

March 1, 2017

Honorable Members of the Board, we are appealing the decision by the Lake County Planning Commission to deny UP 16-04, IS 16-07, DR 17-02.

Lake County Planning Staff did a fantastic job in their presentation and analysis of the proposed project. County staff spent 50 minutes presenting the project and recommended the project for approval.

Cross Development met with members of the community three times; once in an open forum meeting to discuss the project, in which there were both proponents and opponents to the development. We then met twice with the Clear Lake Riviera Owners Association. These meetings were used to hone in on the design of the building. At both meetings, the Owners Association management team guided our design. We specifically designed this building to the parameters of the Owners Association and the Clearlake Riviera Plan.

This project is on a properly zoned piece of property, in the commercial hub for the community. The building design has approval from the Owner's Association for design. This building does in fact, fit the community in design, location, and use. There are several other buildings in the area that are similar in size and identical in look. There are also buildings that are much larger than the proposed building.

County Staff prepared a Mitigated Negative Declaration, proving that all impacts can be mitigated, in which we agree with. We performed all the required studies for the County Staff to make this finding, including, but not limited to Traffic, Geologic, Geo Technical, Environmental, Cultural, Etc.

Here are the findings the Planning Commission used for denial:

- UP 16-04 – “Denied, Commission feels the development is a detriment to area safety and area economics, and traffic.”
 - Planning Director Robert Mansarelli advised the Commission that these were not legal findings.
 - Cross Development performed a traffic study per County Guidelines and did an Economic Analysis, both of which prove the development would not be unsafe due to traffic and would not be detrimental to the economy of the area. (attached)
- IS 16-07 – “Denied, Commission feels the development would impact Traffic and Noise.”
 - Cross Development did a traffic study per County Guidelines and it proves traffic will not be an issue. (attached)
 - The use of this property is already commercial, therefore the noise created by a commercial development is already taken into account in the initial study and Mitigated Negative Declaration the Planning Staff prepared
- DR 17-02 – “Denied, due to size of building and architecture”
 - The size of the building fits with the different sizes of buildings currently in the area. Using Google Earth's Measuring tool, there are buildings that range from 3000 sqft up to 18,000 sqft+.
 - The architecture is a design specifically created by meeting with the community, and the community plan. Before we could even be scheduled for the Planning Commission meeting, County Staff required that the Clearlake Riviera Owner's Association approve the design of our building.

One thing the Planning Commission failed to take into consideration is the property owner's rights. The county's General Plan has this property zoned for Retail use. Our proposed development fits with in this use, and meets all the findings for approval. When the Commission denied the project, they effectively denied the zoning of the property, therefore telling the property owner's that their property is worthless, and would not be suitable for the current zoning.

Cross Development is appealing these denials because they lack the findings of fact to support a denial. We ask that the Board of Supervisor approve the appeal of UP 16-04, IS 16-07, and DR 17-02, and reverse the Planning Commission's decision.

Respectfully,

A handwritten signature in black ink, appearing to read "Joe Dell". The signature is fluid and cursive, with the first name "Joe" and last name "Dell" clearly distinguishable.

Joe Dell

Cross Development, LLC.

TRAFFIC IMPACT ANALYSIS
FOR
DOLLAR GENERAL STORE ON POINT LAKEVIEW ROAD
Lake County, CA

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July 7, 2016

7240-11

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Transportation Engineers

**TRAFFIC IMPACT ANALYSIS FOR
DOLLAR GENERAL STORE ON POINT LAKEVIEW ROAD
Lake County, CA**

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July 7, 2016

KDA

**TRAFFIC IMPACT ANALYSIS FOR
DOLLAR GENERAL STORE ON POINT LAKEVIEW ROAD
Lake County, California**

EXECUTIVE SUMMARY

- **Project Description.** The project is a 9,100 sf retail store to be located along SR 281 in the Lake County community of Clearlake Rivas. The store will occupy a portion of a vacant site on the south side of Point Lakeview Road east of SR 281 (Soda Bay Road), as shown in Figure 1.

The Trip Generation forecast for this store has been based on consideration of trip generation rates provided by the Institute of Transportation Engineers (ITE) in their publication *Trip Generation Manual 9th Edition*. The project is expected to generate approximately 583 daily trips on a weekday basis (i.e., 1/2 inbound and 1/2 outbound). Of that total 35 trips are expected during the a.m. peak hour and 62 trips will occur during the evening commute hour. Of the project's traffic 34% is expected to be drawn from the stream of traffic already using US 101 by the site (i.e., "pass-by" trips). The site will be visited by 1 - 2 large trucks (STAA) each week, although single unit trucks will likely make deliveries each day. Twenty-five on-site parking stalls will be available, as shown in Figure 2.

- **Study Scope.** The breadth of this traffic study was determined in consultation with Lake County staff. The study evaluates immediate and long-term traffic impacts at the adjoining SR 281 (Soda Bay Road) / Point Lakeview Road intersection and at the project access on Point Lakeview Road during a.m. and p.m. peak traffic hours. The analysis adheres to Caltrans guidelines for the preparation of traffic impact studies, although Caltrans District 1 has not requested a traffic study.
- **Existing Setting.** SR 281 (Soda Bay Road) is a major collector route serving the Clearlake Rivas area and connecting the community with SR 29 to the south. In the area of the project SR 281 is a conventional two lane highway.

New traffic counts conducted for this study in June 2016 and were adjusted to reflect a.m. peak hour conditions when local schools are in session. The resulting volumes were the basis for evaluation of operating Level of Service at these locations. Current Levels of Service are LOS C or better for motorists yielding the right of way, and study intersections do not carry volumes that satisfy peak hour traffic signal warrants.

Dedicated facilities for pedestrians and bicyclists are limited in the area of the project. SR 281 has standard paved shoulders that are used by pedestrians and bicyclists, but sidewalks or marked bicycle lanes are not available today. The long term plan for SR 281 includes Class II bike lanes. Other roads in the area of the project lack paved shoulders.

