Jct Rte 27 North Topanga Cyn Rd	4750	59000	54000	3800	48000	43500
44.2	Las Flores Cyn Rd	3700	46500	42000	3550	44500	40000
47.1	Cross Creek Rd	3700	46500	41500	3650	45500	40500
47.4	Civic Center Way (Webb Way)	3650	45500	40500	3000	37000	33000
48.1	Malibu Cyn Rd	2850	35500	31500	3200	39500	35000
54.1	Kanan Cyn Rd	2400	29500	26000	2400	29000	26000
56.9	Trancas Cyn Rd	1750	21400	19100	1600	19300	17300
57.4	Lunita Rd	1600	19300	17300	1550	19000	17100
59.9		1300	15400	13900	1300	15400	14000
62.9	LA Co/Ventura Co Boundary	1150	13500	12300	1150	13500	12300

Figure 13 – Traffic volumes on PCH



2.3 AADT for seven selected intersections

Next, the AADT was compiled for each of the ***seven selected intersections*** and the results are shown in Table 16. The volumes are based on data from various sources: Speed surveys, consultant reports, Caltrans, and estimates made by the CITS Team Engineer. This table shows that the AADT is zero in the northbound direction at the Carbon Canyon Road and Sweetwater Canyon Road since they are both "T" type intersections. The AADT in the northbound direction at the Serra Road intersection is also shown as having zero volume since no reliable count information was available for the driveway which provides access to the LA County Parking Lot and to the Malibu Lagoon Museum. It is understood that during certain weekend periods or holidays, the volume from this driveway could be equal or greater than that from Serra Road. Figure 13 shows the results in bar graph form.

TABLE 16 ESTIMATED ANNUAL AVERAGE TRAFFIC VOLUMES AT SEVEN SELECTED INTERSECTOINS						
Post Mile	Intersection	Direction				
		NB	EB	SB	WB	Total
42.50	PCH/Big Rock Drive	0	21750	500	21750	44000
44.15	PCH/Las Flores Cyn Rd	300	21000	900	21000	43000
44.96	PCH/Carbon Cyn Rd	0	21000	500	21000	42500
6.40	PCH/Sweetwater Rd	0	21000	100	21000	42100
46.80	PCH/Serra Rd	0	20700	200	20750	41700
47.10	Cross Creek Rd	400	17000	4700	19800	41900
47.40	Webb Way	3000	14000	4900	19600	41500

2.4 Collision rates at seven intersections

Table 17 shows the number of collisions reported at intersections from the SWITRS report as well as the total entering AADT volumes for each of the seven selected intersections. For the purpose of this analysis, a collision is designated as an ***intersection type collision*** if the point of impact was recorded within 100 feet from an intersection ***or if it is designated with the letter "I"*** in the SWITRS report. The collision rate was then calculated by the following formula expressed as collisions per million entering vehicles (col/mev).

$$\text{Rate (col/mev)} = \frac{\text{No. of Intersection Collisions} \times 1{,}000{,}000}{\text{Entering Traffic Volume} \times 3.5 \text{ yrs} \times 365 \text{ days}}$$

Results of the calculations show that the rates range from 0.07 col/mev at Sweetwater Canyon Drive to 0.74 col/mev at Webb Way. Since this analysis was limited to comparing only the seven selected intersections it is possible that there may be other intersections from the original list of 43 where the rates are in the same range. The purpose of calculating the collision rates is to provide the City with a method to establish a priority list for improvements. The collision rates for segments were also calculated and are shown in Table 18.

Photos were taken at each of the seven intersections and are included in Figures 1 through 14 of the Engineering Evaluation Appendix.

TABLE 17
ESTIMATED COLLISION RATES AT SEVEN SELECTED INTERSECTIONS

Post Mile	Intersection	No. of Collisions	Total Entering AADT Volumes	Collision Rate	Rank
42.50	PCH/Big Rock Dr	22	44000	0.39	3
44.15	PCH/Las Flores Cyn Rd	30	43000	0.55	2
44.96	PCH/Carbon Cyn Rd	12	42500	0.22	6
46.40	Sweetwater Cyn Rd	4	42100	0.07	7
46.80	Serra Rd	13	41700	0.24	4
47.10	PCH/Cross Creek Rd	11	41900	0.21	5
47.40	PCH/Webb Way	39	41500	0.74	1

TABLE 18
ESTIMATED SEGMENT COLLISION RATES

1	2	3	4	5	6	7
Segment	No of Collisions	Segment Length, Miles	AADT	Collision Rate	Expected Rate	Rank
Big Rock Dr	53	1.33	44000	0.71	3.00	7
Las Flores Cyn Rd	73	1.23	43000	1.08	"	4
Carbon Cyn Rd	62	1.13	42500	1.01	"	6
Sweetwater Cyn Rd	62	0.92	42100	1.25	"	3
Serra Rd	74	0.35	41700	3.97	"	2
Cross Creek Rd	69	0.30	41900	4.29	"	1
Webb Way	31	0.55	41500	1.06	"	5

2.5 Explanation of Table 18:

Col 1 – The segment is that portion of PCH between intersections.

Col 2 - The number of collisions designated as "other" in Table 14 of this Report.

Col 3 - The length of the segment in miles was estimated by adding one-half of the BACK distance and one-half of the AHEAD distance as follows.

Big Rock Drive

BACK distance (42.50 – 41.50)/2 + AHEAD distance (44.15 – 42.50)/2 = 1.33 Miles

Las Flores Cyn Rd

BACK distance (44.15 – 42.50)/2 + AHEAD distance (44.96 – 44.15)/2 = 1.23 "

Carbon Cyn Rd

BACK distance (44.96 – 44.15)/2 + AHEAD distance (46.40 – 44.96)/2 = 1.13 "

Sweetwater Cyn Rd

BACK distance (46.40 – 44.96)/2 + AHEAD distance (46.80 - 46.40)/2 = 0.92 "

Serra Rd

BACK distance (46.80 – 46.40)/2 + AHEAD distance (47.10 – 46.80)/2 = 0.35 "

Cross Creek Rd

BACK distance (47.10 – 46.80)/2 = AHEAD distance (47.40 – 47.10)/2 = 0.30 "

Webb Way

BACK distance (47.40 – 47.10)/2 + AHEAD distance (48.2 – 47.40)/2 = 0.55 "

Col 5 – The collision rate was calculated by the following formula:

$$\text{Rate, (col/mvm)} = \frac{\text{No of Collisions x 1,000,000}}{\text{AADT x 3.5 yrs x distance x 365}}$$

Additional analysis was made of the intersection atf Webb Way and Pacific Coast Highway which has the highest AADT entering the intersections from the side street. Figure 18, Appendix, shows the existing 1999 weekday peak hour traffic volumes at each intersection in the Malibu Civic Center and the Colony Shopping Plaza area. This Figure shows that 295 vehicles per day (vpd) entered the Webb Way/PCH intersection from the south approach, 490 vpd from the north approach, 1,965 vpd from the east approach and 1,325 vpd from the west approach. Thus, a total of 4,075 vpd entered this intersection from all approaches during the pm peak hour.

2.6 Average cycle length at peak hour

A field check by the CITS traffic engineer found that the average cycle length during the peak hour is about 150 seconds. Therefore, it is estimated that the number of vehicles entering the intersection per cycle from all approaches is about 170 per cycle. From Figure 18, Appendix, this intersection has a V/C ratio of 0.825 and operates at a level of service (LOS) "D" during the pm peak hour. The Highway Capacity Manual describes LOS D as a condition approaching unstable flow with possible delays at the intersection during certain portions of the peak traffic period. Fine turning of the signal timing and review of the phasing at this intersection should be considered to improve the level of service.

3. Proposed Improvement projects on Pacific coast highway

The Transportation Equity Act for the 21st Century provided $650,000 for the City of Malibu to fund safety improvements along Pacific Coast Highway. At the time of the CITS visit to Malibu, none of the improvements listed below had been implemented.

The list of improvement projects include:

- $75,000 – Traffic Information Radio Station to be operated by the City with Caltrans having direct access to its message system. With Federal Communications Commission approval, Malibu will place a repeater in a canyon area so that a signal can be heard from as far away as the Ventura Freeway in Calabasas.
- $50,000 – Study of U-Turn and Left – Turn movements.
- $25,000 – Malibu Canyon Rd/PCH Intersection Signal Upgrade. (Caltrans)
- $25,000 – Malibu Canyon Rd/PCH Signal Video Detection System (Caltrans)

*(Note: Malibu Canyon Road Road is classified as a **major road** north of Civic Center Road (County Road "N 1") and provides access to nearby Pepperdine University. It isan important transportation link between Malibu and the Ventura Freeway (Highway 101) in the Agoura/Calabasas area. South of Piuma Road, Malibu Canyon Road carries over 18,000 vehicles per day)*

- $66,000 – Smart Crosswalks at 3 locations
- $7,500 - Speed Advisory Board to be purchased by the City and used by the Sheriff's Department

- $371,500 - Implementation of Left-Turn and U-Turn Study Recommendations

4. Collisions involving pedestrians

An analysis was also done of collisions involving pedestrians along Pacific Coast Highway using data from the SWITRS Report No. 6 covering the 3 ½ year period from January 1, 1996 through June 30, 1999. The purpose of this analysis was to identify the location of pedestrian-related collisions. Table 19 presents a summary on the results of this analysis. Since January 1, 1996 there have been 14 collisions involving a pedestrian on Pacific Coast Highway of which 9 were reported as a pedestrian violation. Table 19 also shows that only one collision involving a pedestrian in a crosswalk was reported during the 3 ½ year period. This collision was located in the crosswalk at the mid-block signalized crosswalk adjacent to the Malibu Pier, Post Mile 46.54.

There are 4 marked mid-block crosswalks on Pacific Coast Highway between Big Rock Drive and Cross Creek Drive. Of these 4 mid-block crosswalks, 3 are controlled by a traffic signal which can be activated by a pedestrian push button. Pacific Coast Highway in the vicinity of the 3 signalized intersections is about 80 feet wide and operates as a 4-lane road plus parking both sides plus a two-way left-turn median. The WALK and DON'T WALK pedestrian timing intervals are set at 7 seconds and 14 seconds, respectively, at the 3 signalized intersections. Using the Caltrans design walking rate of 4 feet/second, the CITS engineer checked the pedestrian push button timing and found it to be appropriate at all 3 locations. The 4th marked mid-block crosswalk is located just east of Carbon Canyon Road and is uncontrolled. All other collisions involved a pedestrian crossing Pacific Coast Highway at a mid-block location without a marked crosswalk or a pedestrian walking along the road. It should be noted that Caltrans plans to install "smart crosswalks" at both the Malibu Pier crosswalk and the uncontrolled crosswalk east of Carbon Canyon Road. The two "smart crosswalks" will be funded under the Transportation Equity Act mentioned above. During the visit, the CITS engineer learned that pedestrians oftentimes cross Pacific Coast Highway at mid-block between Cross Creek Road and Carbon Canyon Road because of the long distances between signalized intersections (s) as illustrated in the following sketch:

19 also shows an increase in the number of side swipe and object type collisions as well as the number of injuries. For further information the reader is encouraged to refer to the article.

Based on the results of this study, the Georgia Department of Transportation replaced an existing two-way left-turn median with a raised median on State Route 10 (Memorial Drive) which had similar conditions to the test arterial. It should be noted that a decision on whether to install a raised or a two-way left-turn median must be based on an analysis of several factors: Land uses, daily traffic volumes, peak hour volumes, mid-block left turn delays, number of driveways per mile, number of side streets per mile, number of traffic signals per mile, collision history, construction and maintenance costs and others.

8. Land use along Pacific Coast Highway

As mentioned above, a key factor that must be taken into consideration during the decision-making process is the kind of existing land uses on both sides of a highway. With respect to land uses, Pacific Coast Highway can be divided into the following 4 sections:

Section A: This section from Tuna Canyon Road to a point approximately east of Las Flores Canyon Road is about 1.5 miles in length. Land uses consist almost exclusively of residential development and open space. Most of the homes are located on the south side (beach area) with many driveways, very limited off-street parking, and only one intersection at Big Rock Drive. To reduce the number of number of turning movements, it is suggested that consideration be given to installing a raised median with openings at 3 locations, to provide for left turns and u-turns. It is important that the openings be located where the width of the roadway meets the minimum standards for permitting u-turns.

Section B: The section from Las Flores Canyon Road to Serra Road is about 2.75 miles long and consists a mixture of residential, commercial and open space land uses. There are numerous driveways on both sides of PCH. This section was recently striped with a two-way left-turn center median to allow for turning movements. Table 14 shows that the vast majority of collisions in this section were reported along segments not at intersections. From a traffic safety standpoint, a raised median would eliminate most of the angle type collisions as demonstrated by the results of the study discussed above and shown in Table 20. However, it is recognized that it may be difficult to implement this type of center median due to the high demand for access to the various commercial properties. The City would likely be required to conduct an **effective public**

information program in order to overcome possible opposition from business owners and residents. Perhaps a compromise might be achieved by designing a raised median with openings at each of the existing signalized intersections and, perhaps, at ¼ mile intervals.

Section C: This section from the Malibu Creek Bridge to Malibu Canyon Road is located adjacent to the Colony Plaza Shopping Center, the Civic Center and Pepperdine University. Pacific Coast Highway is currently divided by a raised center median with openings at the 3 signalized intersections, namely, Cross Creek Road, Webb Road and Malibu Canyon Road. Review of the 3 ½ year collision history indicates that no angle type collisions were reported. Most of the collisions have been of the rear end type. It is suggested the existing raised median in this section be retained.

Section D: Land uses along the section from Malibu Canyon Road to Trancas Canyon Road is primarily residential with several signalized intersections. As indicated above, the median treatment varies from a striped median to a raised median. It is suggested that the City consider working closely with Caltrans to design and construct a raised median throughout this section with openings limited to intersections. In addition to controlling access, a raised median in this section would also provide a refuge area for pedestrians.

9. Summary of engineering factors

A field reconnaissance was made and photographs taken at each of the *seven selected* intersection by the CITS Team. Traffic signal plans and aerial maps of the Pacific Coast Highway corridor were obtained from Caltrans. Speed limits and 85th percentile data were obtained from the City and are shown in Figure 20, Appendix. Existing levels of service and existing weekday peak hour counts were obtained from a consultant's report entitled "Traffic and Circulation Study for the Malibu Village Project" dated June, 1999. From this information, a list of engineering factors is shown in Table 21, page 62.

10. Engineering recommendations

- **Tuna Canyon Road** - If feasible, further sloping of the cliff at the NE corner should be considered to enhance lateral visibility. The "DO NO ENTER – WRONG WAY" sign at the northwest corner could be made more visible to westbound traffic by relocating it closer to the roadway.

- **Big Rock Drive** - Further sloping of the cliff at the NE corner should be considered to improve lateral visibility.

- **Las Flores Canyon Road** - Lateral visibility should be improved by relocating or removing some of the signs, posts and trimming the shrubbery at the northwest corner adjacent to the flower shop.

- **Carbon Canyon Road** - The cliff at the northeast corner should be sloped further. It may require construction of a retaining wall. Also some of the poles and various signs should be removed or relocated to further improve lateral visibility.

- **Crosswalk Post Mile 45.57** - See discussion in Section VI Median Treatment on Pacific Coast Highway, page 54 regarding treatment of the center median.

- **Crosswalk Post Mile 46.08** - See discussion in Section VI Median Treatment on Pacific Coast Highway, page 54 regarding treatment of the center median.

- **Sweetwater Canyon Drive** - This "intersection" is actually a narrow driveway servicing several homes in the area. This location is not signalized and there are no marked crosswalks. Its collision rate is very low at .07 col/mev. Only 4 of the 66 collisions reported in this area occurred at mid-block. See discussion in Section VI Median Treatment on Pacific Coast Highway, regarding treatment of the center median.

- **Crosswalk Post Mile 46.54 Malibu Pier** - One pedestrian was killed on May 13, 1996 at this crosswalk. Since then through June 30, 1999 no pedestrian-involved collisions have been reported. Caltrans plans to install a "smart crosswalk" at this location.

- **Serra Road**access to homes on the north side and to the Malibu Lagoon parking and Museum on the south side. Of the 87 collisions reported in this area, 13 occurred at or near this intersection. There is no marked crosswalk or traffic signal at this location. It is recommended that the trees/shrubs at the northwest corner be trimmed and that the road serving the LA County Parking lot be improved by raising its grade near the driveway to improve lateral visibility. As an alternative, a traffic signal should be considered since lateral visibility from at both driveways is

limited and the two driveways are located within a section of Pacific Coast Highway with a high number of collisions.

- **Cross Creek Road** - Recheck signal phasing following completion of the study on left-turns and u-turns to be conducted later this year. Cross Creek Road is one of the streets which will be directly impacted by the proposed Malibu Village project. Mitigation measures are included in the consultant's report.

- **Crosswalk on Cross Creek Road** - Approximately 240 pedestrians use this crosswalk on a typical weekday. This crosswalk is not signalized. Two pedestrian-involved collisions have been reported since 1996. Flashing inset lights (smart crosswalk) should be considered or some type of textured crosswalk markings such as 3/8" thick thermoplastic should be considered. The City may wish to contact the Office of Traffic Safety in Sacramento to obtain information regarding on whether funds might be available to install a "smart crosswalk".

- **Webb Way** - An overhead SIGNAL AHEAD FLASHING BEACON should be considered in the eastbound direction and a review of the signal phasing be conducted following the u-turn & left-turn study results. Webb Way is also one of the intersections which will be impacted by the proposed Malibu Village project and mitigation measures are included in the consultant's report.

- **Zumirez Drive** - The tree at the northwest corner in front of the Stop Sign should be trimmed and that the speed display trailer being obtained by the City be assigned to this location.

- **Westward Beach Road** - A study to determine whether a traffic signal is warranted should be undertaken.

- **Medians on Pacific Coast Highway** - Based on the results of a brief field reconnaissance along Pacific Coast Highway, the following observations are submitted for the City's consideration:

Section A: This section from Tuna Canyon Road to point approximately east of Las Flores Canyon Road is about 1.5 miles in length. Land uses consist almost exclusively of residential development and open space. Most of the homes are located on the south side (beach area) with many driveways, very limited off-street parking, and only one intersection at Big Rock Drive. To reduce the number of number of turning movements, it is suggested that consideration be given to

installing a raised median with openings at 3 locations, to provide for left turns and u-turns. It is important that the openings be located where the width of the roadway meets the minimum standards for u-turns.

Section B: The section from Las Flores Canyon Road to Serra Road is about 2.75 miles long and consists a mixture of residential, commercial and open space land uses. There are numerous driveways on both sides of PCH. This section was recently striped with a two-way left-turn center median to allow for turning movements. Table 13 shows that the vast majority of collisions in this section were reported along segments not at intersections. From a traffic safety standpoint, a raised median would eliminate most of the angle type collisions as demonstrated by the results of the study discussed above and shown in Table 19. However, it is recognized that it may be difficult to implement this type of center median due to the high demand for access to the various commercial properties. The City might need to conduct an effective public information program in order to overcome possible opposition from business owners and residents. Perhaps a comprise might be achieved by designing a raised median with openings at each of the existing signalized intersections and, perhaps, at ¼ mile increments.

Section C: This section from the Malibu Creek Bridge to Malibu Canyon Road is located adjacent to the Colony Plaza Shopping Center, the Civic Center and Pepperdine University. Pacific Coast Highway is currently divided by a raised center median with openings at the 3 signalized intersections, namely, Cross Creek Road, Webb Road and

Malibu Canyon Road. Review of the 3 ½ year collision history indicates that no angle type collisions were reported. Most of the collisions have been of the rear end type. It is suggested the raised median in this section be retained.

Section D: Land uses along the section from Malibu Canyon Road to Trancas Canyon Road is primarily residential with several signalized intersections. As indicated above, the median treatment varies from a striped median to a raised median. It is suggested that the City consider working closely with Caltrans to design and construct a raised median throughout this section with openings limited to intersections.

Table 21
SUMMARY OF ENGINEERING FACTORS

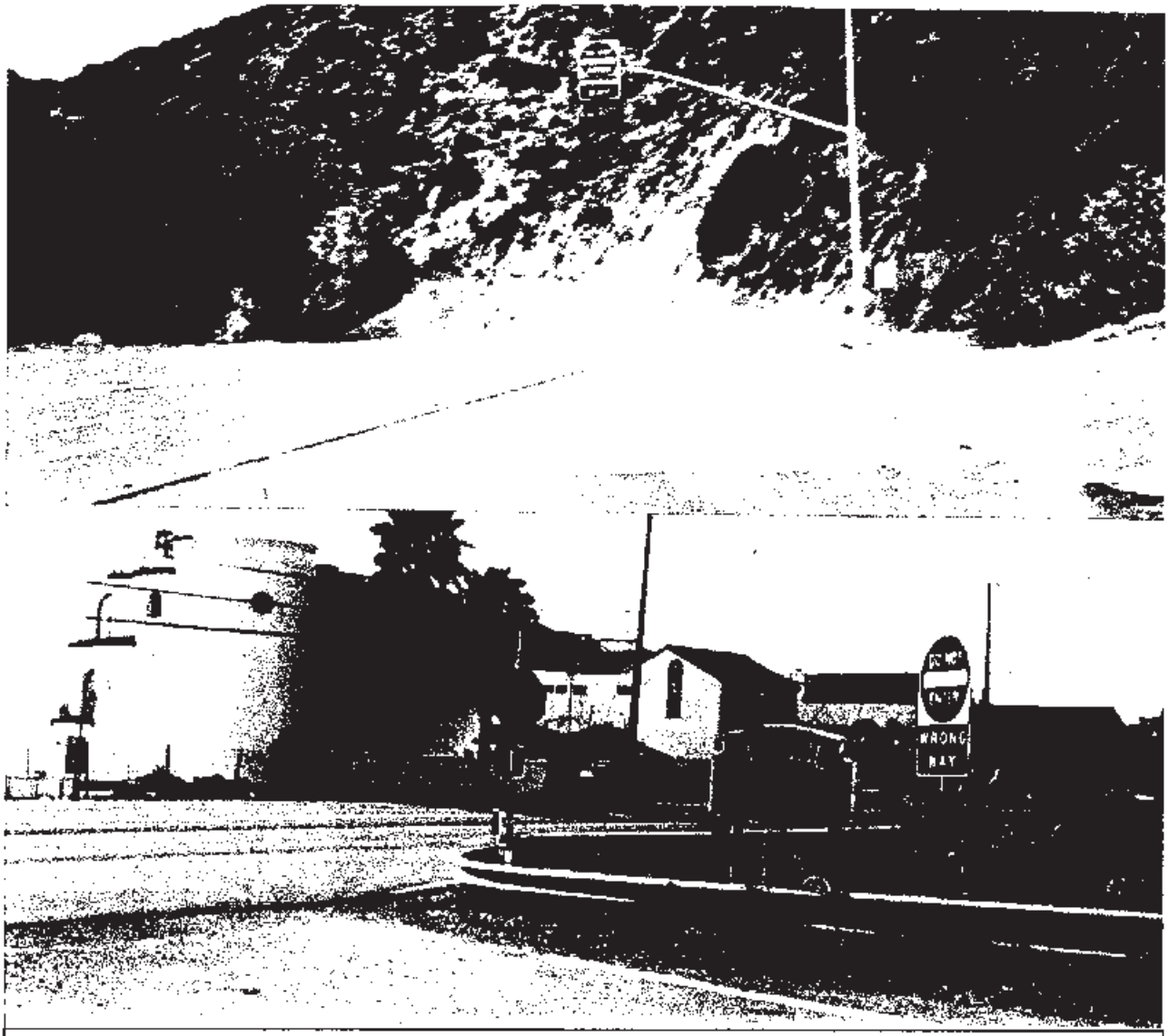
Factors	Side Streets Intersection Pacific Coast Highway						
	Big Rock Drive	Las Flores Cyn Road	Carbon Cyn Rd	Sweetwater Cyn Drive	Serra Rd	Cross Creek Rd	Webb Way
Configuration	"T" intersection, with Big Rock Dr intersecting with PCH on the north leg. See Figure 2 photo, Appendix.	Complex "T" type intersection located about 150 feet east of the Rambla Pacifico intersection. Several driveways exist on both sides of PCH providing access to commercial properties. See Figure 3 photo, Appendix.	"T" intersection with Carbon Cyn Rd intersecting PCH on the north leg. The County Fire Station is located at the northeast corner. See Figure 4 photo, Appendix.	Not an intersection. Sweetwater Cyn Drive is a private driveway on north side of PCH. Driveway on south side for access to motel. See Figure 7 photo, Appendix.	Not an intersection. Serra Rd is a private driveway on north side of PCH; Driveway on south is entrance to County parking lot and to Malibu Lagoon Museum. See Figure 9 photo, Appendix.	This is a 4-legged intersection with the south leg open only to the Malibu Lagoon State Park parking lot. See Figure 10 photo, Appendix.	This is a 4-legged intersection with the Civic Center to the north and commercial & residential to the south. See Figure 12 photo, Appendix.
Traffic Controls	Signalized with EB left turn pocket from PCH to Big Rock Drive. Stop sign on Big Rock Drive.	Las Flores Cyn Rd and Rambla Pacifico are interconnected with 8 phases. Protected LT phase in each direction on PCH. 5 sec amber and 1.0 sec all-red on PCH.	4 phase signal with EB protected LT from PCH to Carbon Cyn Rd. 5 sec amber and 1 sec all-red on PCH.	Not signalized, stop sign on Sweetwater Cyn Drive.	Not signalixzed. STOP on Serra Road.	8 phase signal with protected left turns in both directions on PCH. Winter & summer timing programs. Cycle length varies from 80 to 150 seconds. 5 sec amber & 1 sec all-red on PCH. 3.2 sec amber & .5 sec all-red on Cross Creek Rd.	6 phase signal with protected left turns in both directions on PCH. Winter & summer timing programs. Cycle length varies from 80 to 150 seconds. 5 sec amber & 1.5 sec all-red on PCH. 3.2 sec amber & 0.5 sec all-red on Webb Way.
Advance SIGNAL AHEAD signs	Yes, signal ahead flashing beacons in both directions	Yes, both directions	Yes, signal ahead flashing beacon WB; signal ahead sign EB.	None	None. Side road sign both directions (W7)	WB only	EB only
Lighting	Good	Good	Good	Fair.	good	Good	Good
Lateral Visibility	Partially restricted at north approach on Big Rock Drive due to the high cliff.	Good, except at northwest corner due to plants, shrubs, poles, etc at flower shop.	Partially restricted SB at N approach due to cliff at NE corner and horizontal curve east of Carbon Cyn Rd.	Partially restricted SB at NW corner due to trees & shrubs.	Partially restricted SB at NW corner due to shrubs.	Good	Good

CONTINUED – SUMMARY OF ENGINEERING FACTORS FOR SEVEN SELECTED INTERSECTIONS							
Entering Approach Lanes: T = Thru lane L = Left lane R = Right lane	NB: none SB: I T/L/R EB: 2 T + 1 LTO WB: 2 T/R	NB 1 T/L/R SB: 1 T/L/R EB: 1 LTO + 1 T + 1 T/R WB: 1 RTO + 2 T + 1 LTO	NB: none SB: 1 T/L/R EB: 1 LTO + 2 T WB: 2 T + 1 RTO	NB: none SB: 1/L/R T EB: 2 T WB: 2 T, includes Two-way left-turn center median	NB: none SB: 1 T/L/R EB: 2 T + RTO WB: 2 T, includes Two-way left-turn center median	NB: 1 LTO + + 1 T/R SB: 1 RTO + 1 T/L + 1 LTO EB: 1 LTO + 1 T + 1 T/R WB: 1 T/R + 1 T + 1 LTO	NB: 1 LTO + 1 T/R SB: 1T/R/L + LTO EB: 1 LTO + 3 T + 1 RTO WB: 1 RTO + 2 T + LTO
Bicycles	PCH is bike route, moderate volumes on weekends.	Bike route	Bike route	Bike route	Bike route	Bike Route	Bike Route
Pedestrians	Marked x-walks at N & W approaches, low ped traffic.	Marked x-walks at E and N approaches of Las Flores Cyn Rd; W & N approaches of Rambla Pacifico. Light ped vol.	Marked x-walks at W & N approaches. Light ped vol weekdays; higher weekends.	No x-walks on PCH	No x-walks on PCH	X-walks on all legs except the east leg. Ped volumes moderate on weekends.	x-walks on all legs except east leg. Ped volumes moderate during weekends.
Speed Limit on PCH	45 mph	45 mph on PCH; 25 mph on Las Flores Cyn Rd	45 mph on PCH; 25 mph on Carbon Cyn Rd	45 mph	45 mph on PCH	45 mph	45 mph
85th % Speed	50.8 mph w/o Tuna Cyn Rd	52.1 mph e/o Las Flores Cyn Rd	51.8 mph w/o Rambla Vista	51.5 e/o Serra Rd	53.7 mph	53.7 mph	53.7 mph
Total Weekday Entering AADT Volume	44,000	43,000	42,500	42,100	41,700	41,900	41,500
3 ½ year collision history	75 (22 Intersection + 53 segment)	103 (30 Intersection + 73 segment)	74 (12 intersection + 62 segment)	66 (4 Intersection + 62 segment)	87 (13 intersection + 74 segment	80 (11Intersection + 69 segment)	70 (39 Intersection + 31 segment)
Collision Rate, Collisions/mev	0.39	0.55	0.22	0.07	0.24	0.21	0.74
Rank Number	3	2	5	7	4	6	1

CONTINUED – SUMMARY OF ENGINEERING FACTORS FOR SEVEN SELECTED INTERSECTIONS							
On-Street Parking	None. Some vehicles park park at any angle in driveways in front of garages. Potential conflicts when vehicles back out onto PCH.	Parking on shoulder west of Rambla Pacifico. Large parking lot on the south side serving a restaurant & motel	Yes on N side PCH w/o Carbon Cyn Rd. This side of PCH has been widened.	Yes. Parking permitted on both sides of PCH	Yes, parking on the south side of PCH w/o the Malibu Museum/Co Parking lot driveway. Very heavy parking demand weekends, holidays.	None on PCH. Off-street parking available at nearby shopping center.	None on PCH. Off-street parking available at shopping centers, civic center & local streets
U-Turns	Not permitted	Not permitted	Not permitted WB, Ok EB	Two-way left-turn center median.	Two-way left-turn center median.	Not permitted	Ok , WB & EB. Moderate volume of u-turns EB.

Engineering Appendix

FIGURE 1 - TUNA CANYON RD AT APPROX. POST MILE 41.5

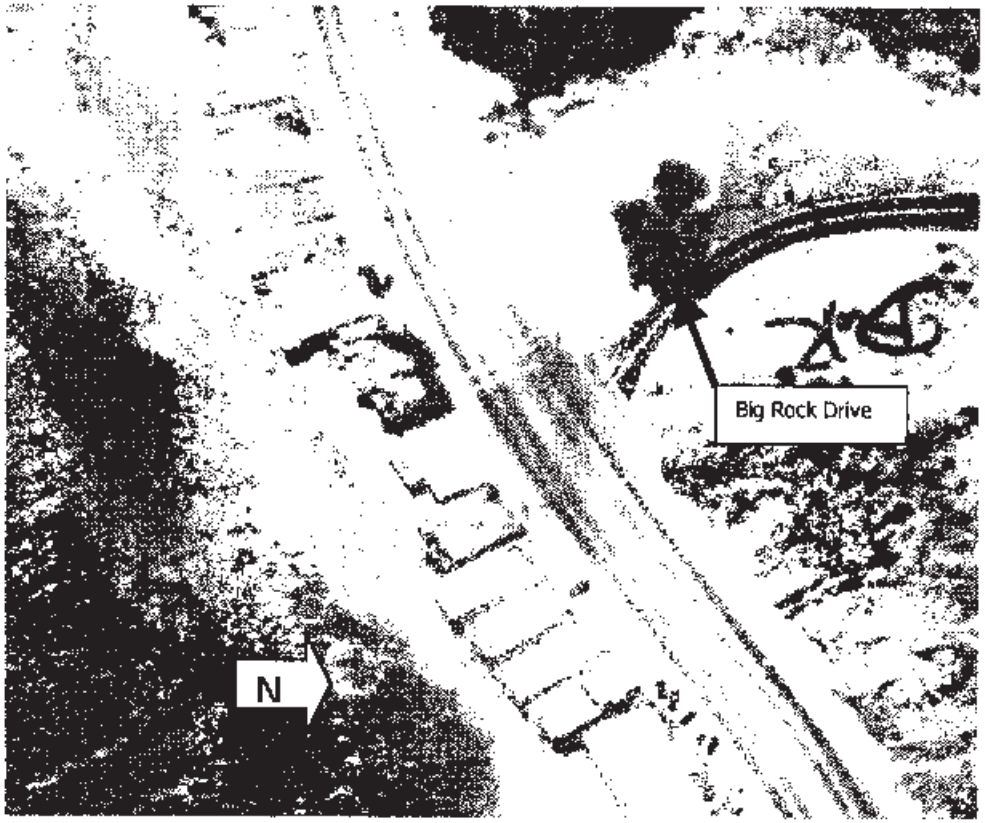


General Description: Tuna Canyon Road is not included in the list of the seven intersections selected for detailed engineering analysis. However, a field observation was conducted since there were 3 persons were killed in a broadside type collision in 1995. Further discussion is included in the ENFORCEMENT SECTION of this report. Tuna Canyon Rd is currently closed to northbound traffic and is therefore signed as a one-way southbound road only road as shown in the above photos. The closure is due to previous damage caused by slides and other conditions. Persons who reside or have businesses north of PCH, including the communities of Topanga and Fernwood , now use Topanga Canyon Boulevard, Las Flores Canyon Road or other available local roads to travel in the northbound direction. Fire and other emergency vehicles are permitted to travel in the northbound direction. Tuna Canyon Road is controlled by a stop sign at its north approach. PCH is uncontrolled and there are no marked crosswalks. Speed Limit in this location on PCH is 45 mph with an 85th percentile speed of 50.8.

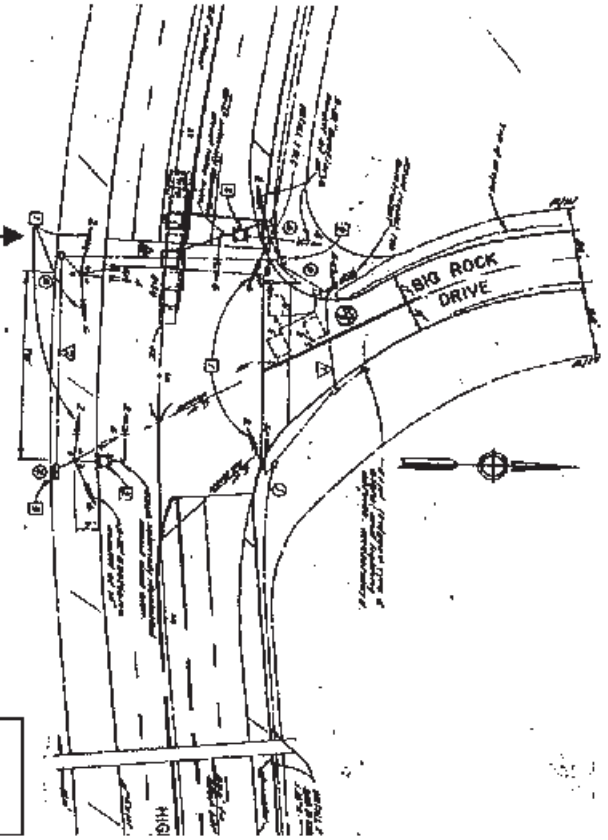
Field Observations: Sight Distance from Tuna Canyon Rd looking to the east on PCH is partially restricted due to the high cliffs at the northeast corner and to the horizontal curve east of Tuna Canyon Rd. Street lighting appears to be adequate. Despite advance signs indicating "NO RIGHT TURN" a few westbound vehicles were observed attempting to make a right turn, then proceeding westbound or making a u-turn.

Recommendation:
If feasible, an effort should be made to enhance the sight distance by further sloping a section of the cliff at the northeast corner. In addition, it is suggested that the "DO NOT ENTER –WRONG WAY" sign shown in the above photo be relocated closer to the corner such that it can be more visible to westbound traffic.

FIGURE 2 - BIG ROCK DRIVE POST MILE 42.5



Traffic Signal Plan



Looking east on PCH at Big Rock Drive

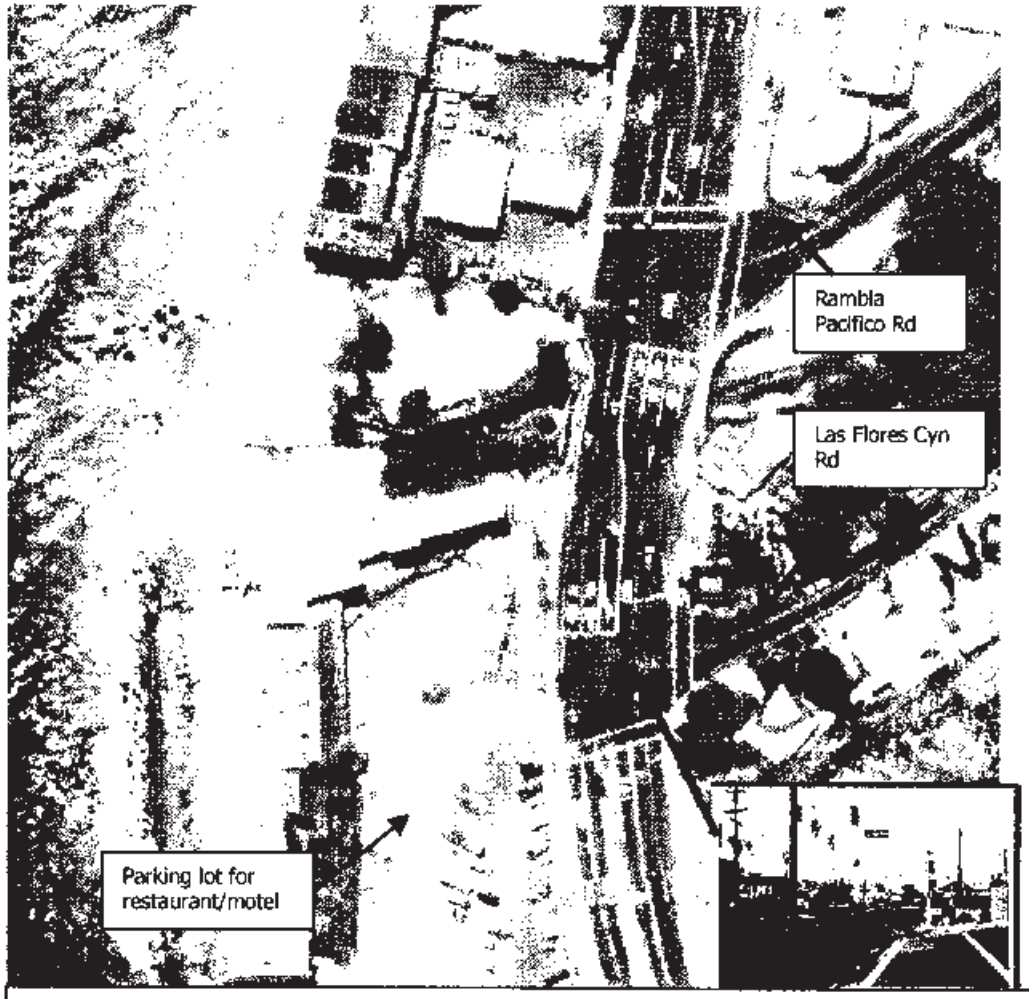


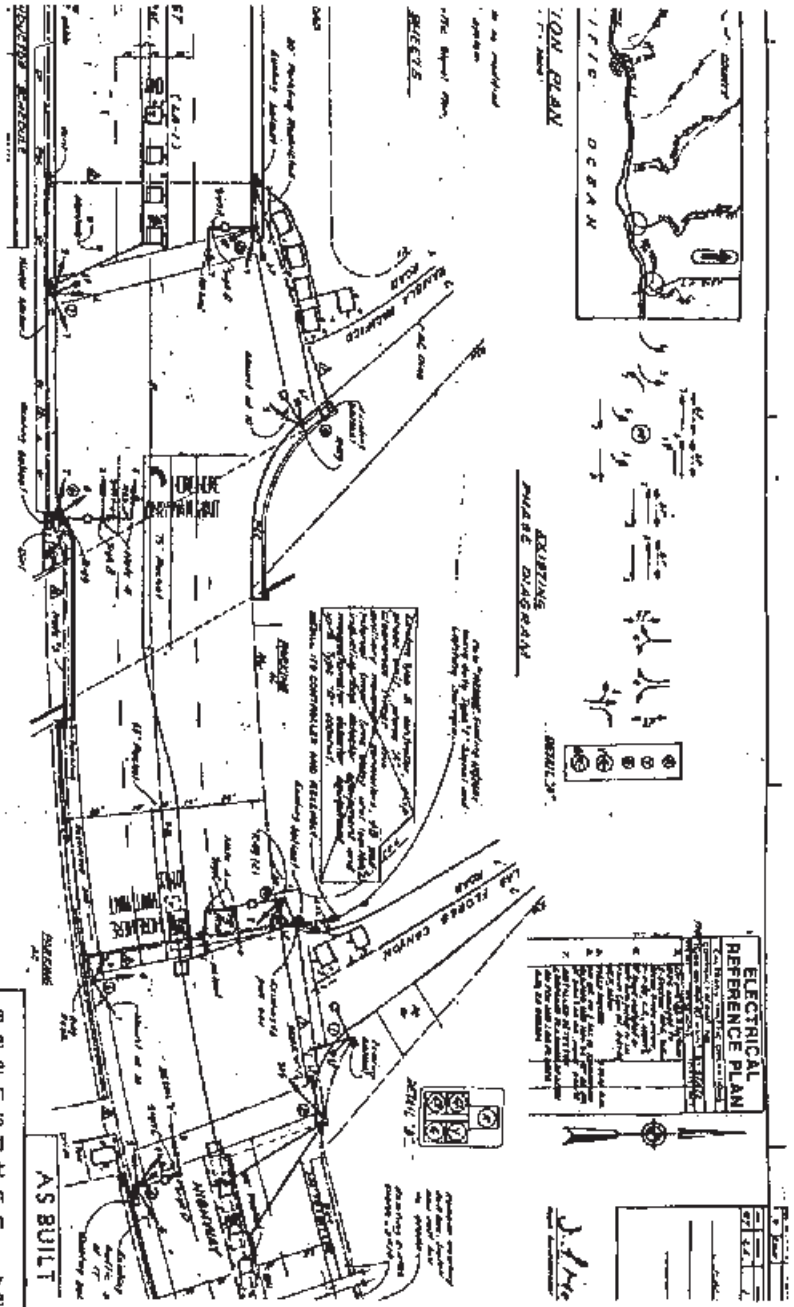
General Description: Big Rock Drive is a signalized "T" type intersection with advance SIGNAL AHEAD signs in both directions. Marked crosswalks are located on the north and west legs with low weekday pedestrian activity. Speed limit on PCH is 45 mph with an 85th percentile speed of 50.8 mph. The total volume entering this intersection is 44,000 vehicles/day (vpd) of which 42,500 travel on PCH and about 500 are vehicles southbound on Big Rock Drive. During the 3 ½ year from January 1, 1996 through June 30, 1999 a total of 75 collisions were reported of which 22 occurred at the intersection. Its calculated collision rate is 0.39 collisions/mev. In comparison with the other six selected intersections, Big Rock Drive ranks number 3.

Field Observations: Due to the high cliff at the northeast corner (see photo) and "S" horizontal curve east of this intersection, lateral visibility is partially restricted to southbound traffic entering PCH from Big Rock Drive. Several of the intersection collisions were reported between southbound vehicles from Big Rock Drive and vehicles on PCH traveling through or turning.

Recommendation: If feasible, further sloping of the cliff at the northeast corner is suggested to enhance lateral visibility.

FIGURE 3 - LAS FLORES CYN RD/RAMBLA PACIFIC0 RD POST MILE 44.15

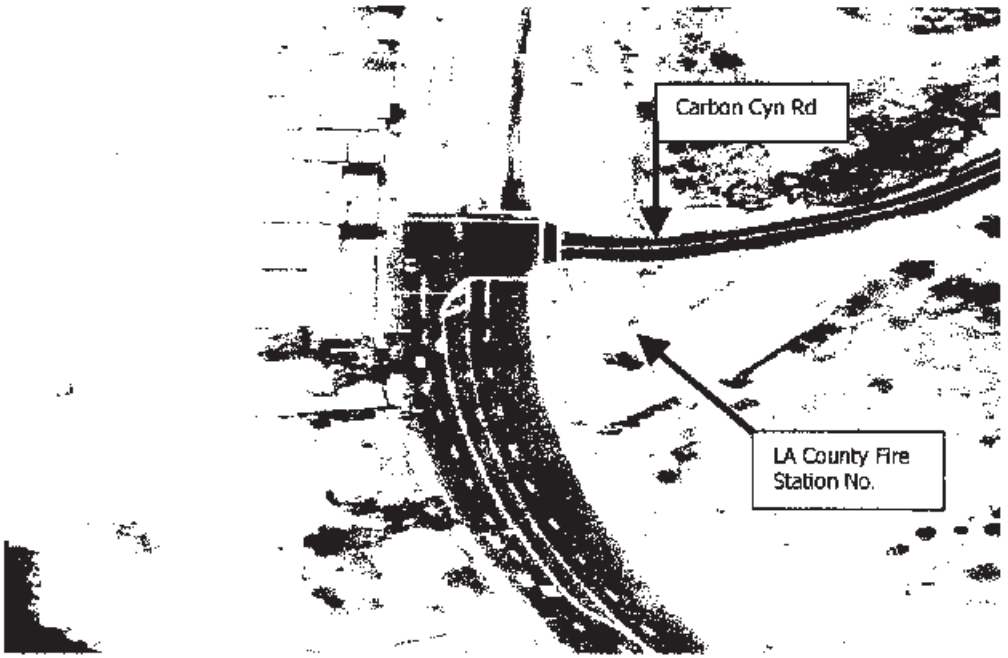




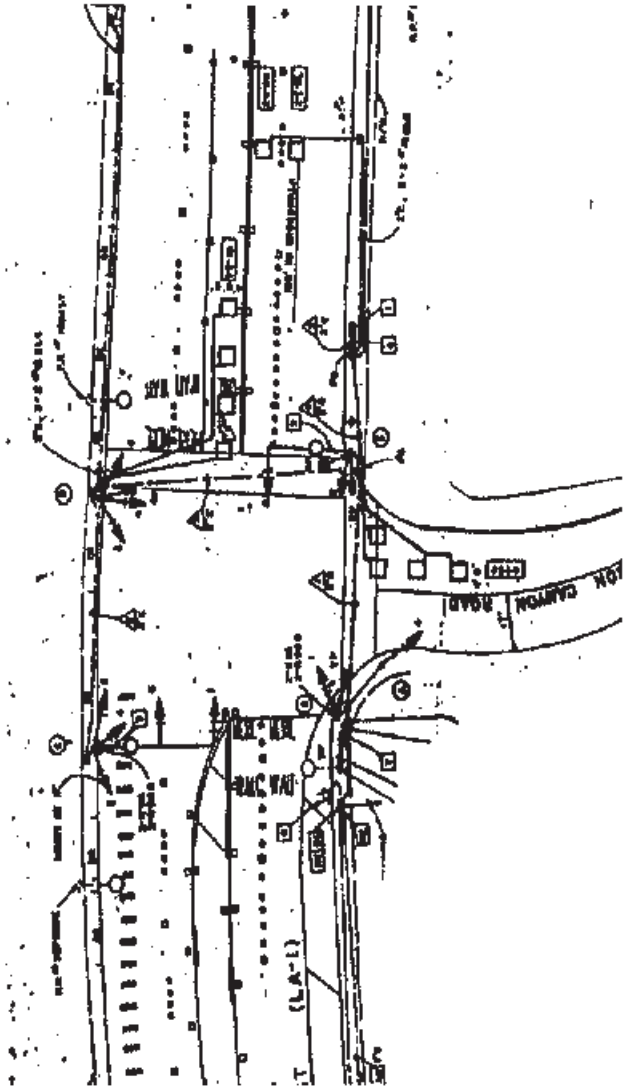
General Description: Las Flores Canyon is a complex signalized "T" type intersection with the Rambla Pacifico signalized intersection located only about 150 feet to the west. The two intersections are interconnected and timing is coordinated. Several driveways are located on both sides of PCH at or near the intersection which provide access to businesses. Both intersections have marked crosswalks. Speed limit on PCH is 45 mph and with an 85th percentile speed of 52.1 mph east of this intersection. About 43,000 vehicles enter this intersection of which 42,000 use PCH. About 900 vpd and 300 vpd travel southbound and northbound, respectively. The northbound 300 vpd originate mostly from the parking lot serving a restaurant and motel as shown in the photo. A total of 103 collisions were reported during the 3 ½ year period of which 30 occurred at or near the intersection. Its calculated collision rate is 0.55/mev and ranks number 2 in comparison with the other six intersections.

Field Observations & Recommendation: Lateral visibility is partially obstructed due to the various signs, shrubs & posts at the northwest corner adjacent to the flower shop (see photo). This corner should be checked and some of the obstructions removed.

FIGURE 4 - CARBON CYN RD POST MILE 44.96



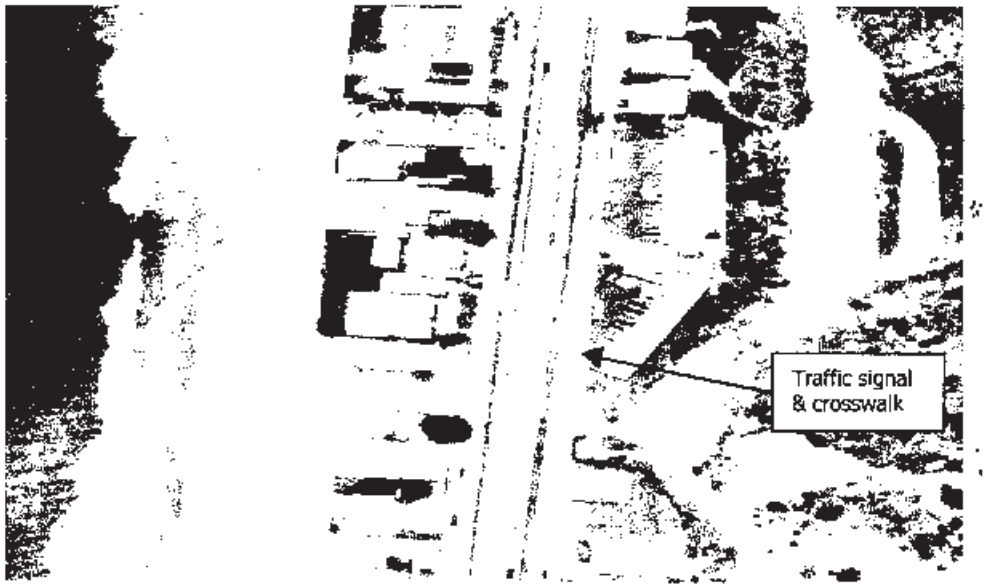




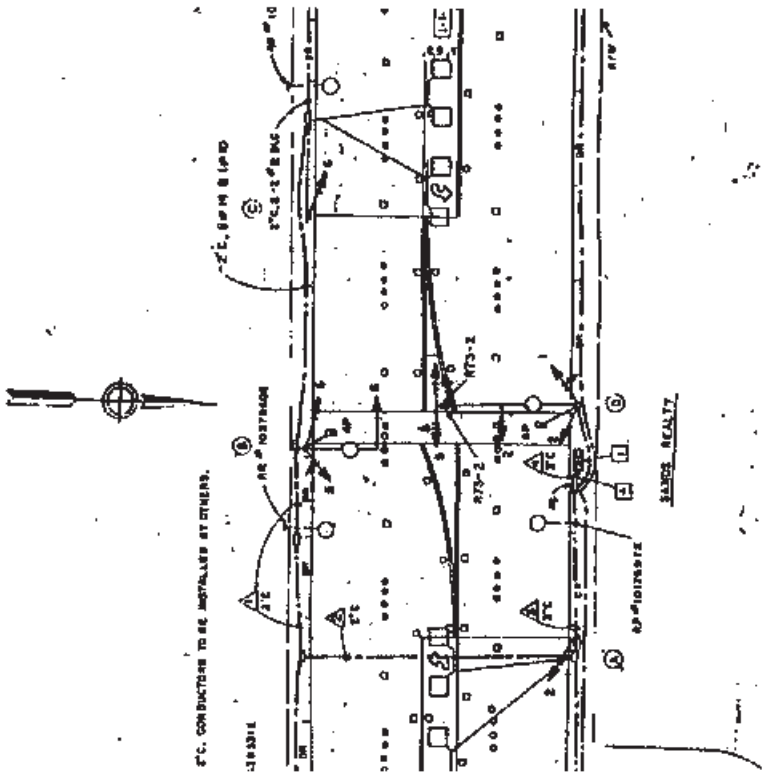
Description: Carbon Cyn Rd is a signalized "T" type intersection with advance SIGNAL AHEAD signs in both directions. Marked crosswalks are located at the west and north legs and with low pedestrian activity. Speed limit on PCH is 45 mph with an 85th percentile speed of 51.8 mph. The total volume entering this intersection is 42,500 vpd of which 42,000 vpd travel on PCH and 500 vpd travel southbound on Carbon Cyn Dr. During the 3 ½ year period, a total of 74 collisions were reported of which 12 occurred at or near the intersection. Its calculated collision rate is 0.0.22 col/mev and its priority rank is 5 in compared to the other six selected intersections.

Field Observations & Recommendation: Lateral visibility is partially obscured due to the cliff at the northeast corner (see photo) and to poles & various signs. If feasible, it is suggested that the cliff be graded to improve sight distance (may require a retaining wall) and that some of the poles/or signs be relocated.

FIGURE 5 - CROSSWALK AT POST MILE 45.57

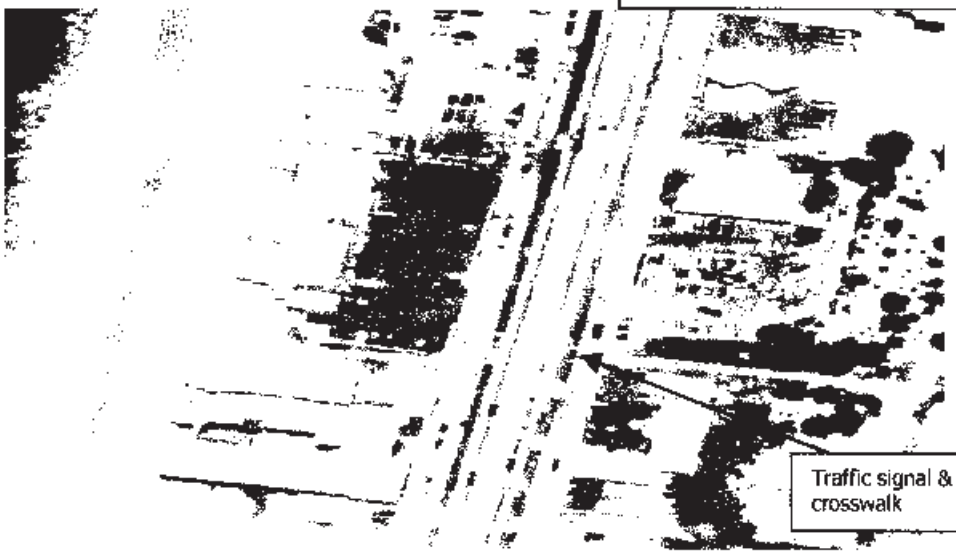




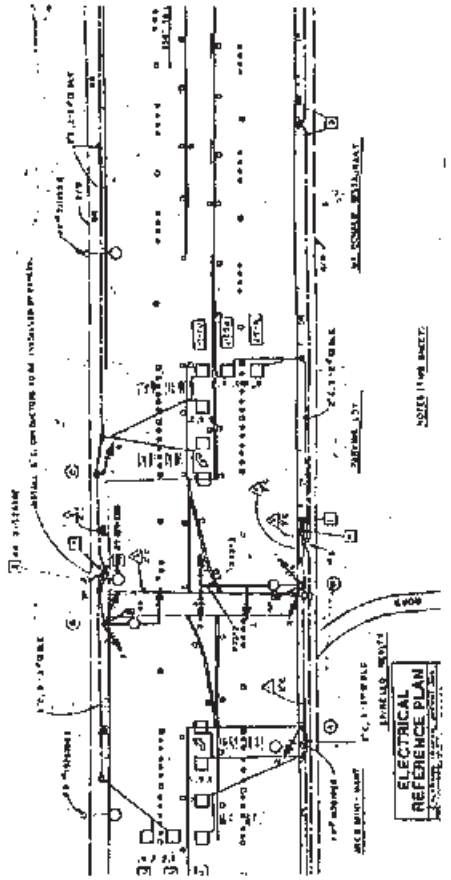


General Description: The traffic signal at Post Mile 45.57 provides safety controls at a mid-block crosswalk. Pedestrians use this crosswalk to walk between the commercial buildings on the north side of PCH and the residences and beach on the south side of PCH. This section of PCH is painted with a two-way left-turn center median and includes left turn pockets for vehicles entering the parking lot (see above photo) and turning direction. Since January 1, 1996 no collisions involving pedestrians have been reported at this crosswalk.

FIGURE 6 - CROSSWALK AT POST MILE 46.08







General Description: The traffic signal at Post Mile 46.08 provides safety controls at mid-block crosswalk. Pedestrians use this crosswalk to walk between the commercial buildings on the north side of PCH and the residences and beach on the south side of PCH. This section of PCH is striped with a two-way left-turn center median which includes left turn pockets. During the period from January 1, 1996 through June 30, 1999 no collisions involving pedestrians were reported at this crosswalk.

FIGURE 7 - SWEETWATER CANYON DRIVE AT POST MILE 46.40





See location of sign in photo below

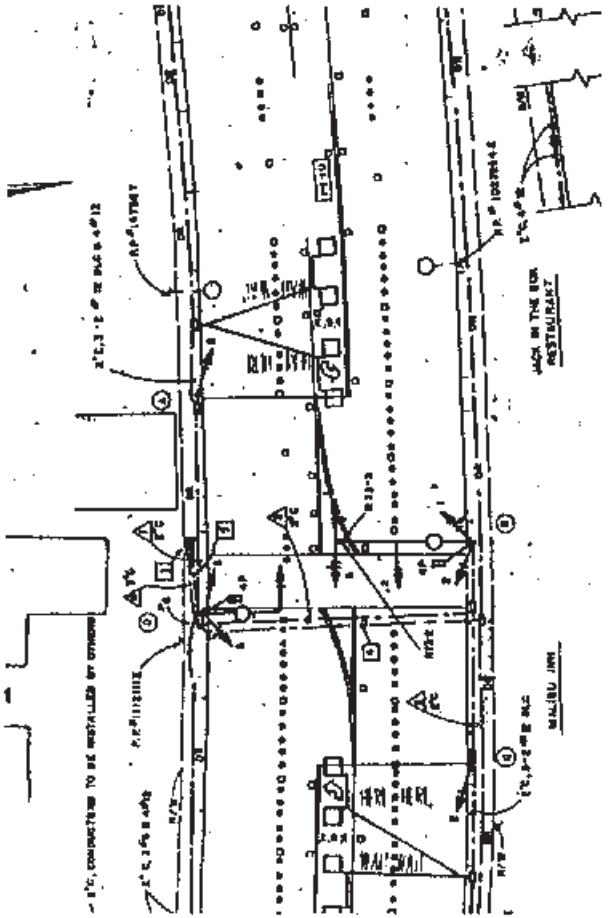


General Description: Sweetwater Canyon Drive is not a publicly maintained road. The private driveway shown in the above photo provides access to several homes and this location is not is not signal-controlled. There are no marked crosswalks on PCH. Caltrans recently re-paved and re-striped this section of PCH with 2 lanes in each direction and a wide 2-way center median. The total volume entering this "intersection" is 42,100 vpd of which 42,000 vpd travel on PCH and 100 vpd are southbound vehicles from Sweetwater Canyon Drive. A total of 66 collisions were reported during the 3 ½ year period with only 4 collisions reported at or near the intersection. Its collision rate is 0.07 col/mev and ranks number 7 among the six selected intersections.

Field Observations & Recommendations: The trees/shrubs located on both sides of the driveway shown in the above photo should be trimmed further to increase lateral visibility. See Section on Median Treatment for further discussion.

FIGURE 8 - CROSSWALK AT POST MILE 46.54 MALIBU PIER

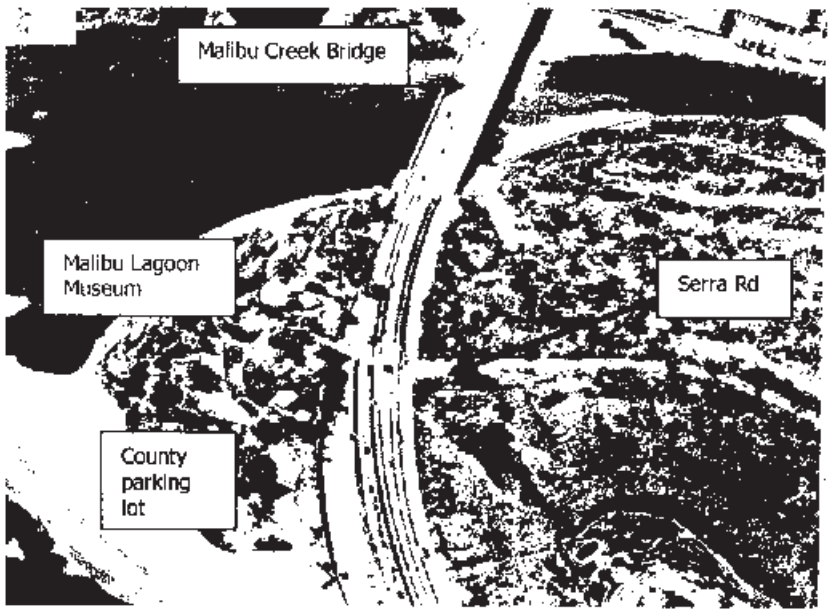






General Description: Crosswalk PM 46.54 is located on PCH adjacent to the Malibu Pier and controlled by a traffic signal as shown in the photo. During the 3 ½ year period from January 1, 1996 through June, 1999 one collision involving a pedestrian was reported. This collision occurred at 11:30 pm on May 13, 1996 and involved a pedestrian who was under the influence of alcohol and drugs. Caltrans plans to install a "smart crosswalk" which is described as a crosswalk with overhead cautionary lights and ground level imbedded lighting that will illuminate the walk area when a pedestrian crosses the highway.

FIGURE 9 - SERRA ROAD AT POST MILE 46.80







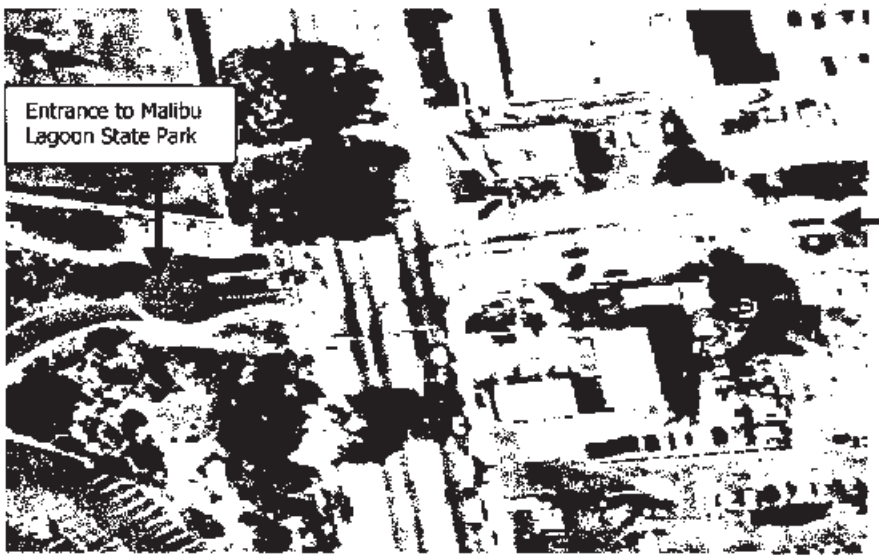


General Description: Serra Road is a narrow 2 lane private road on the north side of PCH that provides access to several homes and to the Serra Retreat center. On the south side of PCH a driveway provides access to the LA County parking lot and to the Malibu Lagoon Museum. Serra Road is not controlled by signals and there are no marked crosswalks on PCH. Speed limit on PCH is 45 mph and the 85th percentile speed is 53.7 mph. The total volume entering this intersection is 41,700 vpd of which 41,500 vpd travel on PCH and about 200 vpd are from Serra Road. A traffic count from the LA County parking lot and the Malibu Lagoon Museum was not available. However, it is understood that on some weekends and holidays, the count may be higher than at Serra Road. Parking along the curb on the south side of PCH is sometimes very heavy as shown in photo to the right. A total of 87 collisions were reported in the vicinity of Serra Road on PCH during the 3 ½ year period. However, 74 of these collisions occurred along the segments as compared to 13 collisions reported at or near the intersection.

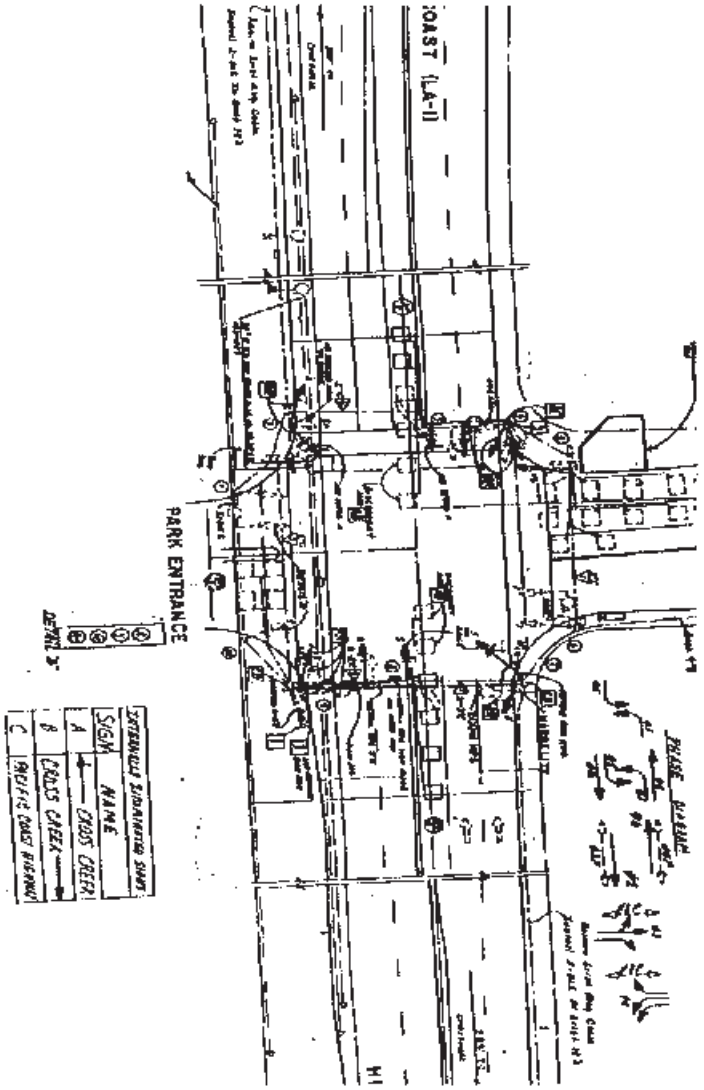
Field Observations: During the field investigation it was observed that the road from the LA County parking lot and the Malibu Lagoon is lower than PCH. Vehicles entering PCH from the driveway are difficult to see because of the difference in grade. In addition, the high shrubs at the southwest corner at Serra Road (see left photo) obstruct the lateral visibility of vehicles entering PCH from Serra Road. Many of collisions in this area are caused by improper turning and unsafe speed.

Recommendation: Have property owner trim shrubs at the southwest corner. Consider raising the grade of the road from the parking lot & museum to improve sight distance.
the grade from the parking lot and museum

FIGURE 10 - CROSS CREEK ROAD AT POST MILE 47.10







General Description: Cross Creek Road is a signalized 4-legged intersection with protected left turns in each direction. Marked crosswalks are located on all but the east leg. The speed limit is 45 mph on PCH and the 85th percentile speed is 53.7 mph. On-street parking is not permitted near the intersection. Parking is available at the nearby shopping center shown in the photo. The south leg of the intersection provides access to the Malibu Lagoon State Park. A total of 80 collisions were reported during the 3 ½ year period with 11 collisions recorded at or near the intersection. A total of 41,900 vpd entered this intersection with 36,800 vpd from PCH, 400 vpd northbound and 4,700 vpd southbound on Cross Creek Road. The collision rate is 0.21 col/mev and its rank is number 6 in comparison with the other six intersections

Field Observations & Recommendation: Recheck signal phasing following completion of the Study of U-Turn and Left-Turn movements to be conducted this year.

FIGURE 11 - CROSSWALK ON CROSSCREEK RD



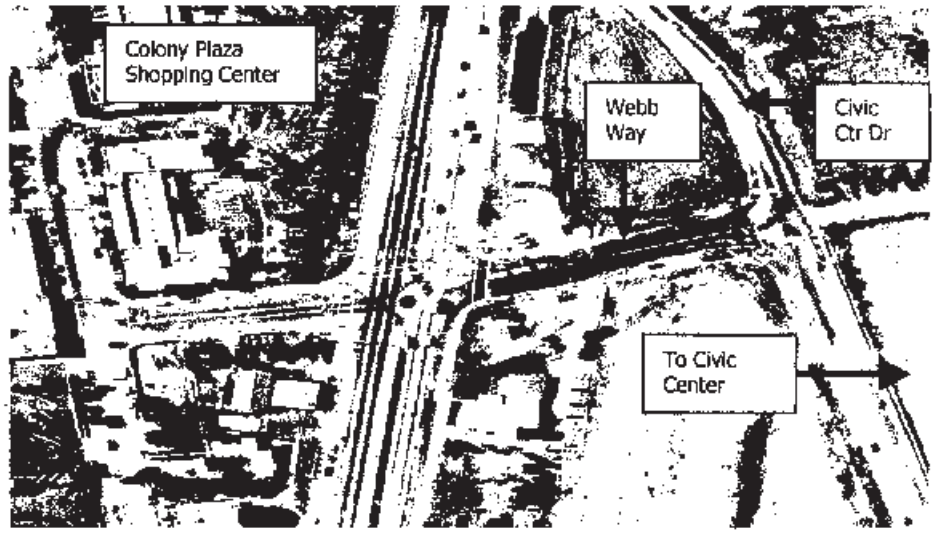




General Description: This crosswalk is located mid-block between Civic Center Drive and PCH as shown in the above aerial photo. It is striped as shown in the photo to the right.

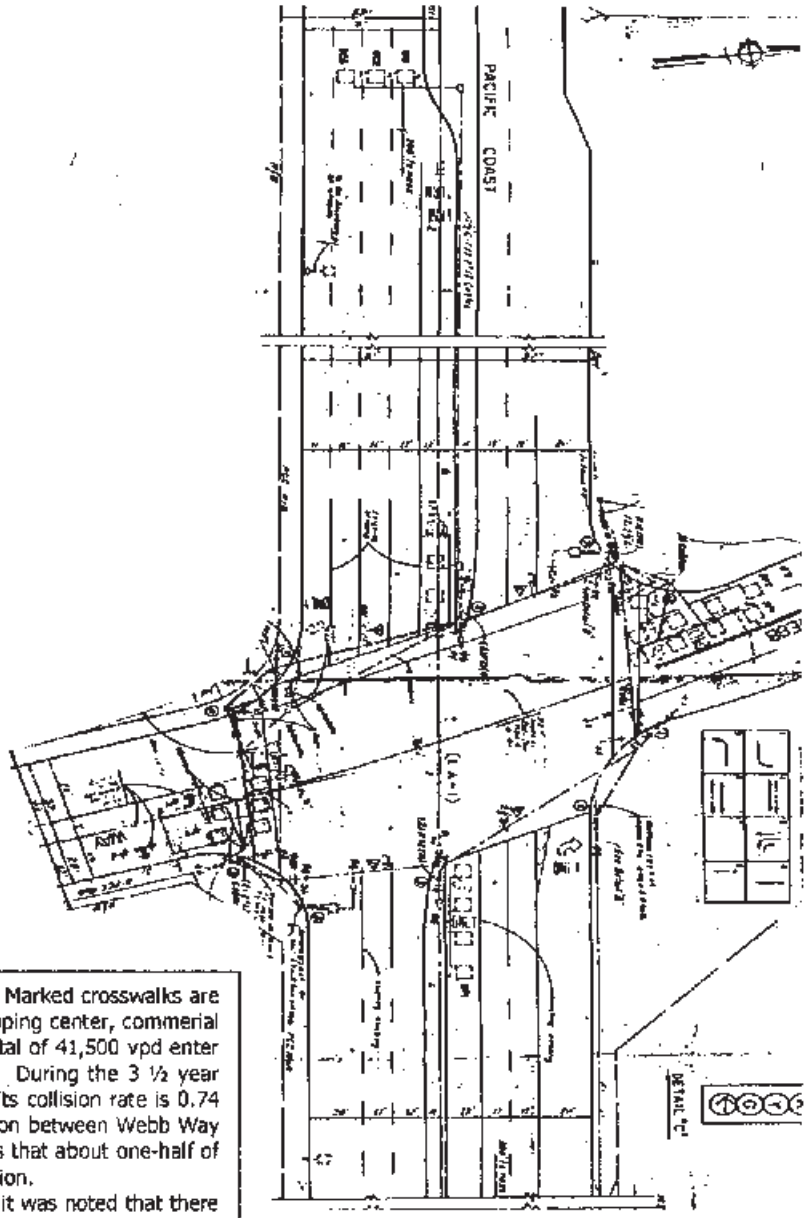
Observations & Recommendation: A short count was made on January 6, 2000 from 12 noon to 1 pm during which 60 pedestrians were observed using this crosswalk going to and from the stores and restaurants on both sides of Cross Creek Road. During other hours of the day, pedestrians crossings are sporadic. Assuming that during the noon hour pedestrian crossings represent about 25% of the total daily volume, it is estimated that about 240 pedestrians use this crosswalk on typical weekday. The City should consider installing some type of textured pedestrian markings to increase visibility. For, example sometimes a thick application (3/8" – ½") of reflective thermoplastic is used to make a crosswalk more visible. If feasible, flashing inset lights embedded in the pavement similar the treatment that Caltrans is proposing at 3 crosswalks on PCH.

FIGURE 12 - WEBB WAY AT POST MILE AT 47.4



PCH looking east

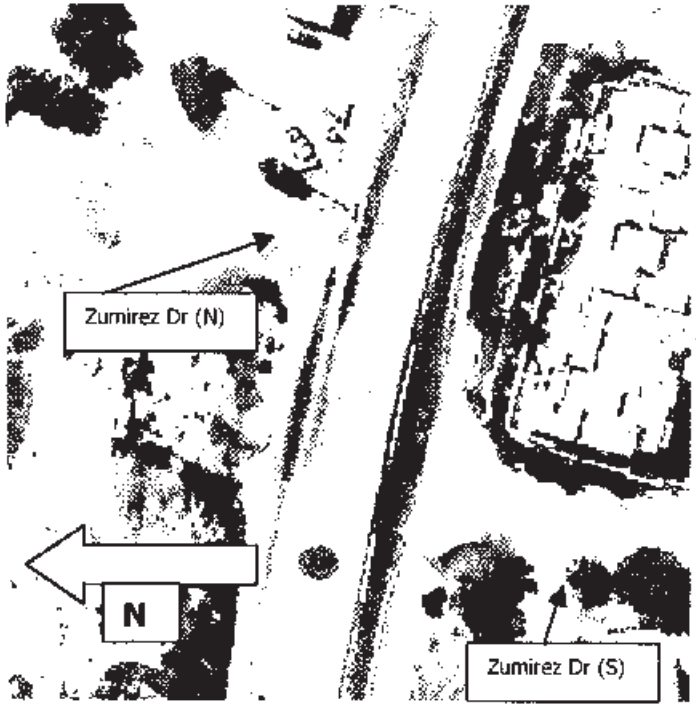




General Description: Webb Way is a signalized intersection with protected left turns in each direction. Marked crosswalks are located at all but the east leg. This intersection provides access to the Civic Center, the Colony Plaza shopping center, commerial and residential development on both sides of PCH and Pepperdine University via Civic Center Way. A total of 41,500 vpd enter this intersection with 33,600 vpd from PCH, 3,000 northbound and 4,900 southbound from Webb Way. During the 3 ½ year period a total of 70 collisions were reported with 39 collisions recorded within or near the intersection. Its collision rate is 0.74 col/mev and is ranked number one in comparison with the other intersections. In the eastbound direction between Webb Way and Malibu Canyon Road, the roadway grade is downhill . A brief review of the collision history indicates that about one-half of the 39 collisions were speed-related of which most were vehicles traveling downhill in the eastbound direction.

Field Observations and Recommendation: A field check conducted during a weekday pm peak hour it was noted that there was a high volume of westbound traffic turning right onto Webb Way. Much of this traffic continued onto Civic Center which connects with Malibu Canyon Road near Pepperdine University. It was also noted that several eastbound vehicles make a u-turn. Although SIGNAL AHEAD signs are installed on PCH, a overhead SIGNAL AHEAD FLASHING BEACON should be considered for the eastbound direction. In addition, the phasing should be reviewed as part of the u-turn/left turn project.

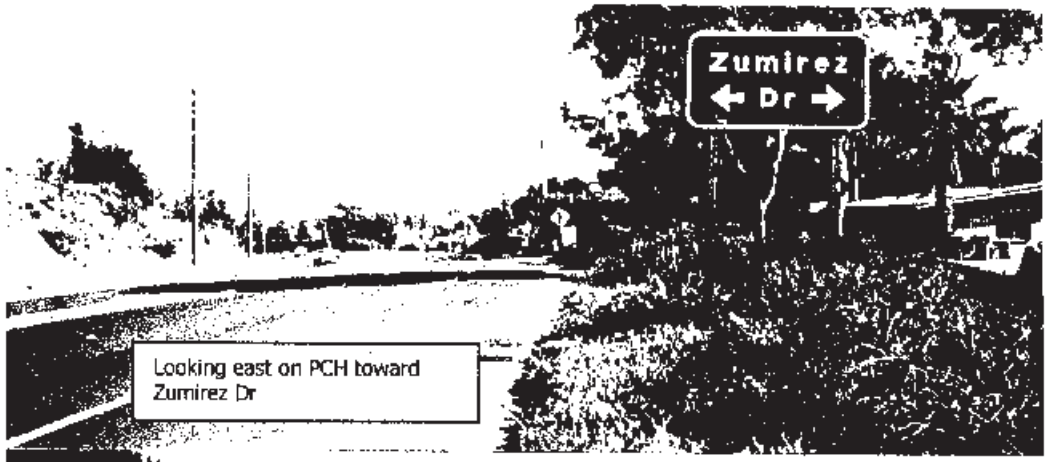
FIGURE 13 - ZUMIREZ DRIVE AT



General Description: Zumirez Drive is an offset-type intersection as shown in the above aerial photo and the pictures to the right. Two persons have been killed at this intersection, one reported on 11/29/95 and the other on 9/5/97. The former was as a result of a broadside type collision caused by a auto-right-of-way violation. The latter was also a broadside type collision and was caused by improper turning. Land use on both sides of Pacific Coast Highway is residential. Along this section of PCH the speed limit is 50 mph with daily traffic of about 26,000. Traffic on Zumirez is light with an estimated daily traffic of 500 vehicles per day. Both approaches of Zumirez Drive are controlled by stop signs. No traffic controls exist on PCH. Bus stops are located on PCH west of Zumirez Drive. There are no marked crosswalks across PCH.

Field Observations: Alignment along this section of PCH is characterized by horizontal curves in both the eastbound and westbound direction but the sight distance appears to be adequate. The stop sign at the southbound approach of Zumirez Drive (N) is partially obscured by tree branches. The two fatal collisions were probably caused by driver error/inattention and did not involved pedestrians.

Recommendation: Trim tree at the northwest corner of Zumirez Drive. Continue efforts to cite speeding and unsafe turning violators.





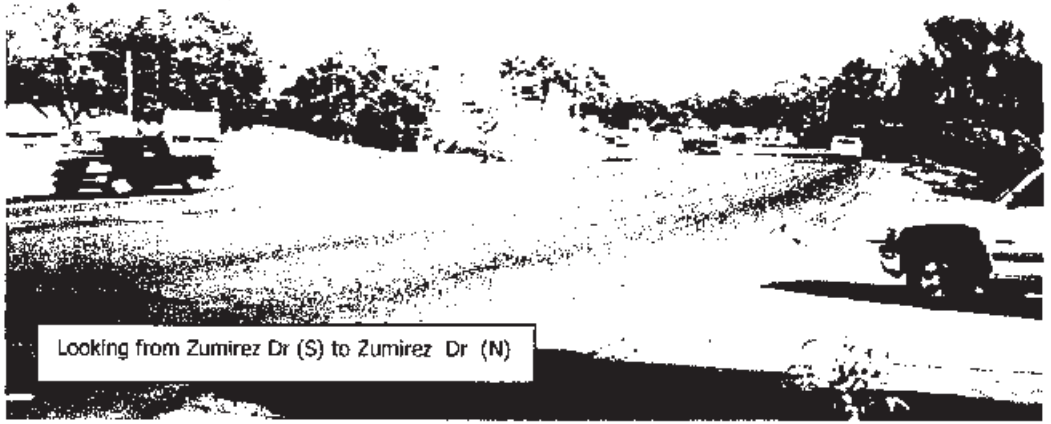


FIGURE 14 - WESTWARD BEACH ROAD AT POST MILE 55.9





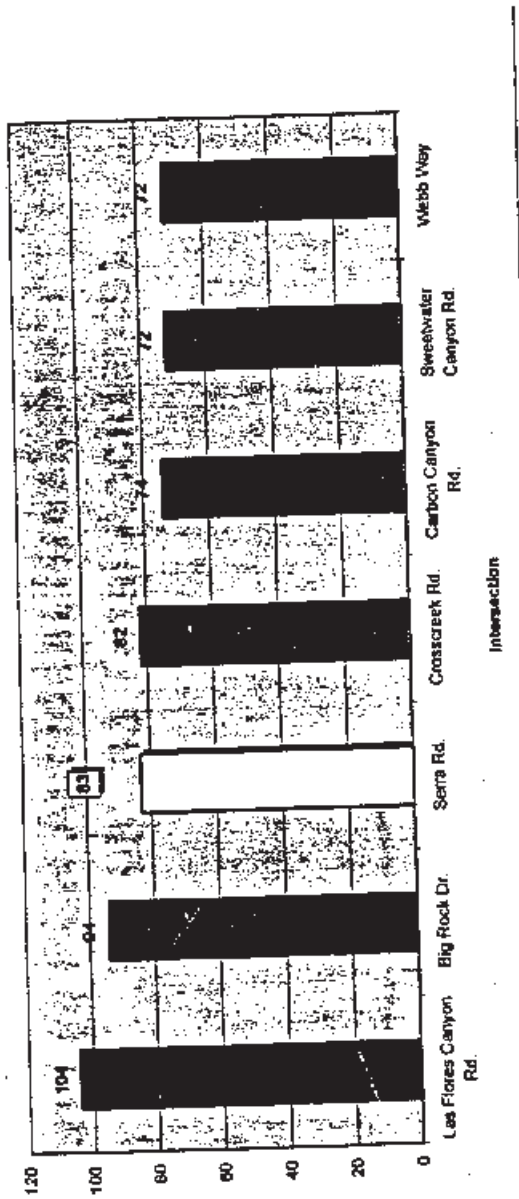


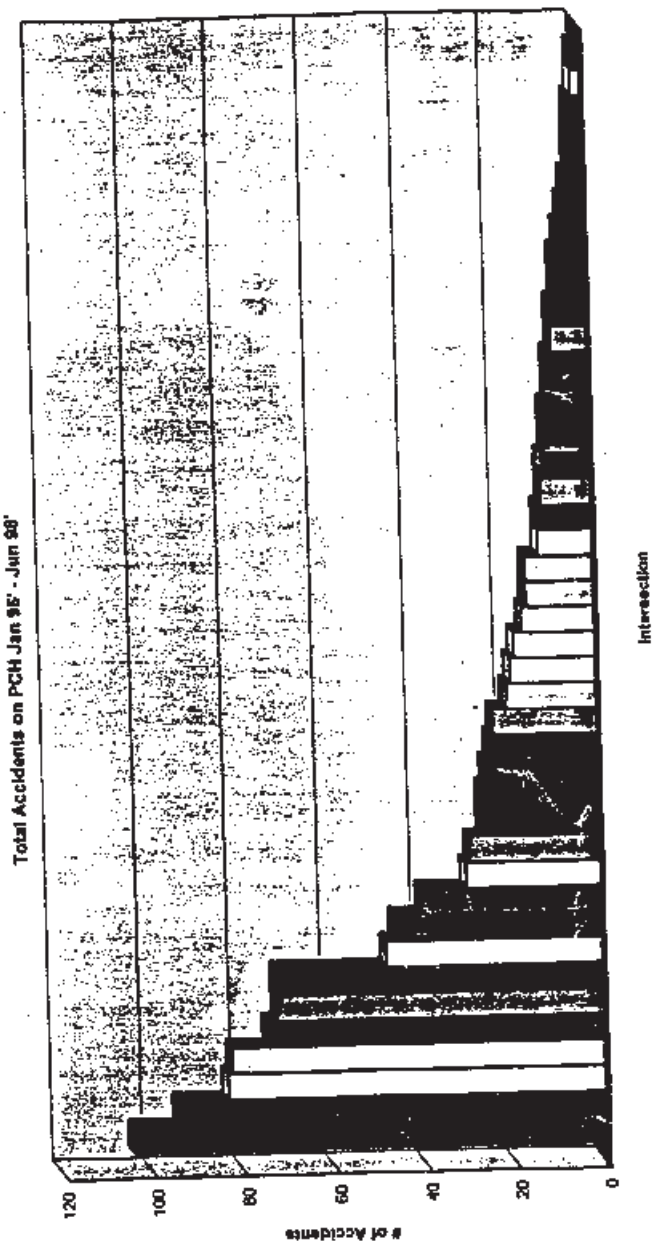
General Description: Westward Beach Road is not signalized and provides access to several beaches and residences in the Point Dume area. It is located about 250 feet east of Busch Drive which is controlled by a signal. A stop sign controls access onto PCH. Westward Beach Road intersects PCH at a sharp angle as shown in the above aerial photo. The approach is marked to include a left turn lane which intersects PCH at an almost 90 degree angle. The latter enhances lateral visibility for vehicles turning left. Bonsal Drive is located on the north side of the intersection but there is no provision for straight through traffic.

Field Observation and Recommendation: It was noted that during the morning peak hour vehicles waiting to turn left onto PCH waited for long periods for an adequate traffic gap. Drivers must be very cautious in entering PCH due to the sharp intersecting angle and horizontal curve west of this intersection. It is suggested that consideration be given to installing a traffic signal interconnect and coordinated with the signal at Busch Drive. A study to determine the feasibility of a traffic signal should be scheduled.

FIGURE 15 - PACIFIC COAST HIGHWAY COLLISION DATA SHOWING MOST FREQUENT COLLISION LOCATIONS ON PCH JANUARY 1, 1995 THRU JUNE 30, 1998

Source: City of Malibu Department of Public Works





Intersection	Accidents
Las Flores Canyon Rd.	104
Big Rock Dr	84
Serra Rd	83
Crosscreek Rd.	82
Carbon Canyon Rd.	74
Sweetwater Canyon Rd.	72
Webb Way	72
Tuna Canyon Rd	48
Rambla Pacifico	46
Malibu Canyon Rd.	40
John Tyler Dr.	30
Corral Canyon Rd.	29
Kanan Dume Rd.	26
Rambla Vista	26
Encinal Canyon Rd	25
Heathercliff Rd.	24
Morning View Dr.	23
Westward Beach Rd.	20
Busch Dr	19
Trancas Canyon Rd.	18
Decker Canyon Rd.	16
Puerco Canyon Rd.	15
Zumirez Dr.	15
Guernsey Ave.	12
Latigo Canyon Rd	12
Broad Beach Rd	11
Paradise Cove Rd.	11
Escondido Beach Rd.	10
Via Escondido	10
Malibu Rd	9
Meadow Ct.	9
Cavalleri Rd	8
Sea Vista Dr	8
Bonsall Dr	7
Latigo Shore Dr.	7
Winding Way	6
Pointsheard Rd.	5
Sweetwater Mesa Dr.	4
Malibu Cove Colony	3
Mulholland Hwy.	3
Ramirez Mesa Dr.	3
John Tyler Rd	2
Lunita Rd.	2

FIGURE 16 - TRAFFIC AND VEHICLE DATA SYSTEMS UNIT WEB PAGE
DEFINITION OF TERMS
Source: State of California Department of Transportation

[Files]

The files containing traffic volumes on California state highways are available for downloading. These files can be imported into spreadsheets or data bases for viewing and analysis.

[Route Number]

All California state highways are listed in this booklet in order of Legislative Route number.

[Annual Average Daily Traffic (Annual ADT)]

Annual average daily traffic is the total volume for the year divided by 365 days. The traffic count year is from October 1st through September 30th. Very few locations in California are actually counted continuously. Traffic Counting is generally performed by electronic counting instruments moved from location throughout the State in a program of continuous traffic count sampling. The resulting counts are adjusted to an estimate of annual average daily traffic by compensating for seasonal influence, weekly variation and other variables which may be present. Annual ADT is necessary for presenting a statewide picture of traffic flow, evaluating traffic trends, computing accident rates. planning and designing highways and other purposes.

[Peak Hour]

Included is an estimate of the "peak hour" traffic at all points on the state highway system. This value is useful to traffic engineers in estimating the amount of congestion experienced, and shows how near to capacity the highway is operating. Unless otherwise indicated, peak hour values indicate the volume in both directions.

A few hours each year are higher than the "peak hour", but not many. In urban and suburban areas, the peak hour normally occurs every weekday, and 200 or more hours will all be about the same. On roads with large seasonal fluctuations in traffic, the peak hour is the four near the maximum for the year but excluding a few (30 to 50 hours) that are exceedingly high and are not typical of the frequency of the high hours occurring during the season.

[Traffic Profile]

These files list 1998 taffic volumes for all count locations on the California state highway system. Peak hours, peak month ADTs and annual ADTs are shown at each count location. Significant volume changes (breakpoints) in the traffic profile along each route are counted and identified by name and milepost value. In addition to the profile breakpoints, these files list county lines and well-known landmarks to aid in orientation. All traffic volume figures listed include traffic in both directions unless otherwise indicated.

[Milepost]

Each profile breakpoint is identified by the milepost value corresponding to that point on the highway. The milepost values increase from the beginning of a route within a count to the next county line. The milepost values start over again at each county line. Milepost values usually increase from south to north or west to east depending upon the general direction the route follows within the state.

The milepost at a given location will remain the same year after year. When a section of road is relocated. new milepost (usually noted by an alphabetical prefix such as "R" or "M") are established for it. If relocation results in a change in length, "milepost equations" are introduced at the end of each relocated portion so that mileposts on the reminder of the route within the county will remain unchanged.

[Peak Month ADT]

The peak month ADT is the average daily traffic for the month of heaviest traffic flow. This data is obtained because on many routes, high traffic volumes which occur during a certain season of the year are more representative of traffic conditions than the annual ADT.

[Back and Ahead]

Back AADT, Peak Month, and Peak Hour usually represents traffic South or West of the count location. Ahead AADT, Peak Month, and Peak Hour usually represents traffic North or East of the count location. A listing of routes with their designated direction of travel is listed here.



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Last updated: 99.07.22

FIGURE 17 - 1999 WEEKDAY PEAK HOUR TRAFFIC VOLUMES

Source: Traffic and Circulation Study for the Proposed Malibu Village Project, KAKU Associates

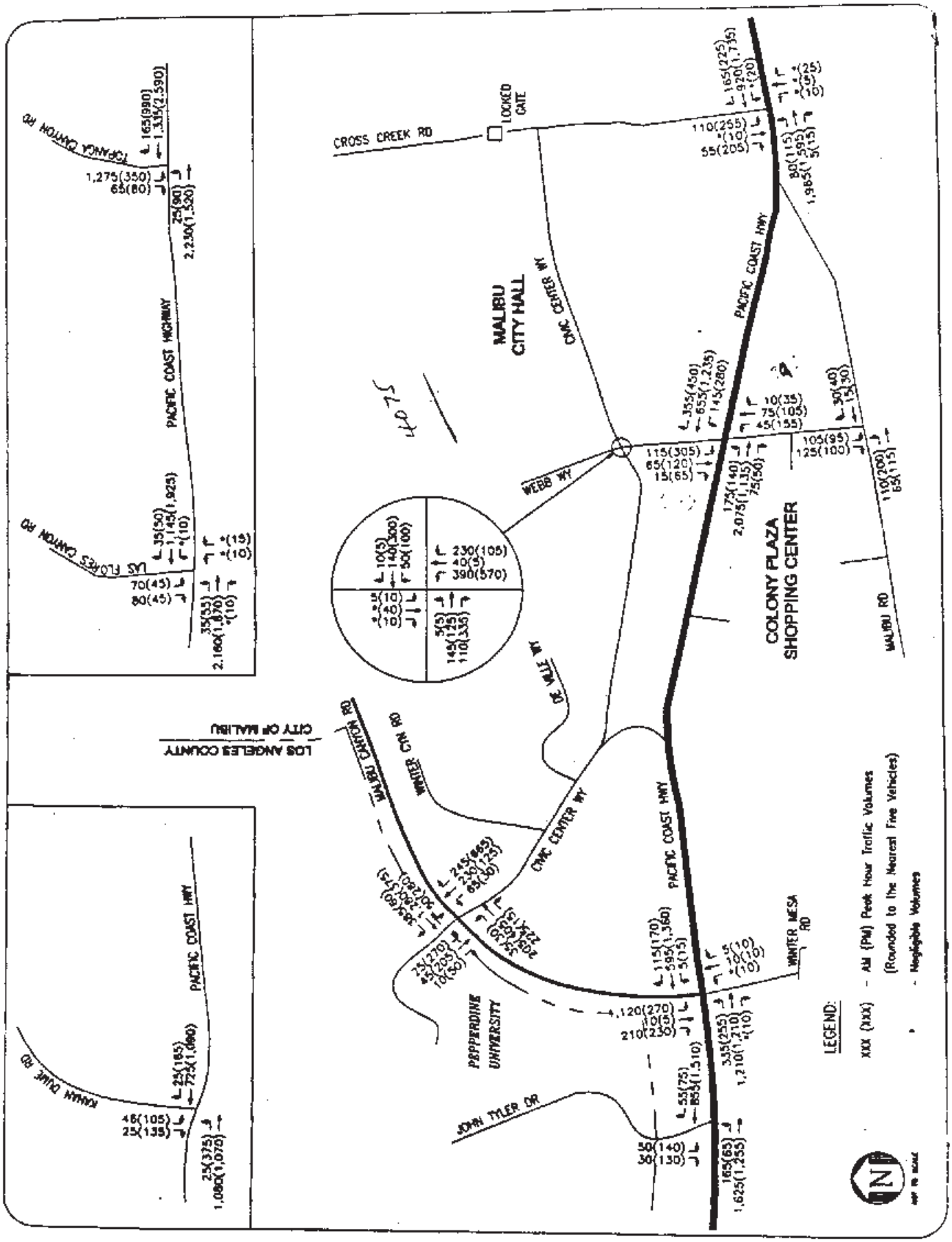
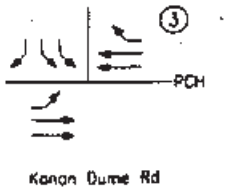


FIGURE 18 – EXISTING LANE CONFIGURATIONS AT INTERSECTIONS ON PCH

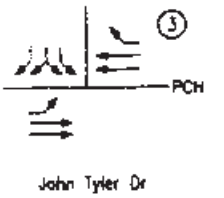
Source: Traffic and Circulation Study for the Proposed Malibu Village Project, KAKU Associates

Existing Conditions

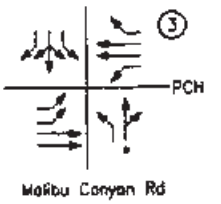
1. Kanan Dume Rd & Pacific Coast Hwy



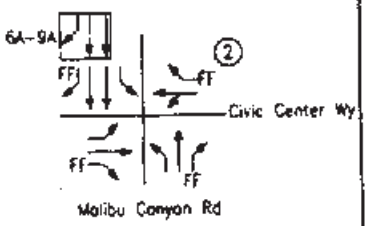
2. John Tyler Dr & Pacific Coast Hwy



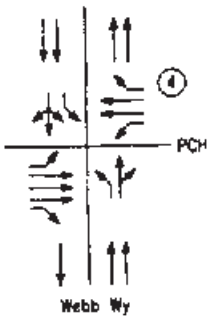
3. Malibu Canyon Rd & Pacific Coast Hwy



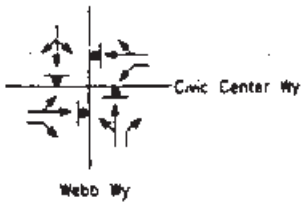
4. Malibu Canyon Rd & Civic Center Wy



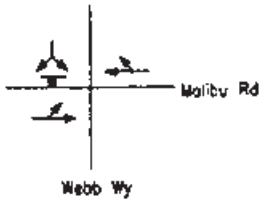
5 Webb Wy & Pacific Coast Hwy



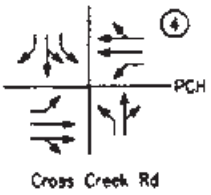
6. Webb Wy & Civic Center Wy



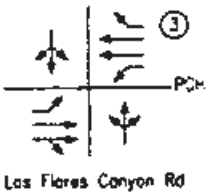
7. Webb Wy & Malibu Rd



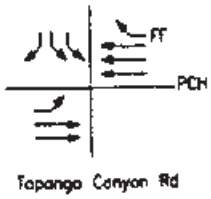
8. Cross Creek Rd & Pacific Coast Hwy



9. Las Flores Canyon Rd Pacific Coast Hwy



10. Topanga Canyon Rd & Pacific Coast Hwy



LEGEND:

- ▼ – Stop Sign
- Ⓘ – Phasing
- FF – Free Flow
- * – Although not striped, it functions as a separate lane

FIGURE 19 – 1999 WEEKDAY INTERSECTION LEVELS OF SERVICE

Source: Traffic and Circulation Study for the Proposed Malibu Village Project, KAKU Associates

INTERSECTION	AM Peak Hour		PM Peak Hour	
	V/C or Delay	LOS	V/C or Delay	LOS
1. Kanan Dume Road & Pacific Coast Highway	0.453	A	0.710	C
2. John Tyler Drive & Pacific Coast Highway	0.625	B	0.667	B
3. Malibu Canyon Road & Pacific Coast Highway	1.107	F	0.732	C
4. Malibu Canyon Road & Civic Center Way	0.736	C	0.791	C
5. Webb Way & Pacific Coast Highway	0.737	C	0.825	D
6. Webb Way & Civic Center Way [a]	15	C	35	E
7. Webb Way & Malibu Road [b]	3	A	3	A
8. Cross Creek Road & Pacific Coast Highway	0.754	C	0.891	D
9. Las Flores Canyon Road & Pacific Coast Highway	0.870	D	0.806	D
10. Topanga Canyon Boulevard & Pacific Coast Highway	1.196	F	0.819	D

Note:

[a] Intersection is controlled by stop signs on all approaches. Value shown represents average vehicle delay (seconds) for the intersection.

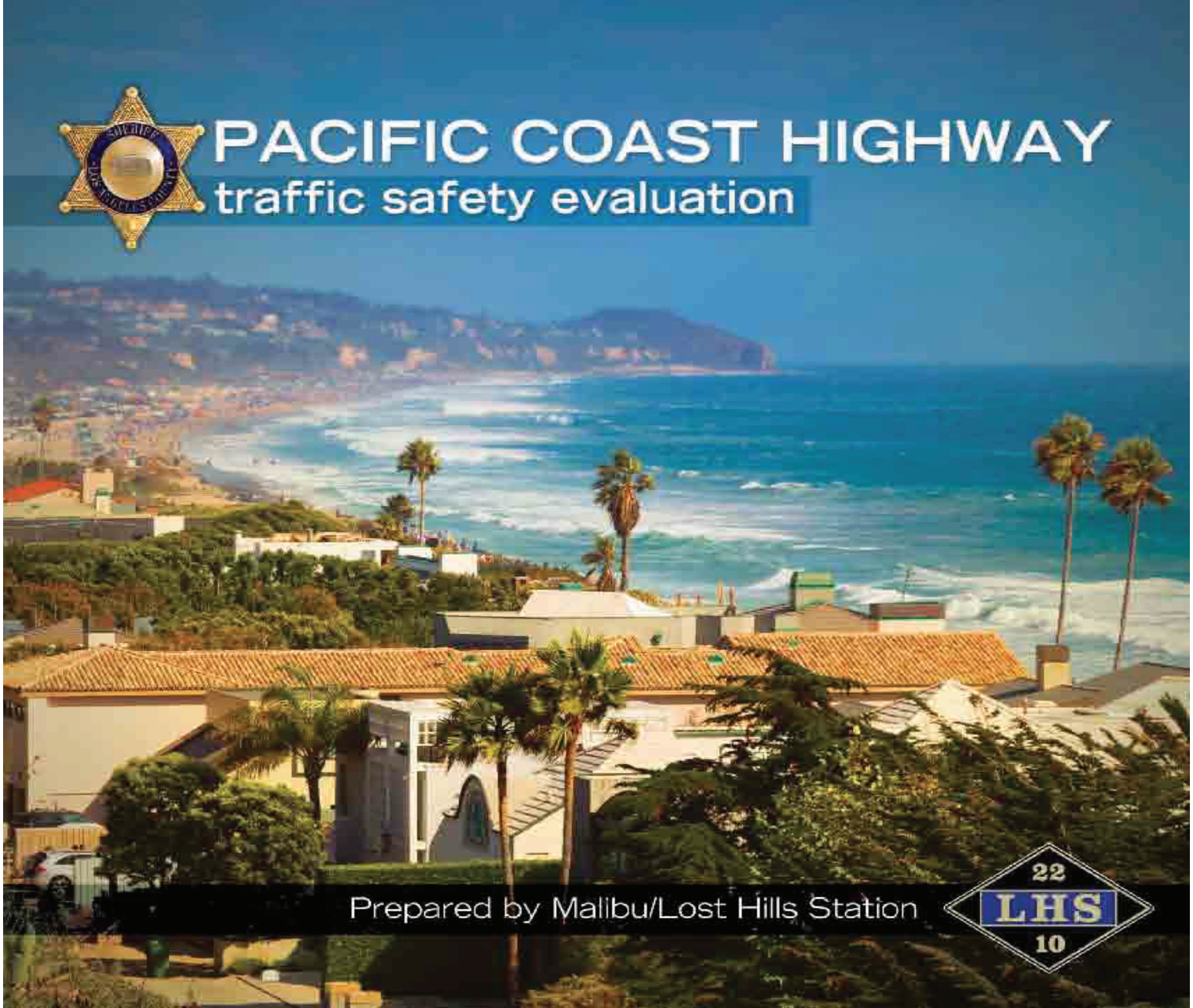
[b] Intersection is controlled by stop signs on the minor approaches. Value shown represents average vehicle delay (seconds) for the intersection.