- **Project Traffic Impacts on Existing Traffic Conditions.** The project will add traffic to the area street system, but without improvements, study area intersections will still maintain acceptable Levels of Service in the vicinity of the project (i.e., LOS C or better).
- **Project Impacts on Alternative Transportation Modes.** The project may result in some pedestrians walking along area streets, but most Dollar General Store customers typically arrive by private automobile. Based on the results of a survey of a recently opened Dollar General Store in the rural Tuolumne County community of Jamestown, the Kelseyville project might attract 3-4 pedestrians per hour on a peak Saturday (i.e., 1-2 inbound and 1-2 outbound). This level of activity would not be appreciably different from that occurring today at other retail locations on Soda Bay Road. Project pedestrian activity would not present a safety hazard along SR 281 or other area streets, and improvements are not required.
- **Project Access Issues.** The volume of traffic at the project access's access on Point Lakeview Road will not justify a northbound left turn lane based on AASHTO guidelines. The Point Lakeview Road access intersection will accommodate the turning requirements of trucks making deliveries to the Dollar General Store with the implementation of approach improvements. Sight distance at the driveway will be adequate and it is recommended that the line of sight between the access and adjoining Emerald Drive intersection be reviewed when the project is constructed.
- **Cumulative Plus Project Impacts.** Long term traffic growth on SR 281 was identified from the SR 281 Transportation Concept Report. Moderate growth (i.e., 50% increase) is expected. Peak hour Levels of Service will continue to meet adopted minimum standards, and no improvements are needed.



VICINITY MAP

figure 2

INTRODUCTION

Study Purpose and Objectives

This study evaluates the traffic impacts associated with developing a free-standing 9,100 sf Dollar General Store proposed on the east side of SR 281 (Soda Bay Road) at its intersection with Point Lakeview Road in the Clearlake Rivas area of Lake County.

This traffic study was requested by Lake County, and while a traffic study was not required by Caltrans District 1, this study adheres to Caltrans traffic study guidelines as well as direction from Lake County staff. This study addresses the following scenarios, and considers conditions occurring during the a.m. and p.m. peak hour periods:

1. Existing summer traffic conditions in Year 2016;
2. Estimated Year 2026 conditions with local schools in session;
3. Year 2016 Plus Dollar General Store conditions;
4. Future Cumulative (Year 2036) conditions based on growth rates identified by Caltrans District 1 without the project; and,
5. Year 2036 conditions with the Dollar General Store.

The objectives of this study are:

- To identify whether the Soda Bay Road / Point Lakeview Road intersection and the project's access onto Point Lakeview Road will operate with minimum Levels of Service when the Dollar General Store is operating.
- To evaluate the adequacy of site access, with specific consideration of the need for a left turn lane on Soda Bay Road at the Point Lakeview Road intersection or at the project access.
- To evaluate the adequacy of internal circulation, with specific consideration of the path of delivery trucks.
- To evaluate the adequacy of bicycle and pedestrian facilities in this area of Lake County.
- To evaluate long term impacts within the context of long term traffic conditions assuming development under the Lake County General Plan and regional traffic growth.

Project Description

Dollar General Stores is a chain of small to medium sized convenience oriented discount stores that are prevalent on the east coast but have only recently appeared in California. While store hours vary from store to store, this Dollar General Store is expected to be open from 7:00 a.m. to 11:00 p.m.

The Dollar General Store will occupy a portion of a vacant site on the south side of Point Lakeview Road, as shown in Figure 1.

The site plan (Figure 2) indicates that access to the site is proposed at a new driveway on Point Lakeview Road opposite Konocti Bay Road. This intersection is about 350 feet from Soda Bay Road. The project proposes no vehicular access to Soda Bay Road.

The project parking lot provides 25 parking spaces and includes a truck loading area. The truck loading area is at the east end of the site. Trucks would enter from Point Lakeview Road and turn right along the front of the building. From that point they would back into the loading area before exiting back onto Point Lakeview Road. Project proponents indicate full size trucks will make deliveries to the site three or four times a week and that STAA sized trucks could be involved if permitted on these roads.

EXISTING SETTING

Study Area Streets

This study addresses traffic conditions on state highways and Lake County roads in the vicinity of the proposed project within a study area identified in consultation with Lake County staff. The text that follows describes the facilities included in this analysis.

Regional access to this area of Lake County is provided by SR 281 (Soda Bay Road) which links the area with SR 29 to the south and the south shore of Clear Lake and Konocti Bay to the north. Direct access to the Dollar Store will be via a driveway on Point Lakeview Road.

The text that follows describes these existing facilities. Functionally, study area streets are classified as Arterials, Collectors or Local Streets. The applicable designation is presented in the SR 281 Transportation Concept Report (SR 281 TCR), Lake County Regional Transportation Plan, Lake County General Plan Circulation Element and the Rivas Area Plan.

SR 281 (Soda Bay Road). SR 281 is designated a Major Collector street in Lake County's Rivas Area Plan. SR 281 begins at an intersection on SR 29 east of the SR 175 junction and west of SR 53 in Lower Lake. From that point SR 281 extends north for about three miles through the Point Lakeview Road intersection to the end of the state highway at Konocti Bay Road. Soda Bay Road (CO RD 502) continues northerly beyond the end of the state highway to South Main Street in Lakeport. In the area of the proposed Dollar General Store SR 281 is a two lane conventional highway with two 12' travel lanes and 4' paved shoulders.

The California Department of Transportation (Caltrans) regularly monitors the volume of traffic on state highways. The most recent Caltrans traffic counts (2014) reveal that US 281 carries an *Annual Average Daily Traffic (AADT)* volume of 6,300 vehicles per day in the area north of SR 29 to Point Lakeview Road. The volume drops to 3,400 vehicles per day north of the Point Lakeview Road intersection. The volume in both locations is roughly 10% greater during the month with the highest traffic volume. The 30th highest hour volume is reported to be 360 vehicles per hour (vph) north of Point Lakeview Road and 600 vph north of SR 29.

Trucks comprise 3% to 4% of the daily traffic volume on SR 281. SR 281 is a "California Legal" Truck Route.

The posted speed limit on SR 281 (Soda Bay Road) is 45 mph in the area of the proposed Dollar General Store.

Point Lakeview Road. Point Lakeview Road is also designated a Major Collector in the Rivas Area Plan and is a Collector Road in the 2010 Regional Transportation Plan. Point Lakeview Road runs between SR 281 and SR 29 in Lower Lake and provides access to the northeastern portion of the Rivas Area, including the subdivisions of Sunrise Shore, Jago Bay and Bay Cliff. Point Lakeview Road also provides access to Riviera Elementary School.

Point Lakeview Road is a two-lane highway with limited paved shoulders (i.e., 0-2 feet) in the area of the proposed Dollar General Store. The Rivas Area Plan indicated that Point Lakeview Road carried 2,920 vehicles per day east of SR 281 in July 1998.

Bicycle and Pedestrian Facilities

Sidewalks do not exist today along the roads near the proposed Dollar General Store, and pedestrians and bicycles regularly mix with motor vehicles along the edge of study area roads. Paved shoulders exist along SR 281, and in the vicinity of the Dollar General Store the shoulders are generally four feet wide. The other streets in this area, including Point Lakeview Road, lack shoulders.

The *2011 Lake County Regional Transportation Bikeway Plan* indicates that class II bike lanes are to be developed along SR 281 from SR 29 to Konocti Bay Road. That plan also suggests that Class III bike routes are planned for Point Lakeview Road and for Konocti Bay Road north of Point Lakeview Road.

Public Transit

Lake Transit Authority provides public transit service in Lake County, and intercity bus route service between Napa County (Calistoga and St. Helena), Lake County (Middletown, Hidden Valley, Clearlake, Lower Lake, Kelseyville, Lakeport, Upper Lake), and Mendocino County (Ukiah). Services include fixed-route and deviated fixed route (flex route) bus services and Dial-a-Ride services. Low-income, young, disabled and elderly persons in Lake County are often dependent on transit to provide access to basic services and facilities. In recent years, the demand for transit services from commuters traveling within and outside of Lake County has increased (based on the results of the 2008 Commuter Survey). The primary clients for Dial-a-Ride services are the elderly and disabled. Many of the transit routes travel along the state highway system, including State Routes 20, 29 and 53, as well as Highway 101 (to the City of Ukiah in Mendocino County).

Route 4A (Kit's Corner to Lakeport) follows Soda Bay Road and passes the Dollar General site. This route runs Monday thru Friday with a stop at the Rivas Shopping Center.

Study Area Intersections

The limits of this analysis were identified in consultation with Lake County staff based on the amount of vehicular traffic associated with the proposed project and their understanding of traffic conditions in the Clearlake Rivas area.

The **SR 281 / Point Lakeview Road intersection** is a "tee" intersection controlled by a stop sign on the westbound Point Lakeview Road approach. There are no auxiliary turn lanes at the

intersection, but the approach has been widened to accommodate the turning requirements of trucks and busses.

The **Point Lakeview Road / Konocti Bay Road intersection** is a “tee” control by a stop sign on the southbound Konocti Bay Road approach. There are no auxiliary turn lanes at this intersection.

Level of Service Analysis Methodology / Thresholds of Significance

Methodology. The *2010 Highway Capacity Manual* was used to provide a basis for describing the quality of existing traffic operating conditions and for evaluating the significance of project traffic impacts based on operating Level of Service. Level of Service (LOS) measures the *quality* of traffic flow and is represented by letter designations from "A" to "F", with a grade of "A" referring to the best conditions, and "F" representing the worst conditions. Table 1 presents typical Level of Service characteristics.

TABLE 1 LEVEL OF SERVICE DEFINITIONS			
Level of Service	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
"A"	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec	Little or no delay. Delay ≤ 10 sec/veh	Completely free flow.
"B"	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and ≤ 20.0 sec	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh	Free flow, presence of other vehicles noticeable.
"C"	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh	Ability to maneuver and select operating speed affected.
"D"	Significant congestion of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and ≤ 60.0 sec	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 60.0 sec and ≤ 80.0 sec	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh	At or near capacity, flow quite unstable.
"F"	Total breakdown, stop-and-go operation. Delay > 80.0 sec	Intersection blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.
Sources: 2010 <i>Highway Capacity Manual</i> , Transportation Research Board (TRB) Special Report 209.			

Standards of Significance. Caltrans employs various minimum Level of Service standards for its facilities depending on the type of facility and the characteristics of the location. Caltrans general minimum standard of LOS C is noted in Caltrans' Traffic Study Guidelines, but exceptions to that standard are documented in various planning and policy documents. In this case the Lake County General Plan notes that the County shall endeavor to manage its roadway system so as to maintain Level of Service C operation, except for intersections on any State Highway, where Level of Service D shall be acceptable. The SR 281 *Transportation Concept Report (TCR)* identifies LOS E as the Concept Level of Service for the highway.

The Lake County General Plan Policy T 1.8 identifies LOS C as the County's goal for its street but recognizes that LOS E may be accepted in locations where measures to provide LOS C are deemed infeasible due to cost, negative community and/or environmental impacts, and constructability issues.

The conditions described using Levels of Service vary for different types of intersections. Where traffic signals or all-way stops are installed, the Level of Service is based on the length of delays experienced by motorists stopped at the intersection, and overall average Level of Service is considered. At unsignalized intersections controlled by side street stop signs, individual Levels of Service can be determined for all motorists who must yield the right of way.

Existing Traffic Operating Conditions

Traffic Volumes. Current a.m. and p.m. peak hour turning movement counts were made at the study intersection during the a.m. peak hour (7:00 to 9:00 a.m.) and p.m. peak hour (4:00 to 6:00 p.m.) on June 28, 2016. Figure 3 identifies the observed traffic volumes and intersection lane configurations used for the Level of Service analysis.

Observed Intersection Levels of Service. Table 2 summarizes current Levels of Service at the study area intersections during the highest volume hour within each analysis period. As shown, the current Level of Service for traffic waiting to enter SR 281 is LOS B in the a.m. peak hour and LOS B in the p.m. peak hour. These conditions are within the County's LOS C goal.

TABLE 2 EXISTING PEAK HOUR LEVELS OF SERVICE (June 28, 2016)						
Location	Control	AM Peak Hour		PM Peak Hour		Traffic Signal Warranted?
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	
SR 281 / Point Lakeview Road Westbound left and right turn Southbound left turn	WB Stop	B	10	B	11	No
		A	1	A	2	
Point Lakeview Road / Konocti Bay Road Southbound left +right turn Eastbound left turn	SB Stop	B	9	10	B	No
		A	1	J2	A	

Level of Service When Area Schools Are In Session. As noted the traffic volume counts conducted for this analysis were completed on June 28, 2016 after area schools had closed for the summer. Thus, while the evening traffic volumes occurring during the p.m. peak hour are likely to represent typical conditions occurring throughout the year, the volume of traffic occurring in the a.m. peak hour (i.e., 7:00 to 9:00 a.m.) can be expected to be greater when area school are in session.