FIGURE 20 – SUMMARY OF SPEED SURVEY RECOMMENDATIONS

Source: City of Malibu, Department of Public Works

STREET/LOCATION	EXISTING SPEED LIMITS	RECOMMENDED SPEED LIMITS	85th PERCENTILE SPEED	AVERAGE SPEED	10MPH PACE RANGE	PERCENT OF VEHICLES IN PACE	REASON FOR CHANGE	PAGE NUMBER
PACIFIC COAST HIGHWAY								
EAST CITY LIMITS TO BIG ROCK DR	45	45	50.8	45.5	42-51	64.6	NO CHANGE	A-1
BIG ROCK DR TO LAS FLORES CANYON RD	45	45	52.1	46.8	42-51	68.4	HSRA/ NO CHANGE	A-4
LAS FLORES CANYON RD TO CARBON CANYON RD	45	45	51.8	46.3	41-50	62.4	HSRA/ NO CHANGE	A-7
CARBON CANYON RD TO SERRA RD	45	45	51.5	45.8	43-52	66.4	HSRA/ NO CHANGE	A-10
SERRA RD TO MALIBU CANYON RD	45	45	53.7	47.6	44-53	60.6	HSRA/ NO CHANGE	A-13
MALIBU CANYON RD TO PUERCO CANYON RD	45	45	57.9	51.7	47-56	61.7	HSRA/LSD/ NO CHANGE	A-16
PUERCO CANYON RD TO CORRAL CANYON RD	50	50	59.6	53.8	50-59	63.9	HSRA/ NO CHANGE	A-19
CORRAL CANYON RD TO VIA ESCONDIDO	50	50	59.2	54.2	49-58	54.2	CONSISTENCY/ NO CHANGE	A-22
VIA ESCONDIDO TO PARADISE COVE RD	50	50	56.9	51.9	49-58	67.5	NO CHANGE	A-25
PARADISE COVE RD TO KANAN DUME RD	50	50	57.8	53.3	48-57	74.0	HSRA/ NO CHANGE	A-28
KANAN DUME RD TO WESTWARD BEACH RD	50	50	55.7	49.8	45-54	63.5	NO CHANGE	A-31
WESTWARD BEACH RD TO MORNINGVIEW DR	50	50	57.1	52.2	48-57	69.8	CONSISTENCY/ NO CHANGE	A-34
MORNINGVIEW DR TO TRANCAS CANYON RD	50	50	55.8	49.9	45-54	63.6	NO CHANGE	A-37
TRANCAS CANYON RD TO BROAD BEACH RD (W)	50	50	58.3	52.6	48-57	64.4	CONSISTENCY/ NO CHANGE	A-40
BROAD BEACH RD (W) TO DECKER RD	55	55	62.1	56.0	52-61	67.8	CONSISTENCY/ NO CHANGE	A-43
DECKER RD TO WEST CITY LIMITS	55	55	60.8	54.9	51-60	64.3	NO CHANGE	A-47

LSD = LIMITED SIGHT DISTANCE
HSRA = HIGH SPEED RELATED ACCIDENTS


PACIFIC COAST HIGHWAY
traffic safety evaluation
Prepared by Malibu/Lost Hills Station
22
LHS
10


SPEED
LIMIT
MALIBU
27 MILES OF SCENIC BEAUTY
MalibuGreenMachine
ROTARY
INTERNATIONAL

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I. Background

Pacific Coast Highway (State Route 1) is a four-lane state highway traveling in an east to west direction along the Pacific Coast. In 1947, the roadway was completely reconstructed and widened to its current configuration of 4 lanes. In 1964, turn pockets and signals were installed. Minor improvements including additional traffic signals, plastic center median paddles (Quick Curb) and other safety modifications stemming from illegal traffic movements have been initiated in subsequent years.



The Pacific Coast Highway (PCH) is part of a major coastal artery that provides access to the many canyons of the Santa Monica Mountains, the major beaches along the coast, Pepperdine University, and many other residential and commercial developments in the area. Additionally, the highway is part of the most direct route between the Ventura/Oxnard area and the coastal cities of Los Angeles County. Consequently, this route frequently carries traffic between those two locations as an alternate to the Ventura (SR-101) and San Diego Freeways (I-405).



PCH is approximately 21 miles long through the City of Malibu and serves mostly commuters during the weekday peak hours. During this period, approximately 35,000 commuters utilize PCH. In summer months, it also serves as an access route to the beaches along the coast, causing the commuter levels to reach 100,000.

The southern portion of the roadway is a four-lane conventional highway with a ten-foot painted center median that alternates between a double solid stripe and a left turn lane. The profile varies from a flat to a slightly rolling grade and the alignment varies from curved segments to tangents up to one-half mile in length.

The middle portions of the highway consist of four lanes with a raised center median. The profile is mostly a rolling grade and the alignment consists predominantly of long tangents up to one mile in length connected by large radius curves.

The northern part of the roadway is a four-lane conventional highway. There is a striped center median and painted two-way left turn median lane which is essentially continuous. This alignment consists predominately of long tangents connected by large radius curves.

PCH is designated as a Class III bikeway. A Class III bikeway is defined in the Section 890.4 of the California Streets and Highways Code as an on street bike route usually depicted by signs or permanent markings. Small signs erected by Caltrans are the only indication to motorists that PCH is a bike route.

North of Malibu Canyon, with the exception of the Zuma Beach area, PCH is a mostly rural highway with available, but lightly used street parking. South of Malibu Canyon, PCH is highly congested with concentrated business and residential areas. This area is extremely hazardous for cyclists as they are forced to ride adjacent to 45 mph traffic with the constant threat of parked vehicles opening doors, vehicles exiting driveways and garages, along with pedestrians crossing the roadway outside of crosswalks.

Due to PCH containing multiple diverse elements throughout its 21 mile stretch, combined with the mixture of vehicle, pedestrian, and bicyclist use, improvements intended to enhance PCH safety is historically based and is a continual process.



II. Executive Summary

Prior to incorporation, both the CHP and LASD provided law enforcement services for the county area, including the section that would eventually become the City of Malibu. LASD provided general law enforcement, while the CHP provided traffic enforcement.

Malibu was incorporated as a city in 1991, and in July, contracted with the Sheriff's Department to provide law enforcement services. Initially, the city contracted for 4.5 general law enforcement field units, while 9.5 units were purchased specifically for traffic enforcement. In September of the same year, the City of Malibu modified its field complement to 4.5 units for general law enforcement and 6.5 for traffic enforcement. As of July 2010, the City of Malibu contracts for 9 general law enforcement, with 6.5 for traffic, 2.5 of which are motor units. Importantly, general law enforcement also performs traffic enforcement, which is considered a crucial element of their law enforcement duties. The last year, prior to the incorporation of the city, there were eleven fatal collisions on PCH. Over the last ten years, fatal collisions averaged 2.5 per year.

Traditionally, the natural inclination is to assume that there is always a direct correlation between the number of traffic citations issued and driving under the influence arrests to the number of collisions. The belief is that the more citations issued and driving under the influence arrests made, the number of collisions will be reduced, providing a safer traffic environment. This is illustrated by the nationally accepted Enforcement Index (EI), which combines the number of hazardous citations issued with the driving under the influence arrests, then divides that sum by the number of fatal and injury traffic collisions. The national standard is 20:1, which means in order to reach the standard, 20 citations/arrests per 1 (one) collision must be reached. As of the date of this document, the City of Malibu's EI is 103:1, which greatly exceeds the national accepted level of provided highway safety.

The number of collisions on PCH is generally proportional to the number of vehicles using the highway. The most common collision on PCH is low speed rear-end collisions, predominately during the evening rush hour. As expected, the number of collisions increases during the summer months even though additional field personnel are provided.

The most frequent Primary Collisions Factors (PCF) for traffic accidents for the last three years are: Unsafe speed (38%), unsafe lane change (15%), right of way violation (11%) and improper turning (9%). The most common types of collisions include: Rear-end (49%), sideswipe (21%), and broadside (15%). The extent of injuries include: Non-injury (65%), complaint of pain (17%), injury (17%), and fatal (0.009%). The number of collisions increases as the volume of traffic increases in during the summer months and is slightly higher on Friday, Saturday, and Sunday, with the highest number of collisions during the evening commute hours.

Moreover, in regards to speed limit, terrain, vehicle/bicycle/pedestrian use, and commercial/residential/tourist use, PCH is not a static highway. The speed limit varies from 45 MPH, 50 MPH, and 55 MPH, none of which address traffic congestion and the competition between motor vehicles, bicycles, and pedestrians. Reduced roadway widths, lack of center medians, erratic roadway surface, all merge to create excessive traveling variables. These variables amplify the safety issues when combining the competitive use of PCH by motor vehicles, bicycles, and pedestrians.

The central portion of PCH is highly congested with commercial use, tourist interests, and cross-traffic, all creating an environment of randomness of actions. This creates a challenging environment for all participants to safely maneuver. Based on statistical information, the intersection of Las Flores Canyon and PCH has the highest accident rate for an intersection. Additionally, mid-block between Carbon Canyon Road and Las Flores Canyon has the highest accident rate per mile for a mid-block section of PCH.

Although the City of Malibu's EI greatly exceeds the national standard, the City of Malibu and the Malibu/Lost Hills Sheriff's Station continue to strive to enhance traffic safety on PCH. Malibu/Lost Hills Sheriff's Station continues to utilize various Departmental resources to continue to improve safety. These include: Reserve Forces Traffic Enforcement saturation, Traffic Services Bureau DUI check-points, and saturation patrol. Internally, Malibu/Lost Hills Sheriff's Station conducts Distracted Driver check-points and traffic enforcement saturation. Additionally, educational handouts have been provided to drivers in order to assist in sensitizing the public to the various traffic issues of PCH.

PCH is an arterial highway that is part of the overall transportation network for the Los Angeles and Ventura County region. It is inadequate to handle the current commuter traffic volumes and gridlocks on busy summer weekends. With the combined effort of all involved stakeholders, PCH can be improved for the public's use.

RECOMMENDATIONS

HIGHWAY ENVIRONMENT

The most common improvements suggested on PCH for intersections included: Improved lighting, construction of acceleration and deceleration lanes, and protected center turn lanes with median modifications. The lighting improvements should improve visibility and bring the existing systems up to current standards using low energy LED or similar devices. The recommendation of acceleration and deceleration lanes is universal in light of the most common collisions consisting of rear-end and turning movements. They also can be utilized to relieve congestion by removing slow vehicles from the travel lanes. Center median modifications, while mainly recommended for eliminating U-turns and unsafe turning movements, may also reduce pedestrian crossings. Additionally, congestion management and roadway design are two elements that must be employed to address the current surroundings. These improvements will be covered throughout sections of this evaluation.

TRAFFIC ENFORCEMENT/EDUCATION

The use of motorcycle officers is one of the most effective tools for traffic enforcement in the City of Malibu. The narrow shoulders and heavy traffic do not allow enough safe areas for deputies in traditional radio cars to stage and subsequently pull out into traffic. Once in traffic, it is nearly impossible for a sedan to safely pass other vehicles in order to catch a violator. Motorcycle officers are able to maneuver through heavy traffic and utilize narrow highway shoulders to monitor traffic. Understanding the transitory nature of persons who utilize PCH, continual education and enforcement are integral elements of enhancing the safety of PCH. Education consists of highway signage, city traffic safety notices via local newspapers, and Sheriff Department generated education programs.

BICYCLE RECOMMENDATIONS

A Class II bikeway provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with travel by motor vehicles or pedestrians prohibited, except for vehicle parking and cross flows by pedestrians and motorists at marked locations. These lanes are commonly depicted by two parallel white lines painted on the roadway edge or outside the parking lane. The entire length of PCH should be converted to a Class II bicycle lane. Without the conversion, cyclists often have to share the lane with motor vehicles traveling in excess of 45 miles per hour.

III. Government Stakeholders

THE CITY OF MALIBU

The City of Malibu contracts for a specific number of hours of patrol and traffic units from the Los Angeles County Sheriff's Department. These hours are monitored on a weekly basis and staffing levels are adjusted accordingly. As a contract city with the LASD, the City of Malibu can draw upon the resources of the entire Sheriff's Department when the need arises. Additionally, the City of Malibu purchases sheriff personnel to enhance summer enforcement (Beach Team) and any other events with the intent to address public safety or quality of life issues.

The City of Malibu and the Sheriff's Department share a common goal of advancing the safety of motorists, bicyclists, and pedestrians who utilize PCH. In order to address such issues, the City of Malibu continually evaluates the desires of its elected officials, residents, and business representatives. These concerns pertain to competing goals of maintaining differing quality of life descriptors, monetary confines, and state government controls and limitations based upon PCH being a state highway. Evaluating parking limitations, highway hardscape modifications, and egress adjustments, Malibu continually seeks to obtain a balance with the competing stakeholders.

MALIBU/LOST HILLS SHERIFF'S STATION

Malibu/Lost Hills Sheriff's Station provides traffic enforcement and law enforcement services for the City of Malibu. The number of deputies patrolling the city varies depending upon the time of day. The level of service is limited by the budget allotment for law enforcement services designated by the City of Malibu.

Currently, Malibu staffs two full time motor deputies and shares two other motor deputies with the four other cities in the MLH jurisdiction for a total of 2.5 forty hour motorcycle deputies per week. The motors are supplemented by two other traffic sedans on the A.M. and P.M. shifts. There is an overlap car in the evenings that stays in Malibu until 4 A.M. that focuses on locating impaired drivers. Thus, the average number of traffic deputies on the streets in Malibu is four. Obviously there are other deputies designated as crime cars who also conduct traffic enforcement when not handling calls for service.

In the short term, the station has requested the use of reserve forces bureau to provide additional staffing. Unfortunately, this service is provided to the entire Department, and is not a source of day-to -day enforcement that would have an appreciable effect on the total number of citations issued. They are available on a monthly basis, and have been assigned to work during peak evenings and/or weekends in order to provide a visible increase in enforcement with the additional benefit of actually issuing hazardous citations.

Another possible resource involves the use of currently assigned station reserves. Presently, several reserves are assigned to the station and have received traffic and/or radar training. Two of these reserves have expressed interest in working a motor unit. Both are willing to take time off in order to attend the required training. They have even offered to purchase a shared BMW motorcycle if the Department does not have the resources to issue them a motorcycle.

Malibu/Lost Hills Traffic Bureau is currently in the process of obtaining a safety corridor grant from the Office of Traffic Safety. If approved, this grant will allow for additional staffing and could be approved for the 2011/2012 fiscal year.

CHP

The CHP patrols the unincorporated areas that surround The City of Malibu. These highway segments are largely unpopulated, especially to the north. Several housing areas are located off residential side streets to the south. The north end abuts the unincorporated area of Ventura County while the south end leads into the City of Los Angeles.

CHP officers are on 12 hour shifts during peak periods in the West Valley area where 15-16 Officers are deployed in a 400 square miles area. This also includes 33 state office buildings that they also patrol. Their borders are Rinaldi to the north, Universal Studios to the east, I-405 freeway at Mulholland Drive to the south, and the western border is the Ventura County Line.

Traffic statistics for these areas were not available from the CHP, but it can be deduced that the northern area has very few collisions, while the south would have a collision rate comparable to the southern area of Malibu. The majority of these collisions would be attributable to congestion due to the lack of businesses and few cross streets.

Most collisions in these areas are usually dispatched to Malibu/Lost Hills station deputies who will stabilize the situation and await the arrival of CHP to conduct the collision investigation. While the CHP does actively patrol these areas, there do not provide a presence 24/7. Most officers respond from Topanga Canyon or the 101 freeway, and have considerably extended arrival times.

CHP officers often conduct enforcement stops in the city of Malibu while driving to or from their assigned areas. Malibu city officials appreciate this enforcement in their city whenever possible. However, the CHP is prohibited from conducting enforcement operations in the city without a paid contract as specified in the vehicle code.

Both the LASD and CHP often cooperate during emergencies that include fires and floods. During emergencies, consolidated command posts and separate areas of responsibilities provide an almost seamless cooperative effort.

CALTRANS

Caltrans is responsible for maintenance and construction as PCH is designated State Highway 1. This designation has limited the amount of improvements to the highway since Malibu projects must compete with other highway projects throughout the State.

Caltrans uses warrants to establish the feasibility of each construction project. This bureaucratic process has delayed numerous projects within the city for decades. In some specific instances, the city of Malibu has paid for the installation of traffic signals with the expectation of being reimbursed by the state once funding becomes available.

CALIFORNIA COASTAL COMMISSION

Members appointed to the California Coastal Commission have the responsibility of preserving and when possible, providing public access to coastal areas within the state. This commission has been given, and has consistently exercised its authority over construction projects and private property rights throughout the state.

The City of Malibu has attempted to restrict parking in areas where parked vehicles present a hazard to pedestrians exiting the vehicles. In each instance, the coastal commission has prohibited such restrictions under the guise that it limits the public's access to the coastline.

As many of the safety proposals in this document advocate parking restrictions and hardscape modifications, it is anticipated that the California Coastal Commission will be one of the stakeholders whose concerns will need to be addressed.

IV. Traffic Volume & Speed Zones

The posted speed limits are as follows:

- Coastline Drive to Malibu Canyon Road 45 mph
- Malibu Canyon Road to Trancas Canyon 50 mph
- Trancas Canyon to Los Angeles/Ventura County Line 55 mph

According to the most recent Caltrans Survey, the annual Average Daily Traffic (ADT) for Pacific Coast Highway varies from 53,000 vehicles north of Coastline Drive to 29,000 vehicles north of Zumirez Drive. From Kanan Dume Road to the Los Angeles/Ventura County line, the ADT ranges from 29,000-30,000 annually, to 33,500-34,500 at peak times. During the recreational peak periods, which occur mostly on weekends during the summer months, the traffic may exceed the ADT figures by 20 to 30%. Occasionally, during periods of exceptionally heavy demand, the traffic on this four-lane facility has exceeded 100,000 vehicles per day. As noted above, ADT is the average number of vehicles two-way passing a specific point in a 24-hour period, normally measured throughout a year.





V. Accident Rates

According to the most recent Caltrans Survey for PCH in Malibu, based on the Traffic Accident Surveillance and Analysis System (TASAS), the accident rate and fatality rate are less than the statewide average rate for this type of highway. There was only one segment where the fatality rate was higher than the statewide average. This area is near the Las Flores Canyon and Rambla Vista intersections.

The most frequent Primary Collisions Factors (PCF) for traffic accidents for the last three years are: Unsafe speed (38%), unsafe lane change (15%), right-of-way violation (11%) and improper turning (9%). The most common types of collisions include: Rear-end (49%), sideswipe (21%), and broadside (15%). The extent of injuries include: Non-injury (65%), complaint of pain (17%), injury (17%), and fatal (0.009%). The number of collisions is proportional to the increase in volumes during the summer months and is slightly higher on Friday, Saturday, and Sunday, with the highest number of collisions during the evening commute hours.





VI. Enforcement

YEAR	INJURY CRASH	FATAL CRASH	HAZARD CITATIONS	TOTAL CITATIONS	CRASH HAZARD RATIO	TOTAL CITE RATIO
2010	110	4	12,489	15,098	9.1280	7.550
2009	111	2	11,314	13,448	9.9876	8.4027
2008	125	2	9,885	11,900	12.8477	10.6722
2007	106	3	9,701	10,475	11.2359	10.1457
2006	112	3	11,399	12,095	10.0886	9.508
2005	112	4	9,479	10,496	12.2375	11.0518

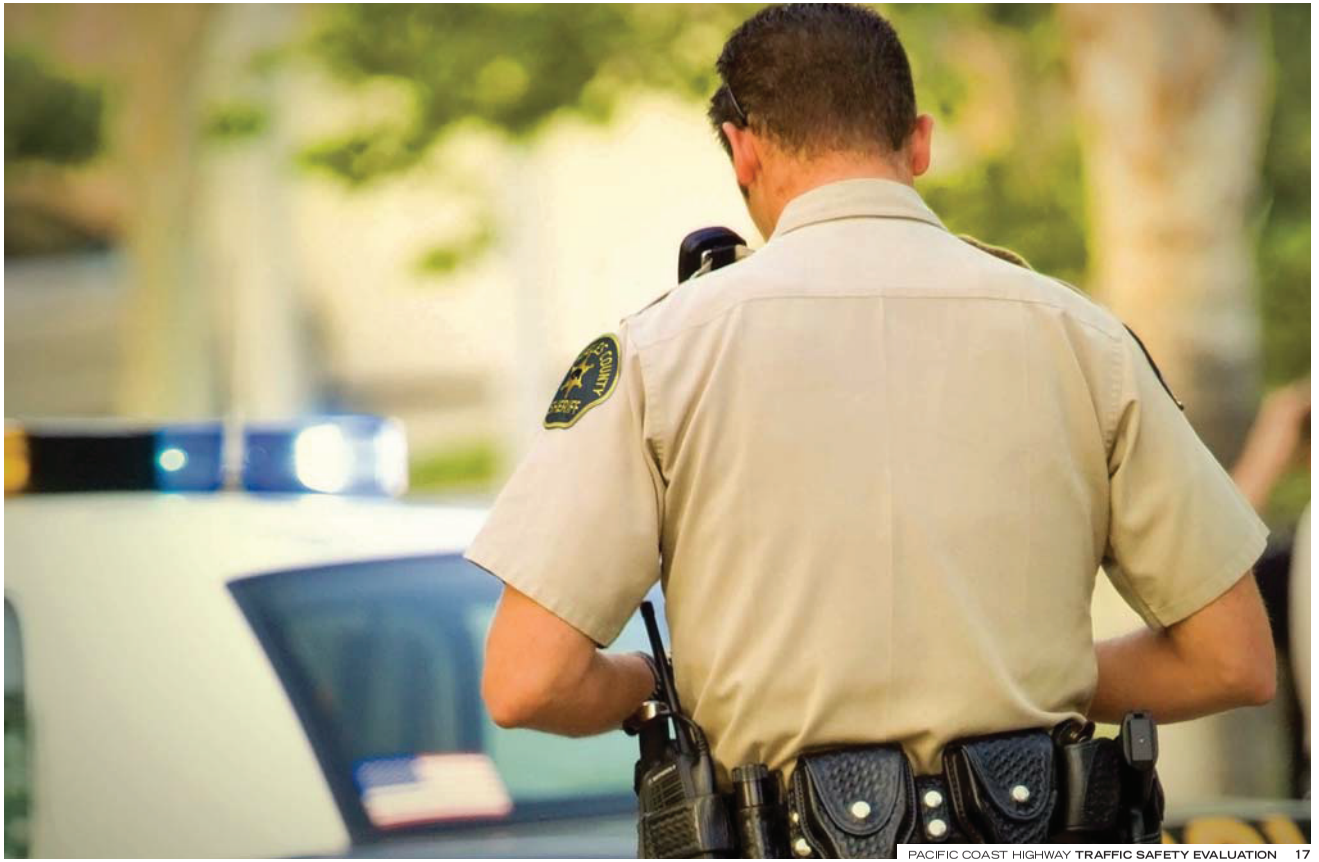
Comparison of annual number of traffic collisions to number of citations issued.

Hazard Citation Ratio = injury + fatal collisions / 1,000 hazardous citations.

Total Citation Ratio = injury + fatal collisions / 1,000 total citations.

The injury collision/citation ratios charted above were created to determine if there is any observable correlation of the number of collisions to the number of citations issued. If the assumption is that more citations reduce the number of collisions, the years with the most citations issued should have the lowest number of collisions. However, the year (2007) with the lowest number of total citations issued, also had the lowest number of injury collisions. On the other hand, the year with the highest total number of citations (2010) did have the lowest Collision/Citation ratio, although the fatality rate equaled the highest rate within the six year period. This result supports the City of Malibu and Malibu/Lost Hills Sheriff's Station multi-faceted approach for PCH safety enhancements.





VII. Traffic Fatal Collision Descriptors

The below information provides a brief description of the above listed traffic fatalities that occurred on PCH. A "Traffic Fatality" is defined as a traffic collision between a motor vehicle and another vehicle, bicycle, pedestrian or other fixed object resulting in a fatality. Additionally, a "Non-Traffic Fatality" is defined as when a vehicle is used to commit or attempt to commit suicide or other criminal act resulting in a fatality. A "Non-Traffic Fatality" is not considered a traffic generated event and is not included in this evaluation.

2010 Fatal Collisions

11.16.10 - 1810 Hrs. - Tuesday
Grayfox Dr. at Fernhill Ave.
Solo Vehicle
23152 CVC – DUI
No Criminal Charges Filed
A dirt bike rider was riding an off-road motorcycle on city streets, in the dark, without any lighting and crashed into a legally parked vehicle. The collision killed the motorcycle rider. The motorcycle rider was not wearing a helmet or any other safety gear.

09.17.10 - 1759 hrs. - Friday
PCH near Pena Cyn. Rd.
Vehicle vs. Pedestrian
Inattention of Pedestrian
Criminal Charges Rejected by DA
A pedestrian was crossing Pacific Coast Highway after parking his car, when he crossed in front of a vehicle traveling eastbound Pacific Coast Highway. The pedestrian was struck and killed.

04.02.10 - 1616 Hrs. - Friday
PCH at Broad Beach Rd. (west)
Vehicle vs. Vehicle
21650 CVC – Drive on Wrong Side of Road
Criminal Charges Filed
Vehicle #1 was traveling westbound on Pacific Coast Highway when the driver allegedly fell asleep while driving. Vehicle #1 crossed over into the oncoming traffic lanes at struck vehicle #2 who was making a right turn onto Broad Beach Rd (west). The driver of vehicle #2 was killed.

03.15.10 - 0627 Hrs. - Monday
PCH near Winding Way
Vehicle vs. Pedestrian
21952 CVC – Jaywalking
Criminal Charges Rejected by DA
A pedestrian was crossing Pacific Coast Highway after leaving work to walk to the bus stop. The pedestrian crossed in front of approaching traffic and was struck by a vehicle traveling westbound on Pacific Coast Highway. The impact launched the pedestrian into the eastbound traffic lanes of Pacific Coast Highway, where the pedestrian was run over by approximately 4 others vehicles. Pedestrian was killed.

2009 Fatal Collisions

06.28.09 - 0120 Hrs. - Sunday
PCH near Mulholland Hwy
Vehicle vs. Bicycle
23152 CVC – DUI
Criminal Charges Filed
Two bicycle riders were riding eastbound on Pacific Coast Highway on the shoulder area, while participating in a bicycle event (No LASD Assistance). The bicycle riders were struck from behind by vehicle #1, who was driving on the shoulder of Pacific Coast Highway. After the collision, vehicle #1 fled the accident scene. Bicycle rider #1 was killed. Bicycle rider #2 was injured.

01.12.09 - 2230 Hrs. - Friday
PCH at Puerco Cyn Rd.
Vehicle vs. Vehicle
21658 CVC – Unsafe Lane Change
Criminal Charges Filed
Both vehicles were traveling westbound on Pacific Coast Highway approaching Puerco Cyn Rd. Vehicle #1 made an unsafe lane change into right lane, striking vehicle #2. Both vehicles struck, causing vehicle #2 to lose control. Vehicle #2 flipped over and killed the driver.

2008 Fatal Collisions

05.18.08 - 1253 Hrs. - Sunday
PCH N/of Puerco Cyn Rd.
Vehicle vs. Tree
Possible Medical Condition
No Criminal Charges Filed
A vehicle was traveling eastbound on Pacific Coast Highway, when it drifted off the roadway into a tree. The driver of vehicle was killed. The collision was caused due to a possible medical condition.

04.08.08 - 2219 Hrs. - Tuesday
PCH at Encinal Cyn Rd.
Solo Vehicle
23152 CVC – DUI
No Criminal Charges Filed
A vehicle was traveling eastbound on Pacific Coast Highway at high rate of speed. The vehicle lost control and rolled over ejecting several passengers, who were unbelted. The driver was killed. The passengers were injured.

2007 Fatal Collisions

10.24.07 - 0950 Hrs. - Wednesday
Kanan-Dume Rd. at PCH
Vehicle vs. Vehicle
21461 CVC – Fail to Obey Signs
No Criminal Charges Filed
A driver of Semi-truck was traveling southbound on Kanan-Dume Rd. in violation of the posted signs. The Semi-truck was traveling on a weight restricted road limited to a maximum of 8,000 lbs. The Semi-truck lost control, due to over-heated brakes and crashed into two vehicles that were traveling eastbound on Pacific Coast Highway through the intersection of Kanan-Dume Rd. The driver of Semi-truck was killed and the driver of one other vehicle was killed. One other involved vehicle, the driver was injured. The driver of the truck also failed to use the runaway vehicle emergency lane.

06.11.07 - 1140 Hrs. - Monday
PCH N/of Decker Cyn Rd.
Vehicle vs. Vehicle
21650 CVC – Drive on Wrong Side of Road
No Criminal Charges Filed
Vehicle #1 was traveling northbound on Pacific Coast Highway, when it crossed over into on-coming traffic lanes and struck vehicle #2 head-on. The drivers of both vehicles were killed. The driver of vehicle #1 had a possible medical condition.

05.18.07 - 1533 Hrs. - Tuesday
PCH at Guernsey Rd.
Vehicle vs. Vehicle
22100.5 CVC – Unsafe Turn
Criminal Charges Rejected by DA
Vehicle #1 made an unsafe u-turn from the shoulder area of Pacific Coast Highway. Vehicle #1 was struck by vehicle #2, who was traveling southbound on Pacific Coast Highway. The collision caused the passenger in vehicle #1 to be ejected and killed. The passenger was not wearing a seat belt.

2006 Fatal Collisions

12.12.06 - 1635 Hrs. - Tuesday
PCH S/of Guernsey Ave.
Vehicle vs. Vehicle
21651 CVC – Illegal Turn
No Criminal Charges Filed
Vehicle #1 was parked on the shoulder area of Pacific Coast highway and made a u-turn in front of approaching traffic from the shoulder area. Vehicle #1 was struck by vehicle #2. The drivers of both vehicles were killed.

02.09.06 - 1355 Hrs. - Thursday
Kanan-Dume at PCH
Vehicle vs. Fixed Object
21461 CVC – Fail to Obey Signs
No Criminal Charges Filed
A driver of Semi-truck was traveling southbound on Kanan-Dume Rd in violation of the posted signs. The Semi-truck was traveling on a weight restricted road limited to a maximum of 8,000 lbs. The Semi-truck lost control, due to over-heated brakes and crashed into the hillside located through the intersection of Kanan-Dume Rd and Pacific Coast Highway. The driver of Semi-truck was killed. The driver of the truck also failed to use the runaway vehicle emergency lane.

2005 Fatal Collisions

09.10.05 - 1005 Hrs. - Saturday
PCH at John Tyler Rd.
Vehicle vs. Bicycle
22350 CVC – Unsafe Speed
Criminal Charges Filed
A driver of a catering truck was traveling eastbound on Pacific Coast Highway when it struck two bicycle riders, who were riding eastbound on Pacific Coast highway. Both bicycle riders were killed.

06.10.05 - 2246 Hrs. - Friday
PCH at Serra Rd.
Vehicle vs. Vehicle
21651 CVC – Illegal Turn
No Criminal Charges Filed
Vehicle #1 was making an illegal u-turn from the shoulder, when it was struck by vehicle #2, who was traveling eastbound on Pacific Coast Highway. The driver of vehicle #1 was killed.

03.01.05 - 0304 Hrs. - Tuesday
PCH at Cross Creek Rd
Vehicle vs. Pedestrian
Inattention of Pedestrian
No Criminal Charges Filed
Vehicle #1 was traveling southbound on Pacific Coast Highway and struck a pedestrian, who was crossing Pacific Coast Highway in the dark. The pedestrian was jaywalking.

01.09.05 - 0720 Hrs. - Sunday
PCH at Big Rock Dr.
Vehicle vs. Pole
22350 CVC – Unsafe Speed
No Criminal Charges Filed
A solo vehicle was traveling at unsafe speed for conditions, heavy rain and wet roadway. The vehicle lost control and crashed into a telephone pole. A passenger was ejected from the vehicle and killed. The passenger was not belted.

VIII. Individual Intersection Analysis

Intersection collision data was analyzed for a three year period focusing on injury and fatal collisions from the LASD Crossroads data base. Intersections that did not have any injury collisions for that period are not included. Intersections with three or less injury accidents were listed as low accident rate, four to nine was moderate, and ten or more were considered to have a high accident rate. These numbers and descriptors were based on statistical breaks occurring between the number of three and nine traffic collisions.

Recommended design improvements for intersections are general in nature and do not reflect the actual engineering and design requirements. It is also important to note the small sample size can skew the analysis of necessary improvements, so that in some cases, the day to day known characteristics of the intersection are taken into account and statistical anomalies are ignored.

In many cases, these recommendations may not be seen as plausible due to right of way, Caltrans standards, and environmental laws. However, the purpose here is to project the possibilities of reducing collisions and improving safety regardless of self-imposed restrictions. Since all of the Caltrans standards were codified, it is reasonable to change these standards to for the unique properties of PCH in Malibu in order to improve safety.

The most common improvements suggested for intersections include: Improved lighting, construction of acceleration and deceleration lanes, and protected center turn lanes with median modifications. The lighting improvements should improve visibility and bring the existing systems up to current standards using low energy LED or similar devices. The recommendation of adding acceleration and deceleration lanes is universal in light of the most common collisions consisting of rear-end and turning movements. Once installed, these acceleration/deceleration lanes will provide the added benefit of relieving congestion by removing slow vehicles from the travel lanes.

Median modifications, including dividing the highway with a barrier, are recommended to eliminate U-turns and unsafe turning movements. Additionally, these medians will force pedestrians to use designated crossings rather than attempting unsafe midblock crossings.







[DECKER CANYON ROAD]

T-Intersection, low accident rate, no signal
Total Collisions: 2
Most Frequent PCF: Broadside 50% (Turning)
Injury Rate (Including Fatal): 0% | Day/Night: 100% day

Improvements Needed:

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This low volume semi-rural intersection is almost unrecognizable in darkness. Although a traffic signal is not warranted, it would better identify the intersection to passing motorists. Larger signage that conforms to current standards would also warn drivers of the possibility of cross traffic.



[ENCINAL CANYON ROAD]

T-Intersection, low accident rate, no signal
Total collisions: 3
Most Frequent PCF: Head on 66% (Passing)
Injury Rate (Including Fatal): 66% | Day/Night: 67% / 33%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

Similar to Decker Canyon, Encinal Canyon is a low volume semi-rural road. The addition of a traffic signal would improve visibility with the addition of larger street signs which are the current standard.



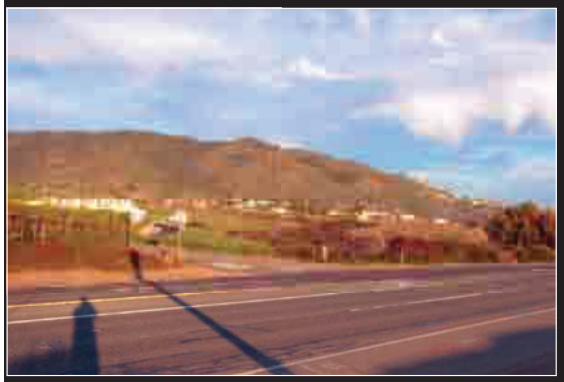
[BROAD BEACH ROAD]

T-Intersection, low accident rate, no signal
Total Collisions: 1
Most Frequent PCF: Broadside (Turning)
Injury Rate (Including Fatal): Fatal 100% | Day/Night: 100% day

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This intersection connects the residential Broad Beach neighborhood to PCH. There is also a southern terminus at the Trancas Canyon intersection. A traffic signal could provide protection for left turns in and out of this street, as most residents enter via a left turn and exit by turning right. There is currently space to widen the center of the intersection to provide for a left turn pocket exiting the neighborhood. The current limited sight lines force residents to place the nose of their vehicle in traffic in order to safely exit right or left.



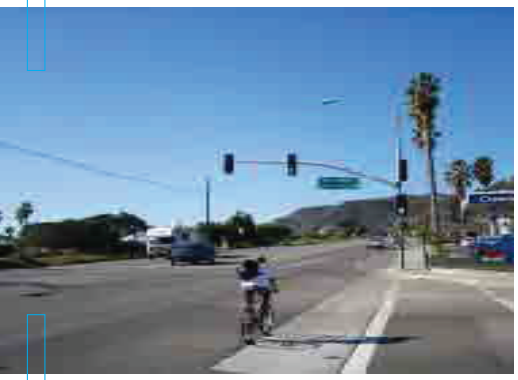
[LUNITA ROAD]

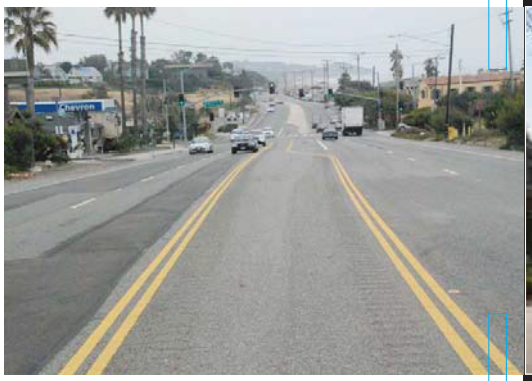
T-Intersection, low accident rate, no signal
Total Collisions: 2
Most Frequent PCF: Broadside 50% (Turning)
Injury Rate (Including Fatal): 0 | Day/Night: 100% day

Improvements needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This street accesses approximately a dozen homes of the north side of PCH. It is not well marked and approaching vehicles do not recognize it as an intersection. Although protected left turn pockets would improve safety since the majority of the movements exiting the neighborhood are left turns, it would be more economical to force a right turn exit and have residents make a U-turn in a safe location. Lastly, the addition of a traffic signal may also increase the safety of entering PCH.





[TRANCAS CANYON ROAD]

4-Way intersection, moderate accident rate, existing signals
Total Collisions: 5
Most Frequent PCF: Various
Injury Rate (Including Fatal): Injury 40% | Day/Night: Day 100%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes (Note: improvement project in design)
•Widening of approach

This intersection provides access to PCH for Broad Beach Residents and homes to the north adjacent to Trancas Canyon. It is also adjacent to the major retail area for the north portion of Malibu. During the summer months, it is heavily used by pedestrians from Zuma Beach and is used by northbound vehicles who turn right and subsequently turn around to travel south on PCH.

There is a current proposal to add deceleration lanes as part of remodeling of the retail establishments. This will significantly improve the current configuration along the lines of the recommendations in this report. One of the conditions of the construction project calls for a painted bike lane to allow cyclists to separate between the through lane and the right turn pocket. Caltrans is opposed to this configuration since the bike lane is not contiguous to the rest of the highway.

The high volume of pedestrian traffic combined with vehicles turning onto and off PCH warrants the addition of an overhead crossing. This would eliminate the constant conflict during peak periods in the summer when vehicles cannot complete their turning movements during the signal cycle due to the large number of pedestrians.



[GUERNSEY AVENUE]

T-Intersection, low accident rate, no signal (potential school access)
Total Collisions: 3
Most Frequent PCF: Rear-end 66% (Speed)
Injury Rate (Including Fatal): 0 | Day / Night: 100% day

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3
•Signalization
•Widening of approach, improve sightlines

This roadway provides access to PCH for residents living north of PCH. The approach has hills on each side so the sight distance is very limited. There is no crosswalk, but is heavily utilized during the summer by beachgoers seeking free parking on the residential streets.

Guernsey Ave. connects with Morning View Dr. as the only access route to the Malibu Schools. Although the schools are much closer to Morning View Dr. than Guernsey Ave., it is recommended that both roadways be converted to one-way streets where vehicles would enter the schools and residential areas from Morning View Dr., and exit via Guernsey Ave. This would require the installation of a signal at Guernsey Ave. to allow motorists to complete the natural loop from north to south.

Part of this recommendation would eliminate most of the street parking on the roadways, near PCH in order to discourage beach parking. In addition to making the intersections safer, it would greatly improve the safety and efficiency of the school drop off and pick up. A pedestrian crossing should be located in the intersection, as it can be anticipated Zuma beach patrons will attempt to cross PCH to access the shopping area to the north off Trancas Canyon. An alternate would be to prohibit pedestrian crossing forcing them to use the proposed overcrossing at Trancas Canyon.



[MORNING VIEW DRIVE]

T-Intersection, moderate accident rate, signalized (school access)
Total Collisions: 5
Most Frequent PCF: Rear-end 60% (Speed)
Injury Rate (Including Fatal): Injury 20% | Day / Night: 80% / 20%

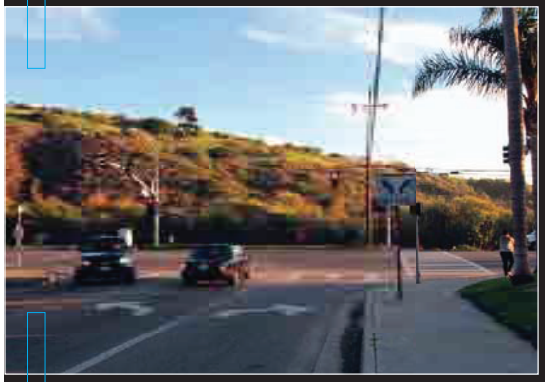
Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Widening of approach, improve sightlines
•School crossing signs, crosswalk

This intersection is mostly utilized by residents and for school access. Three schools are comingled at the top of Morning View Dr. There should be a left turn pocket for the street as it handles large volumes of traffic during school hours.

In order to improve safety and efficiency during school drop off and pick up hours, Morning View Dr. could be converted to a one way street allowing ingress with Guernsey Ave. completing the loop as the point of egress. It is possible to maintain it as a standard intersection while converting Morning View Dr. to a one-way street at residential intersection prior to entering the school zone. This option may be preferable to some residents who currently exit neighborhoods south of the schools to access PCH.

As the major school access point and summertime parking area for Zuma Beach this intersection could benefit from a pedestrian overcrossing. Many summer visitors park in and around the schools in search of free parking. Such a crossing would make it safer for students to cross PCH and would allow the utilization of the Zuma Beach parking lots as a drop off area for parents who wish to avoid the congestion immediately adjacent to the schools.





[BUSCH DRIVE]

T-Intersection, moderate accident rate, signalized
Total Collisions: 6
Most Frequent PCF: Rear-end 50% (Speed)
Injury Rate (Including Fatal): Injury 17% | Day / Night: 83% / 17%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Access via Zuma Beach undercrossing

Busch Dr. provides access to residents north of PCH. There is a small retail mall on the northwest corner. Most important, Busch Dr. is utilized for the Zuma Beach undercrossing that access the only parking lot entrance.

The Zuma Beach undercrossing is vital to maintaining a safe and efficient entrance to the main parking lot. It allows stacking of numerous vehicles waiting to enter the lot during peak demand. Without it, a left turn lane would have to be constructed in the center of PCH along with a long storage pocket that would interfere with two intersections east of Busch Dr.

The current undercrossing is adjacent to a small stream that allows for drainage from the canyons above. Often this stream flows in to the undercrossing roadway, which if the stream causes the closure of the access road; increased traffic would impact on PCH, would be a disaster for PCH. It would create incredible gridlock on the highway during peak summer periods and would eliminate some access to the streets east of Busch Dr. Maintenance of this undercrossing is probably the most important project that would impact the safety of the highway in this area.





[WESTWARD BEACH ROAD]

T-Intersection, high accident rate

Total Collisions: 10

Most Frequent PCF: Rear-end 50% (Speed)

Injury Rate (Including Fatal): Injury 50% | Day / Night: 90% / 10%

Improvements Needed

•Lighting

•Acceleration/Deceleration lanes

•Access via Zuma Beach undercrossing, (see notes)

•Right turn only access to PCH

Westward Beach Rd. provides access to the parking lot and restaurant at the end of the road. It is also used as the main exit from the Zuma Beach parking area. During the peak summer months, it becomes heavily congested and is often gridlocked. Deputies often close the road when the beach parking lots close. Along the beach, both sides of this road are used for free parking.

The safety of this intersection will be greatly improved by the addition of a traffic signal. Also, the bus bench on the center median should be moved north of the intersection with a bus turn out for additional safety. This would require covering the stream that passes next to Busch Drive under the highway, which is necessary to control the flow of the currently wayward stream. Also the current exit from Zuma Beach should be elevated (Arizona Crossing) above the natural level of the stream.

The majority of the congestion can be attributed to the lack of beach parking and overcrowding of this street. Both the Zuma and Westward beach parking lots could easily be expanded and re-designed to allow for additional parking and more efficient ingress and egress. An overhead digital sign similar to those used in parking garages could display the number of available spaces in the parking lots to vehicles on PCH. Finally, parking on Westward Beach Rd. should be eliminated unless the road is substantially widened with marked diagonal parking spaces on the beach side only.

The existing conditions of parallel parking on both sides of the roadway where pedestrians walk in the roadway and cross at every possible location contribute to making this the most hazardous area in Malibu that is not on PCH.



[BONSALL DRIVE]

T-Intersection, low accident rate, no signal

Total Collisions: 1

Most Frequent PCF: Other

Injury Rate (Including Fatal): 0 | Day / Night: 100% night

Improvements Needed

•Lighting

•Acceleration/Deceleration lanes

•Protected center lane turn area with delineators, see Figure 3

Bonsall Dr. provides access to residents north of PCH. There is also access to Busch Dr. via a cross street north of PCH. The City of Malibu had limited traffic to northbound at PCH due to the lack of sight distance. The narrow substandard lanes are bracketed by high trees forcing vehicles to nose onto PCH in order to safely exit. Often the intersection is gridlocked in the peak summer periods.

This is the first of three intersections spaced extremely close to one another. Installation of a traffic signal is not recommended due to its proximity to Busch Dr. Thus if it is to be utilized as an exit on to PCH, vehicles should be limited to making a right turn only. Residents wishing to exit left should be encouraged to use the signal at Busch Dr. Since the access to Busch Dr. is via a cross street that is often impassable due to the overflow to the steam, that crossing should be improved to allow access at all times. This should be completed as part of the enclosing of the stream adjacent to Busch Dr. impacting the Zuma Beach undercrossing.



[HEATHERCLIFF DRIVE]

T-Intersection, high accident rate

Total Collisions: 10

Most Frequent PCF: Rear-end 40% (Speed)

Injury Rates (Including Fatal): Injury 10% Day / Night: 90% / 10%

Improvements Needed

•Lighting

•Acceleration/Deceleration lanes

•Improved crosswalks, sidewalks

Heathercliff Dr. is the major access route to the Point Dume residential area and a shopping area on the southwest corner of PCH. This location was recently scrutinized when a local teenager was killed by a suicidal driver. It is often impacted by heavy congestion since it is between Zuma Beach and Kanan Dume Rd. which is the main exit route from that recreational area.

The addition of sidewalks and improved markings of crosswalks will provide a safe area for pedestrians who congregate here to catch the bus. Signal timing should be improved as there tends to be a large back up of vehicles eastbound and less congestion east of the intersection. This should reduce the number of rear-end collisions.



[CAVALLERI ROAD]

4-way Intersection, moderate accident rate, no signal

Total Collisions: 6

Most Frequent PCF: Broadside 66% (Turning)

Injury Rate (Including Fatal): Injury 17% | Day / Night: 83% / 17%

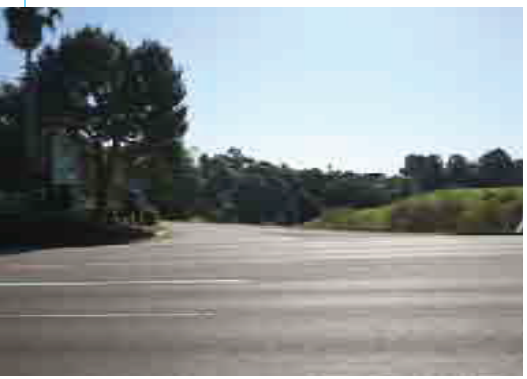
Improvements Needed

•Lighting

•Acceleration/Deceleration lanes

•Signalization

This street accesses residential areas north of PCH. There is no through traffic and it is used by residents only. A signal could be beneficial, but may not be practical due to the close proximity to Kanan Dume Rd. Accidents could most likely be reduced by the addition of a safety lane in the middle of PCH that requires drivers making a left turn onto PCH to only clear one direction of traffic at a time.



[PORTSHEAD ROAD]

4-way Intersection, low accident rate, no signal
Total Collisions: 3
Most Frequent PCF: Rear-end 66% Speed)
Injury Rate (Including Fatal): Injury 33% | Day / Night: 100% day

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This street accesses residential areas south of PCH. It is across from Cavalleri Rd. forming the 4-way intersection. The safety of this intersection would be improved by the protected center turn area described above and in Figure 3.





[KANAN DUME ROAD]

T-Intersection, high accident rate
Total Collisions: 19
Most Frequent PCF: Rear-End 41% (Speed)
Injury Rate (Including Fatal): 5% Fatal, 16% Injury | Day / Night: 53% / 47%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Additional left turn lane (eastbound)
•Removal of runaway vehicle median, widen approach

This road is a major canyon route between the Conejo Valley and Malibu. It is a commuter route that is very heavily used and often becomes congested during peak summer hours. Rear end collisions are a result of heavy congestion. Over the years, several fatal collisions resulted from trucks illegally using Kanan Dume as a route to Malibu and subsequently losing braking ability.

Although there is a hillside south of the intersection and businesses north of PCH, the roadway needs to be widened to allow for double left turns from eastbound PCH to northbound Kanan Dume Rd. This will alleviate much of the congestion that causes the collisions. The addition of "Smart" signal technology will allow the left turn arrow to remain green longer during peak periods.

The truck escape median on Kanan Dume Rd. should be removed since trucks can no longer legally use it as an alternate route. Also, trucks that have crashed as a result of loss of braking ability have never utilized it. Removing the median will allow for additional width on Kanan Dume Rd. to accommodate the double left turns once PCH is improved to allow for this movement.



[ZUMA MESA DRIVE]

T-Intersection, low accident rate
Total Collisions: 1
Most Frequent PCF: Rear-end 100% (Speed)
Injury Rate (Including Fatal): 0 | Day / Night: 100% day

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This roadway provides access to about a dozen residences north of PCH. Due to its close proximity to Kanan Dume Rd., it is conceivable that residents wishing to turn left onto PCH could easily turn right toward Kanan Dume Rd. and then execute a U-turn to proceed south on PCH. This will not be possible until the Kanan Dume Rd. intersection is improved. If that is not possible, the addition of protected center turn lanes would benefit vehicles exiting to make a left turn.



[ZUMIREZ DRIVE]

4-way Intersection, moderate accident rate, signalized
Total collisions: 5
Most Frequent PCF: Rear-end, 40% (Speed)
Injury Rate (Including Fatal): 20% injury | Day / Night: 100% day

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Sidewalk and median

This road accesses residences north and south of PCH. The southern portion is a secondary route to the Point Dume area. The southern portion was re-aligned to create a 4-way intersection. Due to a curve of PCH north of the intersection, southbound drivers have complained they cannot see the signal until they are too close to stop safely.

It is recommended a sign advising motorists of the signal be placed north of the intersection to better alert southbound drivers of the traffic signal.





[RAMIREZ MESA DRIVE]

RAMIREZ MESA DRIVE

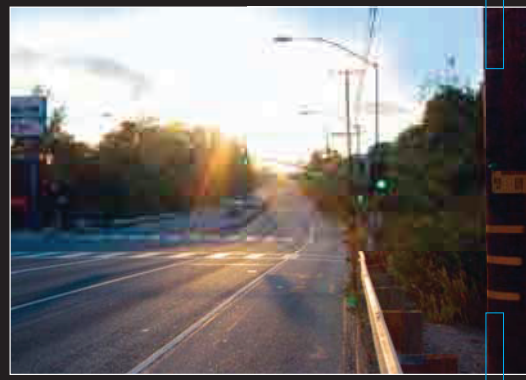
T-Intersection, moderate accident rate
Total Collisions: 4
Most Frequent PCF: Broadside 50% (Turning)
Injury Rate (Including Fatal): Injury 25% | Day / Night: 75% / 25%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This road provides access to residences north of PCH. Due to the speeds on PCH, the addition of a center turn lane will assist drivers when exiting the location to make a left turn. Turn pockets will provide a safe area for vehicles waiting to turn. Signage alerting drivers to the location of the intersection should also provide an additional level of safety.





[PARADISE COVE ROAD]

T-Intersection, high accident rate, signalized
Total collisions: 16
Most Frequent PCF: Rear-end 63% (Speed)
Injury Rate (Including Fatal): Injury 25% | Day / Night: 94% / 6%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes (extended for beach access)
•Improved crosswalks, sidewalks, signage
•Widen approach, dedicated turn lanes upon exit
•Open alternate entrance for residents only

This road provides access to the Paradise Cove Beach Café and resort area. It is also the only access road to the mobile home park adjacent to Paradise Cove. Most of the collisions are a result of traffic congestion attempting to enter the beach area during peak summer periods. Often left turn traffic cannot clear the intersection and it creates gridlock. Employees attempt to turn away vehicles when the parking lot fills, but vehicles continue to enter including residents attempting to return home.