While area schools are not particularly close to the Dollar General site, both Soda Bay Road and Point Lakeview Road may be used by school traffic. Riviera Elementary School is located roughly a mile southeast of the project site and is accessed from Soda Bay Road via Fairway Drive and by Point Lakeview Road via Sunset Ridge Road. This school had an enrollment of 275 students last year. Students residing in this area of Kelseyville Union School District attend middle and high schools that are located in eastern Kelseyville. Mountain Vista Middle School is located on Konocti Road, and Kelseyville HS is located on Main Street in Kelseyville. From the area of the Dollar General Store both schools would be reached via SR 29 or Soda Bay Road. The Kelseyville Unified School District provides bussing for its students, and Riviera ES bussed 30-35% of its students last year. Both Point Lakeview Road and SR 281 - Soda Bay Road are on bus routes.

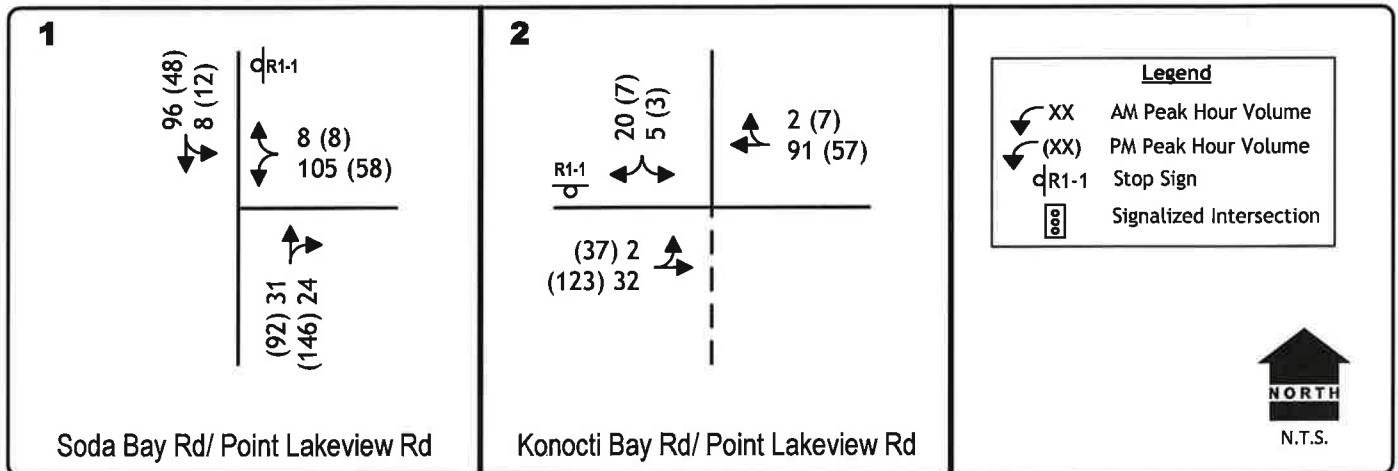
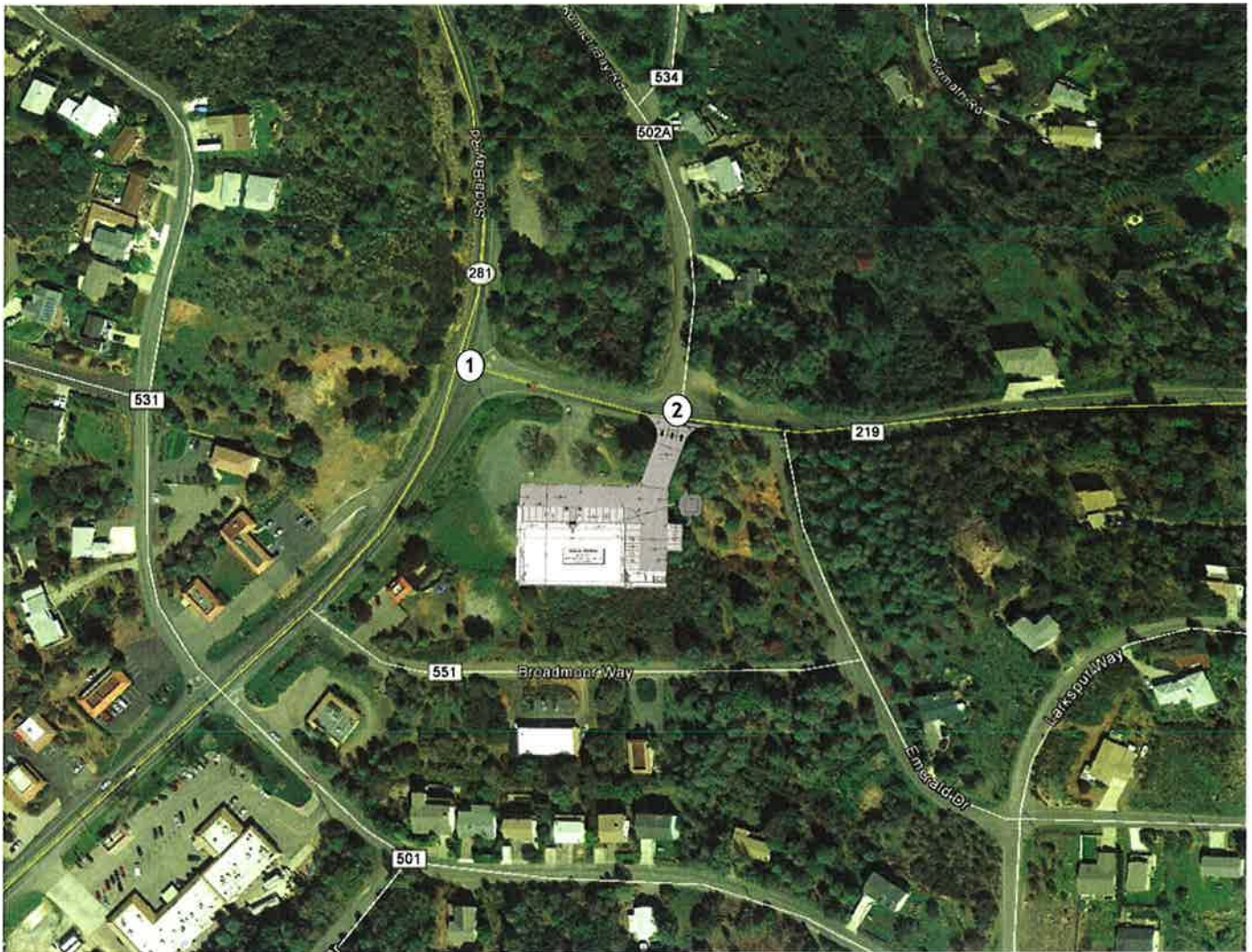
For this analysis it has conservatively been assumed that the residents in the area of the Dollar General would generate additional traffic to and from these schools in the morning peak hour. The trip generation associated with Riviera ES was estimated based on average Institute of Transportation Engineers (ITE) rates on a “per student” basis, and these trips were assigned to route linking the school and neighborhoods within the school’s boundary. It was assumed that similar numbers of MS and HS students would live in this area, and these trips were also generated based on ITE rates and assigned to the local street system.