Some visitors attempt to park on PCH and walk into the resort area. Sidewalks should be installed on PCH as well as Paradise Cove Rd. which is too narrow and needs to be widened. Patrons must be processed faster during peak periods and the Paradise Cove Beach Café should be required to post a sign indicating when the parking lot is full.

Most important would be to provide a separate entrance to the mobile home park. There is an existing gate facing PCH, but it is not opened in order to save the expense of staffing it or paying for an automatic gate along with lane modifications to make it safe to use.



[SEA LANE DRIVE]

4-Way Intersection, low accident rate
Total Collisions: 3
Most Frequent PCF: Broadside 67% (Turning)
Injury Rate (Including Fatal): 0 | Day / Night: 67% / 33%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This road is the southern portion of Winding Way (w), creating a 4 way intersection. It provides residential access only and is not usually travelled by visitors. The greatest safety improvement will be the addition of a protected center turn lane. A signal would not necessarily be warranted.



[WINDING WAY (WEST)]

4-Way Intersection, low accident rate
Total Collisions: 3
Most Frequent PCF: Broadside 67% (Turning)
Injury Rate (Including Fatal): 0 | Day / Night: 67% / 33%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This is the north portion of the 4-way intersection with Sea Lane Dr. The accident data and recommendations are exactly the same as Sea Lane Dr.



[MEADOW COURT]

T-Intersection, low accident rate
Total Collisions: 2
Most Frequent PCF: Other
Injury Rate (Including Fatal): 0 | Day / Night: 0 / 100%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This road allows access to a residential area north of PCH. Due to the low traffic volume, the addition of a protected center turn lane should provide an additional level of safety for vehicles turning right onto PCH.



[ESCONDIDO BEACH ROAD]

T-Intersection, low accident rate
Total Collisions: 2
Most Frequent PCF: Broadside (Turning)
Injury Rate (Including Fatal): Injury 100% | Day / Night: 50% / 50%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This roadway provides access to the residential area south of PCH. The addition of a center left turn lane would provide an extra level of safety for vehicles turning left.



[MALIBU COVE COLONY DRIVE]

4-Way Intersection, moderate accident rate
Total Collisions: 4
Most Frequent PCF: Broadside 50% (Turning)
Injury Rate (Including Fatal): Injury 50% | Day / Night: 75% / 25%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This is the south portion of the 4-way intersection created by Via Escondido to the north. It is exclusively for residential access and would benefit from a protected center turn lane.



[VIA ESCONDIDO]

4-Way Intersection, moderate accident rate
Total Collisions: 4
Most Frequent PCF: Broadside 50% (Turning)
Injury Rate (Including Fatal): 0 | Day / Night: 75% / 25%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This is the northern portion of the 4-way intersection formed with Malibu Cove Colony and the accident data and recommendations are the same as above.



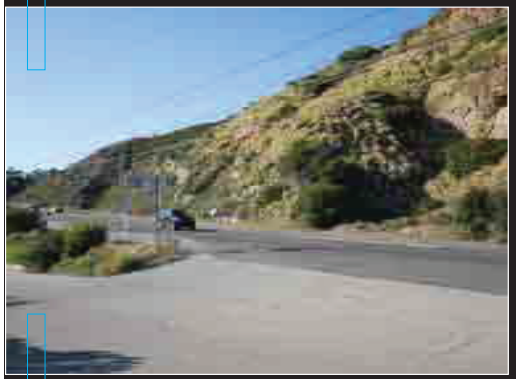
[SEA VISTA DRIVE]

4-Way Intersection, low accident rate
Total Collisions: 2
Most Frequent PCF: Rear-End 50% (Speed)
Injury Rate (Including Fatal): Injury 100% | Day / Night: 50% / 50 %

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

Sea Vista Drive leads to a residential area north of PCH. It intersects with Seagull Dr. on the south which forms a 4-way intersection. The addition of protected center turn lanes would improve the safety of this intersection.





[SEAGULL DRIVE]

4-Way Intersection, low accident rate
Total Collisions: 2
Most Frequent PCF: Broadside 50% (Turning)
Injury Rate (Including Fatal): 0 | Day / Night: 50% / 50%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This is the southern portion of the Sea Vista Dr. 4-way intersection. The statistics and recommendations are the same as Sea Vista Drive.





[LATIGO CANYON ROAD]

T-Intersection, low accident rate
Total Collisions: 3
Most Frequent PCF: Broadside 67% (Turning)
Injury Rate (Including Fatal): Injury 33% | Day / Night: 100% day

Improvements Needed

- Lighting
- Acceleration/Deceleration lanes
- Protected center lane turn area with delineators, see Figure 3

Latigo Canyon Rd. provides access to residential areas north of PCH and connects to Kanan Dume Rd. at the top. It bisects a portion of PCH that is considered a fast downhill southbound. The addition of a traffic signal would most likely reduce the broadside collisions that result from the high speeds on PCH. If a traffic signal is not feasible, the use of protected center turn lane would assist the majority of the drivers who are turning south on PCH from Latigo Canyon.





[CORRAL CANYON ROAD]

T-Intersection, high accident rate, signalized
Total Collisions: 10
Most Frequent PCF: Broadside 67% (Turning)
Injury Rate (Including Fatal): Injury 30% | Day / Night: 100% day

Improvements needed:

- Lighting
- Acceleration/Deceleration lanes
- Widen approach, add sidewalks
- Install pedestrian undercrossing in existing nearby drainage

Corral Canyon Rd. provides access to a residential area north of PCH. It also leads to Solstice Canyon Park. Many visitors utilize the Solstice Canyon parking lot and walk across PCH to the Dan Blocker Beach area. There are also several businesses on each side of Corral Canyon Rd.

A drainage channel runs under PCH on the south side of Corral Canyon. Many visitors use this for safe passage under the highway. Rather than upgrading the crosswalk at the signal, it is recommended that a pedestrian undercrossing be constructed in conjunction with the existing drainage channel. By removing pedestrians from the highway, they can be kept virtually immune from traffic hazards.

Improved directional signage will allow visitors to access the beaches and parks with little difficulty and eliminate unnecessary U-turns for lost tourists.



[MALIBU ROAD (WEST)]

T-Intersection, low accident rate
Total Collisions: 2
Most Frequent PCF: Broadside 100% (Turning)
Injury Rate (Including Fatal): 0 | Day / Night: 50% day / 50% night

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3
•Reconfigure to allow for entrance

Malibu Road (W) is a single lane exit for the residential area on Malibu Road. Drivers cannot see PCH until they move their vehicle onto the highway since the road begins well below PCH.

This intersection should be reconfigured to a two-way standard T configuration where left turns could be allowed with the addition of a protected center lane. It is not clear why this portion of Malibu Rd. was restricted to an exit only, but most likely this was done to restrict non-residential access to what was a private beach area at one time. Now that public access in now mandated, the reconfiguration will make the intersection safer and allow motorists to make legal turns onto Malibu Rd. where they currently make unsafe, illegal driving maneuvers.



[PUERCO CANYON ROAD]

T-Intersection, low accident rate
Total Collisions: 2
Most Frequent PCF: Rear-end 50% (Speed)
Injury Rate (Including Fatal): fatal 50% | Day / Night: 50% / 50%

Improvements needed:

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This road leads to a small residential area north of PCH. The addition of a protected center turn lane would increase the safety of this intersection. The sole fatality was a result of a sideswipe where the victim's vehicle slid on its side into the poles in the photo.





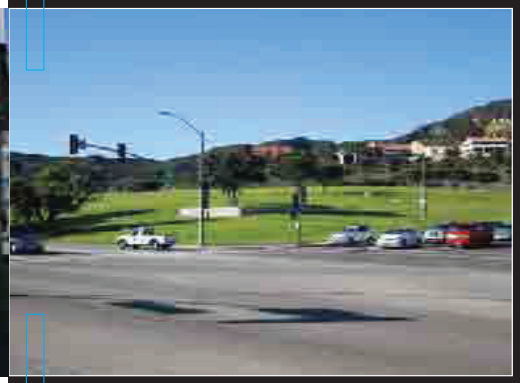
[JOHN TYLER DRIVE]

T-Intersection, high accident rate, signalized
Total Collisions: 16
Most Frequent PCF: Rear-end 50% (Speed)
Injury Rate (Including Fatal): Injury 37% | Day / Night: 56% / 44%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Sidewalks

This road provides access to residences north of PCH and is one of the two entrances to Pepperdine University. It is probably one of the better lit and signed intersections in Malibu. Unfortunately, it is located just west of Malibu Canyon, a major commuter route to PCH. The high accident rate is a result of the very high volume of traffic and inattention of visitors gazing at the ocean and the University.





[MALIBU CANYON ROAD]

4-Way intersection, high accident rate, existing signals
Total Collisions: 23
Most Frequent PCF: Rear-end 70% (Speed)
Injury Rate (Including Fatal): Injury 34% | Day / Night: 74% / 26%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Improved signal timing
•Add sidewalks

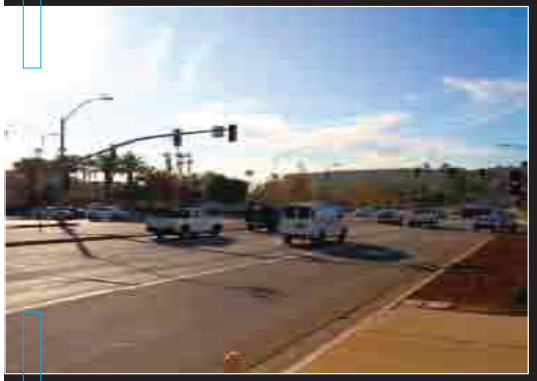
Malibu Canyon is the major access to PCH from the 101 freeway. It is used by commuters, tourists, and trucks. It has the highest traffic volume in the city, and hence the second highest number of collisions. As the common themes on PCH, most of the collisions are low speed, rear-end collisions during peak commute and tourist hours. One area of concern is the lack of signal timing and the failure of Caltrans to use "Smart" signal technology that would automatically adjust signal timing to reflect the actual traffic usage of the roadways. On a daily basis, traffic turning south on PCH from Malibu Canyon Rd. is backed up for one-half mile while southbound lanes on PCH are virtually empty. With smart technology or the even better option of visual monitoring from the Traffic Center, the efficiency and congestion at this intersection could be improved and possibly reduce the number of collisions.



[CIVIC CENTER WAY]

T-intersection, low accident rate
Total Collisions: 1
Most Frequent PCF: Pedestrian/Bike 100% (Speed)
Injury Rate (Including Fatal): Injury 100% | Day / Night: 100% night
Improvements Needed
•Removal

This appears to be an old on ramp to the highway from Civic Center Way, a street that parallels PCH. This ramp epitomizes the lack of maintenance and modernization by Caltrans and the City of Malibu.





[WEBB WAY]

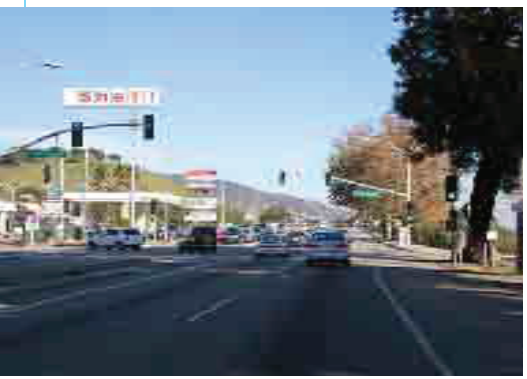
4-Way intersection, high accident rate, existing signals
Total Collisions: 18
Most Frequent PCF: Rear-end 44% (Speed)
Injury Rate (Including Fatal): Injury 33% | Day / Night: 72% / 28%

Improvements Needed
•Lighting
•Acceleration/Deceleration lanes
•Widening of approach
•Add sidewalks

This road provided access to Malibu Rd. and the major shopping area of Malibu. There is often congestion during peak periods which is exacerbated by the lack of storage space on the south leg of Webb Way. Additionally, vehicles turning left from the south leg do not have a green arrow, even though southbound traffic is stopped.

The addition of a green arrow for left turns from northbound Webb Way will improve the efficiency of the intersection. Also, both north and south turn pockets of PCH should be lengthened to allow for additional storage during peak times. Once again, smart signal technology should make the intersection more efficient.

Pedestrians on the south side of Webb Way have access to sidewalks, but once they cross to the north side of PCH, they are literally left in the dirt.



[CROSS CREEK ROAD]

4-Way intersection, high accident rate, existing signals
Total Collisions: 14
Most Frequent PCF: Rear-end 43% (Speed)
Injury Rate (Including Fatal): Injury 21% | Day / Night: 79% / 21 %

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Add sidewalks
•Improve crosswalk
•Signal timing

Cross Creek Road provides access to a major retail area in Malibu. It is often used as a short cut around PCH to Malibu Canyon Road. To the south is the entrance to Malibu Lagoon which lacks sidewalks and improved smart type crosswalk. Improving these aspects will add to pedestrian safety.

The major issue with this intersection is the timing of the signal. PCH will be completely gridlocked south of the intersection, while to the north, the highway is almost empty. Serious attention to this signal timing issue could greatly improve the efficiency of the highway which is the leading causal factor for the rear end collisions.





[SERRA ROAD]

T-Intersection, moderate accident rate
Total Collisions: 6
Most Frequent PCF: Rear-end 50% (Speed)
Injury Rate (Including Fatal): Injury 17% | Day / Night: 83% / 17%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3
•Add traffic signal

This roadway leads to a large residential area north of PCH. There is an additional access road via Civic Center Way. This area of PCH experiences a large amount of congestion resulting from high volume and poor signal timing at Cross Creek Rd. The high volume of stopped vehicles can make it extremely difficult to turn left during peak commute hours.

The left turn pocket into Serra Rd. competes with a left turn into the beach parking lot entrance west of Serra Rd. This creates the potential for a head on collision in the two way left turn lane. In order to remedy this situation, the entrance to the parking lot should be moved east to become a 4-way intersection with Serra Rd. For complete safety, the addition of a signal would be necessary. Since the volume of cross traffic is not significant, the addition of the signal should not impact traffic on PCH. A smart signal would eliminate unnecessary delays in PCH traffic.

If the addition of a traffic signal is not feasible, the center turn lane needs to provide a safe area for left turns. Unfortunately, the left turn into the beach parking lot would have to be eliminated requiring visitors to make a U-turn at Cross Creek.



[SWEETWATER CANYON DRIVE]

T-Intersection, moderate accident rate
Total Collisions: 6
Most Frequent PCF: Rear-end 33% (Speed)
Injury Rate (Including Fatal): Injury 17% | Day / Night: 50% / 50%

Improvements Needed

•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This road leads to a residential area north of PCH. The major concern here involves the limited sight lines and street parking for the businesses on PCH. The addition of acceleration/deceleration lanes with the protected center turn lane will improve the safety at this intersection.



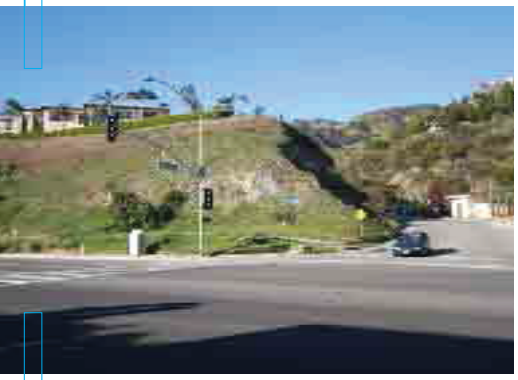
[CARBON MESA]

T-Intersection, low accident rate
Total Collisions: 2
Most Frequent PCF: Rear-end 100% (Speed)
Injury Rate (Including Fatal): 0 | Day / Night: 50% / 50%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Protected center lane turn area with delineators, see Figure 3

This road leads to a residential area north of PCH. Like most intersections south of Malibu Canyon, the most frequent collisions are non-preventable resulting from congestion. This more resembles a driveway more than a roadway, and should be improved to meet current standards for intersections entering a highway.





[CARBON CANYON ROAD]

T-Intersection, high accident rate, signalized
Total Collisions: 12
Most Frequent PCF: Rear-end 75% (Speed)
Injury Rate (Including Fatal): Injury 8% | Day / Night: 83% / 17%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Add sidewalks, median barrier

Carbon Canyon Road leads to a residential area north of PCH. Keeping with the common theme for this portion of the highway, the collisions are non-preventable rear end due to congestion during peak commute hours.



[RAMBLA VISTA (WEST)]

T-Intersection, low accident rate
Total Collisions: 2
Most Frequent PCF: Rear-end 50% (Speed)
Injury Rate (Including Fatal): 0 | Day / Night: 100% day

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Add sidewalks, median barrier

As part of the Rambla Vista loop, it is suggested that Rambla Vista become a one way street where it crosses PCH. The east loop will be a one way entrance and the west loop will be a one way exit.



[RAMBLA VISTA (EAST)]

T-Intersection, high accident rate
Total Collisions: 8
Most Frequent PCF: Broadside 50% (Speed)
Injury Rate (Including Fatal): Injury 50% | Day / Night: 88% / 12%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Add sidewalks, median barrier

Rambla Vista connects with PCH at two locations. This street exits next to an off street parking area where the merge is not delineated and conflicts with traffic turning right from PCH. This section enters PCH within 100 yards of two other intersections. This design contributes to the highest accident rate in Malibu at Las Flores Canyon.

Despite the recommendations above, these three intersections will continue to contribute to the high accident rate unless they are redesigned into two distinct intersections further apart.

Absent the redesign of the intersections, consideration should be given to making the lower portions of Rambla Vista one way. The east leg of Rambla Vista leads itself as a natural entrance, while the west portion faces north and should be the one way exit.



[RAMBLA PACIFICO STREET]

T-Intersection, low accident rate, signalized
Total Collisions: 10
Most Frequent PCF: Rear-end 70% (Speed)
Injury Rate (Including Fatal): Injury 40% | Day / Night: 80% / 20%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Add sidewalks, median barrier

Rambla Pacifico is a relatively short street north of PCH that leads to a small number of residences. It may be possible to access these residences via Las Flores Rd. with the repair of an existing cross street north of PCH. This would alleviate the backup caused by the close proximity to the Las Flores intersection signal. If none of these solutions are adopted, the coordination of the two signals could improve safety in this area.





[LAS FLORES CANYON ROAD]

T-Intersection, high accident rate, signalized
Total Collisions: 26
Most Frequent PCF: Rear-end 58% (Speed)
Injury Rate (Including Fatal): Injury 35% | Day / Night: 77% / 23%

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Add sidewalks, median barrier

Las Flores Canyon leads to residences north of PCH and connects with other canyon roads that lead towards the 101 freeway. Due to its narrow and winding path, it is not considered a commuter route to anyone other than residents of the canyons. As previously mentioned, it could provide access to Rambla Vista and thus eliminate the dueling signals at those intersections.

This intersection has the highest number of collisions on PCH, most of which consist of non-preventable rear end incidents. This is a result of congestion and poor signal timing.



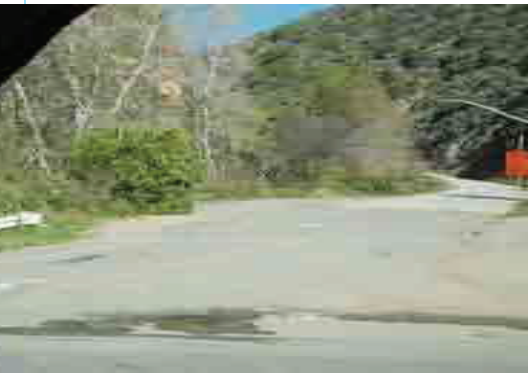
[BIG ROCK DRIVE]

T-Intersection, high accident rate, signalized
Total Collisions: 7
Most Frequent PCF: Rear-end 43% (Speed)
Injury Rate (Including Fatal): Injury 57% | Day / Night: 86% / 14 %

Improvements Needed

•Lighting
•Acceleration/Deceleration lanes
•Add sidewalks, median barrier

This road leads to a residential area north of PCH. This is used exclusively by residents as there is no other exit. The addition of deceleration lanes and improved signal timing could reduce rear end collisions and lead to more efficient operation of the intersection.



[TUNA CANYON ROAD]

T-Intersection, exit only, moderate accident rate
Total Collisions: 5
Most Frequent PCF: Rear-end 40% (Speed)
Injury Rate (Including Fatal): Injury 60% | Day / Night: 60% / 40 %

Improvements Needed

•Lighting
•Acceleration lane
•Median barrier
•Right turn only, no entrance

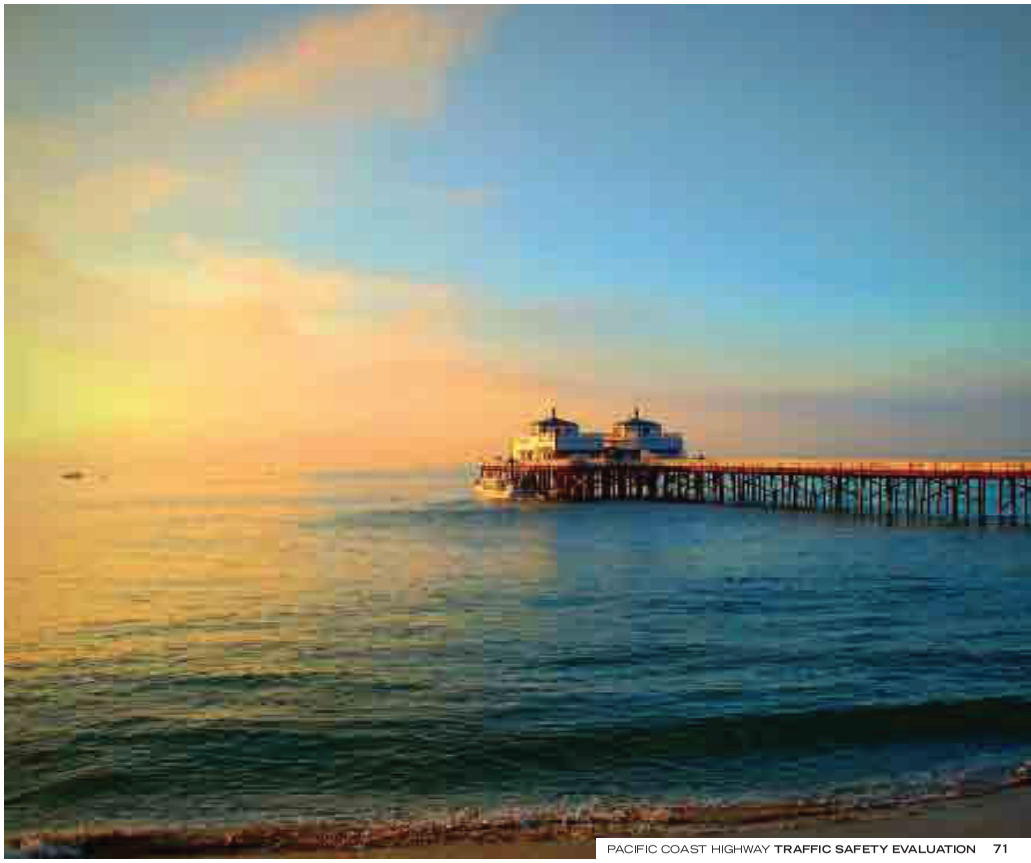
This road is a one way exit only. There is a small portion for several hundred feet north of PCH that allows northbound traffic. This should be eliminated and the road should be signed to prohibit entrance from PCH. Tuna Canyon Road could be widened to allow for two way traffic, but that is unlikely to occur.

[INTERSECTION COLLISION CHART]

INTERSECTION	3 YEAR	FATAL	INJURY	BROADSIDE	HEAD ON	REAR END	SIDE SWIPE	PED BIKE	DAY/NIGHT	TRAFFIC SIGNAL Y/N/ADD
DECKER CANYON RD.	2	0	0	1 / 50%	0	0	0	0	100% / 0%	N
ENCINAL CANYON RD.	3	0	2	1 / 33%	2/66%	0	0	0	67% / 33%	N
BROAD BEACH	1	1	0	1 / 100%	0	0	0	0	100% / 0%	N
LUNITA RD.	2	0	0	1 / 50%	0	1 / 50%	0	0	100% / 0	N
TRANCAS CANYON RD.	5	0	2	0	1 /2 0%	1 / 20%	1 / 20%	1 /20 %	100% / 0%	Y
GUERNESY AVE.	3	0	0	1 / 33%	0	2 / 66%	0	0	100% / 0%	N
MORNING VIEW DR.	5	0	1	1 / 20%	0	3 / 60%	0	0	80% / 20%	Y
BUSCH DR.	6	0	1	0	0	3 / 50%	2 / 33%	0	83% / 17%	Y / NOTE
WESTWARD BEACH RD.	10	0	5	2 / 20%	1 / 10%	5 / 50%	0	0	90% / 10%	N / NOTE
BONSALL DR.	1	0	1	0	0	0	0	0	0 / 100%	N
HEATHERCLIFF	10	0	1	3 / 30%	0	4 / 40%	1 / 10%	0	90% / 10%	Y
CAVALLERI RD.	6	0	1	4 / 66%	0	2 / 33%	0	0	83% / 17%	N
PORTSHEAD	3	0	1	0	0	2 / 66%	1 / 33%	0	100% / 0%	N
KANAN DUME RD.	19	1	3	3 / 16%	0	8 / 42%	4 / 21%	1 / 5%	53% / 42%	Y / NOTE
ZUMA MESA DR.	1	0	0	0	0	1 / 100%	0	0	100% / 0%	N
ZUMIREZ DR. (E)	5	0	1	1 / 20%	0	2 / 40%	0	0	20% / 80%	Y
RAMIREZ MESA	4	0	1	2 / 50%	0	1 / 25%	1 / 25%	0	75% / 25%	N
PARADISE COVE RD.	16	0	4	1 / 6%	0	10 / 63%	3 / 19%	0	94% / 6%	Y
SEA LANE DR.	3	0	0	2 / 67%	0	0	1 / 33%	0	67% / 33%	N
WINDING WAY (W)	3	0	0	2 / 67%	0	0	1 / 33%	0	67% / 33%	N
MEADOWS CT.	2	0	0	0	0	0	0	0	0 / 100%	N
ESCONDIDO BEACH RD.	2	0	2	1 / 50%	0	0	1 / 50%	0	50% / 50%	N
MALIBU COVE COLONY DR.	4	0	2	2 / 50%	1 / 25%	0	1 / 25%	0	75% / 25%	N
VIA ESCONDIDO	4	0	2	2 / 50%	1 / 25%	0	1 / 25%	0	75% / 25%	N

[INTERSECTION COLLISION CHART - CONTINUED]

INTERSECTION	3 YEAR	FATAL	INJURY	BROADSIDE	HEAD ON	REAR END	SIDE SWIPE	PED BIKE	DAY/NIGHT	TRAFFIC SIGNAL Y/N/ADD
SEA VISTA DR.	2	0	0	1 / 50%	0	1 / 50%	0	0	50% / 50%	N
SEAGULL DR.	2	0	0	1 / 50%	0	1 / 50%	0	0	50% / 50%	N
LATIGO CANYON RD.	3	0	1	2 / 67%	0	1 / 33%	0	0	100%	N / ADD
CORRAL CANYON RD.	10	0	3	3 / 30%	0	5 / 50%	1 / 10%	0	100%	Y
MALIBU RD. (W)	2	0	0	2 / 100%	0	0	0	0	50% / 50%	N / NOTE
PUERCO CANYON RD.	2	1	0	0	0	1 / 50%	1 / 50%	0	50% / 50%	N
JOHN TYLER	16	0	6	5 / 31%	3 / 19%	8 / 50%	0	0	56% / 44%	Y
MALIBU CANYON RD.	23	0	8	3 / 13%	0	16 / 70%	3 / 13%	0	74% / 26%	Y
CIVIC CENTER WAY	1	0	1	0	0	0	0	1	0 / 100%	N
WEBB WAY	18	0	6	7 / 39%	1 / 6%	4 / 44%	2 / 11%	0	72% / 28%	Y
CROSS CREEK	14	0	3	4 / 29%	0	6 / 43%	4 / 29%	0	79% / 21%	Y
SERRA RD.	6	0	1	2 / 33%	0	3 / 50%	1 / 17%	0	83% / 17%	N / ADD
SWEETWATER CANYON RD.	6	0	1	1 / 17%	0	2 / 33%	2 / 33%	0	50% / 50%	N
CARBON MESA	2	0	0	0	0	2 / 100%	0	0	50% / 50%	N
CARBON CANYON RD.	12	0	1	0	0	83% / 17%	0	83% / 17%	83% / 17%	Y
RAMBLA VISTA (E)	8	0	4	4 / 50%	0	3 / 38%	1 / 13%	0	88% / 12%	N
RAMBLA VISTA (W)	2	0	0	0	0	1 / 50%	0	0	100% / 0%	N
RAMBLA PACIFICO	10	0	4	2 / 20%	0	7 / 70%	0	1 / 10%	80% / 20%	Y
LAS FLORES CANYON RD.	26	0	9	7 / 27%	2 / 8%	15 / 58%	1 / 4%	0	77% / 19%	Y
BIG ROCK DR.	7	0	4	2 / 29%	1 / 14%	3 / 43%	1 / 14%	0	86% / 14%	Y
PENA RD.	1	0	0	0	0	0	0	0	0 / 100%	N
TUNA CANYON	5	0	3	0	0	2 / 40%	2 / 40%	0	60% / 40%	N / NOTE



IX. Mid Block Segment Analysis

Roadway segments are generalized as rural, residential, business and combination of these types. Generally speaking, the right of way for the Pacific Coast Highway through Malibu is about eighty feet in width with an additional ten feet of shoulder space on the northern portion of the highway.

Reconfiguration of the highway will require easements from business and property owners as well as the utilization of the full right-of-way. It can be anticipated that much of the State's right-of-way has been encroached upon, especially in the southern end of the highway. While concerns of residents along the highway should be acknowledged, the fact they purchased land along said highway should not absolve them from certain inconveniences to make the highway safer and allow for smoother traffic flow.

Most of the recommendations include the addition of a median barrier, bicycle lanes and sidewalks. Removal of street parking from the land side of the highway in non-business areas for pedestrian safety is a second component of this plan. Infrastructure modifications should be based on current engineering design requirements, as this document is not intended to be a technical model.







[MULHOLLAND HWY TO DECKER CANYON ROAD]

Length: 2.4 Miles
Injury Collisions Per Mile: 1.25
Pcfs: Speed / Turning

This section of PCH is semi-rural and lightly populated. It encompasses Leo Carillo State Beach and campground. There is a two-way center turn lane and no sidewalks. All parking is on the street, which is lightly used since there is limited beach access.

Currently, $900,000 is designated for this area for the addition of bicycle lanes. A bicycle lane will improve the safety for cyclists by more clearly defining a safe route of passage and will provide separation between parked vehicles and the traffic lane. It is recommended that the full right-of-way be utilized when this construction begins.

As for this and the roadway segments north of Trancas Canyon, speed enforcement is a primary concern. However, due to the lack of traffic collisions in this area, the enforcement level is much lower than the south section of Malibu. This dearth of enforcement has not resulted in an increase in the accident rate, as the volume remains low in comparison to other areas of the city. The lower enforcement rate is a result of the concentration of enforcement on the more heavily travelled areas of the highway.

Other than the proposed bicycle lanes, there are not really any infrastructure problems in this area. Issues relating to intersections will remain the major issues for roadway modifications. Only an increase of personnel would allow for additional enforcement in this area.

[DECKER CANYON ROAD TO ENCINAL CANYON ROAD]

Length: 0.53 Miles
Injury Collisions Per Mile: 1.06
Pcfs: Lane Change / Unsafe Speed

This section of roadway is almost identical to the above.

[ENCINAL CANYON ROAD TO BROAD BEACH ROAD]

Length: 0.96 Miles
Injury Collisions Per Mile: 1.04
Pcfs: DUI / Lane Change (One Fatal)

This section of roadway is identical to the above. The fatality was due to a DUI. This is an excellent example of how the small amount of statistics skews the data.

[BROAD BEACH ROAD TO TRANCAS CANYON ROAD]

Length: 1.56 Miles
Injury Collisions Per Mile: 1.28
Pcfs: Speed / Lane Change

This section of roadway is identical to the above. Note the recommendations for the Trancas Canyon intersection.



[TRANCAS CANYON ROAD TO BUSCH DRIVE]

LENGTH: 1.83 miles

INJURY COLLISIONS PER MILE: 8.74

PCFS: speed / Lane change

This section of the roadway encompasses the entire length of Zuma Beach. There is a retail market and shops on each end of this section. There had been several serious and fatal accidents in the past, recently Caltrans added delineators in the center turn lane. Since that time (last three years) there have not been any fatal or serious injuries related to unsafe turns.

Based on the above, beginning at Trancas Canyon Road to the city limit south, the addition of a center median would prevent serious collisions related to unsafe turning movements. As can be seen by the addition of delineators, the opportunity to make the unsafe movement has been eliminated. The addition of this center median has the added benefit of adding width to the roadway which should be used for Type II bicycle lanes that will connect to the proposed lanes north of Trancas Canyon.

Even though the demand for parking exceeds the supply during peak summer periods, the elimination of street parking on the highway will greatly improve pedestrian safety. The new median will have the added benefit of preventing midblock uncontrolled pedestrian crossings. At the very least, parking on the north side of PCH should be eliminated. As noted on the intersection details, the sidewalks should extend to the neighborhood streets to allow for residents to walk safely to the local retail establishments while being afforded some protection.

If the street parking is eliminated, and the full right of way is utilized, there may be additional space on the beach side of the highway to allow for improvements to the county run parking lot. This lot is quite expansive, yet poorly designed and underutilized. By expanding towards the highway and slightly towards the beach, hundreds of parking spaces could be gained. This includes the parking on Westward Beach road and the parking lot to the south.

Even with an expanded parking lot, visitors will continue to park on the streets and the public school lots north of the highway. While the proposed median will eliminate midblock crossing, there must be a new crossing at Guernsey Ave. for a marked crosswalk to the beach. Any pedestrian crossing PCH should utilize red lights to stop vehicles instead of the flashing yellows that are currently used on crosswalks.

Drivers are acutely aware that a red light means stop. There seems to be some confusion as to flashing yellow lights in crosswalks. For safety, all crossing should use pedestrian and vehicle red lights to indicate when it is safe to cross and to make it clear when vehicles must stop. This recommendation includes all intersections and midblock crossings along the highway.



[BUSCH DRIVE TO HEATHERCLIFF ROAD]

Length: 0.67 Miles

Injury Collisions Per Mile: 10.44

Pcfs: Speed / Lane Change

This section of highway is on a constant grade with Zuma Beach on the north and a shopping center at Heathercliff Road. There are few residences abutting the roadway and parking is restricted on the north side. Parking is limited on the south side of the road where there is a restaurant with a parking lot.

Due to the lack of parking on the north side of PCH, drivers regularly make U-turns when they see a parking spot on the south side. The extension of the center median will prevent dangerous turns and prevent pedestrians from crossing the highway when dropped off on the north side. The median installation will provide additional usable right of way for bicycle lanes.

Except for the restaurant on the south side of the highway, the roadsides are generally undeveloped. This right of way could be used for the installation of bike lanes and sidewalks on both sides. This will provide safety for the pedestrians who park on the south side of the road and walk to the public beaches. Crosswalk installations mentioned in the intersection portion of this report will provide safe highway crosswalks.



[HEATHERCLIFF ROAD TO KANAN DUME ROAD]

Length: 0.36 Miles

Injury Collisions Per Mile: 5.55

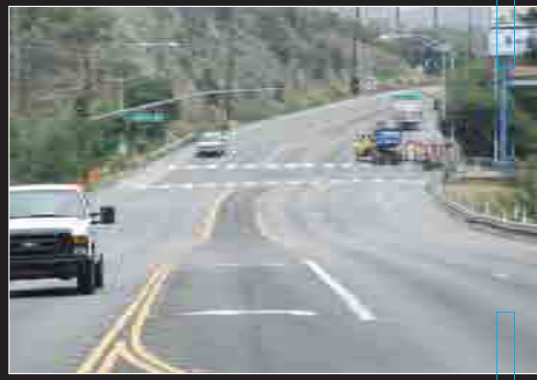
Pcfs: Speed / Lane Change

This section of highway consists of open space with shopping areas on each end. The Kanan Dume intersection becomes very congested in the summer months and a large amount of traffic utilizes Kanan Dume as a commute and beach access route. Also, a larger number of cyclists use Kanan Dume to enter PCH.

The continuation of the proposed center median, bicycle lanes, and sidewalks as illustrated in Figure 1 will improve safety for commuters and pedestrians. The bus stop just south of Heathercliff is heavily used and could be improved like many of the others along the highway. Since there is no demand for on street parking in the area, parking should be prohibited and the extra right of way could be used for bicycle lanes and sidewalks.

The most common collision in this area is the rear-end type and occurs on week days during the heavy beach commute hours. The addition of "Signal Ahead" and "Slow Traffic" signs would advise the high volume of beach visitors to use caution and could reduce the number of collisions.





[KANAN DUME ROAD TO PARADISE COVE ROAD]

Length: 0.98 Miles

Injury Collisions Per Mile: 7.14

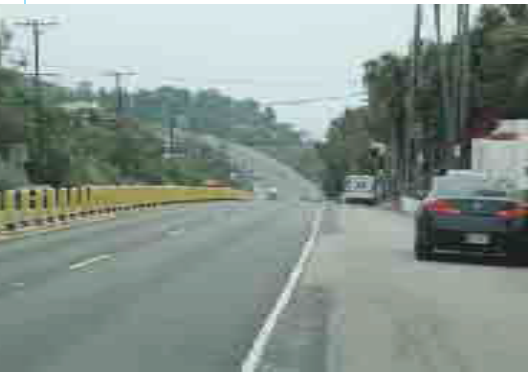
Pcfs: Speed / Follow Too Close

This section of roadway consists of a small shopping center on the north end and the entrance to the Paradise Cove Beach recreational area. While Kanan Dume is heavily utilized as a daily commuter route, Paradise Cove often becomes gridlocked on summer weekends. It is also an access road for the Paradise Cove residential mobile home park.

The modifications recommended are consistent with the previous sections of the highway, however if right of way issues can be mitigated, additional parking depicted in Figure 3 could be constructed to alleviate the overcrowding of the Paradise Cove parking lot. This modification is necessary as traffic gridlocks at the intersection when the parking lot fills. Parking attendants stack cars along the highway in order to keep the access road open for residents who share the entrance. Utilization of usable right of way for a staging area or parking would reduce congestion and eliminate the existing hazards created by stopped vehicles.

Even though there are existing crosswalks at the Paradise Cove intersection, parking should be restricted to the south side of the highway to reduce the number of pedestrians crossing during peak periods. The addition of a median will prohibit residents from crossing the highway when exiting driveways in this area. It is safer for these residents and visitors to utilize signalized intersections to make protected U-Turns rather than mid-block turns.

One of the most beneficial improvements to this area would be the addition of a second entrance to the mobile home park that shares the entrance to Paradise Cove. There are several available areas along the highway for a new entrance.



[PARADISE COVE ROAD TO LATIGO CANYON ROAD]

Length: 1.93 Miles
Injury Collisions Per Mile: 5.70
Pcfs: Speed / Turning

This section of highway has several residential roads bisecting what appears to be a rural area. A portion of the roadway already has a median barrier which should be replaced with the more permanent concrete type 60 barrier recommended for the entire southern section of the highway. The lone fatal collision was a result of a pedestrian crossing mid-block before sunrise in the typical unlighted roadway segment.

There is little demand for street parking in this area, other than overflow for residential areas and Geoffrey's restaurant. The modifications could allow for parking on both sides of the highway, where the proposed median barrier would prevent mid-block crossings. Additional pedestrian crossing could be added at residential intersections, but they must use red lights and flashing no crossing indicators so there is no confusion as the when it is legal to cross and when vehicles are required to stop.



[LATIGO CANYON ROAD TO CORRAL CANYON ROAD]

Length: 0.69 Miles
Injury Collisions Per Mile: 8.70
Pcfs: Speed / Lane Change

This section of highway consists of slight grade at Latigo Canyon with a uninhabited hillside along the inland side of the road. Dan Blocker Beach and several residents dot the coastline which is mostly uninhabited. A small business area and gas station are at the Corral Canyon intersection.

The continuation of the proposed type 60 median barrier and the elimination of parking on the inland side of the highway will keep pedestrians out of traffic and improve safety in an area that is heavily enforced for speeding. Due to the hillside, it is unlike there is sufficient space for a sidewalk next to the hillside, but it would be unnecessary once the parking is eliminated and a bike lane is added.

Recently, the County of Los Angeles proposed a small parking lot for the Dan Blocker Beach area where there is only an unmarked dirt shoulder. As part of the environmental review, the traffic sergeant for the Malibu/Lost Hills Station recommended acceleration and deceleration lanes to reduce rear-end collisions, one of the leading causes of traffic collisions.



[CORRAL CANYON ROAD TO MALIBU CANYON ROAD]

Length: 2.30 Miles
Injury Collisions Per Mile: 4.78
Pcfs: Speed / Follow Too Close

This section of highway consists of a small retail area on the north and the major commute intersection and Pepperdine University on the south. Several residences have direct access to the highway along with some residential intersections and the proposed additional intersection at Malibu Canyon Road (west).

The continuation of the median barrier and better crosswalks at the intersections will improve pedestrian safety. The undersized parking lot at Malibu Seafood requires a large number of vehicles to park on the highway during peak summer months. This creates a major safety hazard for pedestrians exiting vehicles and crossing the roadway.

Recommendations include the expansion of the Malibu Seafood parking lot and elimination of street parking on the inland side of the roadway. Obviously, if right of way issues could be mitigated, a parking solution depicted in Figure 3 could better utilize existing space. There is sufficient inland space to increase the existing parking lot, but environmental preservation issues commonly overrule safety concerns.

Another alternative for pedestrian crossing could be the installation of an overhead crossing. Also, there is and very large existing drainage channel under the roadway that some residents utilize to cross the highway. It may be possible to modify the drain to accommodate pedestrians in summer months when demand is highest.

The only fatal collision in this segment was a result of one vehicle changing lanes unsafely. This forced the second vehicle to overturn and strike some poles protecting a fire hydrant. Older fatal collisions were related Caltrans lane closures and bicycles merging into traffic lanes.



[MALIBU CANYON ROAD TO CROSS CREEK ROAD]

Length: 1.05 Miles
Injury Collisions Per Mile: 16.19
Pcfs: Speed / Lane Change

This section of highway constitutes the beginning of the major commuter route as depicted by the quadrupling of the number of collisions per mile. There is a grade on the north end and the major shopping area for the City of Malibu from the midpoint to the south. In excess of 50,000 vehicles travel this roadway each day.

Most of the improvements consist of intersection modification combined with the addition of the permanent median barrier. Sidewalks and bicycle lane will complete the safety improvements connecting the intersections. Access to the parks and beach areas will be controlled at the intersections, rather than random mid-block crossings.



[CROSS CREEK ROAD TO CARBON CANYON ROAD]

Length: 2.11 Miles
Injury Collisions Per Mile: 27.96
Pcfs: Speed / Lane Change

This section of highway consists of mixed residential and business areas that predominates the southern portion of the roadway. It is also the second highest area for traffic collisions per mile. There are existing sidewalks on and street parking on both sides.

The addition of the median barrier in this area will force vehicles to make turns at intersections using protected arrows. Pedestrians will be required to use intersections with red lights to warn drivers. Many of the rear-end collisions can be attributed to traffic stopping suddenly for vehicles making turns and unexpected pedestrian mid-block crossings. Existing mid-block crossings should be modified to utilize red rather than yellow flashing lights for crossings and locations should be evaluated to allow pedestrian access to public beach entrances, rather than politically motivated installations.

While the installation of the median barrier will provide some additional space for bicycle lanes, the object should be to eliminate all on street parking as depicted in Figure 3. This can be achieved only with the cooperation of residents, business, and the City of Malibu working together to utilize and purchase empty spaces for replacement parking areas. Some businesses will most likely have to share parking with neighboring owners, but the objective is to reduce the number of entrances to the highway from driveways, directing vehicles to a common entrance with deceleration lanes that will reduce the impacts on commuter traffic.

Many single family residences exist on the beach side of the highway as a result of the relocation of PCH inland many years ago. The state was forced to sell the land and hence, the existence of private residences on the beach. This event took place before public beach access and environmental laws came into effect. This resulted in the current condition where the houses abut a major highway, forcing residents to literally pull out of their driveway into high speed traffic.

A larger number of these residences have been converted into rental properties and divided into separate living areas. Some have converted their garages into apartments as well. The result is street parking is insufficient and renters park on both sides of the streets. If the proposes modifications are implanted, much of the residential street parking would be converted to off street parking (Figure 3).



[CARBON CANYON ROAD TO LAS FLORES CANYON ROAD]

Length: 0.83 Miles
Injury Collisions Per Mile: 48.19
Pcfs: Speed / Lane Change

This section of highway continues the mixed business and residential areas similar to the previous segment. As recommended above, the current two-way left turn lane should be converted to a center median, possibly shifting the highway to provide space for off street parking and the addition of marked bicycle lanes. The objective is to reduce the number of entrance/exit points onto the highway with sidewalks for pedestrians.

This segment of roadway has the highest number of accidents per mile on PCH. This is a result of congestion and poorly timed signals causing extreme delays resulting in the high number of non-preventable rear-end collisions. Intersection improvements previously noted and the highway configuration proposed in Figure 3 will help reduce the number of collisions and improve safety.

There is a mid-block crosswalk that is not signalized. The location is in front of a private beach club and does not provide any public benefit other than to members of that club. Any mid-block crosswalks should be evaluated based on public access points far from intersections and if necessary, they must use red signals rather than flashing yellow lights. Also, their timing must match the traffic signals to reduce congestion.



[LAS FLORES CANYON ROAD TO BIG ROCK DRIVE]

Length: 1.64 Miles
Injury Collisions Per Mile: 10.37
Pcfs: Speed / Lane Change

This section of roadway consists of hillside on the inland side of the roadway and single family residences on the beach. There are approximately a dozen homes on the inland side and all of the homes on the beach side were once part of the old PCH land that was sold off as surplus property when the highway war relocated inland.

To the detriment of those houses on the inland side of the roadway, the parking could be eliminated on that side of the roadway, providing enough room for off street parking (Figure 3) on the beach side of the highway. It may be necessary to utilize some of the inland hillside, but there would be the benefit of the installation of a retaining wall to reduce the number of rock slides that are common in the area, especially during and after the rainy season.

Currently, many of these beachfront homes are divided into apartments and used as summer rentals as previously mentioned. The median barrier would prohibit pedestrian crossings that often contribute to traffic stopping suddenly for wayward pedestrians. A sidewalk to nowhere is not necessary for the inland side of the highway, which will contribute to an increased right-of-way once a retaining wall is installed.



[BIG ROCK DRIVE TO TUNA CANYON ROAD]

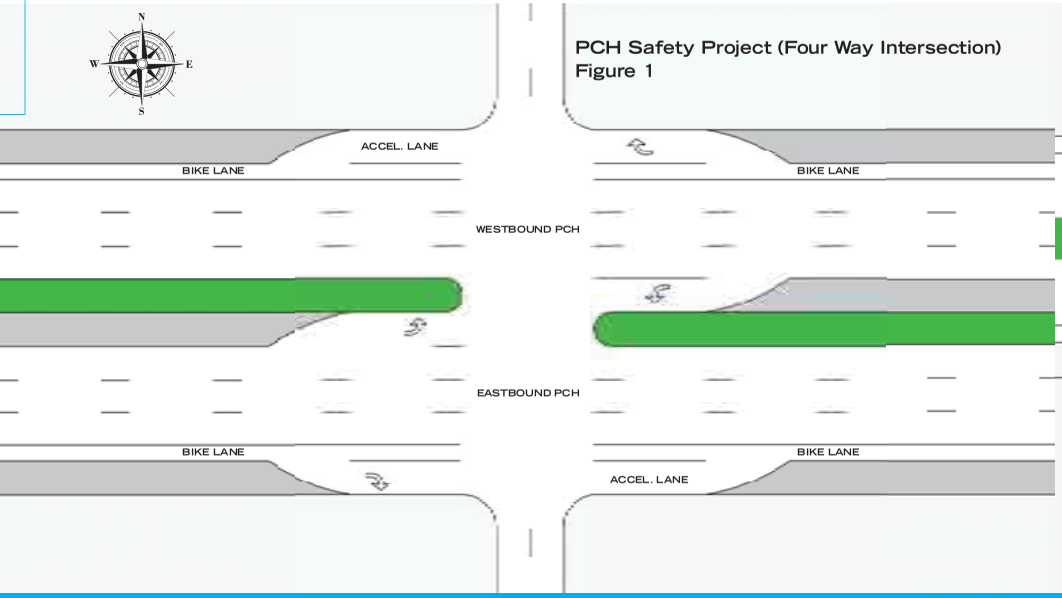
Length: 1.11 Miles
Injury Collisions Per Mile: 20.72
Pcfs: Speed / Lane Change

This section of highway consists of beach front homes and open spaces. Most of the inland side of the roadway is hillside that is famous for frequent rock slides. Modifications recommended are similar to the previous section.

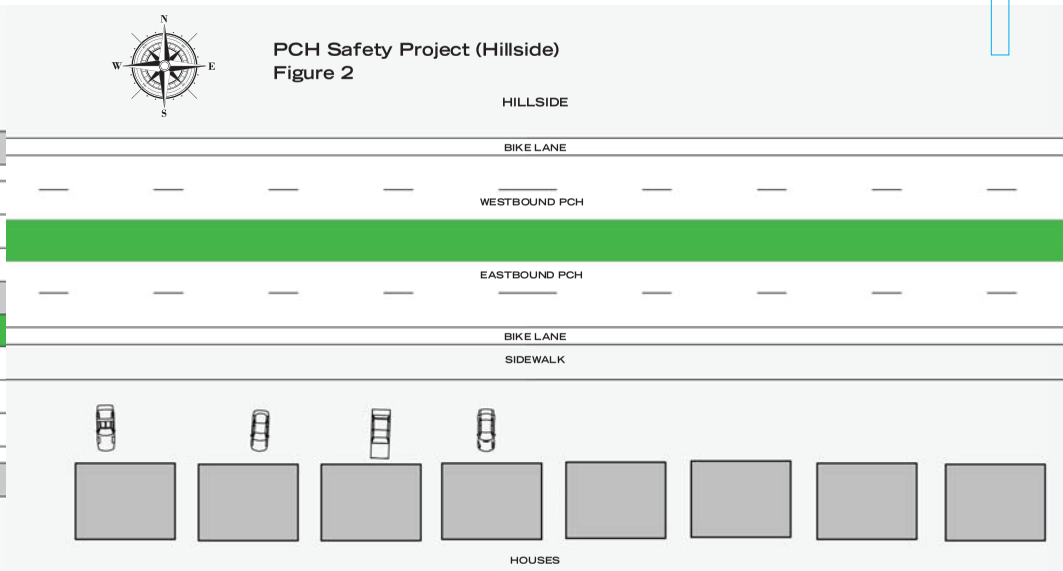
The accident rate here is remarkably high compared to the number of residences in the area. Much of this can be attributed to the winding roadway and the beginning of the major congested area of Malibu. Portions of PCH to the south in the cities of Los Angeles and Santa Monica are three lanes which reduce down to two lanes in Malibu.

This area is essentially the southern city limit that transitions into the unincorporated area patrolled by the California Highway patrol.