Figure 4 shows the resulting baseline traffic volumes used for this analysis. It is important to note that these forecasts represent a very conservative estimate, since many parents drop off students as part of a commute trip. Those commute trips occur in the summer and would have already been counted.

As indicated in Table 3, the Level of Service at the two study intersections remains LOS B under baseline conditions.

TABLE 3 BASELINE PEAK HOUR LEVELS OF SERVICE (WITH SCHOOLS IN SESSION)						
Location	Control	AM Peak Hour		PM Peak Hour		Traffic Signal Warranted?
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	
SR 281 / Point Lakeview Road Westbound left and right turn Southbound left turn	WB Stop	B	12	B	11	No
		A	1	A	2	
Point Lakeview Road / Konocti Bay Road Southbound left +right turn Eastbound left turn	SB Stop	B	10	B	10	No
		A	1	A	2	

Traffic Signal Warrants. Baseline traffic volumes were compared to MUTCD peak hour warrants under “rural” criteria (i.e., > 40 mph). As noted in Table 3, the intersections do not carry traffic volumes that reach a level that would satisfy peak hour warrants for signalization.

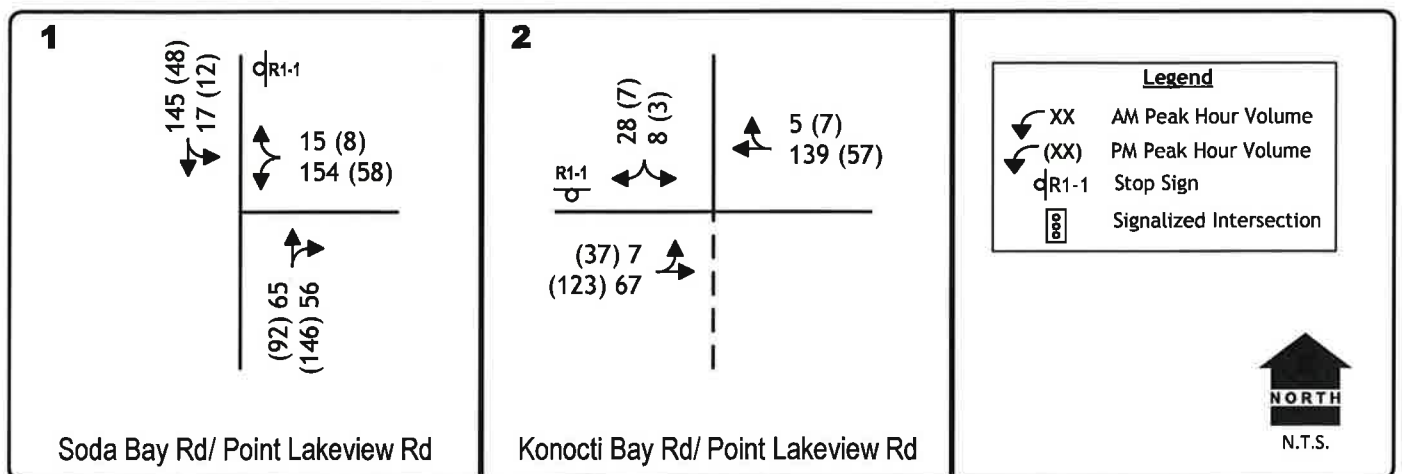


EXISTING (JUNE 28, 2016)
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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7240-11 RA 7/06/2016

figure 3



BASELINE TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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figure 4

Left Turn Channelization. The American Association of State Transportation and Highway Officials (AASHTO) has identified guidelines for the installation of left turn lanes in their publication *A Policy on Geometric Design of Highways and Streets*. These guidelines, which are presented in their Exhibit 9-75 and Table 4 below, base the need for a left turn lane on the volume of traffic on the mainline road and the relative percentage of that traffic that turns. These criteria are applicable to intersections where the major street traffic proceeds freely and side street traffic is controlled by stop signs. AASHTO guidelines are used by Caltrans and most local jurisdictions.

Review of baseline a.m. and p.m. peak hour volumes at the SR 281 / Point Lakeview Road intersection reveals that the current combination of advancing and opposing volumes occurring during the baseline a.m. peak hour traffic falls below the level that would justify a separate left turn lane at 40 to 50 mph.

TABLE 4 TRAFFIC VOLUMES JUSTIFYING LEFT TURN LANES				
Opposing Volume (veh/hr)	Advancing Volume (veh/hr)			
	5% Left Turns	10% Left Turns	20% Left Turns	30% Left Turns
40-mph operating speed				
800	330	240	180	160
600	410	305	225	200
400	510	380	275	245
200	640	470	350	305
100	720	515	390	340
50-mph operating speed				
800	280	210	165	135
600	350	260	195	170
400	430	320	240	210
238			60	
200	550	400	300	270
121		162		
100	615	445	335	295
Source: <i>A Policy on Geometric Design of Highway and Streets</i> , AASHTO, 2012. Baseline AM Peak Hour at SR 281 / Point Lakeview Road Baseline PM Peak Hour at SR 281 / Point Lakeview Road				

PROJECT CHARACTERISTICS

The relative impacts of developing the Dollar General Store and the adequacy of site access is dependent on the physical characteristics of the adjoining street system, as well as the amount of traffic generated by the proposed project. The amount of additional traffic on a particular section of the street network is dependent upon two factors:

- I. Trip Generation, the number of new trips generated by the project, and
- II. Trip Distribution and Assignment, the specific routes that the new traffic takes.

Trip Generation

This analysis considered trip generation rates derived from several sources. The Institute of Transportation Engineers (ITE) publication "*Trip Generation, 9th Edition*" provides information on the characteristics of various retail uses. The use most similar to Dollar General Store is "Variety Store" (Code 813). This information is based on surveys prepared for the Florida Department of Transportation (FDOT) in early 2011. The land use description notes that a Variety Store is a retail store providing health care & beauty aids, cleaning supplies, snack food, household items and some apparel. This is not a "dollar store" where everything is priced at one dollar, but rather is a small neighborhood store offering value and convenience. The stores studied were free-standing and catered to the local neighborhood. The 15 sites studied had building floor areas that ranged from roughly 8,000 to 17,000 square feet. Table 5 identifies the trip generation rates reported by ITE.

TABLE 5 TRIP GENERATION RATES							
Land Use / Source	Unit	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Variety Store	ksf	50%	50%	3.81	50%	50%	6.82
Dollar General Store	9.1 ksf	18	17	35	31	31	62
Pass-By Trips	34%	<6>	<6>	<12>	<11>	<10>	<21>
Net New Trips		12	11	23	20	21	42
Source: ITE Trip Generation, 9 th Edition or FDOT Study							

Trip Generation Forecasts. Table 5 displays the a.m. and p.m. peak hour trip generation forecasts for the 9.1 ksf Dollar General Store. The project would create 35 a.m. and 62 p.m. peak hour trips at its driveway. As shown, a portion of the traffic drawn to these stores would be drawn from the stream of traffic already passing each site. Customer surveys conducted for the FDOT study revealed that on average 34% of the weekday trips were "pass-by". This rate is comparable to the average pass-by rates reported by ITE for all shopping centers (i.e., also 34%).

As noted in Table 5, the project is expected to generate 23 “new” trips during the a.m. peak hour, with 42 “new” trips occurring during the p.m. peak hour.

The volume of traffic generated by variety stores is highest at midday and during the evening commute period. On a daily basis, these stores generate 64.03 trips per ksf. After discount for “pass-by trips”, the proposed project may generate 384 new daily trips (½ inbound and ½ outbound).

Truck Trips. The proposed project will receive regular deliveries from the Dollar General Stores regional distribution center serving this area of California. Project proponents anticipate that 1-2 full size trucks will visit the store each week, although smaller single unit trucks may visit each day. At typical Dollar General Stores some of the full size trucks are expected to be STAA trucks (53’) permitted on California highways under the Surface Transportation Authorization Act. However, when the regional routes providing access to individual stores are not designated for STAA, alternative vehicles are used.

Truck Turning Requirements. These issues are important with regards to truck circulation. The project will result in full size trucks (STAA) turning into and out of the site via the project’s access on Point Lakeview Road and via the SR 281 / Point Lakeview Road intersection. The turning requirements of large trucks (i.e., STAA trucks) have been accommodated in the plans for improvements to its Point Lakeview Road access.

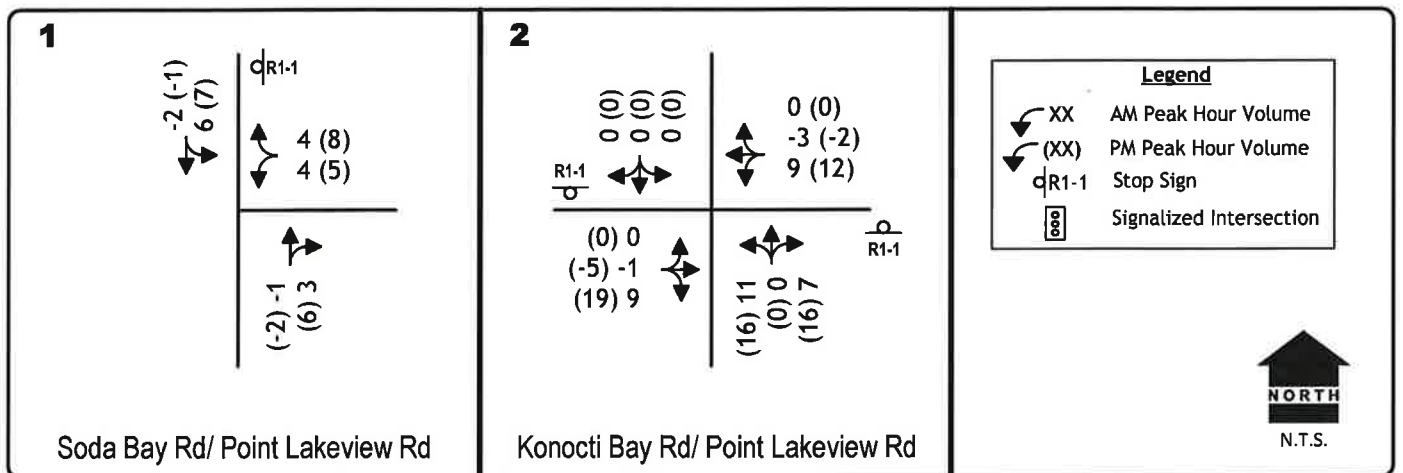
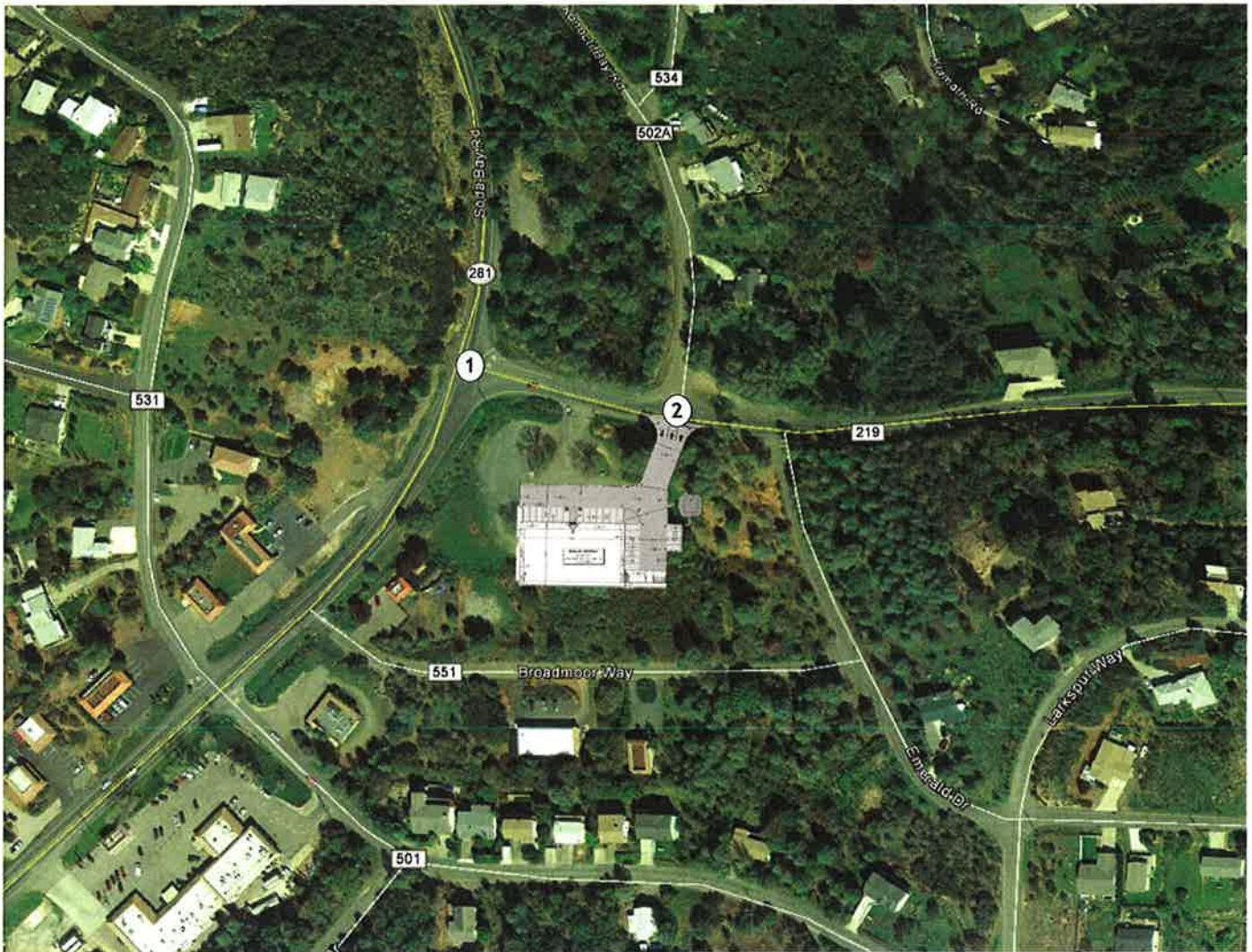
Trip Distribution