X. Attachments

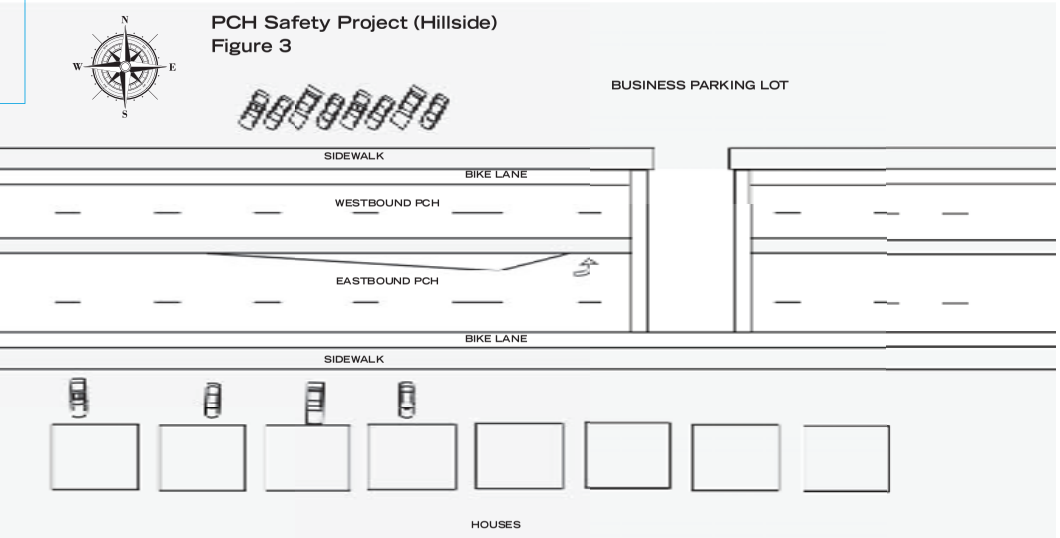


PCH Safety Project (Four Way Intersection)
Figure 1



PCH Safety Project (Hillside)
Figure 2

PCH Safety Project (Hillside)
Figure 3







L.A. County Sheriff's Department
Lost Hills & Malibu Station
Collision Report Summary

2/8/2010
Date Range Reported: 1/1/10 - 1/31/10
Total Number of Collisions: 17

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kll.	Ver.
910-00031-1013-472	1/2/10		29145 Heathercliff Rd & Private Property	0'	In Int.	Hit Object	Other Object	South	Proceeding Straight			Other Improper Driving	0	0	
910-00089-1013-472	1/6/10	07:25	29211 Heathercliff Rd & Private Property	0'	In Int.	Other	Parked Motor Vehicle	South	Backing	South	Parked	Other Improper Driving	0	0	
910-00176-1017-471	1/10/10	15:45	Pacific Coast Hwy & Big Rock Dr	1584'	South	Head-On	Other Motor Vehicle	North	Proceeding Straight	South	Proceeding Straight	Unsafe Lane Change	4	0	
910-00195-1012-472	1/11/10	18:05	Pacific Coast Hwy & Corral Canyon Rd	74'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Proceeding Straight	Hazardous Parking	0	0	
910-00222-1016-472	1/13/10	11:35	Pacific Coast Hwy & Sweetwater Canyon Rd	2112'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0	
910-00279-1012-472	1/16/10	09:00	Pacific Coast Hwy & Kanan Dume Rd	276'	North	Rear-End	Other Motor Vehicle	South	Changing Lanes	South	Proceeding Straight	Unsafe Lane Change	0	0	
910-00311-1015-472	1/17/10	19:43	Malibu Canyon Rd & Civic Center Wy	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	West	Proceeding Straight	Traffic Signals and Signs	0	0	
910-00341-1015-250	1/20/10	04:20	Pacific Coast Hwy & Carbon Canyon Rd	2112'	West	Sideswipe	Parked Motor Vehicle	North	Parked	North	Proceeding Straight	Unsafe Lane Change	0	0	
910-00366-1011-472	1/21/10	07:25	Pacific Coast Hwy & Broad Beach Rd (W)	2112'	South	Hit Object	Fixed Object	East	Ran Off Road			Unsafe Speed	0	0	
910-00391-1014-472	1/22/10	13:10	Pacific Coast Hwy & Webb Wy	665'	North	Hit Object	Fixed Object	East	Making Right Turn			Unsafe Speed	0	0	
910-00418-1014-472	1/23/10	14:20	23841 Malibu Rd & Private Property	0'	In Int.	Other	Other Motor Vehicle	South	Backing	South	Stopped In Road	Other Improper Driving	0	0	
910-00420-1013-472	1/23/10	17:00	Westward Beach Rd & Birdview Av	0'	In Int.	Sideswipe	Parked Motor Vehicle	East	Backing	West	Parked	Unsafe Starting or Backing	0	0	
910-00516-1016-472	1/28/10	13:05	22837 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	East	Backing	North	Parked	Other Improper Driving	0	0	

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.
910-00557-1018-472	1/30/10	12:00	Pacific Coast Hwy & Cross Creek Rd	132'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0	
910-00560-1018-471	1/30/10	14:10	Big Rock Dr & Pinnacle Wy	258'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0	
910-00565-1014-250	1/30/10	16:35	Pacific Coast Hwy & Corral Canyon Rd	0'	In Int.	Other	Other Motor Vehicle	West	Backing	West	Stopped In Road	Unsafe Starting or Backing	0	0	
910-00574-1012-471	1/30/10	23:30	Pacific Coast Hwy & Westward Beach Rd	48'	North	Hit Object	Fixed Object	South	Ran Off Road			Wrong Side of Road	1	0	

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

3/9/2010
Date Range Reported: 2/1/10 - 2/28/10
Total Number of Collisions: 31

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.
910-00600-1016-472	2/1/10	09:10	Pacific Coast Hwy & Malibu Canyon Rd	45'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Slowing/Stopping	Unsafe Speed	0	0	
910-00618-1016-472	2/2/10	07:10	Pacific Coast Hwy & Cross Creek Rd	3696'	South	Overturned	Non-Collision	South	Proceeding Straight			Unsafe Speed	0	0	
910-01178-1015-250	2/3/10	07:30	3825 Winter Canyon Dr & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0	
910-00708-1015-472	2/5/10	11:40	Malibu Canyon Rd & Civic Center Wy	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	East	Proceeding Straight	Traffic Signals and Signs	0	0	
910-00717-1013-242	2/5/10	17:20	Heathercliff Rd & Pacific Coast Hwy	45'	West	Hit Object	Fixed Object	West	Making Left Turn			Driving Under Influence	0	0	
910-00719-1013-472	2/5/10	20:40	Pacific Coast Hwy & Ramirez Mesa Dr (E)	300'	North	Hit Object	Fixed Object	East	Changing Lanes			Unsafe Speed	0	0	
910-00722-1018-471	2/6/10	03:20	Pacific Coast Hwy & Big Rock Dr	737'	South	Hit Object	Fixed Object	South	Proceeding Straight			Unsafe Speed	1	0	
910-00780-1016-471	2/8/10	18:30	Malibu Rd & Webb Wy	500'	East	Hit Object	Fixed Object	East	Proceeding Straight			Unsafe Lane Change	1	0	
910-00787-1017-471	2/9/10	10:00	Pacific Coast Hwy & Big Rock Dr	178'	South	Broadside	Other Motor Vehicle	South	Proceeding Straight	North	Proceeding Straight	Unknown	2	0	
910-00850-1016-472	2/9/10	18:30	22800 Pacific Coast Hwy & Private Property	0'	In Int.	Hit Object	Fixed Object	East	Making Left Turn			Other Improper Driving	0	0	
910-00918-1082-472	2/10/10	12:13	Westward Beach Rd & Pacific Coast Hwy	1584'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Slowing/Stopping	Following Too Closely	0	0	
910-00999-1012-472	2/12/10	07:40	Pacific Coast Hwy & Paradise Cove Rd	0'	In Int.	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Stopped In Road	Other Improper Driving	0	0	
910-00867-1013-472	2/12/10	07:50	Pacific Coast Hwy & Paradise Cove Rd	0'	In Int.	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Stopped In Road	Unsafe Speed	0	0	

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.
910-01256-1012-472	2/12/10	21:00	5958 Busch Dr & Private Property	0'	In Int.	Other	Parked Motor Vehicle	North	Backing	West	Parked	Other Improper Driving	0	0	
910-00894-1016-472	2/14/10	13:15	21216 Pacific Coast Hwy & Private Property	0'	In Int.	Other	Parked Motor Vehicle	North	Backing	South	Parked	Other Improper Driving	0	0	
910-00901-1014-242	2/14/10	20:58	Pacific Coast Hwy & Meadow Ct	197'	North	Sideswipe	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Driving Under Influence	0	0	
910-00929-1015-472	2/16/10	04:07	23648 Pacific Coast Hwy & Private Property	0'	In Int.	Hit Object	Fixed Object	East	Making Right Turn			Other Improper Driving	0	0	
910-00994-1012-472	2/18/10	12:20	Pacific Coast Hwy & Busch Dr	159'	North	Sideswipe	Other Motor Vehicle	South	Changing Lanes	South	Proceeding Straight	Unsafe Lane Change	0	0	
910-01025-1014-472	2/19/10	16:08	Pacific Coast Hwy & Malibu Canyon Rd	340'	West	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Slowing/Stopping	Unsafe Speed	0	0	
910-01027-1011-472	2/19/10	17:45	30765 Pacific Coast Hwy & Private Property	0'	In Int.	Other	Other Motor Vehicle	South	Backing	South	Stopped In Road	Other Improper Driving	0	0	
910-01035-1012-250	2/20/10	00:30	Kanan Dume Rd & Teal Ter	0'	In Int.	Hit Object	Fixed Object	North	Making Right Turn			Unsafe Speed	0	0	
910-01084-1011-472	2/23/10	01:50	Pacific Coast Hwy & Morning View Dr	1584'	North	Overturned	Non-Collision	North	Ran Off Road			Unsafe Lane Change	0	0	
910-01096-1015-472	2/23/10	16:00	Webb Wy & Pacific Coast Hwy	54'	South	Sideswipe	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Improper Turning	0	0	
910-01260-1016-250	2/25/10	10:00	23805 Malibu Rd & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0	
910-01132-1016-471	2/25/10	14:52	Pacific Coast Hwy & Las Flores Canyon Rd	1584'	East	Broadside	Other Motor Vehicle	South	Making U Turn	South	Proceeding Straight	Improper Turning	2	0	
910-01134-1017-472	2/25/10	16:30	Pacific Coast Hwy & Tuna Canyon Rd	300'	North	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unknown	0	0	
910-01139-1015-471	2/25/10	20:00	Civic Center Wy & Pacific Coast Hwy	0'	In Int.	Vehicle - Pedestrian	Pedestrian	East	Proceeding Straight	East	Proceeding Straight	Pedestrian Violation	1	0	
910-01169-1012-472	2/26/10	20:25	Pacific Coast Hwy & Winding Wy W	0'	In Int.	Broadside	Other Motor Vehicle	West	Entering Traffic	North	Proceeding Straight	Auto R/W Violation	0	0	
910-01280-1016-250	2/27/10	14:00	20722 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Other Improper Driving	0	0	

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.
910-01184-1012-242	2/27/10	21:00	Pacific Coast Hwy & Kanan Dume Rd	100'	West	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Making Right Turn	Driving Under Influence	0	0	
910-01190-1017-472	2/28/10	09:30	Pacific Coast Hwy & Serra Rd	4240'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	0	0	

L.A. County Sheriff's Department
Lost Hills & Malibu Station
Collision Report Summary

4/8/2010
Date Range Reported: 3/1/10 - 3/31/10
Total Number of Collisions: 39

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Veh.
910-01217-1016-472	3/1/10	15:30	Pacific Coast Hwy & Serra Rd	300'	South	Broadside	Other Motor Vehicle	West	Making U Turn	North	Proceeding Straight	Improper Turning	0	0	
910-01245-1016-472	3/3/10	08:25	Pacific Coast Hwy & Carbon Canyon Rd	2640'	North	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Lane Change	0	0	
910-01277-1017-472	3/4/10	12:00	Pacific Coast Hwy & Big Rock Dr	4224'	North	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Lane Change	0	0	
910-01265-1016-471	3/4/10	14:10	Pacific Coast Hwy & Rambla Vista (E)	528'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Slowing/Stopping	Following Too Closely	1	0	
910-01311-1016-472	3/5/10	11:35	Pacific Coast Hwy & Rambla Vista (E)	528'	North	Broadside	Motor Vehicle on Other	North	Making U Turn	South	Changing Lanes	Unknown	0	0	
910-01313-1015-242	3/5/10	12:42	3835 Cross Creek Rd & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	East	Parking Maneuver	West	Parked	Driving Under Influence	0	0	
910-01344-1016-472	3/6/10	15:22	Pacific Coast Hwy & Las Flores Canyon Rd	1320'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0	
910-01360-1086-472	3/7/10	16:05	26023 Pacific Coast Hwy & Private Property	0'	In Int.	Other	Other Motor Vehicle	North	Backing	North	Stopped In Road	Other Improper Driving	0	0	
910-01363-1016-250	3/7/10	19:00	23400 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	South	Parking Maneuver	South	Parked	Other Improper Driving	0	0	
910-01366-1013-471	3/7/10	21:27	Pacific Coast Hwy & Cavalleri Rd	24'	East	Broadside	Other Motor Vehicle	South	Making Left Turn	West	Proceeding Straight	Auto R/W Violation	1	0	
910-01391-1016-471	3/8/10	17:40	Pacific Coast Hwy & Carbon Canyon Rd	85'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	2	0	
910-01432-1016-471	3/11/10	09:04	Pacific Coast Hwy & Carbon Canyon Rd	500'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0	
910-01433-1015-471	3/11/10	09:07	Pacific Coast Hwy & Malibu Canyon Rd	83'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	2	0	

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Fil.	Ver.
910-01435-1012-250	3/11/10	10:40	Pacific Coast Hwy & Big Rock Dr	1056'	North	Other	Non-Collision	South	Proceeding Straight			Unsafe Speed	1	0	
910-01443-1017-472	3/11/10	14:10	Pacific Coast Hwy & Las Flores Canyon Rd	0'	In Int.	Broadside	Other Motor Vehicle	North	Stopped In Road	South	Making Left Turn	Traffic Signals and Signs	0	0	
910-01468-1012-472	3/12/10	15:55	Pacific Coast Hwy & Trancas Canyon Rd	2640'	North	Hit Object	Fixed Object	South	Proceeding Straight			Unsafe Lane Change	0	0	
910-01507-1016-472	3/14/10	16:50	Pacific Coast Hwy & Carbon Canyon Rd	1584'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	0	0	
910-01510-1013-472	3/14/10	17:00	6225 Merritt Dr & Private Property	0'	In Int.	Hit Object	Fixed Object	South	Making Right Turn			Unsafe Speed	0	0	
010-01516-1013-470	3/15/10	06:27	Pacific Coast Hwy & Winding Wy W	367'	North	Vehicle - Pedestrian	Pedestrian	West	Other	West	Other	Pedestrian Violation	1	1	
910-01535-1015-250	3/15/10	16:30	3835 Cross Creek Rd & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0	
910-01549-1014-471	3/16/10	20:15	Pacific Coast Hwy & John Tyler Dr	0'	In Int.	Head-On	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	1	0	
910-01554-1016-472	3/17/10	09:30	Pacific Coast Hwy & Sweetwater Canyon Rd	180'	North	Other	Other Motor Vehicle	East	Backing	West	Proceeding Straight	Unsafe Starting or Backing	0	0	
910-01618-1016-472	3/19/10	16:00	Pacific Coast Hwy & Cross Creek Rd	1584'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Unsafe Speed	0	0	
910-01644-1015-471	3/20/10	12:15	Pacific Coast Hwy & Cross Creek Rd	528'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	5	0	
910-01645-1012-472	3/20/10	13:25	Pacific Coast Hwy & Latigo Canyon Rd	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0	
910-01659-1016-472	3/21/10	14:40	Pacific Coast Hwy & Webb Wy	100'	North	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Lane Change	0	0	
910-01665-1013-472	3/21/10	22:10	Pacific Coast Hwy & Kanan Dume Rd	42'	South	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Traffic Signals and Signs	0	0	
910-01670-1015-472	3/22/10	08:30	Malibu Canyon Rd & Civic Center Wy	26'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0	
910-01685-1017-471	3/22/10	20:28	Pacific Coast Hwy & Big Rock Dr	1056'	South	Other	Motor Vehicle on Other	South	Slowing/Stopping	South	Slowing/Stopping	Unsafe Speed	1	0	

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.
910-01693-1016-471	3/23/10	09:20	Pacific Coast Hwy & Big Rock Dr	1056'	North	Broadside	Other Motor Vehicle	North	Making Left Turn	South	Proceeding Straight	Auto R/W Violation	0	0	
910-01708-1015-472	3/24/10	06:45	Pacific Coast Hwy & Sweetwater Canyon Rd	1584'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Unsafe Speed	0	0	
910-01712-1016-472	3/24/10	12:45	22935 Pacific Coast Hwy & Private Property	0'	In Int.	Other	Parked Motor Vehicle	West	Backing	West	Parked	Other Improper Driving	0	0	
910-01756-1015-472	3/25/10	14:40	3868 Cross Creek Rd & Private Property	0'	In Int.	Other	Parked Motor Vehicle	East	Backing	East	Parked	Other Improper Driving	0	0	
910-01764-1017-471	3/26/10	17:50	Pacific Coast Hwy & Rambla Vista (E)	1056'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	2	0	
910-01767-1015-250	3/26/10	20:20	Malibu Canyon Rd & Civic Center Wy	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0	
910-01783-1011-471	3/27/10	11:20	Decker Rd & Decker Edison Rd	3696'	South	Overturned	Non-Collision	South	Ran Off Road			Unsafe Speed	1	0	
910-01797-1017-471	3/27/10	20:00	Pacific Coast Hwy & Big Rock Dr	1584'	North	Broadside	Other Motor Vehicle	South	Proceeding Straight	South	Making U Turn	Auto R/W Violation	1	0	
910-01801-1016-471	3/28/10	14:30	Pacific Coast Hwy & Malibu Canyon Rd	90'	North	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	North	Making Right Turn	Unsafe Lane Change	2	0	
910-01831-1016-472	3/29/10	18:10	22741 Pacific Coast Hwy & Private Property	0'	In Int.	Hit Object	Fixed Object	North	Backing			Other Improper Driving	0	0	

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

5/7/2010
Date Range Reported: 4/1/10 - 4/30/10
Total Number of Collisions: 28

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.
910-01893-1017-472	4/1/10	15:26	Pacific Coast Hwy & Las Flores Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Stopped In Road	Unsafe Speed	0	0	
910-01895-1013-472	4/1/10	16:15	Pacific Coast Hwy & Webb Wy	500'	West	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Stopped In Road	Unsafe Speed	0	0	
910-01897-1015-472	4/1/10	18:10	Pacific Coast Hwy & Cross Creek Rd	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	South	Making Left Turn	Traffic Signals and Signs	0	0	
010-01919-1011-470	4/2/10	16:16	Pacific Coast Hwy & Broad Beach Rd (W)	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	South	Making Right Turn	Wrong Side of Road	1	1	
910-01947-1017-471	4/3/10	11:47	Pacific Coast Hwy & Las Flores Canyon Rd	1056'	South	Other	Bicycle	North	Parked	North	Proceeding Straight	Other Hazardous Movement	1	0	
910-01960-1015-471	4/4/10	13:40	Pacific Coast Hwy & John Tyler Dr	2112'	North	Rear-End	Bicycle	North	Changing Lanes	North	Proceeding Straight	Unsafe Lane Change	1	0	
910-01998-1014-471	4/6/10	18:45	Pacific Coast Hwy & John Tyler Dr	0'	In Int.	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Traffic Signals and Signs	1	0	
910-02026-1017-472	4/8/10	02:30	Las Flores Canyon Rd & Las Flores Mesa Dr	306'	South	Hit Object	Fixed Object	North	Ran Off Road			Unsafe Speed	0	0	
910-02038-1015-472	4/8/10	15:17	Cross Creek Rd & Pacific Coast Hwy	95'	North	Head-On	Other Motor Vehicle	North	Making Right Turn	South	Stopped In Road	Improper Turning	0	0	
910-02056-1016-471	4/9/10	12:00	23841 Malibu Rd & Private Property	0'	In Int.	Other	Motor Vehicle on Other	North	Backing	South	Stopped In Road	Other Improper Driving	0	0	
910-02105-1012-471	4/12/10	07:20	Pacific Coast Hwy & Morning View Dr	600'	North	Rear-End	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Following Too Closely	1	0	
910-02106-1015-472	4/12/10	07:35	Pacific Coast Hwy & Cross Creek Rd	0'	In Int.	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Following Too Closely	0	0	
910-02147-1015-472	4/13/10	15:27	Malibu Canyon Rd & Civic Center Wy	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0	

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.
910-02171-1017-472	4/14/10	16:01	Pacific Coast Hwy & Big Rock Dr	17'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Parked	Following Too Closely	0	0	
910-02178-1017-472	4/15/10	07:30	Pacific Coast Hwy & Las Flores Canyon Rd	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	North	Making Left Turn	Unknown	0	0	
910-02182-1016-472	4/15/10	10:00	Pacific Coast Hwy & Rambla Pacifico	0'	In Int.	Rear-End	Other Motor Vehicle	West	Making Left Turn	East	Stopped In Road	Improper Turning	0	0	
910-02197-1010-472	4/16/10	15:27	Encinal Canyon Rd & Pacific Coast Hwy	2640'	North	Head-On	Other Motor Vehicle	South	Crossed Into Opposing	North	Proceeding Straight	Wrong Side of Road	0	0	
910-02224-1015-250	4/18/10		3835 Cross Creek Rd & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	West	Parked	West	Parking Maneuver	Other Improper Driving	0	0	
910-02227-1017-241	4/18/10	20:00	Pacific Coast Hwy & Big Rock Dr	2640'	North	Sideswipe	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Driving Under Influence	1	0	
910-02251-1015-472	4/19/10	23:07	Malibu Canyon Rd & Civic Center Wy	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0	
910-02325-1017-472	4/23/10	01:18	Pacific Coast Hwy & Tuna Canyon Rd	1584'	North	Rear-End	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Lane Change	0	0	
910-02357-1016-471	4/24/10	15:30	Pacific Coast Hwy & Rambla Pacifico	528'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Following Too Closely	4	0	
910-02365-1014-472	4/25/10	02:45	Pacific Coast Hwy & Malibu Canyon Rd	0'	In Int.	Sideswipe	Other Motor Vehicle	East	Making Right Turn	East	Proceeding Straight	Improper Turning	1	0	
910-02371-1016-471	4/25/10	16:50	Pacific Coast Hwy & Carbon Canyon Rd	2112'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	1	0	
910-02373-1017-250	4/25/10	22:01	Pacific Coast Hwy & Las Flores Canyon Rd	6336'	South	Sideswipe	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Unsafe Lane Change	0	0	
910-02411-1016-472	4/27/10	14:48	Pacific Coast Hwy & Rambla Vista (E)	1056'	North	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0	
910-02418-1015-251	4/28/10		Civic Center Wy & Vista Pacifica St	0'	In Int.	Hit Object	Fixed Object	East	Making Left Turn			Unsafe Speed	1	0	
910-02435-1013-472	4/29/10	10:00	Pacific Coast Hwy & Big Rock Dr	696'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	0	0	

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

6/8/2010
Date Range Reported: 5/1/10 - 5/31/10
Total Number of Collisions: 25

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.
910-02527-1016-472	5/3/10	01:05	Pacific Coast Hwy & Carbon Mesa Rd	0'	In Int.	Rear-End	Parked Motor Vehicle	East	Merging	East	Parked	Auto R/W Violation	0	0	
910-02565-1088-472	5/4/10	19:27	Pacific Coast Hwy & Corral Canyon Rd	0'	In Int.	Sideswipe	Other Motor Vehicle	West	Entering Traffic	North	Proceeding Straight	Auto R/W Violation	0	0	
910-02570-1017-250	5/4/10	23:16	Las Flores Canyon Rd & Pacific Coast Hwy	3696'	North	Hit Object	Fixed Object	North	Ran Off Road			Unsafe Lane Change	0	0	
910-02666-1016-250	5/8/10		Pacific Coast Hwy & Sweetwater Canyon Rd	23'	South	Rear-End	Parked Motor Vehicle	East	Parking Maneuver	East	Parked	Unknown	0	0	
910-02714-1015-472	5/8/10	12:00	23419 Pacific Coast Hwy & Private Property	0'	In Int.	Rear-End	Other Motor Vehicle	South	Stopped In Road	South	Backing	Other Improper Driving	0	0	
910-02766-1015-250	5/12/10	15:00	3822 Cross Creek Rd & Private Property	0'	In Int.	Other	Parked Motor Vehicle	North	Parking Maneuver	South	Parked	Other Improper Driving	0	0	
910-02774-1014-472	5/13/10	06:20	Pacific Coast Hwy & Corral Canyon Rd	1056'	South	Hit Object	Fixed Object	North	Proceeding Straight			Other Improper Driving	0	0	
910-02794-1013-471	5/13/10	18:25	Wildlife Rd & Zumirez Dr	280'	South	Overturned	Non-Collision	South	Proceeding Straight			Unsafe Speed	2	0	
910-02802-1016-471	5/13/10	21:30	Pacific Coast Hwy & Las Flores Canyon Rd	2480'	North	Rear-End	Parked Motor Vehicle	South	Ran Off Road	South	Parked	Unsafe Speed	1	0	
910-02879-1017-471	5/16/10	21:13	Pacific Coast Hwy & Big Rock Dr	5280'	South	Broadside	Other Motor Vehicle	East	Making U Turn	South	Proceeding Straight	Improper Turning	3	0	
910-02895-1015-471	5/17/10	12:30	Pacific Coast Hwy & Cross Creek Rd	60'	East	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Slowing/Stopping	Unsafe Speed	0	0	
910-02912-1013-250	5/17/10	17:00	Busch Dr & Pacific Coast Hwy	320'	North	Broadside	Parked Motor Vehicle	South	Parked	West	Other	Wrong Side of Road	0	0	
910-02934-1012-472	5/19/10	09:25	Pacific Coast Hwy & Kanan Dume Rd	0'	In Int.	Sideswipe	Other Motor Vehicle	East	Changing Lanes	East	Proceeding Straight	Unsafe Lane Change	0	0	

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.
910-02984-1014-185	5/21/10	09:10	Pacific Coast Hwy & John Tyler Dr	322'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	0	0	
910-02992-1013-472	5/21/10	14:40	Pacific Coast Hwy & Busch Dr	0'	In Int.	Sideswipe	Other Motor Vehicle	West	Proceeding Straight	South	Making Left Turn	Traffic Signals and Signs	0	0	
910-03057-1015-472	5/24/10	17:51	Malibu Canyon Rd & Pacific Coast Hwy	0'	In Int.	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Stopped In Road	Following Too Closely	0	0	
910-03076-1017-472	5/25/10	15:45	Pacific Coast Hwy & Rambla Vista (E)	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Making Left Turn	West	Proceeding Straight	Auto R/W Violation	0	0	
910-03135-1012-471	5/27/10	19:40	Pacific Coast Hwy & Morning View Dr	200'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	2	0	
910-03152-1018-250	5/28/10	17:00	Pacific Coast Hwy & Tuna Canyon Rd	500'	North	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Lane Change	0	0	
910-03188-1015-471	5/29/10	16:03	Pacific Coast Hwy & John Tyler Dr	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	South	Making Left Turn	Unsafe Speed	1	0	
910-03209-1010-471	5/30/10	13:15	Decker Rd & Pacific Coast Hwy	3168'	North	Other	Non-Collision	North	Making Right Turn			Unsafe Speed	1	0	
910-03215-1016-472	5/30/10	14:25	Pacific Coast Hwy & Cross Creek Rd	5280'	South	Sideswipe	Other Motor Vehicle	North	Making Right Turn	North	Making Right Turn	Improper Turning	0	0	
910-03216-1012-471	5/30/10	14:30	Pacific Coast Hwy & Morning View Dr	300'	South	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Slowing/Stopping	Following Too Closely	1	0	
910-03249-1012-472	5/31/10	12:40	Pacific Coast Hwy & Busch Dr	90'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	0	0	
910-03283-1014-472	5/31/10	16:40	Malibu Rd & Pacific Coast Hwy (W)	300'	West	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Wrong Side of Road	0	0	

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

7/7/2010

Date Range Reported: 6/1/10 - 6/30/10
Total Number of Collisions: 40

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kll.	Ver.
910-03302-1015-472	6/1/10	12:35	Pacific Coast Hwy & Serra Rd	528'	South	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0	
910-03345-1016-471	6/2/10	20:50	Pacific Coast Hwy & Carbon Canyon Rd	3168'	North	Rear-End	Other Motor Vehicle	North	Entering Traffic	North	Proceeding Straight	Auto R/W Violation	1	0	
910-03354-1012-471	6/3/10	09:12	Pacific Coast Hwy & Paradise Cove Rd	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	North	Making Left Turn	Other Improper Driving	0	0	
910-03381-1016-471	6/4/10	12:00	Pacific Coast Hwy & Sweetwater Canyon Rd	528'	North	Sideswipe	Parked Motor Vehicle	North	Ran Off Road	North	Parked	Unsafe Lane Change	1	0	
910-03456-1015-250	6/6/10		23361 Pacific Coast Hwy & Private Property	0'	In Int.	Other	Parked Motor Vehicle	South	Backing	South	Parked	Other Improper Driving	0	0	
910-03435-1017-472	6/6/10	02:13	Pacific Coast Hwy & Big Rock Dr	3696'	North	Sideswipe	Other Motor Vehicle	North	Making U Turn	North	Proceeding Straight	Improper Turning	0	0	
910-03449-1012-471	6/6/10	14:05	Pacific Coast Hwy & Kanan Dume Rd	30'	North	Overturned	Non-Collision	South	Changing Lanes			Unsafe Speed	1	0	
910-03447-1016-472	6/6/10	14:19	Pacific Coast Hwy & Carbon Canyon Rd	1056'	North	Rear-End	Other Motor Vehicle	North	Merging	North	Proceeding Straight	Auto R/W Violation	0	0	
910-03485-1013-472	6/7/10	19:54	25653 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	South	Parking Maneuver	South	Parked	Other Improper Driving	0	0	
910-03561-1016-471	6/10/10	16:10	23387 Pacific Coast Hwy & Private Property	0'	In Int.	Rear-End	Parked Motor Vehicle	North	Slowing/Stopping	North	Parked	Brakes	0	0	
910-03577-1015-472	6/11/10	16:30	23410 Civic Center Way & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	West	Making Left Turn	South	Parked	Other Improper Driving	0	0	
910-03580-1016-250	6/11/10	16:30	Pacific Coast Hwy & Big Rock Dr	3165'	North	Rear-End	Parked Motor Vehicle	South	Backing	South	Parked	Unsafe Starting or Backing	0	0	
910-03612-1016-472	6/12/10	14:50	Pacific Coast Hwy & Serra Rd	1056'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0	

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.
910-03645-1015-471	6/13/10	15:25	Pacific Coast Hwy & Serra Rd	1320'	East	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0	
910-03651-1013-472	6/13/10	18:05	Pacific Coast Hwy & Westward Beach Rd	0'	In Int.	Rear-End	Other Motor Vehicle	South	Making Right Turn	South	Making Right Turn	Improper Turning	0	0	
910-03654-1016-472	6/13/10	20:20	Cross Creek Rd & Civic Center Wy	60'	South	Other	Parked Motor Vehicle	North	Backing	South	Parked	Unsafe Starting or Backing	0	0	
910-03673-1015-472	6/14/10	14:42	Malibu Canyon Rd & Seaver Dr	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Merging	South	Proceeding Straight	Unsafe Lane Change	0	0	
910-60030-1014-472	6/16/10	15:30	Malibu Rd & Webb Wy	4224'	West	Broadside	Other Motor Vehicle	South	Making U Turn	West	Proceeding Straight	Improper Turning	0	0	
910-03720-1013-471	6/16/10	19:15	Pacific Coast Hwy & Kanan Dume Rd	95'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Following Too Closely	3	0	
910-03733-1015-250	6/16/10	23:15	Serra Rd & Palm Canyon Ln	0'	In Int.	Hit Object	Fixed Object	North	Proceeding Straight			Unsafe Speed	0	0	
910-03757-1016-471	6/18/10	14:00	Pacific Coast Hwy & Sweetwater Canyon Rd	528'	North	Sideswipe	Bicycle	South	Changing Lanes	South	Proceeding Straight	Unsafe Lane Change	1	0	
910-03763-1013-472	6/18/10	17:30	Pacific Coast Hwy & Winding Wy W	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Improper Turning	0	0	
910-03793-1016-471	6/19/10	15:00	Pacific Coast Hwy & Rambla Vista (E)	1584'	West	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Unsafe Speed	3	0	
910-03816-1014-472	6/20/10	14:10	Pacific Coast Hwy & John Tyler Dr	450'	East	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Unsafe Speed	0	0	
910-03829-1012-472	6/20/10	16:35	Birdview Av & Bluewater Rd	528'	West	Sideswipe	Other Motor Vehicle	East	Passing Other Vehicle	West	Proceeding Straight	Wrong Side of Road	0	0	
910-03877-1013-471	6/22/10	15:10	Morning View Dr & Pacific Coast Hwy	1056'	North	Broadside	Other Motor Vehicle	North	Making Left Turn	South	Proceeding Straight	Auto R/W Violation	1	0	
910-03879-1014-472	6/22/10	17:00	3040 Sequit Dr & Private Property	0'	In Int.	Hit Object	Fixed Object	North	Proceeding Straight			Other Improper Driving	0	0	
910-03896-1016-250	6/23/10	09:55	Pacific Coast Hwy & Serra Rd	48'	North	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Proceeding Straight	Unsafe Speed	0	0	
910-03910-1016-471	6/23/10	15:50	Pacific Coast Hwy & Serra Rd	300'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Slowing/Stopping	Following Too Closely	1	0	

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.	Ver.
910-03930-1014-250	6/24/10	11:00	23805 Malibu Rd & Private Property	0'	In Int.	Rear-End	Parked Motor Vehicle	North	Backing	North	Parked	Other Improper Driving	0	0	
910-03941-1017-472	6/24/10	17:55	Pacific Coast Hwy & Big Rock Dr	80'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0	
910-03987-1016-472	6/25/10	14:05	Pacific Coast Hwy & Serra Rd	792'	South	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	North	Parking Maneuver	Unsafe Speed	0	0	
910-03968-1017-251	6/25/10	15:42	Pacific Coast Hwy & Las Flores Canyon Rd	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	1	0	
910-04007-1013-250	6/26/10	14:00	29500 Heathercliff Rd & Private Property	0'	In Int.	Hit Object	Fixed Object	South	Backing			Unsafe Starting or Backing	0	0	
910-04005-1012-471	6/26/10	16:10	Pacific Coast Hwy & Busch Dr	165'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	10	0	
910-04011-1017-471	6/26/10	22:50	Pacific Coast Hwy & Las Flores Canyon Rd	12671'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0	
910-04030-1011-472	6/27/10	15:40	Tapia Dr & Trancas Canyon Rd	66'	East	Hit Object	Fixed Object	East	Making Right Turn			Wrong Side of Road	0	0	
910-04066-1017-471	6/28/10	13:50	Pacific Coast Hwy & Rambla Pacifico	2112'	South	Sideswipe	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Lane Change	1	0	
910-04076-1016-471	6/28/10	18:30	Pacific Coast Hwy & Rambla Vista (E)	300'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	2	0	
910-04114-1017-250	6/30/10	07:20	Pacific Coast Hwy & Big Rock Dr	2112'	North	Sideswipe	Other Motor Vehicle	West	Making Left Turn	East	Proceeding Straight	Unsafe Lane Change	0	0	

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

8/11/2010
Date Range Reported: 7/1/10 - 7/31/10
Total Number of Collisions: 41
Total Numberof Persons Injured 14
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-04140-1015-471	7/1/10	06:50	Pacific Coast Hwy & Malibu Canyon Rd	0'	In Int.	Overturned	Other Motor Vehicle	South	Making Right Turn	West	Proceeding Straight	Traffic Signals and Signs	1	0
910-04156-1012-472	7/1/10	17:15	Pacific Coast Hwy & Morning View Dr	1584'	North	Rear-End	Parked Motor Vehicle	South	Parking Maneuver	South	Parked	Unsafe Speed	0	0
910-04329-1016-250	7/4/10	21:40	Pacific Coast Hwy & Serra Rd	2640'	South	Sideswipe	Other Motor Vehicle	South	Making Left Turn	South	Stopped In Road	Unsafe Lane Change	0	0
910-04266-1015-472	7/4/10	23:00	Pacific Coast Hwy & Malibu Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Stopped In Road	Unsafe Speed	0	0
910-04323-1017-471	7/6/10	12:09	Pacific Coast Hwy & Tuna Canyon Rd	270'	East	Rear-End	Parked Motor Vehicle	West	Proceeding Straight	West	Parked	Unsafe Lane Change	1	0
910-04343-1016-472	7/7/10	11:35	Pacific Coast Hwy & Sweetwater Canyon Rd	528'	South	Broadside	Other Motor Vehicle	East	Making Right Turn	South	Proceeding Straight	Auto R/W Violation	0	0
910-04367-1017-250	7/8/10		20433 Seaboard Rd & Private Property	0'	In Int.	Hit Object	Fixed Object	North	Other Unsafe Turning			Other Improper Driving	0	0
910-04361-1018-250	7/8/10	06:00	Pacific Coast Hwy & Big Rock Dr	3696'	South	Sideswipe	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Lane Change	0	0
910-04387-1011-472	7/9/10	06:50	Pacific Coast Hwy & La Heman Rd	2112'	North	Hit Object	Fixed Object	South	Ran Off Road			Unsafe Speed	0	0
910-04393-1016-472	7/9/10	13:09	Pacific Coast Hwy & Rambla Vista (E)	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Lane Change	0	0
910-04397-1016-472	7/9/10	18:05	22601 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0
910-04430-1011-471	7/10/10	17:15	Pacific Coast Hwy & Mulholland Hwy	3696'	South	Hit Object	Fixed Object	South	Ran Off Road			Unsafe Lane Change	1	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-04432-1015-472	7/10/10	19:15	Pacific Coast Hwy & Malibu Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	West	Making Right Turn	West	Slowing/Stopping	Other Hazardous Movement	0	0
910-04484-1082-471	7/13/10	09:06	30000 Pacific Coast Hwy & Private Property	0'	In Int.	Head-On	Parked Motor Vehicle	East	Parking Maneuver	North	Parked	Other Improper Driving	0	0
910-04591-1015-250	7/15/10		3939 Cross Creek Dr & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	West	Other Unsafe Turning	West	Parked	Unknown	0	0
910-04551-1012-472	7/15/10	14:45	Kanan Dume Rd & Pacific Coast Hwy	528'	North	Rear-End	Parked Motor Vehicle	South	Backing	South	Parked	Unsafe Starting or Backing	0	0
910-04580-1016-472	7/16/10	13:10	Pacific Coast Hwy & Sweetwater Canyon Rd	50'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
910-04634-1015-471	7/17/10	17:05	Webb Wy & Pacific Coast Hwy	0'	In Int.	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	1	0
910-04636-1012-251	7/17/10	17:25	Pacific Coast Hwy & Corral Canyon Rd	1320'	East	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	2	0
910-04665-1016-471	7/18/10	14:35	Pacific Coast Hwy & Rambla Vista (E)	1584'	North	Vehicle - Pedestrian	Pedestrian	East	Other	North	Proceeding Straight	Pedestrian Violation	1	0
910-04711-1017-472	7/18/10	20:00	Pacific Coast Hwy & Rambla Vista (E)	0'	In Int.	Broadside	Other Motor Vehicle	North	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	1	0
910-04707-1016-472	7/19/10	11:20	Pacific Coast Hwy & Carbon Canyon Rd	58'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
910-04753-1015-250	7/20/10	16:20	Pacific Coast Hwy & Webb Wy	25'	South	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Stopped In Road	Unsafe Lane Change	0	0
910-04756-1014-471	7/20/10	17:30	Pacific Coast Hwy & Malibu Canyon Rd	528'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	2	0
910-04778-1016-472	7/21/10	14:30	Pacific Coast Hwy & Carbon Canyon Rd	15'	North	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
910-04792-1014-472	7/22/10	08:07	Pacific Coast Hwy & Malibu Canyon Rd	528'	North	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Stopped In Road	Unsafe Speed	0	0
910-04795-1018-471	7/22/10	10:55	Pacific Coast Hwy & Tuna Canyon Rd	2112'	North	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Slowing/Stopping	Unsafe Speed	1	0
910-04825-1015-472	7/23/10	11:50	3939 Cross Creek Rd & Private Property	0'	In Int.	Broadside	Other Motor Vehicle	North	Backing	West	Proceeding Straight	Other Improper Driving	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-04854-1015-471	7/23/10	21:50	Pacific Coast Hwy & Webb Wy	0'	In Int.	Rear-End	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Unsafe Lane Change	2	0
910-04885-1016-472	7/24/10	15:40	Carbon Canyon Rd & Pacific Coast Hwy	0'	In Int.	Rear-End	Other Motor Vehicle	North	Backing	South	Stopped In Road	Unsafe Starting or Backing	0	0
910-04888-1016-472	7/24/10	16:10	Rambla Pacifico & Pacific Coast Hwy	1200'	North	Rear-End	Parked Motor Vehicle	South	Backing	South	Parked	Unsafe Starting or Backing	0	0
910-04955-1015-472	7/26/10	17:35	Pacific Coast Hwy & Webb Wy	528'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
910-04958-1016-472	7/26/10	18:45	Pacific Coast Hwy & Carbon Canyon Rd	15'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
910-04964-1013-250	7/26/10	22:56	Pacific Coast Hwy & Kanan Dume Rd	0'	In Int.	Broadside	Other Motor Vehicle	West	Making U Turn	East	Proceeding Straight	Other Hazardous Movement	0	0
910-04985-1014-472	7/27/10	18:40	Malibu Canyon Rd & Pacific Coast Hwy	18'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Making Right Turn	Unsafe Speed	0	0
910-05029-1018-472	7/29/10	12:15	Pacific Coast Hwy & Big Rock Dr	500'	North	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Unsafe Lane Change	0	0
910-05040-1016-472	7/29/10	17:10	Pacific Coast Hwy & Cross Creek Rd	18'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
910-05070-1015-472	7/30/10	16:20	Pacific Coast Hwy & Serra Rd	1320'	East	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Following Too Closely	0	0
910-05084-1016-242	7/31/10	03:00	Pacific Coast Hwy & Carbon Canyon Rd	2'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Driving Under Influence	0	0
910-05086-1018-472	7/31/10	04:03	Pacific Coast Hwy & Pena Rd	100'	South	Hit Object	Fixed Object	South	Ran Off Road			Unsafe Lane Change	0	0
910-05115-1014-471	7/31/10	21:05	Pacific Coast Hwy & Malibu Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Starting or Backing	1	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

9/9/2010
Date Range Reported: 8/1/10 - 8/31/10
Total Number of Collisions: 48
Total Numberof Persons Injured 24
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-05150-1029-242	8/1/10	16:50	Pacific Coast Hwy & Las Flores Canyon Rd	2640'	South	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Making Left Turn	Driving Under Influence	0	0
910-05153-1017-472	8/1/10	18:00	Pacific Coast Hwy & Topanga Canyon Blvd	5280'	South	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Proceeding Straight	Unknown	0	0
910-05185-1015-250	8/2/10		23705 Malibu Rd & Private Property	0'	In Int.	Rear-End	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0
910-05194-1012-472	8/3/10	15:00	Via Escondido & Pacific Coast Hwy	0'	In Int.	Sideswipe	Other Motor Vehicle	East	Entering Traffic	West	Proceeding Straight	Auto R/W Violation	0	0
910-05227-1015-471	8/4/10	15:27	Pacific Coast Hwy & Webb Wy	528'	South	Other	Non-Collision	North	Entering Traffic	North	Proceeding Straight	Unsafe Lane Change	1	0
910-05255-1015-242	8/5/10	16:00	Pacific Coast Hwy & Malibu Canyon Rd	200'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Driving Under Influence	1	0
910-05257-1015-472	8/5/10	18:30	Harbor Vista Dr & Malibu Canyon Rd	15'	East	Head-On	Other Motor Vehicle	East	Making Right Turn	West	Stopped In Road	Improper Turning	1	0
910-05271-1018-472	8/6/10	12:40	Pacific Coast Hwy & Tuna Canyon Rd	528'	North	Hit Object	Fixed Object	North	Other Unsafe Turning			Unsafe Speed	0	0
910-05273-1016-471	8/6/10	14:25	Pacific Coast Hwy & Rambla Pacifico	1056'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	1	0
910-05277-1014-471	8/6/10	18:15	Pacific Coast Hwy & Webb Wy	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	South	Proceeding Straight	Traffic Signals and Signs	1	0
910-05292-1013-250	8/7/10	12:00	Dume Dr & Heathercliff Rd	1584'	East	Hit Object	Fixed Object	South	Proceeding Straight			Unsafe Speed	0	0
910-05296-1016-472	8/7/10	13:55	Pacific Coast Hwy & Sweetwater Canyon Rd	3696'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-05300-1012-471	8/7/10	14:50	Pacific Coast Hwy & Paradise Cove Rd	460'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	1	0
910-05339-1016-472	8/8/10	15:30	30500 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	East	Other Unsafe Turning	South	Parked	Other Improper Driving	0	0
910-05349-1016-472	8/8/10	18:40	23400 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	West	Backing	West	Parked	Other Improper Driving	0	0
910-05351-1016-243	8/8/10	22:48	Pacific Coast Hwy & Las Flores Canyon Rd	5280'	South	Sideswipe	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Driving Under Influence	0	0
910-05353-1014-472	8/9/10	06:45	26101 Pacific Coast Hwy & Private Property	0'	In Int.	Hit Object	Fixed Object	South	Parking Maneuver			Other Improper Driving	0	0
910-05407-1013-250	8/10/10	09:20	Pacific Coast Hwy & Latigo Canyon Rd	2640'	South	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Improper Turning	0	0
910-05422-1013-472	8/11/10	13:00	6506 Westward Beach Rd & Private Property	0'	In Int.	Hit Object	Fixed Object	South	Parking Maneuver			Other Improper Driving	0	0
910-05425-1016-471	8/11/10	17:20	Pacific Coast Hwy & Sweetwater Canyon Rd	600'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0
910-05436-1029-471	8/12/10	13:34	Pacific Coast Hwy & Topanga Canyon Blvd	2112'	North	Sideswipe	Bicycle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Lane Change	2	0
910-05446-1012-242	8/12/10	21:30	Pacific Coast Hwy & Kanan Dume Rd	40'	South	Sideswipe	Other Motor Vehicle	South	Changing Lanes	South	Proceeding Straight	Driving Under Influence	0	0
910-05465-1015-471	8/13/10	16:00	Pacific Coast Hwy & Corral Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
910-05579-1015-471	8/17/10	09:30	Malibu Canyon Rd & Civic Center Wy	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	2	0
910-05596-1013-472	8/17/10	13:30	Pacific Coast Hwy & Busch Dr	120'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Changing Lanes	Unsafe Speed	0	0
910-05857-1016-471	8/18/10	11:40	Pacific Coast Hwy & Webb Wy	700'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	2	0
910-80039-1014-472	8/18/10	12:35	Pacific Coast Hwy & Webb Wy	268'	South	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Stopped In Road	Unsafe Speed	0	0
910-80045-1015-471	8/18/10	17:20	Pacific Coast Hwy & Webb Wy	3168'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-80046-1015-472	8/18/10	17:21	Pacific Coast Hwy & Webb Wy	2956'	North	Hit Object	Fixed Object	South	Other			Hazardous Parking	0	0
910-05629-1011-250	8/19/10		30745 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0
910-05614-1017-472	8/19/10	10:30	Piedra Chica Rd & Big Rock Dr	387'	West	Sideswipe	Other Motor Vehicle	West	Entering Traffic	West	Proceeding Straight	Unsafe Starting or Backing	0	0
910-05678-1017-250	8/21/10	10:00	Pacific Coast Hwy & Tuna Canyon Rd	1320'	North	Other	Bicycle	West	Parked	West	Proceeding Straight	Unsafe Lane Change	1	0
910-05698-1013-471	8/21/10	17:16	Pacific Coast Hwy & Kanan Dume Rd	242'	East	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Following Too Closely	1	0
910-05716-1012-472	8/22/10	14:25	Pacific Coast Hwy & Busch Dr	0'	In Int.	Sideswipe	Other Motor Vehicle	West	Passing Other Vehicle	West	Proceeding Straight	Unsafe Lane Change	0	0
910-05736-1017-472	8/23/10	08:13	Pacific Coast Hwy & Las Flores Canyon Rd	4224'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
910-05763-1015-471	8/24/10	11:30	Pacific Coast Hwy & Sweetwater Canyon Rd	500'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0
910-05775-1012-471	8/24/10	15:48	Pacific Coast Hwy & Busch Dr	245'	West	Sideswipe	Other Motor Vehicle	North	Making Left Turn	South	Proceeding Straight	Improper Turning	0	0
910-05804-1016-472	8/25/10	15:30	Pacific Coast Hwy & Carbon Canyon Rd	3168'	West	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Stopped In Road	Unsafe Speed	0	0
910-05808-1012-471	8/25/10	19:06	Pacific Coast Hwy & Paradise Cove Rd	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	4	0
910-05824-1015-472	8/25/10	23:15	Malibu Canyon Rd & Harbor Vista Dr	33'	North	Hit Object	Fixed Object	North	Ran Off Road			Improper Turning	0	0
910-05830-1018-472	8/26/10	08:25	Pacific Coast Hwy & Tuna Canyon Rd	500'	South	Sideswipe	Parked Motor Vehicle	South	Ran Off Road	North	Parked	Unsafe Lane Change	0	0
910-05861-1012-472	8/27/10	11:46	Pacific Coast Hwy & Paradise Cove Rd	20'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
910-05901-1016-471	8/28/10	12:07	Pacific Coast Hwy & Rambla Vista (E)	528'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	2	0
910-05903-1013-471	8/28/10	12:30	Paradise Cove Rd & Pacific Coast Hwy	0'	In Int.	Hit Object	Other Object	South	Proceeding Straight			Unsafe Starting or Backing	0	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

10/14/2010
Date Range Reported: 9/1/10 - 9/30/10
Total Number of Collisions: 35
Total Numberof Persons Injured 18
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-06018-1017-471	9/1/10	07:05	Pacific Coast Hwy & Big Rock Dr	2112'	North	Broadside	Other Motor Vehicle	North	Making U Turn	North	Proceeding Straight	Improper Turning	1	0
910-06023-1015-472	9/1/10	11:20	Sweetwater Canyon Rd & Ridgemont Dr	0'	In Int.	Broadside	Other Motor Vehicle	West	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0
910-06059-1016-472	9/2/10	16:30	Pacific Coast Hwy & Carbon Canyon Rd	2112'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
910-06078-1016-250	9/2/10	23:00	Pacific Coast Hwy & Big Rock Dr	3168'	North	Vehicle - Pedestrian	Pedestrian	North	Other	North	Proceeding Straight	Pedestrian Violation	0	0
910-06083-1016-472	9/3/10	15:48	Pacific Coast Hwy & Rambla Pacifico	1584'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	0	0
910-06089-1016-471	9/3/10	17:30	Pacific Coast Hwy & Carbon Canyon Rd	4752'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	2	0
910-06138-1014-472	9/4/10	19:30	Pacific Coast Hwy & Latigo Canyon Rd	200'	South	Overturned	Non-Collision	North	Making Right Turn			Improper Turning	0	0
910-06156-1016-471	9/5/10	15:20	Pacific Coast Hwy & Rambla Vista (E)	121'	North	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0
910-06234-1014-471	9/6/10	11:30	Pacific Coast Hwy & John Tyler Dr	520'	East	Other	Non-Collision	West	Proceeding Straight			Unsafe Speed	1	0
910-06189-1016-472	9/6/10	16:27	Pacific Coast Hwy & Carbon Canyon Rd	2640'	North	Other	Parked Motor Vehicle	North	Backing	North	Parked	Unsafe Starting or Backing	0	0
910-06221-1017-472	9/7/10	16:05	Pacific Coast Hwy & Big Rock Dr	60'	South	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
910-06233-1016-250	9/8/10	04:15	Pacific Coast Hwy & Rambla Pacifico	7920'	North	Sideswipe	Parked Motor Vehicle	West	Proceeding Straight	North	Parked	Unsafe Lane Change	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-06295-1010-472	9/10/10	16:00	Encinal Canyon Rd & Noranda Ln	55'	North	Broadside	Other Motor Vehicle	South	Making U Turn	South	Proceeding Straight	Improper Turning	0	0
910-06311-1012-472	9/11/10	09:19	Pacific Coast Hwy & Morning View Dr	1056'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
910-06314-1013-472	9/11/10	12:39	Grayfox St & Fernhill Dr	528'	East	Rear-End	Parked Motor Vehicle	West	Proceeding Straight	West	Parked	Wrong Side of Road	0	0
910-06318-1013-241	9/11/10	14:25	Pacific Coast Hwy & Zumirez Dr (E)	200'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Driving Under Influence	3	0
910-06345-1016-471	9/12/10	09:20	Pacific Coast Hwy & Carbon Canyon Rd	10560'	North	Broadside	Other Motor Vehicle	South	Making U Turn	South	Proceeding Straight	Auto R/W Violation	1	0
910-06380-1015-472	9/13/10	12:00	Pacific Coast Hwy & Sweetwater Canyon Rd	528'	North	Sideswipe	Other Motor Vehicle	North	Entering Traffic	North	Proceeding Straight	Auto R/W Violation	0	0
910-06401-1016-472	9/14/10	08:07	Pacific Coast Hwy & Carbon Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Stopped In Road	Unsafe Speed	0	0
910-06418-1016-472	9/14/10	17:25	Pacific Coast Hwy & Sweetwater Canyon Rd	1056'	South	Broadside	Other Motor Vehicle	North	Making Left Turn	North	Proceeding Straight	Wrong Side of Road	0	0
910-06422-1016-471	9/14/10	21:10	Pacific Coast Hwy & Rambla Vista (E)	1320'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
910-06433-1017-471	9/15/10	12:00	Pacific Coast Hwy & Las Flores Canyon Rd	2'	South	Rear-End	Other Motor Vehicle	South	Other	South	Stopped In Road	Unsafe Speed	4	0
910-06474-1014-471	9/16/10	18:24	Pacific Coast Hwy & Escondido Beach Rd	280'	North	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Proceeding Straight	Unsafe Speed	3	0
910-06819-1016-472	9/18/10	16:00	Pacific Coast Hwy & Serra Rd	300'	South	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Stopped In Road	Unsafe Speed	0	0
910-06518-1016-472	9/18/10	19:15	Pacific Coast Hwy & Sweetwater Canyon Rd	7920'	South	Broadside	Other Motor Vehicle	North	Proceeding Straight	North	Making Left Turn	Other Hazardous Movement	0	0
910-06542-1014-471	9/19/10	20:50	Pacific Coast Hwy & Malibu Rd (W)	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Right Turn	South	Proceeding Straight	Auto R/W Violation	1	0
910-06560-1012-472	9/20/10	13:17	Pacific Coast Hwy & Kanan Dume Rd	300'	North	Broadside	Other Motor Vehicle	South	Making U Turn	South	Proceeding Straight	Improper Turning	0	0
910-06567-1016-472	9/22/10	09:32	Webb Wy & Pacific Coast Hwy	111'	West	Sideswipe	Other Motor Vehicle	North	Making Right Turn	North	Proceeding Straight	Unsafe Lane Change	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-06609-1013-472	9/22/10	16:40	Pacific Coast Hwy & Bonsall Dr	630'	South	Rear-End	Other Motor Vehicle	North	Stopped In Road	North	Stopped In Road	Other Hazardous Movement	0	0
910-06642-1015-472	9/24/10	10:52	Malibu Rd & Webb Wy	91'	East	Sideswipe	Other Motor Vehicle	East	Entering Traffic	East	Proceeding Straight	Unsafe Starting or Backing	0	0
910-06667-1016-472	9/25/10	11:20	Pacific Coast Hwy & Carbon Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Stopped In Road	Following Too Closely	0	0
910-06691-1016-250	9/26/10	13:05	Pacific Coast Hwy & Sweetwater Canyon Rd	2640'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Slowing/Stoppi ng	Unsafe Speed	1	0
910-06693-1015-472	9/26/10	14:52	Pacific Coast Hwy & Serra Rd	100'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
910-06699-1012-250	9/26/10	22:35	Guernsey Av & Pacific Coast Hwy	70'	North	Hit Object	Fixed Object	South	Proceeding Straight			Unsafe Speed	0	0
910-06754-1014-471	9/28/10	15:10	Pacific Coast Hwy & John Tyler Dr	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

11/11/2010
Date Range Reported: 10/1/10 - 10/31/10
Total Number of Collisions: 30
Total Numberof Persons Injured 13
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-06833-1013-471	10/1/10	16:55	Pacific Coast Hwy & Escondido Beach Rd	400'	North	Rear-End	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Lane Change	1	0
910-06857-1014-472	10/2/10	13:30	23717 Malibu Rd & Private Property	0'	In Int.	Other	Other Motor Vehicle	East	Backing	South	Stopped In Road	Other Improper Driving	0	0
910-06887-1016-471	10/3/10	13:00	Rambla Vista & Villa Costera	163'	West	Sideswipe	Other Motor Vehicle	East	Proceeding Straight	West	Proceeding Straight	Other Hazardous Movement	1	0
910-06910-1017-250	10/4/10	15:50	Pacific Coast Hwy & Big Rock Dr	300'	North	Sideswipe	Motor Vehicle on Other	North	Making U Turn	South	Proceeding Straight	Auto R/W Violation	0	0
910-06939-1012-472	10/6/10	13:40	Harvester Rd & Filaree Heights Av	75'	North	Other	Other	North	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
910-06940-1015-471	10/6/10	16:10	23670 Pacific Coast Hwy & Private Property	0'	In Int.	Vehicle - Pedestrian	Pedestrian	West	Backing	South	Other	Other Improper Driving	0	0
910-06947-1016-471	10/7/10	07:50	Pacific Coast Hwy & Rambla Pacifico	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	2	0
910-06975-1017-471	10/8/10	02:15	Pacific Coast Hwy & Big Rock Dr	3155'	North	Broadside	Parked Motor Vehicle	South	Ran Off Road	West	Parked	Wrong Side of Road	2	0
910-06979-1014-472	10/8/10	10:45	Malibu Rd & Pacific Coast Hwy (W)	1056'	East	Sideswipe	Other Motor Vehicle	West	Stopped In Road	West	Making Left Turn	Impeding Traffic	0	0
910-06996-1015-472	10/8/10	22:40	Pacific Coast Hwy & Cross Creek Rd	3168'	South	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Lane Change	0	0
910-07010-1011-471	10/9/10	11:05	Pacific Coast Hwy & Decker Rd	2640'	North	Sideswipe	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Unsafe Lane Change	1	0
910-07023-1012-250	10/9/10	22:45	Latigo Canyon Rd & Pacific Coast Hwy	12'	North	Broadside	Other Motor Vehicle	North	Making Right Turn	South	Stopped In Road	Improper Turning	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-07034-1016-471	10/10/10	12:15	Pacific Coast Hwy & Rambla Vista (E)	528'	North	Broadside	Bicycle	North	Proceeding Straight	North	Proceeding Straight	Unknown	1	0
910-07086-1012-472	10/12/10	14:00	Pacific Coast Hwy & Zuma Mesa Dr	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
910-07117-1013-472	10/13/10	17:15	Heathercliff Rd & Pacific Coast Hwy	47'	South	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Improper Turning	0	0
910-07119-1015-472	10/13/10	18:35	Pacific Coast Hwy & Webb Wy	150'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
910-07140-1016-471	10/14/10	15:39	Pacific Coast Hwy & Carbon Canyon Rd	4752'	North	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	1	0
910-07191-1018-472	10/17/10	10:42	Pacific Coast Hwy & Carbon Canyon Rd	0'	In Int.	Sideswipe	Other Motor Vehicle	West	Proceeding Straight	South	Proceeding Straight	Traffic Signals and Signs	0	0
910-07223-1015-472	10/19/10	11:50	Malibu Canyon Rd & Seaver Dr	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	West	Proceeding Straight	Auto R/W Violation	0	0
910-07225-1016-472	10/19/10	12:35	Pacific Coast Hwy & Sweetwater Canyon Rd	3168'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Lane Change	0	0
910-07288-1017-255	10/21/10	21:00	Pacific Coast Hwy & Las Flores Canyon Rd	200'	South	Other	Non-Collision	South	Proceeding Straight			Driving Under Influence	1	0
910-07313-1014-471	10/22/10	18:45	25801 Pacific Coast Hwy & Private Property	0'	In Int.	Hit Object	Other Object	North	Backing			Other Improper Driving	0	0
910-07367-1015-471	10/25/10	10:57	Pacific Coast Hwy & Cross Creek Rd	52'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
910-07385-1080-472	10/26/10	10:10	Pacific Coast Hwy & Pena Rd	1420'	South	Broadside	Other Motor Vehicle	South	Making U Turn	South	Proceeding Straight	Auto R/W Violation	0	0
910-07392-1015-471	10/26/10	12:45	Malibu Canyon Rd & Civic Center Wy	0'	In Int.	Broadside	Other Motor Vehicle	West	Proceeding Straight	North	Proceeding Straight	Traffic Signals and Signs	1	0
910-07443-1014-471	10/28/10	11:56	Pacific Coast Hwy & John Tyler Dr	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Slowing/Stopping	Auto R/W Violation	1	0
910-07449-1015-472	10/28/10	14:00	Malibu Canyon Rd & Pacific Coast Hwy	0'	In Int.	Rear-End	Other Motor Vehicle	East	Slowing/Stopping	East	Stopped In Road	Following Too Closely	0	0
910-07461-1015-255	10/29/10	10:25	Pacific Coast Hwy & Webb Wy	78'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-07477-1014-250	10/30/10		Pacific Coast Hwy & Corral Canyon Rd	3188'	South	Hit Object	Fixed Object	North	Proceeding Straight			Unsafe Speed	1	0
910-07521-1012-250	10/31/10	21:30	Murphy Mtwy & Ramirez Ridge Tr	2640'	North	Hit Object	Fixed Object	North	Ran Off Road			Unsafe Speed	0	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station
Collision Report Summary

12/9/2010
Date Range Reported: 11/1/10 - 11/30/10
Total Number of Collisions: 21
Total Numberof Persons Injured 6
Total Number of Persons Killed: 1

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-07579-1015-472	11/4/10	08:32	Pacific Coast Hwy & Serra Rd	1056'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Merging	Unsafe Speed	0	0
910-07580-1018-472	11/4/10	09:30	19828 Pacific Coast Hwy & Private Property	0'	In Int.	Rear-End	Parked Motor Vehicle	North	Backing	East	Parked	Other Improper Driving	0	0
910-07591-1016-472	11/4/10	18:40	22935 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	East	Backing	West	Parked	Unsafe Starting or Backing	0	0
910-07610-1015-472	11/5/10	16:32	Malibu Canyon Rd & Seaver Dr	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0
910-07628-1015-472	11/6/10	12:30	Cross Creek Rd & Fines Rd	100'	North	Hit Object	Fixed Object	North	Ran Off Road			Wrong Side of Road	0	0
910-07667-1015-472	11/8/10	10:15	Civic Center Wy & Webb Wy	560'	East	Broadside	Other Motor Vehicle	East	Making Left Turn	West	Proceeding Straight	Improper Turning	0	0
910-07740-1011-472	11/12/10	04:45	Pacific Coast Hwy & Morning View Dr	1584'	West	Hit Object	Fixed Object	North	Proceeding Straight			Other Equipment	0	0
910-07841-1013-472	11/15/10	20:25	Pacific Coast Hwy & Busch Dr	528'	South	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Unsafe Lane Change	0	0
910-07847-1016-472	11/16/10	07:00	Pacific Coast Hwy & Las Flores Canyon Rd	14256'	South	Rear-End	Parked Motor Vehicle	South	Making Right Turn	North	Parked	Improper Turning	0	0
910-07849-1014-472	11/16/10	08:25	Pacific Coast Hwy & Corral Canyon Rd	0'	In Int.	Overturned	Non-Collision	West	Making U Turn			Other Hazardous Movement	0	0
910-07856-1013-470	11/16/10	18:10	Grayfox St & Fernhill Dr	503'	West	Rear-End	Parked Motor Vehicle	East	Proceeding Straight	East	Parked	Driving Under Influence	0	1
910-07861-1016-472	11/17/10	07:10	Rambla Vista & Paseo Portola	12'	East	Hit Object	Fixed Object	West	Other Unsafe Turning			Improper Turning	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-07897-1016-472	11/19/10	08:57	Pacific Coast Hwy & Sweetwater Canyon Rd	2640'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Unsafe Speed	0	0
910-07929-1017-242	11/21/10	00:30	Pacific Coast Hwy & Big Rock Dr	3696'	North	Sideswipe	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Driving Under Influence	0	0
910-07936-1015-471	11/21/10	13:48	Pacific Coast Hwy & Malibu Canyon Rd	65'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	1	0
910-08027-1017-472	11/26/10	05:30	Pacific Coast Hwy & Las Flores Canyon Rd	2640'	South	Head-On	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Lane Change	0	0
910-08032-1014-471	11/26/10	09:34	Pacific Coast Hwy & Sea Vista Dr	23'	South	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Stopped In Road	Unsafe Speed	2	0
910-08040-1012-250	11/26/10	16:45	Morning View Dr & Via Cabrillo	300'	West	Hit Object	Fixed Object	North	Proceeding Straight			Unsafe Speed	0	0
910-08053-1015-472	11/27/10	15:00	Pacific Coast Hwy & Cross Creek Rd	4224'	South	Broadside	Other Motor Vehicle	South	Making Left Turn	South	Proceeding Straight	Auto R/W Violation	0	0
910-08073-1014-471	11/28/10	17:50	Pacific Coast Hwy & John Tyler Dr	87'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	2	0
910-08103-1015-471	11/30/10	15:05	Civic Center Wy & Webb Wy	182'	West	Head-On	Other Motor Vehicle	West	Crossed Into Opposing	East	Proceeding Straight	Wrong Side of Road	1	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

1/9/2011

Date Range Reported: 12/1/10 - 12/31/10
Total Number of Collisions: 20
Total Numberof Persons Injured 6
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-08133-1012-472	12/2/10	08:00	Guernsey Av & Pacific Coast Hwy	10'	North	Rear-End	Other Motor Vehicle	South	Making Right Turn	South	Stopped In Road	Unsafe Speed	0	0
910-08145-1012-472	12/2/10	14:45	30215 Morning View Dr & Private Property	0'	In Int.	Broadside	Other Motor Vehicle	East	Making Right Turn	South	Proceeding Straight	Other Improper Driving	0	0
910-08162-1016-472	12/3/10	07:22	Pacific Coast Hwy & Sweetwater Canyon Rd	5280'	South	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Proceeding Straight	Unsafe Speed	0	0
910-08167-1015-250	12/3/10	10:35	Pacific Coast Hwy & Serra Rd	537'	South	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Parked	Improper Turning	0	0
910-08170-1014-472	12/3/10	14:00	Pacific Coast Hwy & John Tyler Dr	404'	South	Other	Non-Collision	South	Slowing/Stopping			Following Too Closely	0	0
910-08178-1013-250	12/3/10	22:50	Heathercliff Rd & Wandermere Rd	360'	West	Sideswipe	Parked Motor Vehicle	West	Proceeding Straight	West	Parked	Wrong Side of Road	0	0
910-08213-1017-471	12/6/10	09:15	Pacific Coast Hwy & Big Rock Dr	1056'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Slowing/Stopping	Unsafe Speed	1	0
910-08238-1017-472	12/7/10	08:18	Pacific Coast Hwy & Big Rock Dr	3696'	North	Broadside	Other Motor Vehicle	South	Proceeding Straight	North	Making Left Turn	Improper Passing	0	0
910-08253-1018-471	12/8/10	06:45	Pacific Coast Hwy & Tuna Canyon Rd	48'	South	Sideswipe	Parked Motor Vehicle	South	Ran Off Road	South	Parked	Unsafe Speed	1	0
910-08254-1012-472	12/8/10	07:53	Pacific Coast Hwy & Guernsey Av	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Improper Turning	1	0
910-08277-1015-472	12/9/10	07:10	Pacific Coast Hwy & Malibu Canyon Rd	22'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
910-08332-1016-472	12/11/10	16:45	21237 Pacific Coast Hwy & Private Property	0'	In Int.	Broadside	Parked Motor Vehicle	East	Backing	North	Parked	Other Improper Driving	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
910-08349-1016-472	12/12/10	07:40	Pacific Coast Hwy & Serra Rd	5280'	South	Rear-End	Parked Motor Vehicle	South	Proceeding Straight		Parked	Unsafe Speed	0	0
910-08344-1015-472	12/12/10	16:15	Pacific Coast Hwy & Serra Rd	0'	In Int.	Broadside	Other Motor Vehicle	North	Entering Traffic	East	Proceeding Straight	Auto R/W Violation	0	0
910-08385-1015-472	12/14/10	15:00	Pacific Coast Hwy & Webb Wy	200'	South	Sideswipe	Other Motor Vehicle	North	Making Right Turn	North	Proceeding Straight	Improper Turning	0	0
910-08411-1016-242	12/15/10	22:00	Pacific Coast Hwy & Cross Creek Rd	8976'	South	Sideswipe	Other Motor Vehicle	North	Making U Turn	North	Proceeding Straight	Driving Under Influence	1	0
910-08419-1016-471	12/16/10	10:45	Pacific Coast Hwy & Carbon Canyon Rd	236'	South	Sideswipe	Parked Motor Vehicle	South	Ran Off Road	South	Parked	Improper Turning	1	0
910-08491-1016-471	12/20/10	12:25	Pacific Coast Hwy & Carbon Canyon Rd	300'	South	Broadside	Other Motor Vehicle	South	Making U Turn	South	Proceeding Straight	Improper Turning	1	0
910-08499-1012-472	12/20/10	22:40	Kanan Dume Rd & Pacific Coast Hwy	5280'	North	Hit Object	Fixed Object	South	Proceeding Straight			Unsafe Speed	0	0
910-08666-1013-472	12/24/10	21:00	6506 Westward Beach Rd & Private Property	0'	In Int.	Rear-End	Other Motor Vehicle	West	Stopped In Road	South	Backing	Other Improper Driving	0	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

2/7/2011
Date Range Reported: 1/1/11 - 1/31/11
Total Number of Collisions: 20
Total Numberof Persons Injured 5
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-00005-1017-472	1/1/11	12:20	Pacific Coast Hwy & Las Flores Canyon Rd	66'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Traffic Signals and Signs	0	0
911-00035-1011-472	1/3/11	11:30	Pacific Coast Hwy & Broad Beach Rd (W)	1320'	South	Hit Object	Fixed Object	South	Ran Off Road			Unsafe Lane Change	0	0
911-00038-1015-250	1/3/11	14:10	Malibu Canyon Rd & Civic Center Wy	300'	North	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Unsafe Lane Change	0	0
911-00080-1015-472	1/5/11	13:50	Pacific Coast Hwy & Webb Wy	528'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
911-00122-1016-472	1/5/11	20:00	23152 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0
911-00176-1015-472	1/10/11	09:30	22941 Pacific Coast Hwy & Private Property	0'	In Int.	Rear-End	Parked Motor Vehicle	South	Passing Other Vehicle	North	Parked	Other Improper Driving	0	0
911-00208-1015-471	1/11/11	16:00	Pacific Coast Hwy & Cross Creek Rd	4224'	South	Broadside	Other Motor Vehicle	North	Making U Turn	North	Proceeding Straight	Improper Turning	1	0
911-00212-1013-472	1/11/11	18:11	Pacific Coast Hwy & Zuma View Pl	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0
911-00223-1011-471	1/12/11	09:30	Pacific Coast Hwy & Lunita Rd	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	2	0
911-00237-1013-250	1/13/11		6508 Westward Beach Blvd & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0
911-00295-1016-472	1/15/11	11:30	Pacific Coast Hwy & Sweetwater Canyon Rd	528'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Slowing/Stopping	Following Too Closely	0	0
911-00315-1014-471	1/16/11	15:00	Pacific Coast Hwy & Corral Canyon Rd	1760'	South	Broadside	Other Motor Vehicle	South	Making U Turn	South	Proceeding Straight	Auto R/W Violation	1	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-00352-1016-472	1/17/11	18:00	Pacific Coast Hwy & Cross Creek Rd	5280'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped in Road	Traffic Signals and Signs	0	0
911-00426-1011-472	1/21/11	13:00	Cottontail Ln & Broad Beach Rd	168'	North	Sideswipe	Parked Motor Vehicle	West	Parking Maneuver	West	Parked	Improper Turning	0	0
911-00475-1018-250	1/22/11	17:35	Pacific Coast Hwy & Tuna Canyon Rd	100'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
911-00468-1016-250	1/23/11	10:30	Pacific Coast Hwy & Cross Creek Rd	100'	South	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unknown	0	0
911-00512-1016-471	1/25/11	13:10	Pacific Coast Hwy & Rambla Pacifico	0'	In Int.	Broadside	Other Motor Vehicle	North	Making Left Turn	South	Proceeding Straight	Auto R/W Violation	1	0
911-00524-1015-250	1/26/11		Pacific Coast Hwy & Sweetwater Canyon Rd	2112'	South	Sideswipe	Parked Motor Vehicle	South	Changing Lanes	South	Parked	Improper Turning	0	0
911-00528-1012-472	1/26/11	12:15	Pacific Coast Hwy & Via Escondido	2112'	North	Hit Object	Fixed Object	South	Proceeding Straight			Improper Turning	0	0
911-00531-1013-250	1/26/11	14:57	28128 Pacific Coast Hwy & Private Property	0'	In Int.	Hit Object	Fixed Object	North	Other			Other Improper Driving	0	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

3/8/2011
Date Range Reported: 2/1/11 - 2/28/11
Total Number of Collisions: 25
Total Numberof Persons Injured 9
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-00672-1015-472	2/1/11	17:15	Pacific Coast Hwy & Serra Rd	1200'	South	Sideswipe	Motor Vehicle on Other	West	Proceeding Straight	East	Making U Turn	Improper Turning	0	0
911-00724-1016-472	2/4/11	13:45	Pacific Coast Hwy & Tuna Canyon Rd	1'	North	Sideswipe	Other Motor Vehicle	North	Passing Other Vehicle	North	Proceeding Straight	Unsafe Lane Change	0	0
911-00766-1013-472	2/6/11	08:55	Bluewater Rd & Dume Dr	0'	In Int.	Hit Object	Fixed Object	West	Ran Off Road			Unsafe Lane Change	0	0
911-00778-1016-250	2/7/11	06:50	Pacific Coast Hwy & Carbon Canyon Rd	2640'	North	Sideswipe	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Unsafe Lane Change	0	0
911-00873-1013-472	2/11/11	11:57	Heathercliff Rd & Pacific Coast Hwy	207'	South	Sideswipe	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Improper Turning	0	0
911-00876-1015-472	2/11/11	15:15	Pacific Coast Hwy & Cross Creek Rd	541'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Following Too Closely	0	0
911-00879-1015-472	2/11/11	17:30	Pacific Coast Hwy & Sweetwater Canyon Rd	468'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Following Too Closely	0	0
911-00882-1016-242	2/11/11	17:31	Pacific Coast Hwy & Sweetwater Canyon Rd	468'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Driving Under Influence	0	0
911-00880-1015-472	2/11/11	17:35	Pacific Coast Hwy & Sweetwater Canyon Rd	494'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
911-00881-1015-255	2/11/11	18:30	Pacific Coast Hwy & Cross Creek Rd	16'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Following Too Closely	0	0
911-00903-1015-472	2/12/11	12:15	Pacific Coast Hwy & Carbon Canyon Rd	3168'	North	Sideswipe	Other Motor Vehicle	South	Making Left Turn	South	Stopped In Road	Auto R/W Violation	0	0
911-00923-1016-471	2/13/11	15:45	Pacific Coast Hwy & Carbon Canyon Rd	340'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	2	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-00952-1015-250	2/14/11	19:07	23805 Malibu Rd & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0
911-00954-1016-471	2/14/11	19:50	Pacific Coast Hwy & Carbon Canyon Rd	4224'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Following Too Closely	0	0
911-00985-1016-471	2/16/11	10:20	Pacific Coast Hwy & Carbon Canyon Rd	528'	South	Broadside	Other Motor Vehicle	North	Proceeding Straight	North	Making U Turn	Improper Turning	3	0
911-00998-1016-250	2/16/11	15:00	23525 Civic Center Wy & Private Property	0'	In Int.	Other	Parked Motor Vehicle	South	Parking Maneuver	South	Parked	Other Improper Driving	0	0
911-01001-1015-241	2/17/11	01:18	Malibu Canyon Rd & Civic Center Wy	2112'	East	Overturned	Non-Collision	South	Ran Off Road			Driving Under Influence	2	0
911-01014-1015-250	2/17/11	21:40	Pacific Coast Hwy & Sweetwater Canyon Rd	600'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Making Right Turn	Unsafe Speed	0	0
911-01050-1017-471	2/20/11	14:04	Pacific Coast Hwy & Big Rock Dr	5280'	North	Sideswipe	Bicycle	North	Proceeding Straight	North	Parked	Other Hazardous Movement	1	0
911-01062-1017-471	2/21/11	11:30	Pacific Coast Hwy & Big Rock Dr	4224'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	1	0
911-01073-1011-472	2/22/11	02:00	Pacific Coast Hwy & Broad Beach Rd (W)	1584'	West	Other	Animal	East	Proceeding Straight			Unknown	0	0
911-01136-1014-472	2/25/11	12:30	Latigo Canyon Rd & Pacific Coast Hwy	6864'	North	Other	Other Motor Vehicle	East	Backing	North	Proceeding Straight	Unsafe Starting or Backing	0	0
911-01148-1015-472	2/25/11	19:45	Pacific Coast Hwy & Sweetwater Canyon Rd	100'	North	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Unsafe Lane Change	0	0
911-01156-1015-472	2/26/11	08:05	Pacific Coast Hwy & Webb Wy	187'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
911-01155-1013-472	2/26/11	12:58	Paradise Cove Rd & Pacific Coast Hwy	235'	South	Hit Object	Fixed Object	South	Proceeding Straight			Wrong Side of Road	0	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

4/5/2011
Date Range Reported: 3/1/11 - 3/31/11
Total Number of Collisions: 27
Total Numberof Persons Injured 10
Total Number of Persons Killed: 1

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-01222-1017-472	3/2/11	09:53	Pacific Coast Hwy & Big Rock Dr	1584'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Following Too Closely	0	0
911-01306-1015-471	3/5/11	11:15	Pacific Coast Hwy & Webb Wy	528'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	2	0
911-01309-1012-471	3/5/11	14:05	Pacific Coast Hwy & Latigo Shore Dr	0'	In Int.	Broadside	Other Motor Vehicle	East	Making Right Turn	South	Making U Turn	Auto R/W Violation	2	0
911-01329-1017-472	3/6/11	18:00	Pacific Coast Hwy & Topanga Canyon Blvd	1500'	North	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Unsafe Lane Change	0	0
911-01359-1017-472	3/8/11	14:44	Pacific Coast Hwy & Las Flores Canyon Rd	1320'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
911-01362-1014-472	3/8/11	15:15	Pacific Coast Hwy & Malibu Canyon Rd	105'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
911-01364-1015-472	3/8/11	15:30	Pacific Coast Hwy & Webb Wy	0'	In Int.	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Slowing/Stopping	Following Too Closely	0	0
911-01389-1010-472	3/10/11	06:50	Pacific Coast Hwy & Decker Rd	4752'	South	Overturned	Fixed Object	North	Ran Off Road			Unsafe Lane Change	0	0
911-01397-1013-472	3/10/11	13:41	Pacific Coast Hwy & Winding Wy E	0'	In Int.	Sideswipe	Other Motor Vehicle	North	Making Right Turn	North	Proceeding Straight	Improper Turning	0	0
911-01458-1016-472	3/14/11	09:20	21249 Pacific Coast Hwy & Private Property	0'	In Int.	Rear-End	Parked Motor Vehicle	East	Backing	West	Parked	Other Improper Driving	0	0
911-01489-1015-471	3/15/11	15:00	Pacific Coast Hwy & John Tyler Dr	1800'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Slowing/Stopping	Following Too Closely	1	0
911-01494-1015-472	3/15/11	16:00	Webb Wy & Pacific Coast Hwy	170'	North	Broadside	Other Motor Vehicle	North	Making U Turn	North	Proceeding Straight	Improper Turning	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
011-01520-1013-470	3/16/11	20:40	Pacific Coast Hwy & Kanan Dume Rd	10392'	South	Head-On	Other Motor Vehicle	South	Making Left Turn	South	Proceeding Straight	Wrong Side of Road	0	1
911-01553-1011-471	3/18/11	08:20	Pacific Coast Hwy & Trancas Canyon Rd	1056'	North	Hit Object	Fixed Object	South	Ran Off Road			Improper Turning	1	0
911-01571-1015-472	3/18/11	14:00	23000 Pacific Coast Hwy & Private Property	0'	In Int.	Other	Parked Motor Vehicle	West	Backing	West	Parked	Other Improper Driving	0	0
911-01568-1016-472	3/18/11	17:32	Pacific Coast Hwy & Carbon Canyon Rd	528'	West	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Proceeding Straight	Following Too Closely	0	0
911-01570-1016-471	3/18/11	18:14	Pacific Coast Hwy & Carbon Canyon Rd	528'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Following Too Closely	1	0
911-01687-1016-472	3/19/11	13:15	Pacific Coast Hwy & Sweetwater Canyon Rd	528'	North	Rear-End	Other Motor Vehicle	North	Making Left Turn	North	Proceeding Straight	Improper Turning	0	0
911-01636-1017-472	3/22/11	07:40	Pacific Coast Hwy & Topanga Canyon Blvd	2'	North	Hit Object	Fixed Object	North	Making Left Turn			Unsafe Lane Change	0	0
911-01648-1012-472	3/22/11	19:45	Pacific Coast Hwy & Cavalleri Rd	223'	North	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Unsafe Lane Change	0	0
911-01678-1011-472	3/24/11	10:10	Pacific Coast Hwy & Trancas Canyon Rd	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	West	Proceeding Straight	Traffic Signals and Signs	0	0
911-01694-1017-471	3/24/11	17:45	Las Flores Canyon Rd & Pacific Coast Hwy	0'	In Int.	Broadside	Other Motor Vehicle	West	Making Left Turn	North	Proceeding Straight	Traffic Signals and Signs	1	0
911-01810-1016-472	3/29/11	07:22	Pacific Coast Hwy & Carbon Canyon Rd	1584'	North	Sideswipe	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Speed	0	0
911-01841-1014-472	3/30/11	16:05	Pacific Coast Hwy & Corral Canyon Rd	140'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Slowing/Stopping	Unsafe Speed	0	0
911-01843-1012-472	3/30/11	18:40	Kanan Dume Rd & Zumirez Dr	520'	North	Sideswipe	Other Motor Vehicle	North	Making U Turn	North	Proceeding Straight	Improper Turning	0	0
911-01848-1012-242	3/30/11	20:15	Pacific Coast Hwy & Bonsall Dr	528'	South	Head-On	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Speed	1	0
911-01867-1012-471	3/31/11	21:30	Pacific Coast Hwy & Paradise Cove Rd	300'	North	Hit Object	Fixed Object	South	Ran Off Road			Wrong Side of Road	1	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

5/9/2011
Date Range Reported: 4/1/11 - 4/30/11
Total Number of Collisions: 31
Total Numberof Persons Injured 11
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-01911-1013-250	4/1/11	23:40	Birdview Av & Bluewater Rd	0'	In Int.	Hit Object	Fixed Object	South	Proceeding Straight			Unsafe Lane Change	0	0
911-01951-1010-471	4/3/11	13:47	Decker Rd & Pacific Coast Hwy	3696'	North	Other	Non-Collision	North	Ran Off Road			Unsafe Speed	1	0
911-01954-1016-242	4/3/11	16:09	Pacific Coast Hwy & Carbon Canyon Rd	2112'	North	Rear-End	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Driving Under Influence	0	0
911-01955-1012-242	4/3/11	17:50	Pacific Coast Hwy & Paradise Cove Rd	30'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Driving Under Influence	0	0
911-01966-1015-471	4/4/11	10:03	Civic Center Wy & Winter Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Stopped In Road	Unsafe Speed	1	0
911-01972-1014-472	4/4/11	12:48	23705 Malibu Rd & Private Property	0'	In Int.	Sideswipe	Other Motor Vehicle	East	Backing	West	Stopped In Road	Other Improper Driving	0	0
911-01980-1017-242	4/4/11	23:00	Pacific Coast Hwy & Rambla Vista (E)	586'	North	Sideswipe	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Driving Under Influence	0	0
911-02033-1015-472	4/7/11	19:50	Pacific Coast Hwy & Webb Wy	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	North	Making Left Turn	Traffic Signals and Signs	0	0
911-02071-1017-471	4/9/11	16:49	Pacific Coast Hwy & Big Rock Dr	126'	North	Hit Object	Other Object	North	Proceeding Straight			Unsafe Speed	1	0
911-02072-1010-471	4/9/11	19:00	Encinal Canyon Rd & Pacific Coast Hwy	500'	North	Other	Non-Collision	South	Proceeding Straight			Other	1	0
911-02211-1016-472	4/16/11	17:00	Pacific Coast Hwy & Rambla Pacifico	1320'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped in Road	Following Too Closely	1	0
911-02216-1016-472	4/17/11	04:45	Pacific Coast Hwy & Rambla Vista (E)	1584'	North	Rear-End	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Unsafe Lane Change	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-02249-1015-472	4/18/11	14:00	Pacific Coast Hwy & Sweetwater Canyon Rd	300'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Following Too Closely	0	0
911-02267-1010-472	4/19/11	16:15	Pacific Coast Hwy & Lunita Rd	97'	North	Rear-End	Other Motor Vehicle	North	Making Left Turn	North	Proceeding Straight	Other Hazardous Movement	0	0
911-02312-1012-472	4/21/11	16:40	Pacific Coast Hwy & Morning View Dr	20'	South	Rear-End	Other Motor Vehicle	North	Changing Lanes	North	Other	Following Too Closely	0	0
911-02314-1013-471	4/21/11	18:40	Pacific Coast Hwy & Heathercliff Rd	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	East	Making Left Turn	Traffic Signals and Signs	1	0
911-02322-1013-471	4/22/11	07:05	Pacific Coast Hwy & Portshead Rd	0'	In Int.	Broadside	Other Motor Vehicle	East	Making Left Turn	South	Proceeding Straight	Auto R/W Violation	2	0
911-02374-1013-250	4/24/11		29500 Heathercliff Rd & Private Property	0'	In Int.	Rear-End	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Other Improper Driving	0	0
911-02370-1013-242	4/24/11	06:11	Heathercliff Rd & Dume Dr	0'	In Int.	Overturned	Non-Collision	North	Parking Maneuver			Driving Under Influence	0	0
911-02378-1017-472	4/24/11	15:45	Pacific Coast Hwy & Rambla Pacifico	1584'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
911-02380-1016-472	4/24/11	16:30	Pacific Coast Hwy & Carbon Canyon Rd	1584'	South	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Changing Lanes	Following Too Closely	0	0
911-02381-1014-471	4/25/11	00:45	Pacific Coast Hwy & Corral Canyon Rd	1584'	South	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	2	0
911-02393-1013-472	4/25/11	14:45	28128 Pacific Coast Hwy & Private Property	0'	In Int.	Rear-End	Other Motor Vehicle	South	Backing	South	Parking Maneuver	Other Improper Driving	0	0
911-02407-1017-472	4/26/11	07:22	Pacific Coast Hwy & Las Flores Canyon Rd	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	West	Making Left Turn	Unsafe Speed	0	0
911-02419-1015-472	4/26/11	15:41	Pacific Coast Hwy & Cross Creek Rd	152'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Following Too Closely	0	0
911-02449-1012-472	4/27/11	16:15	Pacific Coast Hwy & Zuma Beach Access Rd (W)	0'	In Int.	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Other Improper Driving	0	0
911-02464-1017-472	4/28/11	13:40	Pacific Coast Hwy & Las Flores Canyon Rd	100'	South	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
911-02471-1014-472	4/28/11	22:15	Pacific Coast Hwy & Puerco Canyon Rd	3168'	North	Hit Object	Fixed Object	South	Ran Off Road			Wrong Side of Road	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-02492-1013-250	4/29/11		29575 Pacific Coast Hwy & Private Property	0'	In Int.	Other	Parked Motor Vehicle		Backing	North	Parked	Other Improper Driving	0	0
911-02467-1011-472	4/29/11	13:57	Pacific Coast Hwy & Paradise Cove Rd	150'	South	Sideswipe	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Lane Change	0	0
911-02514-1017-471	4/30/11	11:30	Pacific Coast Hwy & Las Flores Canyon Rd	2112'	South	Rear-End	Other Motor Vehicle	North	Entering Traffic	South	Slowing/Stopping	Auto R/W Violation	1	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-02767-1016-471	5/12/11	09:00	Pacific Coast Hwy & Sweetwater Canyon Rd	132'	North	Broadside	Other Motor Vehicle	East	Proceeding Straight	North	Proceeding Straight	Improper Turning	2	0
911-02781-1016-472	5/12/11	17:28	Pacific Coast Hwy & Carbon Canyon Rd	426'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
911-02782-1014-472	5/12/11	18:10	Pacific Coast Hwy & Malibu Canyon Rd	136'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	0	0
911-02790-1012-471	5/13/11	03:55	Pacific Coast Hwy & Decker Rd	9504'	North	Hit Object	Fixed Object	North	Proceeding Straight			Unsafe Lane Change	1	0
911-02796-1017-472	5/13/11	10:15	Pacific Coast Hwy & Las Flores Canyon Rd	2640'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
911-02830-1012-472	5/14/11	07:55	Kanan Dume Rd & Pacific Coast Hwy	102'	North	Hit Object	Fixed Object	North	Making Left Turn	North	Parked	Unsafe Speed	0	0
911-02977-1012-250	5/15/11		Fernhill Dr & Cliffside Dr	528'	North	Other	Parked Motor Vehicle	North	Backing	South	Parked	Unsafe Starting or Backing	0	0
911-02862-1016-472	5/15/11	15:35	Pacific Coast Hwy & Sweetwater Canyon Rd	2640'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
911-02867-1015-472	5/15/11	19:20	Malibu Canyon Rd & Malibu Knolls Rd	120'	North	Other	Other Motor Vehicle	North	Backing	North	Stopped In Road	Unsafe Starting or Backing	0	0
911-02939-1017-250	5/19/11	08:00	Pacific Coast Hwy & Big Rock Dr	100'	South	Broadside	Parked Motor Vehicle	East	Proceeding Straight	East	Parked	Unsafe Lane Change	0	0
911-03001-1012-471	5/22/11	14:00	Pacific Coast Hwy & Westward Beach Rd	0'	In Int.	Broadside	Other Motor Vehicle	East	Making Left Turn	South	Proceeding Straight	Auto R/W Violation	3	0
911-02989-1013-472	5/22/11	17:00	Heathercliff Rd & Pacific Coast Hwy	30'	West	Hit Object	Fixed Object	West	Making Right Turn			Wrong Side of Road	0	0
911-03031-1016-472	5/24/11	06:20	Pacific Coast Hwy & Carbon Canyon Rd	3696'	North	Rear-End	Parked Motor Vehicle	South	Other	South	Parked	Unsafe Lane Change	0	0
911-03096-1014-471	5/26/11	18:55	Pacific Coast Hwy & Latigo Shore Dr	180'	South	Rear-End	Other Motor Vehicle	North	Ran Off Road	North	Stopped In Road	Unsafe Speed	1	0
911-03107-1012-472	5/27/11	11:05	Busch Dr & Merritt Dr	175'	South	Hit Object	Fixed Object	South	Making Left Turn			Unsafe Speed	0	0
911-03145-1012-471	5/28/11	14:00	Pacific Coast Hwy & Morning View Dr	1584'	South	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Unsafe Lane Change	1	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-03155-1016-242	5/28/11	17:43	Pacific Coast Hwy & Las Flores Canyon Rd	1056'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Driving Under Influence	0	0
911-03158-1016-472	5/28/11	19:42	Pacific Coast Hwy & Las Flores Canyon Rd	10'	South	Rear-End	Other Motor Vehicle	South	Passing Other Vehicle	South	Proceeding Straight	Unsafe Lane Change	0	0
911-03337-1014-250	5/29/11		26863 Via Linda St & Private Property	0'	In Int.	Rear-End	Parked Motor Vehicle	East	Other	East	Parked	Unknown	0	0
911-03182-1011-471	5/29/11	18:50	Pacific Coast Hwy & La Herran Rd	215'	South	Vehicle - Pedestrian	Pedestrian	North	Changing Lanes	North	Other	Unsafe Lane Change	1	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station
Collision Report Summary

7/9/2011
Date Range Reported: 6/1/11 - 6/30/11
Total Number of Collisions: 39
Total Numberof Persons Injured 15
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kll.
911-03252-1014-472	6/1/11	11:37	Pacific Coast Hwy & Latigo Canyon Rd	410'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
911-03257-1013-472	6/1/11	15:50	28128 Pacific Coast Hwy & Private Property	0'	In Int.	Hit Object	Fixed Object	West	Making U Turn			Other Improper Driving	0	0
911-03263-1015-471	6/1/11	20:00	Malibu Rd & Webb Wy	528'	South	Broadside	Other Motor Vehicle	East	Making U Turn	East	Proceeding Straight	Improper Turning	1	0
911-03272-1016-472	6/2/11	14:10	Pacific Coast Hwy & Rambla Vista (E)	1584'	North	Sideswipe	Parked Motor Vehicle	North	Parked	North	Proceeding Straight	Other Hazardous Movement	0	0
911-03298-1014-472	6/3/11	12:40	Pacific Coast Hwy & Corral Canyon Rd	461'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Slowing/Stoppi ng	Unsafe Speed	0	0
911-03304-1013-250	6/3/11	14:30	29211 Heathercliff Dr & Private Property	0'	In Int.	Other	Other Motor Vehicle	West	Backing	South	Stopped In Road	Unsafe Starting or Backing	0	0
911-03306-1016-471	6/3/11	15:50	Pacific Coast Hwy & Carbon Canyon Rd	4752'	North	Rear-End	Other Motor Vehicle	South	Changing Lanes	South	Slowing/Stoppi ng	Unsafe Speed	1	0
911-03315-1012-472	6/4/11	06:05	Pacific Coast Hwy & Bonsall Dr	115'	North	Hit Object	Fixed Object	North	Proceeding Straight			Unsafe Speed	0	0
911-03368-1016-472	6/6/11	18:50	Pacific Coast Hwy & Carbon Canyon Rd	3696'	North	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
911-03394-1016-472	6/8/11	09:30	Pacific Coast Hwy & Sweetwater Canyon Rd	1056'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Following Too Closely	0	0
911-03396-1014-471	6/8/11	11:00	Pacific Coast Hwy & John Tyler Dr	2640'	South	Broadside	Other Motor Vehicle	South	Entering Traffic	North	Proceeding Straight	Auto R/W Violation	2	0
911-03398-1016-472	6/8/11	12:15	Pacific Coast Hwy & Sweetwater Canyon Rd	1584'	South	Broadside	Other Motor Vehicle	North	Making U Turn	North	Proceeding Straight	Improper Turning	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-03405-1016-471	6/8/11	19:00	Pacific Coast Hwy & Rambla Vista (E)	500'	South	Rear-End	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unknown	2	0
911-03414-1012-472	6/9/11	11:25	Pacific Coast Hwy & Ramirez Mesa Dr (E)	82'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	0	0
911-03438-1015-472	6/10/11	11:35	Pacific Coast Hwy & Webb Wy	0'	In Int.	Sideswipe	Other Motor Vehicle	East	Proceeding Straight	East	Stopped In Road	Unsafe Speed	0	0
911-03480-1013-472	6/11/11	15:41	29500 Heathercliff Rd & Private Property	0'	In Int.	Hit Object	Fixed Object	West	Proceeding Straight			Other Improper Driving	0	0
911-03490-1010-242	6/11/11	20:55	Decker Rd & Pacific Coast Hwy	500'	North	Overturned	Non-Collision	South	Ran Off Road			Driving Under Influence	0	0
911-03525-1012-250	6/12/11		Pacific Coast Hwy & Westward Beach Rd	0'	In Int.	Hit Object	Fixed Object	East	Proceeding Straight			Wrong Side of Road	0	0
911-03623-1012-471	6/18/11	10:05	Pacific Coast Hwy & Bonsall Dr	0'	In Int.	Rear-End	Bicycle	North	Proceeding Straight	North	Making Right Turn	Unsafe Speed	1	0
911-03624-1015-471	6/18/11	10:35	Pacific Coast Hwy & Sweetwater Canyon Rd	526'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	1	0
911-03669-1017-250	6/20/11	11:30	Pacific Coast Hwy & Las Flores Canyon Rd	4752'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
911-03670-1017-472	6/20/11	11:35	Pacific Coast Hwy & Las Flores Canyon Rd	5280'	South	Sideswipe	Parked Motor Vehicle	South	Parking Maneuver	South	Parked	Improper Turning	0	0
911-03691-1015-472	6/21/11	09:34	3900 Cross Creek Rd & Private Property	0'	In Int.	Other	Parked Motor Vehicle	North	Backing	North	Parked	Other Improper Driving	0	0
911-03710-1015-250	6/21/11	11:00	24250 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0
911-03715-1015-242	6/22/11	03:00	Serra Rd & Mariposa De Oro	0'	In Int.	Hit Object	Fixed Object	South	Proceeding Straight			Driving Under Influence	0	0
911-03722-1016-471	6/22/11	14:18	Pacific Coast Hwy & Sweetwater Canyon Rd	526'	North	Sideswipe	Parked Motor Vehicle	North	Other Unsafe Turning	North	Parked	Improper Turning	1	0
911-03724-1015-472	6/22/11	14:30	Pacific Coast Hwy & Webb Wy	650'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
911-03725-1016-472	6/22/11	17:20	Pacific Coast Hwy & Serra Rd	300'	South	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-03727-1016-471	6/22/11	16:40	Pacific Coast Hwy & Sweetwater Canyon Rd	2112'	South	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	1	0
911-03751-1015-471	6/23/11	20:30	3401 Serra Rd & Private Property	0'	In Int.	Other	Non-Collision	East	Proceeding Straight			Other Improper Driving	0	0
911-03754-1012-250	6/24/11	06:10	Pacific Coast Hwy & Winding Wy E	2640'	South	Hit Object	Fixed Object	North	Other			Other Improper Driving	0	0
911-03763-1014-472	6/24/11	11:38	Pacific Coast Hwy & Via Escondido	320'	West	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Unsafe Speed	0	0
911-03767-1016-472	6/24/11	14:55	Pacific Coast Hwy & Carbon Canyon Rd	4224'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Slowing/Stopping	Unsafe Speed	0	0
911-03770-1015-472	6/24/11	18:30	Malibu Canyon Rd & Seaver Dr	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Making Right Turn	South	Proceeding Straight	Improper Turning	0	0
911-03822-1014-471	6/26/11	09:40	Winter Mesa Rd & Pacific Coast Hwy	273'	South	Broadside	Other Motor Vehicle	South	Proceeding Straight	South	Making Right Turn	Improper Passing	1	0
911-03824-1013-471	6/26/11	12:00	Pacific Coast Hwy & Westward Beach Rd	0'	In Int.	Sideswipe	Other Motor Vehicle	West	Entering Traffic	West	Proceeding Straight	Improper Turning	0	0
911-03901-1014-250	6/29/11	09:21	Malibu Rd & Webb Wy	10560'	East	Other	Parked Motor Vehicle	North	Backing	West	Parked	Unsafe Starting or Backing	0	0
911-03912-1016-471	6/29/11	16:30	Pacific Coast Hwy & Rambla Vista (E)	400'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	2	0
911-03931-1016-471	6/30/11	17:25	Pacific Coast Hwy & Serra Rd	3168'	South	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Unsafe Lane Change	2	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