The distribution of project traffic was determined based on knowledge of the demographic distribution of residences in the Rivas – Kelseyville area and on market characteristics of Dollar General Stores. As noted in Table 6, assuming a primary trade area that extends 2-3 miles from the site, the majority of the new trips attracted to the site will arrive from the east, and lesser shares will arrive from the north and south. Pass-by trips will be drawn from passing traffic on Soda Bay Road and Point Lakeview Road in proportion to current volumes.

Trip Assignment

Project trips were assigned to the adjacent street system through the project’s driveway opposite Konocti Bay Road, and Figure 5 illustrates the projected “Dollar General Store Traffic Only” traffic volumes forecast for the a.m. and p.m. peak hours.

TABLE 6 PROJECT TRIP DISTRIBUTION				
Direction	Route	Percentage of All Trips		
		New Trips	Pass-By Trips	
			AM	PM
North	SR 281 - Soda Bay Road	30%	-	-
East	Point Lakeview Road	50%	-	-
South	SR 281 - Soda Bay Road	20%	-	-
Northbound on SR 281		-	10%	25%
Southbound on SR 281		-	35%	12½ %
Eastbound on Point Lakeview Road		-	12½%	45%
Westbound on Point Lakeview Road		-	42½%	17½%
Total		100%	100%	100%



PROJECT ONLY
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

7240-11 RA 7/06/2016

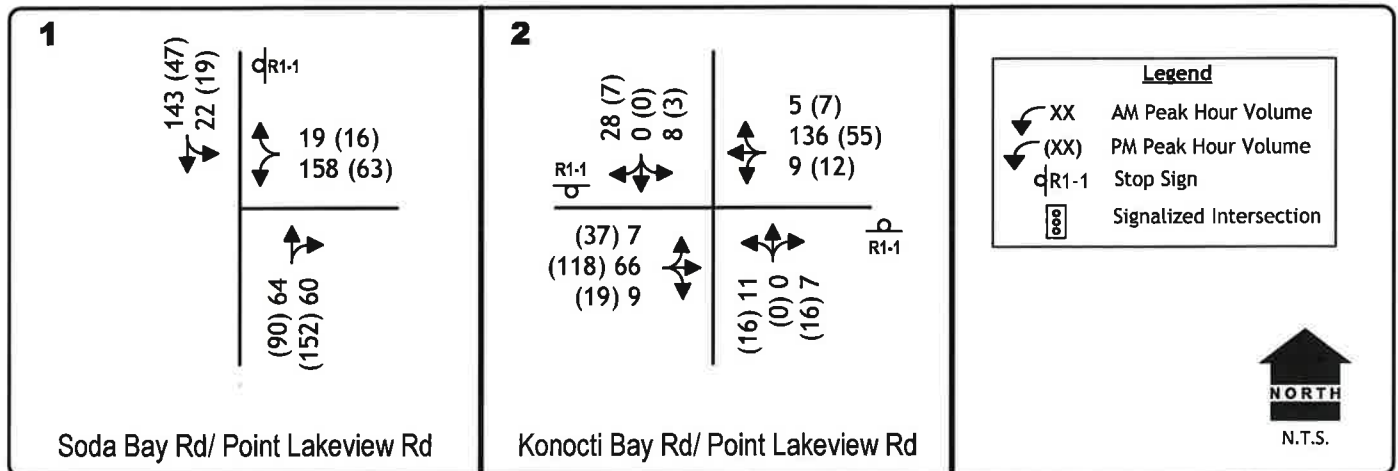
figure 5

PROJECT IMPACTS

Baseline Plus Project Traffic Conditions

The impacts of operating the proposed project have been identified by superimposing project trips onto the baseline background condition. Resulting intersection Levels of Service were then calculated and used as the basis for evaluating potential project impacts. Figure 6 presents the “Baseline Plus Project” traffic volumes used for this analysis.

Intersection Levels of Service. Table 7 compares Current and Plus Project peak hour Levels of Service and average delay per vehicle at the study intersections under the peak month condition. As shown, motorists entering SR 281 will continue to experience delays that are characteristic of LOS B conditions. As this LOS satisfies the identified minimum standard, the Dollar General Store’s impact is not significant under this metric.