8/10/2011
Date Range Reported: 7/1/11 - 7/31/11
Total Number of Collisions: 57
Total Numberof Persons Injured 32
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-03950-1016-472	7/1/11	15:00	Pacific Coast Hwy & Carbon Canyon Rd	3696'	North	Sideswipe	Other Motor Vehicle	North	Merging	North	Slowing/Stopping	Unsafe Lane Change	0	0
911-03954-1015-471	7/1/11	16:00	Pacific Coast Hwy & Carbon Canyon Rd	6335'	North	Broadside	Other Motor Vehicle	South	Proceeding Straight	North	Making Left Turn	Unsafe Speed	1	0
911-03958-1014-250	7/1/11	20:35	Pacific Coast Hwy & Corral Canyon Rd	2640'	North	Sideswipe	Other Motor Vehicle	South	Changing Lanes	South	Proceeding Straight	Unsafe Lane Change	0	0
911-03967-1016-472	7/2/11	09:55	Pacific Coast Hwy & Carbon Canyon Rd	1584'	South	Rear-End	Other Motor Vehicle	North	Entering Traffic	North	Proceeding Straight	Unsafe Starting or Backing	0	0
911-03973-1012-471	7/2/11	13:03	Kanan Dume Rd & Teal Ter	49'	North	Broadside	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Other Hazardous Movement	1	0
911-03972-1010-471	7/2/11	13:20	Decker Rd & Pacific Coast Hwy	31'	North	Hit Object	Other Object	South	Ran Off Road			Unsafe Speed	3	0
911-03980-1014-471	7/2/11	18:38	Pacific Coast Hwy & Puerco Canyon Rd	1584'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0
911-03992-1013-472	7/2/11	20:25	6800 Westward Beach Rd & Private Property	0'	In Int.	Other	Parked Motor Vehicle	North	Making Right Turn	North	Parked	Improper Turning	0	0
911-03993-1012-242	7/2/11	20:26	Pacific Coast Hwy & Latigo Canyon Rd	462'	South	Sideswipe	Other Motor Vehicle	East	Proceeding Straight	East	Proceeding Straight	Driving Under Influence	0	0
911-04014-1014-472	7/3/11	14:20	Pacific Coast Hwy & Corral Canyon Rd	500'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Slowing/Stopping	Unsafe Speed	0	0
911-04024-1017-471	7/3/11	15:58	Pacific Coast Hwy & Tuna Canyon Rd	528'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Following Too Closely	3	0
911-04131-1014-471	7/6/11	11:42	Pacific Coast Hwy & Escondido Beach Rd	2640'	South	Sideswipe	Bicycle	South	Proceeding Straight	South	Proceeding Straight	Other Than Driver	1	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-04136-1015-472	7/6/11	14:10	Pacific Coast Hwy & Webb Wy	528'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	1	0
911-04177-1015-472	7/8/11	16:40	Pacific Coast Hwy & Sweetwater Canyon Rd	100'	South	Rear-End	Other Motor Vehicle	South	Making Right Turn	South	Proceeding Straight	Following Too Closely	0	0
911-04204-1012-471	7/9/11	11:35	Pacific Coast Hwy & Zumirez Dr (E)	77'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Slowing/Stopping	Unsafe Speed	1	0
911-04205-1012-472	7/9/11	13:30	Pacific Coast Hwy & Winding Wy W	282'	North	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
911-04210-1012-243	7/9/11	15:00	Pacific Coast Hwy & Winding Wy W	300'	North	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Driving Under Influence	0	0
911-04219-1017-472	7/9/11	21:05	Pacific Coast Hwy & Big Rock Dr	2640'	North	Rear-End	Parked Motor Vehicle	North	Ran Off Road	North	Parked	Wrong Side of Road	0	0
911-04220-1012-471	7/9/11	21:10	Pacific Coast Hwy & Corral Canyon Rd	1320'	South	Vehicle - Pedestrian	Pedestrian	South	Other	South	Proceeding Straight	Pedestrian Violation	1	0
911-04241-1015-472	7/10/11	13:18	Malibu Canyon Rd & Pacific Coast Hwy	33'	East	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
911-04242-1011-472	7/10/11	13:30	Pacific Coast Hwy & Westward Beach Rd	0'	In Int.	Rear-End	Other Motor Vehicle	North	Entering Traffic	South	Proceeding Straight	Auto R/W Violation	0	0
911-04266-1016-472	7/10/11	16:55	Pacific Coast Hwy & John Tyler Dr	1320'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
911-04281-1016-472	7/10/11	17:50	Pacific Coast Hwy & Big Rock Dr	3960'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	2	0
911-04289-1014-242	7/10/11	21:50	Malibu Rd & Webb Wy	5280'	West	Hit Object	Fixed Object	East	Proceeding Straight			Driving Under Influence	0	0
911-04274-1015-250	7/11/11		23901 Civic Center Way & Private Property	0'	In Int.	Rear-End	Parked Motor Vehicle	North	Other	South	Parked	Other Improper Driving	0	0
911-04286-1012-471	7/11/11	20:40	Pacific Coast Hwy & Zuma View Pl	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	West	Proceeding Straight	Auto R/W Violation	2	0
911-04321-1012-242	7/13/11	13:35	Morning View Dr & Ebbtide Wy	86'	North	Sideswipe	Parked Motor Vehicle	North	Ran Off Road	North	Parked	Driving Under Influence	0	0
911-04338-1016-472	7/14/11	14:45	Pacific Coast Hwy & Cross Creek Rd	10560'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kll.
911-04366-1016-472	7/15/11	18:20	Pacific Coast Hwy & Carbon Canyon Rd	4752'	North	Broadside	Other Motor Vehicle	North	Backing	South	Making Left Turn	Unsafe Starting or Backing	0	0
911-04407-1012-471	7/17/11	15:10	Pacific Coast Hwy & Westward Beach Rd	0'	In Int.	Broadside	Other Motor Vehicle	West	Making Left Turn	South	Proceeding Straight	Auto R/W Violation	3	0
911-04418-1016-471	7/17/11	17:10	Pacific Coast Hwy & Carbon Canyon Rd	2640'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Unsafe Speed	1	0
911-04437-1014-250	7/18/11	15:30	23755 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Proceeding Straight	East	Parked	Other Improper Driving	0	0
911-04444-1011-471	7/18/11	18:47	Pacific Coast Hwy & Encinal Canyon Rd	123'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Wrong Side of Road	1	0
911-04449-1017-471	7/19/11	08:27	Pacific Coast Hwy & Las Flores Canyon Rd	2632'	South	Rear-End	Parked Motor Vehicle	North	Ran Off Road	North	Parked	Unsafe Lane Change	1	0
911-04451-1016-472	7/19/11	13:04	Pacific Coast Hwy & Carbon Canyon Rd	58'	West	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
911-04827-1011-472	7/19/11	14:45	Pacific Coast Hwy & Trancas Canyon Rd	2640'	South	Rear-End	Other Motor Vehicle	South	Stopped In Road	South	Stopped In Road	Unknown	0	0
911-04470-1015-472	7/20/11	14:20	Pacific Coast Hwy & Webb Wy	198'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Slowing/Stopping	Unsafe Speed	0	0
911-04504-1015-472	7/22/11	14:49	Pacific Coast Hwy & Cross Creek Rd	4752'	South	Head-On	Other Motor Vehicle	North	Entering Traffic	North	Entering Traffic	Improper Turning	0	0
911-04506-1015-471	7/22/11	17:33	Pacific Coast Hwy & Cross Creek Rd	2640'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	1	0
911-04507-1017-471	7/22/11	20:40	Pacific Coast Hwy & Carbon Canyon Rd	120'	South	Rear-End	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Wrong Side of Road	1	0
911-04538-1016-472	7/23/11	16:25	Pacific Coast Hwy & Sweetwater Canyon Rd	580'	East	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Proceeding Straight	Unsafe Speed	0	0
911-04542-1014-471	7/23/11	17:20	Pacific Coast Hwy & John Tyler Dr	300'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0
911-04551-1012-250	7/23/11	20:30	Pacific Coast Hwy & Ramirez Mesa Dr (E)	80'	West	Sideswipe	Parked Motor Vehicle	West	Parked	West	Proceeding Straight	Unsafe Speed	0	0
911-04565-1017-471	7/24/11	14:20	Pacific Coast Hwy & Carbon Canyon Rd	2'	South	Sideswipe	Other Motor Vehicle	South	Making U Turn	North	Proceeding Straight	Improper Turning	1	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-04568-1016-250	7/24/11	15:50	Pacific Coast Hwy & Carbon Canyon Rd	300'	North	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
911-04573-1016-472	7/25/11	06:45	Pacific Coast Hwy & Carbon Canyon Rd	2640'	North	Rear-End	Other Motor Vehicle	South	Changing Lanes	South	Proceeding Straight	Unsafe Lane Change	0	0
911-04582-1013-471	7/25/11	14:25	Pacific Coast Hwy & Zumirez Dr (E)	30'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	2	0
911-04583-1014-472	7/25/11	15:00	Pacific Coast Hwy & Serra Rd	0'	In Int.	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Slowing/Stopping	Following Too Closely	0	0
911-04589-1012-472	7/25/11	18:00	Las Flores Canyon Rd & Pacific Coast Hwy	528'	North	Broadside	Other Motor Vehicle	North	Backing	West	Proceeding Straight	Unknown	0	0
911-04604-1018-471	7/26/11	12:00	Pacific Coast Hwy & Tuna Canyon Rd	0'	In Int.	Sideswipe	Bicycle	South	Making Left Turn	South	Proceeding Straight	Improper Turning	1	0
911-04628-1015-250	7/27/11	16:00	3835 Cross Creek Rd & Private Property	0'	In Int.	Rear-End	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0
911-04632-1015-242	7/28/11	00:55	23017 Pacific Coast Hwy & Private Property	0'	In Int.	Hit Object	Fixed Object	North	Backing			Driving Under Influence	0	0
911-04664-1016-471	7/29/11	13:00	Pacific Coast Hwy & Sweetwater Canyon Rd	2640'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	1	0
911-04676-1017-472	7/29/11	17:15	Pacific Coast Hwy & Rambla Vista (E)	528'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
911-04709-1013-472	7/30/11	17:45	Kanan Dume Rd & Galahad Dr	57'	South	Rear-End	Motor Vehicle on Other	South	Backing	South	Proceeding Straight	Unsafe Starting or Backing	0	0
911-04733-1014-471	7/31/11	16:50	Pacific Coast Hwy & John Tyler Dr	528'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Slowing/Stopping	Following Too Closely	1	0
911-04744-1016-472	7/31/11	18:55	Pacific Coast Hwy & Rambla Vista (E)	0'	In Int.	Broadside	Other Motor Vehicle	West	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station
Collision Report Summary

9/8/2011
Date Range Reported: 8/1/11 - 8/31/11
Total Number of Collisions: 33
Total Numberof Persons Injured 21
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-04749-1012-250	8/1/11	00:43	Morning View Dr & Via Cabrillo	87'	West	Hit Object	Fixed Object	North	Ran Off Road			Unknown	0	0
911-04791-1012-472	8/3/11	01:30	Morning View Dr & Philip Av	0'	In Int.	Hit Object	Fixed Object	South	Making Right Turn			Unsafe Speed	0	0
911-04846-1012-471	8/4/11	21:05	Pacific Coast Hwy & Paradise Cove Rd	200'	South	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Unsafe Lane Change	1	0
911-04855-1015-471	8/5/11	12:00	Pacific Coast Hwy & Webb Wy	528'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	2	0
911-04885-1017-250	8/6/11	05:40	Pacific Coast Hwy & Las Flores Canyon Rd	1056'	South	Sideswipe	Other Motor Vehicle	North	Other Unsafe Turning	North	Parked	Improper Turning	1	0
911-04994-1014-250	8/6/11	09:00	23676 Malibu Rd & Private Property	0'	In Int.	Rear-End	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0
911-04977-1016-471	8/8/11	18:10	Pacific Coast Hwy & Serra Rd	2640'	South	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	2	0
911-05032-1015-472	8/11/11	08:17	Malibu Canyon Rd & Seaver Dr	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	North	Making Left Turn	Traffic Signals and Signs	0	0
911-05047-1016-472	8/11/11	17:00	Pacific Coast Hwy & Webb Wy	300'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North		Unsafe Speed	0	0
911-05050-1016-472	8/11/11	21:30	Las Flores Canyon Rd & Pacific Coast Hwy	4750'	North	Hit Object	Fixed Object	North	Ran Off Road			Unsafe Speed	0	0
911-05071-1015-472	8/12/11	18:05	Pacific Coast Hwy & Cross Creek Rd	240'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
911-05109-1012-471	8/14/11	16:30	Pacific Coast Hwy & Latigo Shore Dr	19'	North	Broadside	Other Motor Vehicle	North	Making Left Turn	South	Proceeding Straight	Improper Turning	1	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-05131-1016-250	8/15/11	14:30	3835 Cross Creek Rd & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	East	Making Left Turn	West	Parked	Other Improper Driving	0	0
911-05226-1015-472	8/15/11	17:20	Pacific Coast Hwy & Malibu Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Stopped In Road	Other Improper Driving	0	0
911-05147-1015-472	8/16/11		3868 Cross Creek Rd & Private Property	0'	In Int.	Other	Parked Motor Vehicle	West	Backing	West	Parked	Other Improper Driving	0	0
911-05169-1017-472	8/17/11	18:30	Pacific Coast Hwy & Las Flores Canyon Rd	2640'	South	Sideswipe	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Lane Change	0	0
911-05200-1014-471	8/19/11		Pacific Coast Hwy & Sea Lane Dr	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Making Left Turn	South	Proceeding Straight	Improper Turning	2	0
911-05233-1017-472	8/20/11	17:30	Pacific Coast Hwy & Topanga Beach Rd (1)	140'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
911-05235-1015-471	8/20/11	18:45	Pacific Coast Hwy & Webb Wy	260'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	1	0
911-05255-1016-471	8/21/11	13:45	Pacific Coast Hwy & Sweetwater Canyon Rd	3168'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Slowing/Stopping	Following Too Closely	1	0
911-05261-1012-472	8/21/11	16:05	Pacific Coast Hwy & Heathercliff Rd	300'	South	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Slowing/Stopping	Unsafe Speed	0	0
911-05266-1016-471	8/21/11	18:55	Pacific Coast Hwy & Carbon Canyon Rd	3168'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Unsafe Speed	1	0
911-05272-1016-242	8/22/11	00:52	Pacific Coast Hwy & Rambla Pacifico	2'	North	Hit Object	Fixed Object	North	Proceeding Straight			Driving Under Influence	0	0
911-05283-1017-472	8/22/11	15:10	Las Flores Canyon Rd & Pacific Coast Hwy	2112'	North	Hit Object	Fixed Object	South	Proceeding Straight			Unsafe Lane Change	0	0
911-05324-1012-472	8/24/11	13:38	Winding Wy E & Pacific Coast Hwy	3960'	North	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	0	0
911-05328-1014-472	8/24/11	15:20	Pacific Coast Hwy & Puerco Canyon Rd	2112'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	0	0
911-05335-1016-472	8/24/11	18:20	Pacific Coast Hwy & Carbon Canyon Rd	2640'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	0	0
911-05353-1015-471	8/25/11	16:30	Pacific Coast Hwy & Malibu Canyon Rd	25'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	2	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-05388-1017-241	8/27/11	01:20	Pacific Coast Hwy & Pena Rd	600'	North	Rear-End	Non-Collision	South	Proceeding Straight	South	Stopped In Road	Driving Under Influence	3	0
911-05412-1016-471	8/27/11	14:50	Pacific Coast Hwy & Sweetwater Canyon Rd	200'	South	Broadside	Other Motor Vehicle	North	Proceeding Straight	North	Making Left Turn	Unsafe Speed	0	0
911-05413-1015-471	8/27/11	15:30	Pacific Coast Hwy & Webb Wy	440'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0
911-05436-1015-471	8/28/11	10:52	Pacific Coast Hwy & Serra Rd	1300'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Following Too Closely	1	0
911-05446-1016-471	8/28/11	16:15	Pacific Coast Hwy & Carbon Canyon Rd	1584'	North	Other	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Unknown	2	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

10/11/2011
Date Range Reported: 9/1/11 - 9/30/11
Total Number of Collisions: 27
Total Numberof Persons Injured 8
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-05544-1012-472	9/1/11		Pacific Coast Hwy & Latigo Shore Dr	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Entering Traffic	Auto R/W Violation	0	0
911-05549-1016-471	9/1/11	19:45	Pacific Coast Hwy & Serra Rd	600'	South	Rear-End	Motor Vehicle on Other	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	1	0
911-05560-1015-472	9/2/11	10:40	Malibu Canyon Rd & Harbor Vista Dr	0'	In Int.	Broadside	Other Motor Vehicle	West	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0
911-05572-1016-472	9/2/11	16:33	Pacific Coast Hwy & Rambla Pacifico	0'	In Int.	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	0	0
911-05771-1016-250	9/4/11	19:00	Pacific Coast Hwy & Las Flores Canyon Rd	5280'	North	Head-On	Parked Motor Vehicle	North	Parking Maneuver	South	Parked	Other Improper Driving	0	0
911-05623-1017-250	9/4/11	19:35	Pacific Coast Hwy & Rambla Pacifico	92'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
911-05671-1015-472	9/6/11	14:10	Pacific Coast Hwy & Cross Creek Rd	320'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Following Too Closely	0	0
911-05676-1015-472	9/6/11	19:00	Malibu Rd & Webb Wy	80'	East	Rear-End	Parked Motor Vehicle	East	Proceeding Straight	East	Parked	Unsafe Speed	0	0
911-05688-1016-472	9/7/11	17:10	Pacific Coast Hwy & Cross Creek Rd	45'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	0	0
911-80031-1016-471	9/7/11	18:30	Pacific Coast Hwy & Big Rock Dr	370'	North	Head-On	Other Motor Vehicle	South	Stopped In Road	South	Proceeding Straight	Other Hazardous Movement	2	0
911-05693-1017-472	9/8/11	07:00	Pacific Coast Hwy & Las Flores Canyon Rd	1056'	South	Rear-End	Other Motor Vehicle	South	Entering Traffic	South	Stopped In Road	Unsafe Speed	0	0
911-05703-1012-472	9/8/11	16:19	Pacific Coast Hwy & Busch Dr	0'	In Int.	Sideswipe	Other Motor Vehicle	West	Proceeding Straight	West	Merging	Unsafe Lane Change	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kll.
911-05741-1012-472	9/10/11	10:05	Pacific Coast Hwy & Guernsey Av	528'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Lane Change	0	0
911-05804-1010-472	9/13/11	11:05	Pacific Coast Hwy & Trancas Canyon Rd	26400'	North	Broadside	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Speed	0	0
911-05838-1014-472	9/15/11	09:20	Pacific Coast Hwy & John Tyler Dr	1056'	North	Rear-End	Other Motor Vehicle	South	Other	South	Slowing/Stopping	Other Than Driver	0	0
911-05869-1015-471	9/17/11	01:45	Pacific Coast Hwy & Serra Rd	300'	South	Rear-End	Other Motor Vehicle	North	Making U Turn	North	Proceeding Straight	Auto R/W Violation	1	0
911-05888-1013-472	9/18/11	06:39	Pacific Coast Hwy & Westward Beach Rd	30'	North	Sideswipe	Other Motor Vehicle	South	Making U Turn	South	Proceeding Straight	Improper Turning	0	0
911-05919-1017-472	9/19/11	17:40	Pacific Coast Hwy & Las Flores Canyon Rd	2112'	South	Broadside	Other Motor Vehicle	South	Making U Turn	South	Proceeding Straight	Auto R/W Violation	0	0
911-05927-1017-472	9/20/11	11:16	Pacific Coast Hwy & Big Rock Dr	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
911-05979-1018-471	9/23/11	06:30	Pacific Coast Hwy & Tuna Canyon Rd	1584'	North	Broadside	Other Motor Vehicle	North	Making U Turn	South	Proceeding Straight	Improper Turning	1	0
911-06023-1017-471	9/25/11	23:40	Pacific Coast Hwy & Big Rock Dr	3168'	North	Vehicle - Pedestrian	Pedestrian	North	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	1	0
911-06045-1010-250	9/26/11	18:00	24250 Pacific Coast Hwy & Private Property	0'	In Int.	Other	Parked Motor Vehicle	East	Backing	East	Parked	Other Improper Driving	0	0
911-06069-1012-472	9/28/11	09:50	Pacific Coast Hwy & Meadow Ct	35'	North	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Lane Change	0	0
911-06076-1017-471	9/28/11	12:50	Pacific Coast Hwy & Rambla Pacifico	12'	North	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Slowing/Stopping	Unsafe Speed	1	0
911-06084-1012-472	9/28/11	17:30	29100 Westward Beach Rd & Private Property	0'	In Int.	Other	Parked Motor Vehicle	North	Backing	South	Parked	Other Improper Driving	0	0
911-06108-1012-250	9/30/11		Pacific Coast Hwy & Morning View Dr	1150'	South	Sideswipe	Parked Motor Vehicle	East	Proceeding Straight	South	Parked	Wrong Side of Road	0	0
911-06116-1014-471	9/30/11	18:33	Malibu Canyon Rd & Civic Center Wy	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	1	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station
Collision Report Summary

11/10/2011
Date Range Reported: 10/1/11 - 10/31/11
Total Number of Collisions: 27
Total Numberof Persons Injured 8
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-06131-1015-250	10/1/11	15:30	23387 Pacific Coast Hwy & Private Property	0'	In Int.	Head-On	Parked Motor Vehicle	North	Proceeding Straight	South	Parked	Other Improper Driving	0	0
911-06148-1015-472	10/2/11	16:20	Pacific Coast Hwy & John Tyler Dr	500'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Following Too Closely	0	0
911-06333-1015-471	10/2/11	16:21	Pacific Coast Hwy & John Tyler Dr	450'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Following Too Closely	1	0
911-06163-1012-250	10/2/11	19:30	Pacific Coast Hwy & Morning View Dr	500'	North	Rear-End	Parked Motor Vehicle	North	Backing	South	Parked	Unsafe Starting or Backing	0	0
911-06195-1012-472	10/5/11	14:45	Morning View Dr & Ebbtide Wy	530'	South	Sideswipe	Parked Motor Vehicle	West	Proceeding Straight	West	Parked	Unsafe Lane Change	0	0
911-06203-1016-472	10/6/11	08:39	Pacific Coast Hwy & Carbon Canyon Rd	4752'	North	Hit Object	Other Object	South	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	0	0
911-06216-1012-250	10/6/11	15:50	Pacific Coast Hwy & Guernsey Av	500'	North	Sideswipe	Other Motor Vehicle	North	Changing Lanes	North	Proceeding Straight	Other Improper Driving	0	0
911-06237-1015-472	10/7/11	19:20	Pacific Coast Hwy & Malibu Canyon Rd	120'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
911-06270-1016-472	10/9/11	18:35	Pacific Coast Hwy & Las Flores Canyon Rd	140'	South	Sideswipe	Other Motor Vehicle	South	Entering Traffic	South	Proceeding Straight	Auto R/W Violation	0	0
911-06316-1015-250	10/12/11	13:32	3840 Cross Creek Rd & Private Property	0'	In Int.	Other	Other Motor Vehicle	North	Backing	East	Parked	Other Improper Driving	0	0
911-06336-1016-471	10/13/11	09:55	Pacific Coast Hwy & Carbon Canyon Rd	3168'	North	Broadside	Other Motor Vehicle	West	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	2	0
911-06385-1015-250	10/16/11	13:42	Pacific Coast Hwy & Serra Rd	0'	In Int.	Sideswipe	Motor Vehicle on Other	North	Proceeding Straight	North	Stopped In Road	Unsafe Lane Change	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-06411-1016-472	10/17/11	14:00	22601 Pacific Coast Hwy & Private Property	0'	In Int.	Other	Parked Motor Vehicle	South	Backing	North	Parked	Other Improper Driving	0	0
911-06414-1017-472	10/17/11	16:50	Pacific Coast Hwy & Las Flores Canyon Rd	300'	South	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Slowing/Stopping	Following Too Closely	0	0
911-06437-1016-471	10/18/11	17:31	Pacific Coast Hwy & Cross Creek Rd	5280'	South	Vehicle - Pedestrian	Pedestrian	North	Proceeding Straight	West	Other	Pedestrian Violation	1	0
911-06439-1015-472	10/18/11	17:45	Cross Creek Rd & Pacific Coast Hwy	154'	North	Broadside	Other Motor Vehicle	West	Proceeding Straight	South	Making Left Turn	Auto R/W Violation	0	0
911-06498-1013-472	10/21/11	16:30	Busch Dr & Merritt Dr	0'	In Int.	Hit Object	Fixed Object	North	Proceeding Straight			Unsafe Speed	0	0
911-06508-1012-472	10/22/11	10:20	Pacific Coast Hwy & Heathercliff Rd	75'	South	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	0	0
911-06517-1016-250	10/23/11	00:25	Pacific Coast Hwy & Sweetwater Canyon Rd	350'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Lane Change	2	0
911-06554-1015-250	10/24/11		Morning View Dr & Private Property	0'	In Int.	Rear-End	Other Motor Vehicle	North	Backing	North	Parked	Other Improper Driving	0	0
911-06546-1012-472	10/24/11	20:50	Latigo Canyon Rd & Latigo Bay View Dr	86'	North	Overturned	Non-Collision	South	Proceeding Straight			Unsafe Lane Change	0	0
911-06559-1015-471	10/25/11	18:20	Rainsford Pl & Busch Dr	69'	North	Head-On	Other Motor Vehicle	North	Making Right Turn	South	Proceeding Straight	Unsafe Speed	2	0
911-06564-1012-472	10/26/11	07:35	Pacific Coast Hwy & Paradise Cove Rd	33'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
911-06612-1012-472	10/28/11	12:55	Morning View Dr & Ebbtide Wy	187'	West	Head-On	Other Motor Vehicle	East	Making Left Turn	West	Proceeding Straight	Auto R/W Violation	0	0
911-06628-1016-250	10/28/11	20:42	22147 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	South	Parking Maneuver	South	Parked	Other Improper Driving	0	0
911-06632-1012-472	10/28/11	23:45	Pacific Coast Hwy & Escondido Beach Rd	2640'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	0	0
911-06667-1012-472	10/31/11	08:00	Pacific Coast Hwy & Kanan Dume Rd	300'	South	Hit Object	Other Object	South	Changing Lanes			Improper Turning	0	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

12/8/2011
Date Range Reported: 11/1/11 - 11/30/11
Total Number of Collisions: 21
Total Numberof Persons Injured 12
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-06691-1017-472	11/1/11	12:50	Inland Ln & Rockport Wy	200'	West	Rear-End	Parked Motor Vehicle	East	Proceeding Straight	East	Parked	Unsafe Speed	0	0
911-06696-1015-472	11/1/11	15:10	Pacific Coast Hwy & Malibu Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
911-06723-1015-471	11/2/11	22:40	Civic Center Wy & Winter Canyon Rd	200'	West	Overturned	Non-Collision	East	Proceeding Straight			Unsafe Speed	1	0
911-06841-1014-472	11/9/11	14:10	Pacific Coast Hwy & Latigo Canyon Rd	1320'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
911-06877-1012-472	11/11/11	11:35	Pacific Coast Hwy & Sea Vista Dr	18'	North	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Proceeding Straight	Unsafe Speed	0	0
911-06884-1015-472	11/11/11	15:58	Pacific Coast Hwy & Serra Rd	1584'	South	Other	Non-Collision	North	Proceeding Straight			Unknown	0	0
911-06912-1012-472	11/13/11	06:15	Kanan Dume Rd & Pacific Coast Hwy	0'	In Int.	Rear-End	Other Motor Vehicle	South	Making Right Turn	South	Stopped In Road	Unsafe Speed	0	0
911-06957-1016-472	11/15/11	06:45	Pacific Coast Hwy & Private Property	0'	In Int.	Broadside	Other Motor Vehicle	East	Making U Turn	West	Proceeding Straight	Auto R/W Violation	0	0
911-06964-1015-471	11/15/11	16:02	Malibu Canyon Rd & Malibu Knolls Rd	357'	South	Broadside	Other Motor Vehicle	North	Making U Turn	North	Proceeding Straight	Improper Turning	2	0
911-06955-1013-472	11/15/11	23:35	Cliffside Dr & Birdview Av	0'	In Int.	Hit Object	Fixed Object	East	Making Right Turn			Unsafe Speed	0	0
911-06978-1013-472	11/16/11	10:35	Heathercliff Rd & Pacific Coast Hwy	22'	South	Other	Other Motor Vehicle	South	Backing	North	Stopped In Road	Unsafe Starting or Backing	0	0
911-07016-1018-472	11/17/11	15:00	Pacific Coast Hwy & Tuna Canyon Rd	1056'	North	Broadside	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Improper Turning	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-07027-1012-472	11/18/11	08:34	Pacific Coast Hwy & Morning View Dr	0'	In Int.	Broadside	Other Motor Vehicle	West	Proceeding Straight	North	Proceeding Straight	Traffic Signals and Signs	0	0
911-07041-1015-471	11/19/11	03:52	Malibu Canyon Rd & Malibu Knolls Rd	2'	South	Hit Object	Fixed Object	South	Ran Off Road			Unsafe Lane Change	1	0
911-07049-1016-471	11/19/11	12:25	Pacific Coast Hwy & Sweetwater Canyon Rd	530'	South	Head-On	Other Motor Vehicle	North	Proceeding Straight	South	Making Left Turn	Auto R/W Violation	5	0
911-07079-1013-250	11/19/11	23:00	28125 Pacific Coast Hwy & Private Property	0'	In Int.	Hit Object	Fixed Object	West	Other			Other Improper Driving	0	0
911-07091-1012-472	11/22/11	07:30	28904 Wight Rd & Private Property	0'	In Int.	Hit Object	Fixed Object	North	Making U Turn			Other Improper Driving	0	0
911-07130-1011-471	11/27/11	12:37	Pacific Coast Hwy & Trancas Canyon Rd	2112'	North	Broadside	Other Motor Vehicle	South	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	2	0
911-07192-1011-471	11/27/11	14:15	Pacific Coast Hwy & La Herran Rd	83'	South	Broadside	Other Motor Vehicle	South	Making U Turn	South	Proceeding Straight	Improper Turning	1	0
911-07194-1016-472	11/27/11	16:00	Pacific Coast Hwy & Carbon Canyon Rd	2640'	North	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
911-07209-1013-472	11/28/11	18:00	Pacific Coast Hwy & Winding Wy W	0'	In Int.	Other	Motor Vehicle on Other	West	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station
Collision Report Summary

1/9/2012
Date Range Reported: 12/1/11 - 12/31/11
Total Number of Collisions: 23
Total Numberof Persons Injured 11
Total Number of Persons Killed: 1

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-07292-1014-241	12/3/11	21:00	Pacific Coast Hwy & Puerco Canyon Rd	1244'	South	Hit Object	Fixed Object	North	Ran Off Road			Driving Under Influence	3	0
911-07302-1016-472	12/4/11	14:30	Pacific Coast Hwy & Cross Creek Rd	528'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
011-07309-1016-470	12/5/11	08:45	Pacific Coast Hwy & Rambla Vista (E)	34'	North	Broadside	Other Motor Vehicle	West	Proceeding Straight	West	Making Right Turn	Improper Passing	0	1
911-07325-1015-472	12/6/11	08:45	Malibu Canyon Rd & Civic Center Wy	200'	South	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Proceeding Straight	Unsafe Speed	0	0
911-07336-1017-250	12/6/11	16:30	Pacific Coast Hwy & Las Flores Canyon Rd	30'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Following Too Closely	0	0
911-07341-1014-472	12/6/11	18:05	Pacific Coast Hwy & Winding Wy E	0'	In Int.	Hit Object	Fixed Object	North	Making Right Turn			Unsafe Lane Change	0	0
911-07363-1010-242	12/7/11	17:45	Pacific Coast Hwy & Kanan Dume Rd	45'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Driving Under Influence	0	0
911-07384-1014-093	12/9/11	01:00	Corral Canyon Rd & Sea Breeze Dr	4224'	South	Other	Non-Collision	South	Ran Off Road			Unsafe Speed	0	0
911-07456-1016-472	12/12/11	17:15	Pacific Coast Hwy & Carbon Canyon Rd	3696'	North	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	0	0
911-07469-1017-471	12/13/11	15:30	Big Rock Dr & Seaboard Rd	412'	North	Head-On	Other Motor Vehicle	South	Proceeding Straight	North	Proceeding Straight	Wrong Side of Road	2	0
911-07484-1012-472	12/14/11	14:06	Morning View Dr & Ebbtide Wy	309'	South	Broadside	Motor Vehicle on Other	West	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0
911-07489-1011-472	12/15/11	11:30	Pacific Coast Hwy & Trancas Canyon Rd	13200'	North	Hit Object	Fixed Object	North	Ran Off Road			Improper Turning	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
911-07510-1013-472	12/15/11	16:15	Pacific Coast Hwy & Meadow Ct	150'	North	Sideswipe	Parked Motor Vehicle	South	Entering Traffic	South	Proceeding Straight	Auto R/W Violation	0	0
911-07518-1016-471	12/16/11	06:48	Pacific Coast Hwy & Serra Rd	2640'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	1	0
911-07526-1015-472	12/16/11	13:05	Pacific Coast Hwy & Webb Wy	200'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Starting or Backing	0	0
911-07534-1016-471	12/17/11	05:22	Pacific Coast Hwy & Sweetwater Canyon Rd	100'	North	Rear-End	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Unsafe Lane Change	1	0
911-07535-1011-472	12/17/11	05:35	Pacific Coast Hwy & Decker Rd	0'	In Int.	Hit Object	Fixed Object	South	Proceeding Straight			Wrong Side of Road	2	0
911-07589-1016-472	12/21/11	10:58	Pacific Coast Hwy & Carbon Canyon Rd	40'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
911-07626-1015-471	12/22/11	17:30	Pacific Coast Hwy & Malibu Canyon Rd	0'	In Int.	Broadside	Other Motor Vehicle	East	Proceeding Straight	South	Proceeding Straight	Traffic Signals and Signs	1	0
911-07639-1012-250	12/23/11	11:17	Ramirez Canyon Rd & Pacific Coast Hwy	3696'	North	Sideswipe	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Speed	0	0
911-07672-1015-472	12/26/11	13:29	Pacific Coast Hwy & Webb Wy	528'	East	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Slowing/Stopping	Unsafe Speed	0	0
911-07674-1016-471	12/26/11	14:33	Pacific Coast Hwy & Cross Creek Rd	5808'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	1	0
911-07724-1016-472	12/29/11	11:25	Pacific Coast Hwy & Sweetwater Canyon Rd	704'	North	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Stopped In Road	Unsafe Speed	0	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

2/9/2012
Date Range Reported: 1/1/12 - 1/31/12
Total Number of Collisions: 25
Total Numberof Persons Injured 12
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
912-00072-1012-250	1/4/12	17:30	30500 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0
912-00071-1016-471	1/5/12	12:06	Pacific Coast Hwy & Rambla Pacifico	1584'	South	Rear-End	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Speed	1	0
912-00195-1013-250	1/6/12		23951 Greyfox St & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	South	Parking Maneuver	South	Parked	Other Improper Driving	0	0
912-00099-1016-471	1/7/12	06:50	Pacific Coast Hwy & Carbon Canyon Rd	2640'	North	Rear-End	Parked Motor Vehicle	South	Changing Lanes	South	Parked	Unsafe Lane Change	1	0
912-00117-1012-472	1/8/12	15:40	Busch Dr & Rainsford Pl	500'	North	Hit Object	Fixed Object	North	Proceeding Straight			Unsafe Speed	0	0
912-00183-1015-472	1/11/12	18:18	Pacific Coast Hwy & Webb Wy	0'	In Int.	Broadside	Other Motor Vehicle	North	Proceeding Straight	North	Making Left Turn	Traffic Signals and Signs	0	0
912-00201-1015-471	1/12/12	12:00	Pacific Coast Hwy & Webb Wy	255'	South	Sideswipe	Bicycle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Lane Change	1	0
912-00204-1016-471	1/12/12	15:00	Pacific Coast Hwy & Webb Wy	1056'	South	Sideswipe	Other Motor Vehicle	South	Merging	South	Proceeding Straight	Other Improper Driving	1	0
912-00227-1017-471	1/13/12	13:45	Las Flores Canyon Rd & Pacific Coast Hwy	1584'	North	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	South	Proceeding Straight	Wrong Side of Road	1	0
912-00236-1012-472	1/13/12	19:45	Bonsall Dr & Pacific Coast Hwy	21'	North	Hit Object	Fixed Object	North	Making Right Turn			Unsafe Speed	0	0
912-00248-1012-472	1/14/12	11:05	Winding Wy W & Pacific Coast Hwy	24'	North	Head-On	Other Motor Vehicle	North	Making Right Turn	South	Slowing/Stopping	Wrong Side of Road	0	0
912-00265-1016-471	1/15/12	12:40	Pacific Coast Hwy & Carbon Canyon Rd	1265'	North	Rear-End	Other Motor Vehicle	South	Changing Lanes	South	Proceeding Straight	Unsafe Lane Change	1	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
912-00274-1017-472	1/15/12	19:00	Pacific Coast Hwy & Tuna Canyon Rd	10560'	North	Hit Object	Other Object	North	Proceeding Straight			Unknown	0	0
912-00270-1016-242	1/16/12	00:48	Pacific Coast Hwy & Rambla Vista (E)	1000'	South	Hit Object	Fixed Object	East	Making Left Turn			Driving Under Influence	0	0
912-00351-1015-471	1/19/12	22:25	Malibu Canyon Rd & Malibu Knolls Rd	50'	North	Other	Animal	North	Proceeding Straight			Other Than Driver	1	0
912-00422-1016-471	1/23/12	08:42	Pacific Coast Hwy & Las Flores Canyon Rd	4224'	South	Sideswipe	Other Motor Vehicle	North	Making Left Turn	East	Proceeding Straight	Auto R/W Violation	2	0
912-00438-1016-242	1/24/12	02:16	Pacific Coast Hwy & Carbon Canyon Rd	2640'	South	Rear-End	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Lane Change	1	0
912-00454-1015-471	1/24/12	18:32	Civic Center Wy & Webb Wy	1056'	West	Hit Object	Fixed Object	East	Proceeding Straight			Unsafe Speed	1	0
912-00468-1015-472	1/25/12	17:45	Pacific Coast Hwy & Malibu Canyon Rd	2640'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
912-00487-1015-472	1/26/12	11:29	John Tyler Dr & Pacific Coast Hwy	535'	North	Sideswipe	Motor Vehicle on Other	South	Changing Lanes	South	Proceeding Straight	Unsafe Lane Change	0	0
912-00492-1012-472	1/26/12	15:45	Pacific Coast Hwy & Latigo Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	South	Making Left Turn	South	Proceeding Straight	Auto R/W Violation	0	0
912-00550-1012-472	1/29/12	11:45	Pacific Coast Hwy & Paradise Cove Rc	411'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Starting or Backing	0	0
912-00555-1016-471	1/29/12	15:00	Pacific Coast Hwy & Serra Rd	1320'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	1	0
912-00559-1017-472	1/29/12	16:35	Pacific Coast Hwy & Rambla Pacifico	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
912-00572-1014-250	1/30/12		Malibu Rd & Webb Wy	2640'	West	Head-On	Parked Motor Vehicle	East	Backing	West	Parked	Wrong Side of Road	0	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station
Collision Report Summary

3/8/2012
Date Range Reported: 2/1/12 - 2/29/12
Total Number of Collisions: 20
Total Numberof Persons Injured 10
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kll.
912-00613-1012-472	2/1/12	14:58	Pacific Coast Hwy & Bonsall Dr	114'	South	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Slowing/Stopping	Unsafe Speed	0	0
912-00616-1015-472	2/1/12	20:46	Pacific Coast Hwy & Malibu Canyon Rc	30'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
912-00638-1016-472	2/3/12	12:05	Pacific Coast Hwy & Carbon Canyon Rd	4752'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
912-00658-1018-471	2/4/12	08:24	Pacific Coast Hwy & Big Rock Dr	0'	In Int.	Other	Non-Collision	West	Proceeding Straight			Unsafe Speed	1	0
912-00683-1016-472	2/5/12	15:00	Pacific Coast Hwy & Webb Wy	50'	South	Rear-End	Other Motor Vehicle	North	Slowing/Stopping	North	Stopped In Road	Unsafe Speed	0	0
912-00691-1010-250	2/6/12	12:50	23805 Malibu Rd & Private Property	0'	In Int.	Rear-End	Parked Motor Vehicle	North	Not Stated	North	Parked	Unknown	0	0
912-00700-1014-471	2/6/12	17:13	Pacific Coast Hwy & Latigo Canyon Rd	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	2	0
912-00732-1018-471	2/8/12	14:36	Pacific Coast Hwy & Carbon Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0
912-00853-1016-250	2/10/12		Pacific Coast Hwy & Las Flores Canyon Rd	2112'	North	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Parked	Unsafe Lane Change	0	0
912-00771-1013-471	2/10/12	23:45	Zumirez Dr & Wildlife Rd	120'	South	Hit Object	Fixed Object	North	Ran Off Road			Unsafe Speed	1	0
912-00788-1016-472	2/11/12	10:35	Pacific Coast Hwy & Sweetwater Canyon Rd	528'	East	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Proceeding Straight	Unsafe Speed	0	0
912-00858-1016-471	2/14/12	15:40	Pacific Coast Hwy & Carbon Canyon Rd	3686'	North	Head-On	Other Motor Vehicle	North	Ran Off Road	North	Parked	Unsafe Speed	1	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
912-00857-1016-472	2/14/12	16:20	Pacific Coast Hwy & Carbon Canyon Rd	1'	North	Rear-End	Other Motor Vehicle	North	Stopped In Road	North	Proceeding Straight	Other Hazardous Movement	1	0
912-00899-1015-472	2/16/12	17:45	Malibu Canyon Rd & Malibu Knolls Rd	528'	South	Broadside	Other Motor Vehicle	North	Entering Traffic	North	Proceeding Straight	Auto R/W Violation	0	0
912-00960-1015-471	2/19/12	14:26	Pacific Coast Hwy & Malibu Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
912-00961-1017-471	2/19/12	17:00	Pacific Coast Hwy & Tuna Canyon Rd	2112'	North	Broadside	Other Motor Vehicle	North	Making Left Turn	South	Proceeding Straight	Auto R/W Violation	1	0
912-00980-1017-472	2/21/12	07:50	Pacific Coast Hwy & Carbon Canyon Rd	2640'	South	Rear-End	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Unsafe Lane Change	0	0
912-01014-1012-472	2/22/12	14:20	Pacific Coast Hwy & Busch Dr	23'	South	Sideswipe	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Improper Turning	0	0
912-01063-1013-242	2/24/12	23:20	Grayfox St & Fernhill Dr	1575'	East	Hit Object	Fixed Object	East	Ran Off Road			Driving Under Influence	0	0
912-01107-1012-471	2/28/12	02:30	Pacific Coast Hwy & Winding Wy E	0'	In Int.	Other	Non-Collision	North	Ran Off Road	North	Changing Lanes	Improper Turning	2	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station
Collision Report Summary

4/9/2012
Date Range Reported: 3/1/12 - 3/31/12
Total Number of Collisions: 31
Total Numberof Persons Injured 18
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
912-01161-1015-472	3/1/12	14:05	Pacific Coast Hwy & Cross Creek Rd	2112'	South	Sideswipe	Other Motor Vehicle	North	Entering Traffic	North	Changing Lanes	Unsafe Starting or Backing	0	0
912-01184-1015-471	3/2/12	14:58	Pacific Coast Hwy & Webb Wy	210'	South	Broadside	Bicycle	East	Making Right Turn	East	Proceeding Straight	Improper Turning	1	0
912-01193-1015-242	3/3/12	03:35	Malibu Canyon Rd & Harbor Vista Dr	173'	North	Hit Object	Fixed Object	North	Proceeding Straight			Driving Under Influence	0	0
912-01201-1016-472	3/3/12	13:05	Pacific Coast Hwy & Rambla Pacifico	1056'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Following Too Closely	0	0
912-01221-1012-472	3/4/12	21:20	Pacific Coast Hwy & Cavalleri Rd	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Traffic Signals and Signs	1	0
912-01269-1015-472	3/7/12	07:29	Pacific Coast Hwy & Webb Wy	528'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
912-01333-1017-242	3/9/12	22:05	Pacific Coast Hwy & Las Flores Canyon Rd	2'	South	Rear-End	Parked Motor Vehicle	South	Ran Off Road	South	Parked	Driving Under Influence	1	0
912-01371-1016-472	3/12/12	15:00	Pacific Coast Hwy & Serra Rd	1056'	South	Rear-End	Other Motor Vehicle	South	Slowing/Stopping	South	Stopped In Road	Unsafe Speed	0	0
912-01380-1014-241	3/13/12	06:46	Corral Canyon Rd & Pacific Coast Hwy	5280'	North	Hit Object	Fixed Object	South	Proceeding Straight			Driving Under Influence	1	0
912-01392-1013-472	3/13/12	14:15	Paradise Cove Rd & Private Property	0'	In Int.	Hit Object	Fixed Object	North	Proceeding Straight			Other Improper Driving	0	0
912-01408-1087-472	3/14/12	11:30	Pacific Coast Hwy & Serra Rd	528'	South	Sideswipe	Other Motor Vehicle	North	Making Left Turn	North	Proceeding Straight	Wrong Side of Road	0	0
912-01425-1013-472	3/15/12	10:30	Heathercliff Rd & Dume Dr	155'	North	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	North	Making Left Turn	Improper Passing	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
912-01440-1014-472	3/15/12	21:15	Pacific Coast Hwy & Puerco Canyon Rd	1056'	North	Other	Animal	North	Proceeding Straight			Other Than Driver	0	0
912-01458-1015-472	3/16/12	19:05	Pacific Coast Hwy & Malibu Canyon Rd	0'	In Int.	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Proceeding Straight	Unsafe Speed	0	0
912-01479-1015-472	3/18/12	01:40	Pacific Coast Hwy & Serra Rd	1584'	South	Broadside	Motor Vehicle on Other	North	Proceeding Straight	North	Making Left Turn	Auto R/W Violation	0	0
912-01541-1012-472	3/21/12	09:39	Pacific Coast Hwy & Winding Wy E	1584'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
912-01548-1015-250	3/21/12	11:52	Pacific Coast Hwy & Cross Creek Rd	400'	South	Hit Object	Fixed Object	East	Ran Off Road			Unsafe Speed	0	0
912-01556-1016-471	3/21/12	18:10	Pacific Coast Hwy & Sweetwater Canyon Rd	500'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Slowing/Stopping	Following Too Closely	1	0
912-01571-1017-471	3/22/12	10:21	Pacific Coast Hwy & Las Flores Canyon Rd	234'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	1	0
912-01631-1015-472	3/24/12	16:16	Pacific Coast Hwy & Webb Wy	580'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Following Too Closely	0	0
912-01635-1016-471	3/24/12	18:00	Pacific Coast Hwy & Las Flores Canyon Rd	0'	In Int.	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Lane Change	1	0
912-01640-1017-242	3/24/12	22:32	Pacific Coast Hwy & Las Flores Canyon Rd	0'	In Int.	Head-On	Other Motor Vehicle	North	Making Left Turn	South	Proceeding Straight	Driving Under Influence	1	0
912-01654-1014-471	3/26/12	06:30	Pacific Coast Hwy & John Tyler Dr	0'	In Int.	Broadside	Other Motor Vehicle	East	Making Left Turn	West	Proceeding Straight	Auto R/W Violation	1	0
912-01662-1015-472	3/26/12	12:35	3835 Cross Creek Rd & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	East	Parking Maneuver	East	Parked	Other Improper Driving	0	0
912-01666-1016-471	3/26/12	18:09	Pacific Coast Hwy & Rambla Pacifico	0'	In Int.	Broadside	Other Motor Vehicle	North	Making Left Turn	South	Proceeding Straight	Auto R/W Violation	1	0
912-01700-1016-472	3/28/12	10:15	Pacific Coast Hwy & Rambla Pacifico	865'	East	Rear-End	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Unsafe Lane Change	0	0
912-01737-1010-471	3/29/12	12:12	Pacific Coast Hwy & Mulholland Hwy	7392'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Making Right Turn	Unsafe Speed	5	0
912-01747-1015-472	3/29/12	18:35	Pacific Coast Hwy & Malibu Canyon Rd	50'	South	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Other Improper Driving	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
912-01765-1016-472	3/30/12	14:46	Pacific Coast Hwy & Las Flores Canyon Rd	58'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
912-01773-1017-471	3/30/12	23:45	Pacific Coast Hwy & Big Rock Dr	50'	North	Rear-End	Parked Motor Vehicle	East	Proceeding Straight	East	Parked	Unsafe Speed	1	0
912-01778-1015-471	3/31/12	08:59	Pacific Coast Hwy & Carbon Mesa Rd	2640'	North	Broadside	Other Motor Vehicle	North	Entering Traffic	North	Proceeding Straight	Unsafe Starting or Backing	2	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

5/8/2012
Date Range Reported: 4/1/12 - 4/30/12
Total Number of Collisions: 43
Total Numberof Persons Injured 20
Total Number of Persons Killed: 1

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
912-01809-1015-250	4/1/12	12:30	23410 Civic Center Way & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Backing	South	Parked	Other Improper Driving	0	0
912-01813-1017-472	4/1/12	16:30	Pacific Coast Hwy & Big Rock Dr	3696'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
912-01822-1012-471	4/2/12	06:30	Pacific Coast Hwy & Busch Dr	385'	North	Broadside	Other Motor Vehicle	North	Entering Traffic	North	Proceeding Straight	Auto R/W Violation	1	0
912-01839-1015-472	4/3/12	14:12	Pacific Coast Hwy & Serra Rd	10'	North	Head-On	Other Motor Vehicle	North	Making Left Turn	South	Proceeding Straight	Auto R/W Violation	0	0
912-01850-1015-472	4/3/12	19:35	Pacific Coast Hwy & Malibu Rd (W)	100'	North	Broadside	Other Motor Vehicle	North	Making U Turn	North	Proceeding Straight	Auto R/W Violation	0	0
912-01853-1011-250	4/3/12	21:16	Pacific Coast Hwy & Heathercliff Rd	528'	North	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	North	Making U Turn	Improper Turning	0	0
912-01872-1012-471	4/4/12	18:34	Harvester Rd & Clover Heights Av	0'	In Int.	Broadside	Other Motor Vehicle	West	Making Left Turn	East	Proceeding Straight	Improper Turning	2	0
912-01947-1013-250	4/5/12	23:00	29211 Heathercliff Rd & Private Property	0'	In Int.	Other	Parked Motor Vehicle	South	Backing	South	Parked	Other Improper Driving	0	0
912-01934-1013-472	4/7/12	12:25	28128 Pacific Coast Hwy & Private Property	0'	In Int.	Other	Other Motor Vehicle	South	Backing	South	Stopped In Road	Other Improper Driving	0	0
912-01940-1012-189	4/7/12	16:20	Pacific Coast Hwy & Cavalleri Rd	0'	In Int.	Broadside	Other Motor Vehicle	South	Making Left Turn	South	Proceeding Straight	Driving Under Influence	0	0
912-01941-1010-472	4/7/12	17:50	Pacific Coast Hwy & Broad Beach Rd (E)	3696'	East	Broadside	Other Motor Vehicle	South	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0
912-01951-1014-472	4/8/12	15:00	Pacific Coast Hwy & Puerco Canyon Rd	1056'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Following Too Closely	1	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
912-01953-1016-471	4/8/12	16:15	Pacific Coast Hwy & Rambla Pacifico	0'	In Int.	Broadside	Other Motor Vehicle	West	Making Left Turn	South	Proceeding Straight	Improper Turning	1	0
912-01956-1017-250	4/8/12	22:06	Pacific Coast Hwy & Big Rock Dr	0'	In Int.	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Following Too Closely	0	0
912-01961-1015-472	4/9/12	10:26	Banowsky Blvd & John Tyler Dr	200'	East	Sideswipe	Other Motor Vehicle	West	Making U Turn	West	Proceeding Straight	Other Hazardous Movement	0	0
912-01995-1015-471	4/10/12	16:40	Pacific Coast Hwy & Webb Wy	481'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Following Too Closely	1	0
912-02051-1014-472	4/13/12	00:24	Pacific Coast Hwy & Malibu Canyon Rd	0'	In Int.	Head-On	Other Motor Vehicle	North	Proceeding Straight	South	Making Left Turn	Other Hazardous Movement	0	0
912-02062-1012-471	4/13/12	10:59	Bonsall Dr & Pacific Coast Hwy	526'	North	Broadside	Other Motor Vehicle	South	Proceeding Straight	West	Proceeding Straight	Improper Turning	1	0
912-02089-1015-472	4/14/12	14:59	Pacific Coast Hwy & Serra Rd	200'	South	Sideswipe	Parked Motor Vehicle	South	Proceeding Straight	North	Stopped In Road	Unsafe Lane Change	0	0
912-02092-1014-471	4/14/12	18:15	Pacific Coast Hwy & John Tyler Dr	500'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0
912-02103-1015-472	4/15/12	15:50	Civic Center Wy & Webb Wy	1056'	North	Sideswipe	Other Motor Vehicle	South	Proceeding Straight	South	Making Left Turn	Improper Turning	1	0
912-02105-1016-472	4/15/12	16:54	Pacific Coast Hwy & Carbon Canyon Rd	2640'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Speed	0	0
912-02109-1017-241	4/15/12	22:27	Pacific Coast Hwy & Big Rock Dr	1056'	South	Broadside	Parked Motor Vehicle	South	Proceeding Straight	South	Parked	Driving Under Influence	1	0
912-02123-1013-471	4/17/12	09:00	Paradise Cove Rd & Pacific Coast Hwy	9'	South	Vehicle - Pedestrian	Pedestrian	East	Proceeding Straight	North	Other	Ped R/W Violation	1	0
912-02124-1014-472	4/17/12	09:37	Ralphs & Private Property	0'	In Int.	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Stopped In Road	Other Improper Driving	0	0
912-02136-1013-472	4/17/12	16:50	Wildlife Rd & Selfridge Dr	125'	South	Overturned	Non-Collision	North	Ran Off Road			Auto R/W Violation	0	0
912-02152-1012-472	4/18/12	14:22	Morning View Dr & Ebbtide Wy	106'	West	Sideswipe	Other Motor Vehicle	West	Entering Traffic	West	Passing Other Vehicle	Unsafe Starting or Backing	0	0
912-02204-1015-184	4/20/12	11:40	Malibu Canyon Rd & Pacific Coast Hwy	40'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Driving Under Influence	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
912-02237-1013-471	4/22/12	10:50	Heatherdiff Rd & Dume Dr	40'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Following Too Closely	1	0
912-02285-1016-471	4/24/12	12:53	Pacific Coast Hwy & Rambla Pacifico	0'	In Int.	Broadside	Bicycle	South	Making Right Turn	South	Proceeding Straight	Improper Turning	1	0
912-02288-1015-472	4/24/12	13:51	Pacific Coast Hwy & Malibu Canyon Rd	12'	South	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Slowing/Stopping	Following Too Closely	0	0
912-02291-1012-471	4/24/12	16:53	Cuthbert Rd & Busch Dr	1056'	West	Overturned	Non-Collision	West	Making Right Turn			Improper Turning	2	0
012-02292-1018-470	4/24/12	17:08	Pacific Coast Hwy & Tuna Canyon Rd	2640'	East	Head-On	Other Motor Vehicle	South	Crossed Into Opposing	North	Proceeding Straight	Wrong Side of Road	1	1
912-02307-1016-471	4/25/12	15:35	Pacific Coast Hwy & Carbon Canyon Rd	5290'	North	Broadside	Other Motor Vehicle	North	Entering Traffic	South	Proceeding Straight	Auto R/W Violation	1	0
912-02308-1013-472	4/25/12	17:50	Pacific Coast Hwy & Heathercliff Rd	0'	In Int.	Rear-End	Other Motor Vehicle	North	Other	North	Stopped In Road	Unsafe Lane Change	0	0
912-02344-1015-471	4/27/12	12:01	Malibu Canyon Rd & Civic Center Wy	0'	In Int.	Broadside	Other Motor Vehicle	East	Making Left Turn	North	Proceeding Straight	Improper Turning	1	0
912-02373-1016-472	4/28/12	15:26	Pacific Coast Hwy & Carbon Canyon Rd	528'	West	Broadside	Bicycle	East	Proceeding Straight	East	Proceeding Straight	Unsafe Lane Change	0	0
912-02377-1010-242	4/28/12	17:55	Encinal Canyon Rd & Pacific Coast Hwy	9000'	North	Hit Object	Fixed Object	South	Ran Off Road			Driving Under Influence	1	0
912-02570-1016-251	4/29/12	10:30	Pacific Coast Hwy & Las Flores Canyon Rd	200'	West	Sideswipe	Bicycle	South	Proceeding Straight	South	Proceeding Straight	Unsafe Speed	0	0
912-02398-1015-471	4/29/12	10:48	Pacific Coast Hwy & Cross Creek Rd	0'	In Int.	Vehicle - Pedestrian	Pedestrian	South	Making Right Turn	North	Proceeding Straight	Ped R/W Violation	1	0
912-02403-1013-472	4/29/12	15:40	Pacific Coast Hwy & Morning View Dr	1056'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Following Too Closely	0	0
912-02407-1013-250	4/30/12	12:00	6800 Westward Beach Rd & Private Property	0'	In Int.	Other	Parked Motor Vehicle	West	Other	West	Parked	Unknown	0	0
912-02418-1016-250	4/30/12	13:06	Pacific Coast Hwy & Las Flores Canyon Rd	100'	South	Rear-End	Other Motor Vehicle	West	Proceeding Straight	West	Proceeding Straight	Unsafe Speed	0	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

6/7/2012
Date Range Reported: 5/1/12 - 5/31/12
Total Number of Collisions: 28
Total Numberof Persons Injured 12
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
912-02440-1017-255	5/1/12	11:37	Pacific Coast Hwy & Las Flores Canyon Rd	0'	In Int.	Broadside	Other Motor Vehicle	West	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0
912-02494-1016-471	5/4/12	02:40	Pacific Coast Hwy & Carbon Mesa Rd	1400'	North	Rear-End	Parked Motor Vehicle	South	Ran Off Road	South	Parked	Unsafe Speed	2	0
912-02499-1016-472	5/4/12	12:50	Pacific Coast Hwy & Malibu Rd (W)	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
912-02524-1012-250	5/5/12	18:27	30000 Pacific Coast Hwy & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	North	Parking Maneuver	North	Parked	Other Improper Driving	0	0
912-02549-1013-241	5/6/12	18:54	Pacific Coast Hwy & Kanan Dume Rd	5'	North	Rear-End	Motor Vehicle on Other	South	Proceeding Straight	South	Stopped In Road	Driving Under Influence	3	0
912-02550-1012-472	5/6/12	19:45	Pacific Coast Hwy & Westward Beach Rd	0'	In Int.	Sideswipe	Other Motor Vehicle	North	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0
912-02566-1017-471	5/7/12	15:37	Pacific Coast Hwy & Big Rock Dr	4224'	South	Hit Object	Other Object	North	Proceeding Straight			Unsafe Lane Change	1	0
912-02597-1016-472	5/9/12	11:22	Pacific Coast Hwy & Carbon Canyon Rd	600'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
912-02601-1016-471	5/9/12	13:50	Pacific Coast Hwy & Carbon Canyon Rd	2640'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	1	0
912-02604-1015-472	5/9/12	15:00	3939 Cross Creek Rd & Private Property	0'	In Int.	Rear-End	Parked Motor Vehicle	North	Backing	East	Parked	Other Improper Driving	0	0
912-02884-1015-250	5/13/12	16:30	Pacific Coast Hwy & Cross Creek Rd	2640'	North	Rear-End	Parked Motor Vehicle	East	Parked	East	Parking Maneuver	Unsafe Speed	0	0
912-02709-1010-472	5/14/12	15:45	Decker Rd & Pacific Coast Hwy	5808'	North	Hit Object	Fixed Object	North	Ran Off Road			Unsafe Speed	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
912-02798-1014-472	5/18/12	12:45	Pacific Coast Hwy & Seagull Dr	81'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Slowing/Stopping	Unsafe Speed	0	0
912-02805-1013-472	5/18/12	16:55	Pacific Coast Hwy & Corral Canyon Rd	300'	East	Broadside	Other Motor Vehicle	South	Making U Turn	South	Proceeding Straight	Auto R/W Violation	1	0
912-02806-1013-472	5/18/12	20:19	Pacific Coast Hwy & Kanan Dume Rd	30'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
912-02819-1016-472	5/19/12	13:37	Pacific Coast Hwy & Rambla Pacifico	528'	North	Rear-End	Other Motor Vehicle	East	Proceeding Straight	East	Stopped In Road	Following Too Closely	0	0
912-02828-1013-250	5/19/12	22:20	25295 Pacific Coast Hwy & Private Property	0'	In Int.	Broadside	Parked Motor Vehicle	North	Backing	East	Parked	Unsafe Starting or Backing	0	0
912-02924-1016-250	5/20/12	17:45	Pacific Coast Hwy & Carbon Canyon Rd	2640'	South	Not Stated	Bicycle	East	Not Stated	East	Not Stated	Unknown	0	0
912-02858-1016-471	5/21/12	15:30	Pacific Coast Hwy & Rambla Vista (E)	0'	In Int.	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	1	0
912-02902-1016-471	5/24/12	07:03	Pacific Coast Hwy & Carbon Canyon Rd	2640'	North	Broadside	Other Motor Vehicle	North	Making Left Turn	North	Proceeding Straight	Improper Turning	2	0
912-02972-1017-472	5/27/12	01:26	Pacific Coast Hwy & Las Flores Canyon Rd	4229'	South	Sideswipe	Parked Motor Vehicle	North	Proceeding Straight	North	Parked	Improper Passing	0	0
912-02994-1012-250	5/27/12	21:20	Pacific Coast Hwy & Busch Dr	0'	In Int.	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Traffic Signals and Signs	0	0
912-02995-1012-472	5/27/12	22:00	Pacific Coast Hwy & Paradise Cove Rd	250'	North	Broadside	Other Motor Vehicle	West	Making Left Turn	North	Proceeding Straight	Auto R/W Violation	0	0
912-03036-1015-472	5/29/12	09:15	23525 Civic Center Way & Private Property	0'	In Int.	Sideswipe	Parked Motor Vehicle	West	Proceeding Straight	North	Parked	Other Improper Driving	0	0
912-03043-1016-250	5/29/12	15:00	22337 Pacific Coast Hwy & Private Property	0'	In Int.	Broadside	Parked Motor Vehicle	West	Parking Maneuver	West	Parked	Other Improper Driving	0	0
912-03051-1013-242	5/29/12	22:50	Pacific Coast Hwy & Paradise Cove Rd	410'	South	Overturned	Non-Collision	South	Proceeding Straight			Driving Under Influence	0	0
912-03057-1017-250	5/30/12	09:19	Piedra Chica Rd & Big Rock Dr	52'	West	Sideswipe	Parked Motor Vehicle	East	Other	East	Parked	Wrong Side of Road	0	0
912-03059-1014-472	5/30/12	10:07	Webb Wy & Malibu Rd	20'	North	Sideswipe	Parked Motor Vehicle	South	Making Right Turn	South	Parked	Improper Turning	0	0

L.A. County Sheriff's Department
Lost Hills & Malibu Station

Collision Report Summary

7/9/2012
Date Range Reported: 6/1/12 - 6/30/12
Total Number of Collisions: 28
Total Numberof Persons Injured 16
Total Number of Persons Killed: 0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kll.
912-03107-1012-472	6/1/12	16:20	29211 Heathercliff Rd & Private Property	0'	In Int.	Broadside	Other Motor Vehicle	West	Proceeding Straight	South	Stopped In Road	Other Improper Driving	0	0
912-03114-1012-471	6/1/12	20:56	Paradise Cove Rd & Pacific Coast Hwy	250'	South	Vehicle - Pedestrian	Pedestrian	South	Proceeding Straight	North	Stopped In Road	Unsafe Starting or Backing	0	0
912-03076-1015-472	6/4/12	10:58	Pacific Coast Hwy & John Tyler Dr	0'	In Int.	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Following Too Closely	0	0
912-03168-1015-472	6/4/12	12:30	Pacific Coast Hwy & Sweetwater Canyon Rd	517'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
912-03198-1015-472	6/5/12	16:20	Pacific Coast Hwy & Cross Creek Rd	400'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Starting or Backing	0	0
912-03235-1015-250	6/7/12	00:12	3939 Cross Creek Rd & Private Property	0'	In Int.	Other	Parked Motor Vehicle	North	Backing	South	Parked	Other Improper Driving	0	0
912-03271-1012-472	6/8/12	12:31	Pacific Coast Hwy & Morning View Dr	30'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Unsafe Speed	0	0
912-03282-1015-472	6/8/12	16:25	23361 Pacific Coast Hwy & Private Property	0'	In Int.	Other	Other Motor Vehicle	East	Backing	West	Backing	Other Improper Driving	0	0
912-03304-1014-472	6/9/12	16:02	Pacific Coast Hwy & Corral Canyon Rd	19'	South	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Slowing/Stopping	Unsafe Speed	0	0
912-03312-1016-472	6/9/12	20:05	Pacific Coast Hwy & Rambla Vista (E)	1575'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
912-03337-1016-249	6/10/12	20:38	Pacific Coast Hwy & Rambla Pacifico	0'	In Int.	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Stopped In Road	Driving Under Influence	0	0
912-03400-1012-250	6/13/12		28915 Pacific Coast Hwy & Private Property	0'	In Int.	Broadside	Parked Motor Vehicle	South	Parked	North	Parking Maneuver	Improper Turning	0	0

Report#	Date	Time	Location	Dist.	Dir.	Type of Collision	Motor Veh. Involved With	Dir. of Travel 1	Movement Prec. Coll. 1	Dir. of Travel 2	Movement Prec. Coll. 2	PCF	Inj.	Kil.
912-03384-1016-472	6/13/12	10:43	Pacific Coast Hwy & Rambla Pacifico	1056'	North	Broadside	Other Motor Vehicle	South	Making U Turn	North	Proceeding Straight	Auto R/W Violation	0	0
912-03416-1015-471	6/14/12	15:30	Pacific Coast Hwy & Sweetwater Canyon Rd	1400'	South	Broadside	Other Motor Vehicle	North	Entering Traffic	North	Proceeding Straight	Auto R/W Violation	2	0
912-03486-1012-471	6/17/12	14:42	Pacific Coast Hwy & Morning View Dr	382'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Slowing/Stopping	Unsafe Speed	5	0
912-03567-1015-472	6/19/12	15:40	Pacific Coast Hwy & Cross Creek Rd	100'	South	Hit Object	Fixed Object	South	Proceeding Straight			Unsafe Lane Change	0	0
912-03546-1017-471	6/20/12	07:33	Pacific Coast Hwy & Big Rock Dr	7'	North	Broadside	Other Motor Vehicle	East	Making Right Turn	North	Proceeding Straight	Improper Turning	2	0
912-03575-1016-471	6/21/12	10:14	Pacific Coast Hwy & Rambla Pacifico	1056'	North	Rear-End	Other Motor Vehicle	North	Proceeding Straight	North	Slowing/Stopping	Unsafe Speed	1	0
912-03578-1017-250	6/21/12	11:30	Pacific Coast Hwy & Las Flores Canyon Rd	528'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Unsafe Speed	0	0
912-03636-1017-471	6/23/12	16:10	Pacific Coast Hwy & Las Flores Canyon Rd	176'	South	Broadside	Other Motor Vehicle	North	Slowing/Stopping	North	Slowing/Stopping	Other Hazardous Movement	1	0
912-03640-1015-471	6/23/12	20:20	Civic Center Wy & Winter Canyon Rd	300'	West	Hit Object	Bicycle	East	Proceeding Straight			Other Improper Driving	1	0
912-03653-1012-472	6/24/12	11:51	Pacific Coast Hwy & Morning View Dr	147'	South	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Following Too Closely	0	0
912-03661-1018-250	6/24/12	13:20	Pacific Coast Hwy & Topanga Canyon Blvd	500'	North	Sideswipe	Other Motor Vehicle	North	Proceeding Straight	North	Proceeding Straight	Unsafe Lane Change	0	0
912-03685-1012-471	6/25/12	12:40	Pacific Coast Hwy & Escondido Beach Rd	1584'	West	Broadside	Other Motor Vehicle	South	Making Right Turn	South	Proceeding Straight	Improper Turning	1	0
912-03722-1015-471	6/27/12	06:20	Pacific Coast Hwy & Serra Rd	1300'	South	Rear-End	Motor Vehicle on Other	South	Merging	South	Proceeding Straight	Auto R/W Violation	2	0
912-03743-1014-472	6/28/12	11:15	Pacific Coast Hwy & Corral Canyon Rd	528'	North	Rear-End	Other Motor Vehicle	South	Proceeding Straight	South	Stopped In Road	Following Too Closely	0	0
912-03766-1015-471	6/29/12	14:00	Civic Center Wy & Cross Creek Rd	0'	In Int.	Broadside	Other Motor Vehicle	South	Proceeding Straight	North	Making Left Turn	Traffic Signals and Signs	1	0
912-03770-1015-472	6/29/12	15:35	Pacific Coast Hwy & Serra Rd	528'	South	Sideswipe	Other Motor Vehicle	North	Merging	North	Proceeding Straight	Unsafe Lane Change	0	0

APPENDIX E

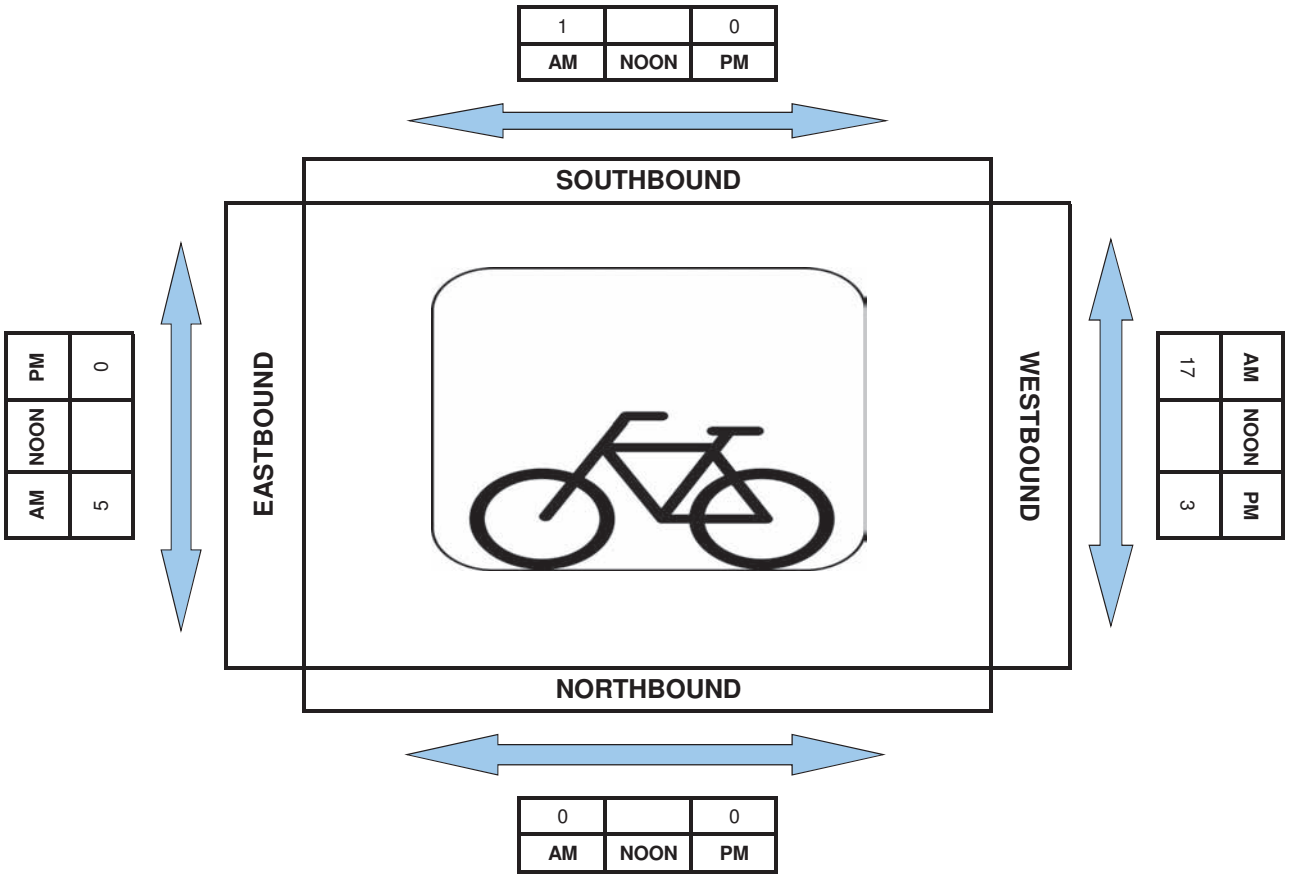
EXISTING BICYCLE TRAFFIC VOLUME COUNTS

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-006
N/S Street: Morning View Dr
E/W Street: Pacific Coast Highway
DATE: 7/12/2012 DAY: Saturday
CITY: Malibu



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

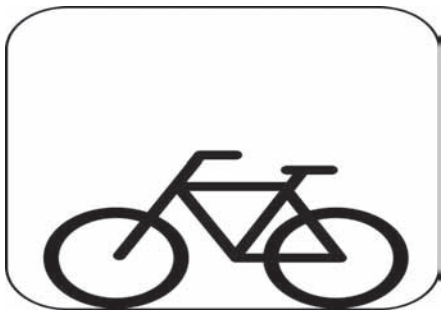
PROJECT#: 12-5299 Thu-008
N/S Street: Bonsall Dr
E/W Street: Pacific Coast Highway
DATE: 7/12/2012 DAY: Saturday
CITY: Malibu

0		0
AM	NOON	PM

SOUTHBOUND

PM	2
NOON	
AM	5

EASTBOUND



WESTBOUND

14	AM
	NOON
1	PM

NORTHBOUND

1		1
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

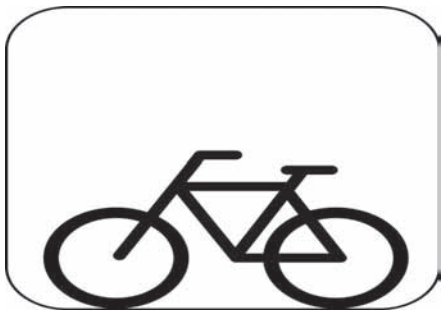
Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-009
N/S Street: Heathercliff Rd
E/W Street: Pacific Coast Highway
DATE: 7/12/2012 DAY: Saturday
CITY: Malibu

0		0
AM	NOON	PM

SOUTHBOUND



EASTBOUND

PM	3
NOON	
AM	5

WESTBOUND

9	AM
	NOON
2	PM

NORTHBOUND

4		0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

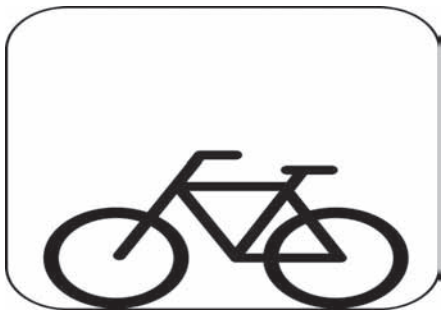
PROJECT#: 12-5299 Thu-010
N/S Street: Kanan Dume Rd
E/W Street: Pacific Coast Highway
DATE: 7/12/2012 DAY: Saturday
CITY: Malibu

0		0
AM	NOON	PM

SOUTHBOUND

PM	2
NOON	
AM	4

EASTBOUND



WESTBOUND

8	AM
	NOON
2	PM

NORTHBOUND

0		0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

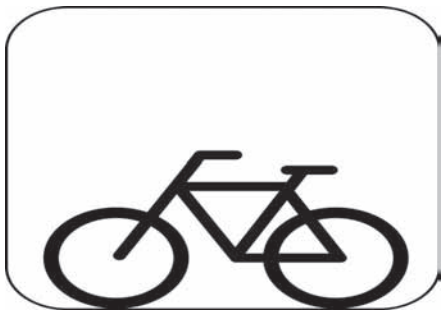
PROJECT#: 12-5299 Thu-012
N/S Street: Paradise Cove Rd
E/W Street: Pacific Coast Highway
DATE: 7/12/2012 DAY: Saturday
CITY: Malibu

0		0
AM	NOON	PM

SOUTHBOUND

PM	2
NOON	
AM	3

EASTBOUND



WESTBOUND

11	AM
	NOON
1	PM

NORTHBOUND

0		0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

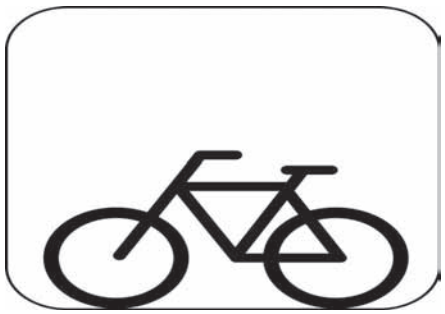
	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-017
N/S Street: Malibu Canyon Rd
E/W Street: Pacific Coast Hwy
DATE: 7/12/2012 DAY: Saturday
CITY: Malibu

1		1
AM	NOON	PM

SOUTHBOUND

EASTBOUND



WESTBOUND

NORTHBOUND

PM	2
NOON	
AM	3

5	AM
	NOON
1	PM

4		1
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

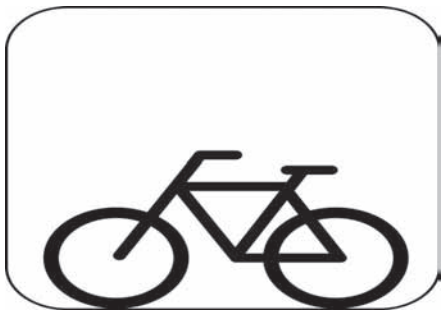
Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-020
N/S Street: Webb Way
E/W Street: Pacific Coast Hwy
DATE: 7/12/2012 DAY: Saturday
CITY: Malibu

0		1
AM	NOON	PM

SOUTHBOUND



EASTBOUND

PM	1
NOON	
AM	14

WESTBOUND

1	AM
	NOON
0	PM

NORTHBOUND

1		1
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

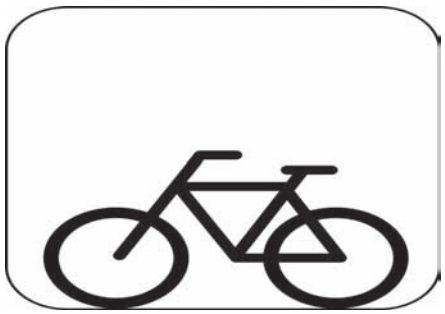
PROJECT#: 12-5299 Thu-022
N/S Street: Cross Creek Rd
E/W Street: Pacific Coast Hwy
DATE: 7/12/2012 DAY: Saturday
CITY: Malibu

4		0
AM	NOON	PM

SOUTHBOUND

PM	3
NOON	
AM	7

EASTBOUND



WESTBOUND

13	AM
	NOON
1	PM

NORTHBOUND

0		0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

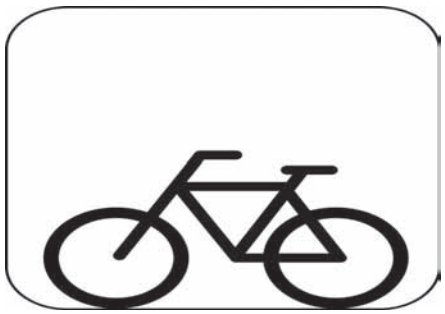
PROJECT#: 12-5299 Thu-024
N/S Street: Malibu Pier Signal
E/W Street: Pacific Coast Highway
DATE: 7/12/2012 DAY: Saturday
CITY: Malibu

0		0
AM	NOON	PM

SOUTHBOUND

PM	4
NOON	
AM	12

EASTBOUND



WESTBOUND

20	AM
	NOON
1	PM

NORTHBOUND

0		0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

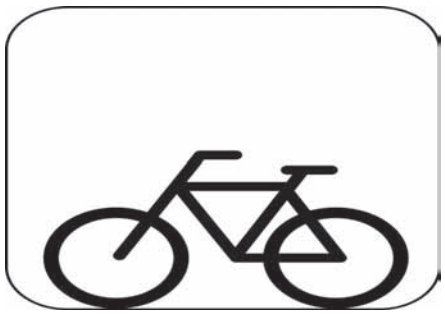
	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-025
N/S Street: 22730 Pacific Coast Highway
E/W Street: Pacific Coast Highway Signal
DATE: 7/12/2012 DAY: Saturday
CITY: Malibu

0		0
AM	NOON	PM

SOUTHBOUND

EASTBOUND



WESTBOUND

NORTHBOUND

PM	0
NOON	
AM	4

21	AM
	NOON
1	PM

0		0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

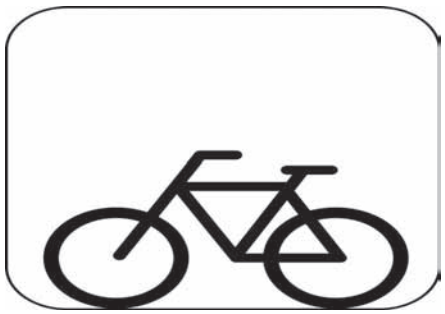
	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-026
N/S Street: 22400 Pacific Coast Highway
E/W Street: Pacific Coast Highway Signal
DATE: 7/12/2012 DAY: Saturday
CITY: Malibu

0		0
AM	NOON	PM

SOUTHBOUND

EASTBOUND



WESTBOUND

NORTHBOUND

PM	4
NOON	
AM	3

17	AM
	NOON
1	PM

0		0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

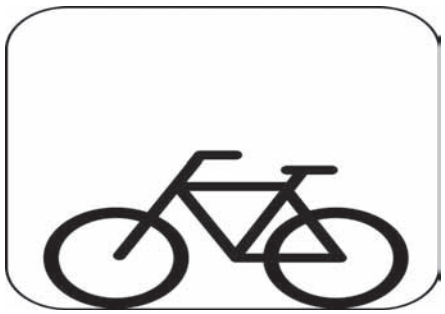
PROJECT#: 12-5299 Sat-031
N/S Street: Big Rock Dr
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

0		0
AM	NOON	PM

SOUTHBOUND

PM	1
NOON	
AM	11

EASTBOUND



WESTBOUND

14	AM
	NOON
5	PM

NORTHBOUND

0		0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

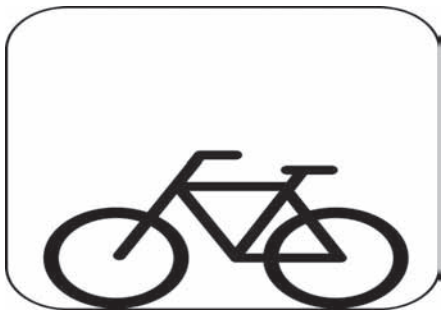
PROJECT#: 12-5299 Sat-006
N/S Street: Morning View Dr
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

0	1	0
AM	NOON	PM

SOUTHBOUND

PM	0
NOON	152
AM	0

EASTBOUND



WESTBOUND

0	AM
54	NOON
0	PM

NORTHBOUND

0	0	0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

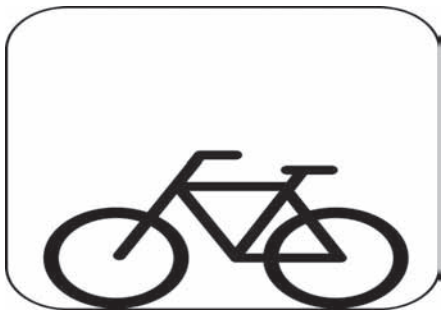
PROJECT#: 12-5299 Sat-008
N/S Street: Bonsall Dr
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

0	0	0
AM	NOON	PM

SOUTHBOUND

PM	0
NOON	108
AM	0

EASTBOUND



WESTBOUND

0	AM
19	NOON
0	PM

NORTHBOUND

0	7	0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

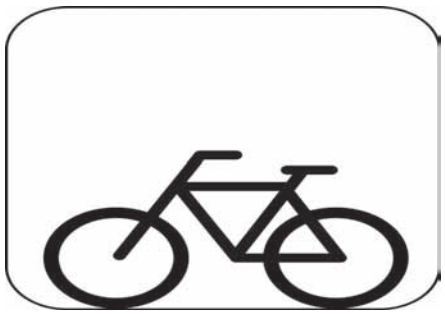
PROJECT#: 12-5299 Sat-009
N/S Street: Heathercliff Rd
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

0	0	0
AM	NOON	PM

SOUTHBOUND

PM	0
NOON	114
AM	0

EASTBOUND



WESTBOUND

0	AM
17	NOON
0	PM

NORTHBOUND

0	4	0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

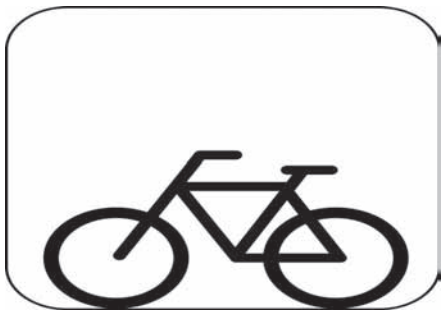
PROJECT#: 12-5299 Sat-010
N/S Street: Kanan Dume Rd
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

0	2	0
AM	NOON	PM

SOUTHBOUND

PM	0
NOON	98
AM	0

EASTBOUND



WESTBOUND

0	AM
39	NOON
0	PM

NORTHBOUND

0	0	0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

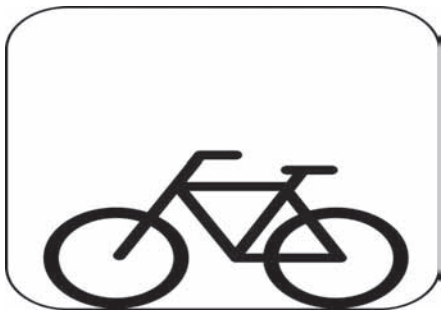
PROJECT#: 12-5299 Sat-012
N/S Street: Paradise Cove Rd
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

0	0	0
AM	NOON	PM

SOUTHBOUND

PM	0
NOON	132
AM	0

EASTBOUND



WESTBOUND

0	AM
25	NOON
0	PM

NORTHBOUND

0	3	0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

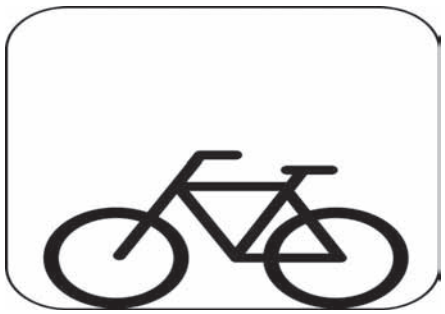
PROJECT#: 12-5299 Sat-017
N/S Street: Malibu Canyon Rd
E/W Street: Pacific Coast Hwy
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

0	14	0
AM	NOON	PM

SOUTHBOUND

PM	0
NOON	128
AM	0

EASTBOUND



WESTBOUND

0	AM
39	NOON
0	PM

NORTHBOUND

0	15	0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

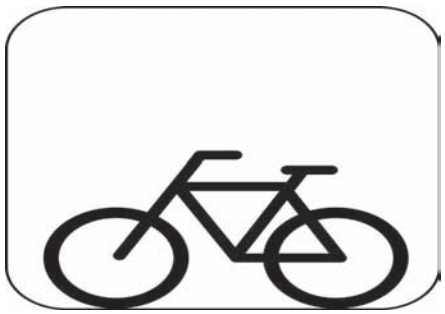
PROJECT#: 12-5299 Sat-020
N/S Street: Webb Way
E/W Street: Pacific Coast Hwy
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

0	12	0
AM	NOON	PM

SOUTHBOUND

PM	0
NOON	96
AM	0

EASTBOUND



WESTBOUND

0	AM
47	NOON
0	PM

NORTHBOUND

0	3	0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

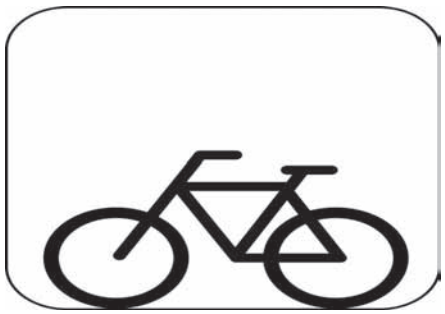
PROJECT#: 12-5299 Sat-022
N/S Street: Cross Creek Rd
E/W Street: Pacific Coast Hwy
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

0	26	0
AM	NOON	PM

SOUTHBOUND

PM	0
NOON	131
AM	0

EASTBOUND



WESTBOUND

0	AM
48	NOON
0	PM

NORTHBOUND

0	7	0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

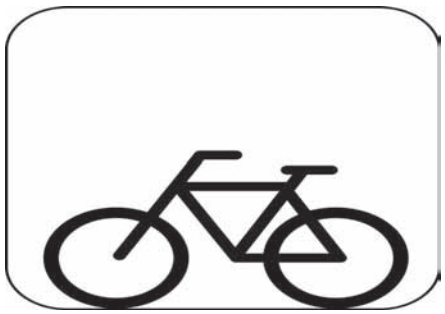
PROJECT#: 12-5299 Sat-024
N/S Street: Malibu Pier Signal
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

0	0	0
AM	NOON	PM

SOUTHBOUND

PM	0
NOON	55
AM	0

EASTBOUND



WESTBOUND

0	AM
104	NOON
0	PM

NORTHBOUND

0	0	0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

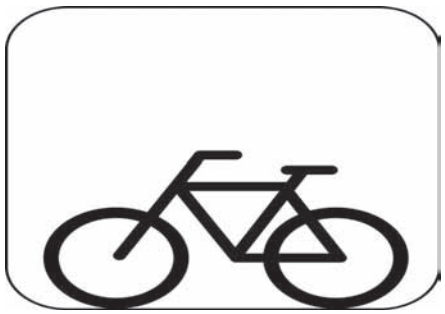
PROJECT#: 12-5299 Sat-025
N/S Street: 22730 Pacific Coast Highway
E/W Street: Pacific Coast Highway Signal
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

0	0	0
AM	NOON	PM

SOUTHBOUND

PM	0
NOON	146
AM	0

EASTBOUND



WESTBOUND

0	AM
75	NOON
0	PM

NORTHBOUND

0	0	0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

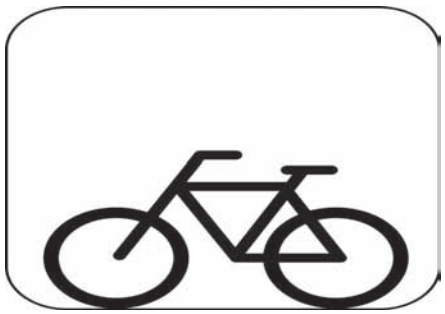
PROJECT#: 12-5299 Sat-026
N/S Street: 22400 Pacific Coast Highway
E/W Street: Pacific Coast Highway Signal
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

0	0	0
AM	NOON	PM

SOUTHBOUND

PM	0
NOON	169
AM	0

EASTBOUND



WESTBOUND

0	AM
59	NOON
0	PM

NORTHBOUND

0	0	0
AM	NOON	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Bicycle Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

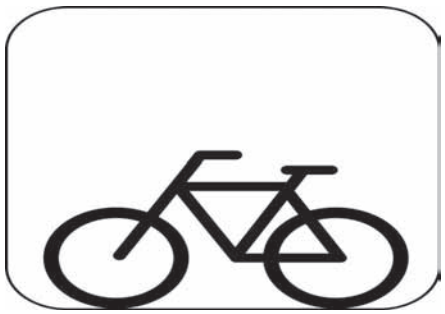
PROJECT#: 12-5299 Sat-031
N/S Street: Big Rock Dr
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

0	1	0
AM	NOON	PM

SOUTHBOUND

PM	0
NOON	204
AM	0

EASTBOUND



WESTBOUND

0	AM
63	NOON
0	PM

NORTHBOUND

0	0	0
AM	NOON	PM

APPENDIX F

EXISTING PEDESTRIAN TRAFFIC VOLUME COUNTS

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-006
N/S Street: Morning View Dr
E/W Street: Pacific Coast Highway
DATE: 7/12/2012 DAY: Thursday
CITY: Malibu

AM	0
NOON	0
PM	0

1	AM
0	NOON
1	PM

AM	NOON	PM
5	0	14

NORTH LEG

AM	NOON	PM
0	0	0



WEST LEG

EAST LEG

4	0	5
AM	NOON	PM

0	0	0
AM	NOON	PM

SOUTH LEG

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-008
N/S Street: Bonsall Dr
E/W Street: Pacific Coast Highway
DATE: 7/12/2012 DAY: Thursday
CITY: Malibu

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

AM	NOON	PM
0	0	0

NORTH LEG

AM	NOON	PM
1	0	3

WEST LEG



EAST LEG

0	0	0
AM	NOON	PM

SOUTH LEG

1	0	0
AM	NOON	PM

AM	3
NOON	0
PM	1

1	AM
0	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-009
N/S Street: Heathercliff Rd
E/W Street: Pacific Coast Highway
DATE: 7/12/2012 DAY: Thursday
CITY: Malibu

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

AM	NOON	PM
3	0	0

NORTH LEG

AM	NOON	PM
26	0	2

WEST LEG



EAST LEG

0	0	0
AM	NOON	PM

SOUTH LEG

3	0	1
AM	NOON	PM

AM	1
NOON	0
PM	5

8	AM
0	NOON
2	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-010
N/S Street: Kanan Dume Rd
E/W Street: Pacific Coast Highway
DATE: 7/12/2012 DAY: Thursday
CITY: Malibu

AM	3
NOON	0
PM	3

6	AM
0	NOON
2	PM

AM	NOON	PM
7	0	1

NORTH LEG

AM	NOON	PM
0	0	0

WEST LEG



EAST LEG

0	0	1
AM	NOON	PM

SOUTH LEG

0	0	0
AM	NOON	PM

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-012
N/S Street: Paradise Cove Rd
E/W Street: Pacific Coast Highway
DATE: 7/12/2012 DAY: Thursday
CITY: Malibu

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

AM	NOON	PM
1	0	0

NORTH LEG

AM	NOON	PM
0	0	0

WEST LEG



EAST LEG

0	0	0
AM	NOON	PM

SOUTH LEG

2	0	0
AM	NOON	PM

AM	0
NOON	0
PM	0

0	AM
0	NOON
4	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-017
N/S Street: Malibu Canyon Rd
E/W Street: Pacific Coast Hwy
DATE: 7/12/2012 DAY: Thursday
CITY: Malibu

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

AM	NOON	PM
0	0	1

NORTH LEG

AM	NOON	PM
0	0	0

WEST LEG



EAST LEG

0	0	4
AM	NOON	PM

SOUTH LEG

0	0	0
AM	NOON	PM

AM	1
NOON	0
PM	0

0	AM
0	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-020
N/S Street: Webb Way
E/W Street: Pacific Coast Hwy
DATE: 7/12/2012 DAY: Thursday
CITY: Malibu

AM	1
NOON	0
PM	3

1	AM
0	NOON
3	PM

AM	NOON	PM
0	0	0

NORTH LEG

AM	NOON	PM
6	0	13

WEST LEG



EAST LEG

0	0	0
AM	NOON	PM

SOUTH LEG

6	0	8
AM	NOON	PM

AM	1
NOON	0
PM	5

3	AM
0	NOON
5	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-022
N/S Street: Cross Creek Rd
E/W Street: Pacific Coast Hwy
DATE: 7/12/2012 DAY: Thursday
CITY: Malibu

AM	3
NOON	0
PM	4

2	AM
0	NOON
14	PM

AM	NOON	PM
10	0	15

NORTH LEG

AM	NOON	PM
0	0	0



WEST LEG

EAST LEG

6	0	30
AM	NOON	PM

SOUTH LEG

0	0	0
AM	NOON	PM

AM	2
NOON	0
PM	7

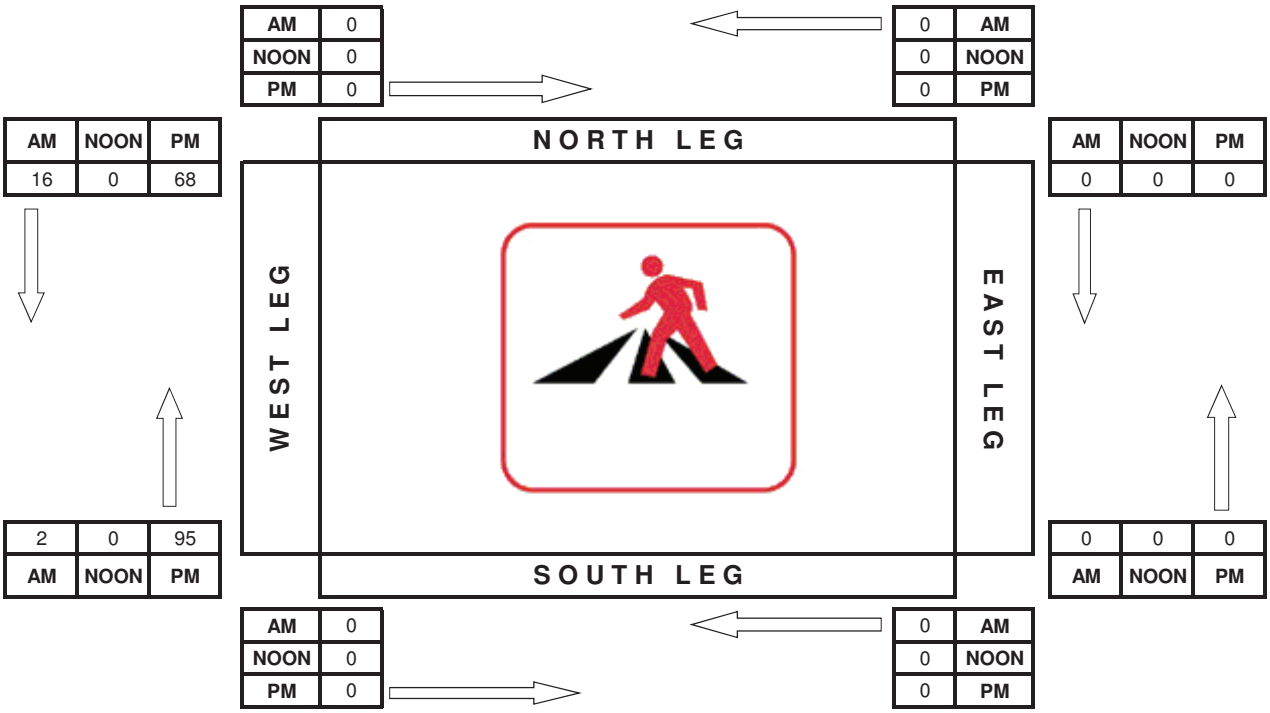
2	AM
0	NOON
8	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-024
N/S Street: Malibu Pier Signal
E/W Street: Pacific Coast Highway
DATE: 7/12/2012 DAY: Thursday
CITY: Malibu



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-025
N/S Street: 22730 Pacific Coast Highway
E/W Street: Pacific Coast Highway Signal
DATE: 7/12/2012 DAY: Thursday
CITY: Malibu

AM	13
NOON	0
PM	15

19	AM
0	NOON
9	PM

AM	NOON	PM
15	0	11

NORTH LEG

AM	NOON	PM
0	0	0



WEST LEG

EAST LEG

10	0	8
AM	NOON	PM

SOUTH LEG

0	0	0
AM	NOON	PM

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Thu-026
N/S Street: 22400 Pacific Coast Highway
E/W Street: Pacific Coast Highway Signal
DATE: 7/12/2012 DAY: Thursday
CITY: Malibu

AM	1
NOON	0
PM	4

1	AM
0	NOON
1	PM

AM	NOON	PM
1	0	0

NORTH LEG

AM	NOON	PM
0	0	0

WEST LEG



EAST LEG

0	0	2
AM	NOON	PM

SOUTH LEG

0	0	0
AM	NOON	PM

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Sat-031
N/S Street: Big Rock Dr
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

AM	0
NOON	0
PM	3

3	AM
0	NOON
0	PM

AM	NOON	PM
4	0	1

NORTH LEG

AM	NOON	PM
0	0	0

WEST LEG



EAST LEG

1	0	4
AM	NOON	PM

SOUTH LEG

0	0	0
AM	NOON	PM

AM	0
NOON	0
PM	1

0	AM
0	NOON
4	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Sat-006
N/S Street: Morning View Dr
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

AM	0
NOON	0
PM	0

0	AM
9	NOON
0	PM

AM	NOON	PM
0	103	0

AM	NOON	PM
0	0	0

NORTH LEG

WEST LEG



EAST LEG

0	33	0
AM	NOON	PM

0	0	0
AM	NOON	PM

SOUTH LEG

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Sat-008
N/S Street: Bonsall Dr
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

AM	NOON	PM
0	1	0

AM	NOON	PM
0	0	0

NORTH LEG

WEST LEG



EAST LEG

0	0	0
AM	NOON	PM

0	0	0
AM	NOON	PM

SOUTH LEG

AM	0
NOON	9
PM	0

0	AM
9	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Sat-009
N/S Street: Heathercliff Rd
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

AM	NOON	PM
0	0	0

NORTH LEG

AM	NOON	PM
0	6	0

WEST LEG



EAST LEG

0	1	0
AM	NOON	PM

0	16	0
AM	NOON	PM

SOUTH LEG

AM	0
NOON	12
PM	0

0	AM
8	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Sat-010
N/S Street: Kanan Dume Rd
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

AM	0
NOON	8
PM	0

0	AM
5	NOON
0	PM

AM	NOON	PM
0	2	0

AM	NOON	PM
0	0	0

NORTH LEG

WEST LEG



EAST LEG

AM	NOON	PM
0	0	0

AM	NOON	PM
0	0	0

SOUTH LEG

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Sat-012
N/S Street: Paradise Cove Rd
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

AM	NOON	PM
0	78	0

NORTH LEG

AM	NOON	PM
0	56	0

WEST LEG



EAST LEG

0	13	0
AM	NOON	PM

SOUTH LEG

0	1	0
AM	NOON	PM

AM	0
NOON	3
PM	0

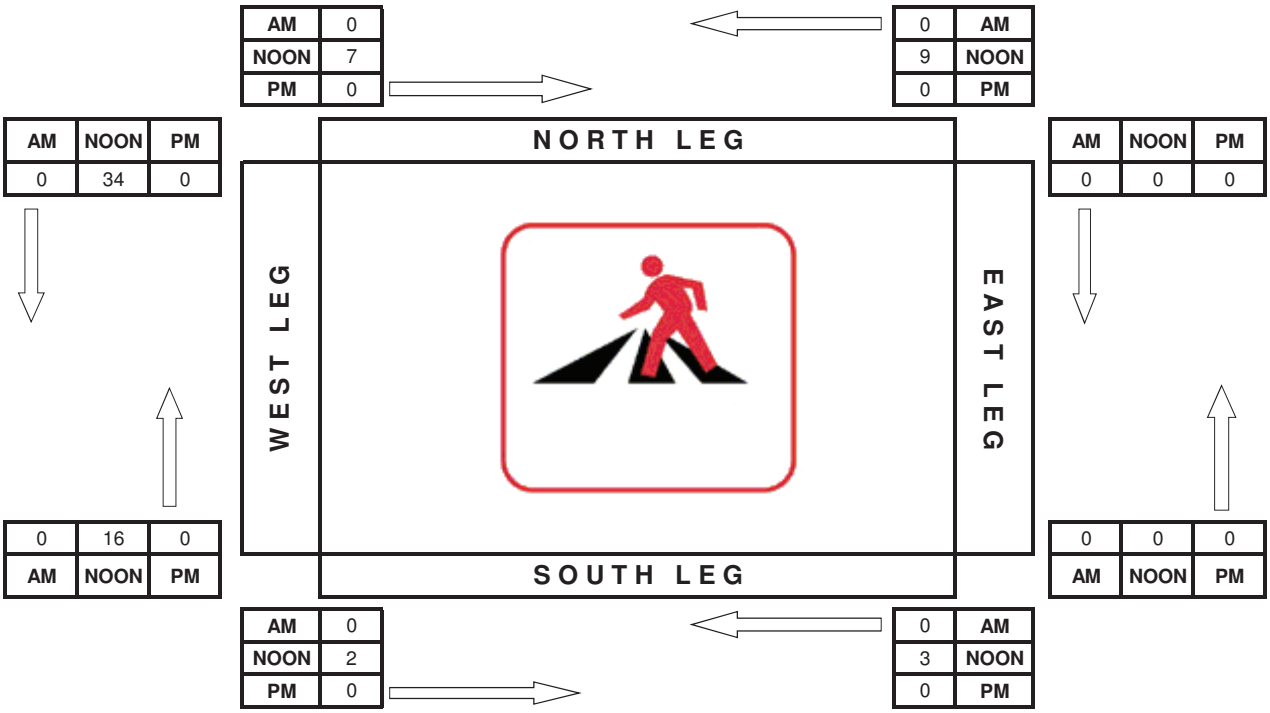
0	AM
18	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Sat-017
N/S Street: Malibu Canyon Rd
E/W Street: Pacific Coast Hwy
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu



PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Sat-020
N/S Street: Webb Way
E/W Street: Pacific Coast Hwy
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

AM	0
NOON	16
PM	0

0	AM
20	NOON
0	PM

AM	NOON	PM
0	28	0

NORTH LEG

AM	NOON	PM
0	0	0



WEST LEG

EAST LEG

0	25	0
AM	NOON	PM

0	0	0
AM	NOON	PM

SOUTH LEG

AM	0
NOON	7
PM	0

0	AM
7	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Sat-022
N/S Street: Cross Creek Rd
E/W Street: Pacific Coast Hwy
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

AM	0
NOON	15
PM	0

0	AM
64	NOON
0	PM

AM	NOON	PM
0	146	0

NORTH LEG

AM	NOON	PM
0	0	0

WEST LEG



EAST LEG

0	90	0
AM	NOON	PM

SOUTH LEG

0	0	0
AM	NOON	PM

AM	0
NOON	35
PM	0

0	AM
32	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Sat-024
N/S Street: Malibu Pier Signal
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

AM	0
NOON	218
PM	0

0	AM
110	NOON
0	PM

AM	NOON	PM
0	367	0

NORTH LEG

AM	NOON	PM
0	0	0



WEST LEG

EAST LEG

0	262	0
AM	NOON	PM

0	1	0
AM	NOON	PM

SOUTH LEG

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Sat-025
N/S Street: 22730 Pacific Coast Highway
E/W Street: Pacific Coast Highway Signal
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

AM	0
NOON	35
PM	0

0	AM
32	NOON
0	PM

AM	NOON	PM
0	36	0

NORTH LEG

AM	NOON	PM
0	1	0

WEST LEG



EAST LEG

0	39	0
AM	NOON	PM

SOUTH LEG

0	1	0
AM	NOON	PM

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Sat-026
N/S Street: 22400 Pacific Coast Highway
E/W Street: Pacific Coast Highway Signal
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

AM	0
NOON	4
PM	0

0	AM
9	NOON
0	PM

AM	NOON	PM
0	11	0

NORTH LEG

AM	NOON	PM
0	0	0



WEST LEG

EAST LEG

0	2	0
AM	NOON	PM

SOUTH LEG

0	0	0
AM	NOON	PM

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

PREPARED BY NATIONAL DATA & SURVEYING SERVICES

Pedestrian Count

	Start:	End:
AM	7:00	9:00
PM	16:00	18:00

PROJECT#: 12-5299 Sat-031
N/S Street: Big Rock Dr
E/W Street: Pacific Coast Highway
DATE: 7/14/2012 DAY: Saturday
CITY: Malibu

AM	0
NOON	0
PM	0

0	AM
0	NOON
0	PM

AM	NOON	PM
0	0	0

NORTH LEG

AM	NOON	PM
0	0	0

WEST LEG



EAST LEG

0	0	0
AM	NOON	PM

SOUTH LEG

0	1	0
AM	NOON	PM

AM	0
NOON	1
PM	0

0	AM
0	NOON
0	PM

APPENDIX G

PCH SAFETY STUDY PUBLIC PARTICIPATION ROUND 1 SUMMARY REPORT

(Bound Under Separate Cover)