BASELINE PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
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7240-11 RA 7/06/2016

figure 6

TABLE 7 BASELINE PLUS PROJECT PEAK HOUR LEVELS OF SERVICE (PEAK MONTH 2016)										
Location	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warranted?
		Baseline		Plus Project		Baseline		Plus Project		
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec /veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	
SR 281 / Point Lakeview Rd	WB Stop									No
Westbound left + right turn		B	12	B	13	B	11	B	11	
Southbound left turn		A	1	A	1	A	2	A	2	
Point Lakeview Rd / Konocti Bay Rd	SB / NB Stop									No
Southbound left+right turn		B	10	B	10	B	10	B	10	
Northbound left+right turn		-	-	B	10	-	-	B	11	
Eastbound left turn		A	1	A	1	A	2	A	2	
Westbound left turn		-	-	A	1	-	-	A	1	

Left Turn Lane Channelization. The combination of opposing and advancing vehicles at the SR 281 / Point Lakeview Road intersection with the Dollar General project has been compared to AASHTO guidelines to determine whether a separate westbound left turn lane is justified. With the project, the greatest number of left turns will be expected during the a.m. peak hour, and at that time the 22 anticipated left turns would equal 13% of the total advancing traffic. As shown in Table 8, the forecast traffic volumes fall below the range that suggests a separate left turn lane is needed.

TABLE 8 TRAFFIC VOLUMES JUSTIFYING LEFT TURN LANES BASELINE PLUS PROJECT VOLUMES				
Opposing Volume (veh/hr)	Advancing Volume (veh/hr)			
	5% Left Turns	10% Left Turns	20% Left Turns	30% Left Turns
40-mph operating speed				
800	330	240	180	160
600	410	305	225	200
400	510	380	275	245
200	640	470	350	305
100	720	515	390	340
50-mph operating speed				
800	280	210	165	135
600	350	260	195	170
400	430	320	240	210
242			66	
200	550	400	300	270
124		165		
100	615	445	335	295
Source: <i>A Policy on Geometric Design of Highway and Streets, AASHTO, 2012.</i> Baseline Plus Project AM Peak Hour at SR 281 / Point Lakeview Road Baseline Plus Project PM Peak Hour at SR 281 / Point Lakeview Road				

Truck Access. Trucks will access the site by turning from SR 281 onto Point Lakeview Road and then into the site. With planned access improvements the area streets accommodate the turning paths of trucks.

Sight Distance. The sight distance available at the project's driveway on Point Lakeview Road has been investigated in comparison to the minimum standards contained in the Caltrans Highway Design Manual (HDM). The HDM notes minimum stopping distance requirements for the speed on Point Lakeview Road (i.e., 40 mph) as well as corner sight distance recommendations. The minimum requirement is 300 feet, and the corner sight distance at 40 mph is 440 feet.

Looking from the proposed driveway, exiting traffic can see vehicles at the SR 281 intersection that is more than 300 feet away. The minimum requirement will be satisfied in this direction. The view is unobstructed looking east and the corner sight distance recommendation will be satisfied.

The Emerald Drive intersection is located about 150 feet east of the projects access of Konocti Bay Road. While the separation is adequate for the speed achieved by motorists at each driveway, when the project is constructed the line of sight between the two intersections should be reviewed to confirm that drivers waiting at this location and motorists at the project access can see each other.

Impacts to Non-Automotive Transportation Modes

Pedestrian Impacts. The proposed project could attract pedestrians from neighborhoods around the store, although based on information developed from observation of another rural Dollar General Store it is unlikely that the number of pedestrians will be substantial.

In 2014 a Dollar General Store was proposed on SR 49 in the Tuolumne County Community of Jamestown. The store is located along a state highway within walking distance of single family and multiple family residences in a community of roughly 3,000 persons (i.e., < ¼ mile). Caltrans District 10 was concerned that the number of pedestrians crossing the state highway to reach the store might justify specific crossing enhancements, and a before and after study of Saturday pedestrian activity was conducted in 2015¹.

Jamestown Dollar General Pedestrian Survey Approach / Results. KDA monitored activity across SR 49/108 within the area of the Dollar General Store on Saturday April 18, 2015. The number of pedestrians walking across SR 49/108 was determined, and those who ultimately visited Dollar General were separated from those with destinations elsewhere.

Hourly Pedestrian Volumes. Table 9 summarizes the results of the pedestrian survey. As shown, relatively few pedestrians walked across SR 49/108. The greatest number of pedestrians occurred in the hour from 10:00 to 11:00 a.m. on Saturday. At that time six Dollar General customers walked across the street and back, generating 12 pedestrian trips. Another three pedestrian trips were associated with the saloon. An average of 7-8 pedestrian trips per hour were observed over the five hours surveyed.

Dollar General Trip Generation. The number of vehicles traveling in and out of the Jamestown Dollar General Store was also recorded. The hour of highest vehicular trip generation occurred from 11:00 a.m. to noon (i.e., 64 trips). The equivalent trip generation rate (i.e., $64/9.2 = 6.96$ trips per ksf) is very similar to the weekday p.m. peak hour of the generator reported by ITE for Variety Stores (i.e., 6.99) per ksf. Thus, the observed Jamestown Dollar General Store's trip generation is consistent with ITE rates.

¹ Dollar General Store, Jamestown, CA Update to June 24, 2014 SR 49/108 Pedestrian Safety Assessment, KDA, April 27, 2015

Dollar General Modal Split. Pedestrian trips were calculated as a share of all trips into and out of Dollar General during the observation period. As noted, the 27 trips observed over the five hours represented 10.1% of the total Dollar General activity at that time.

TABLE 9 JAMESTOWN DOLLAR GENERAL STORE PEDESTRIAN COUNTS ACROSS SR 49/108						
Day	Time	Pedestrians per Hour			Vehicles per hour Visiting Dollar General	Pedestrians as a percentage of all Dollar General Trips
		Visited Dollar General	Others	Total		
Saturday April 18, 2015	10:00 a.m.	12	3	15	37	24.5%
	11:00 a.m.	6	5	11	64	8.6%
	Noon	4	5	9	61	6.2%
	1:00 p.m.	1	2	3	48	2.0%
	2:00 p.m.	4	0	0	30	11.8%
	Total	27	15	38	240	10.1%
	Average	5-6	3	7-8	48	

Point Lakeview Road Dollar General Store Pedestrian Estimate. In this case, the Dollar General Store on Point Lakeview Road will be farther from residential neighborhoods than was the Jamestown store. Review of aerial photography suggests that there are 500 to 600 residences within ½ mile of the store. We expect that up to 10% of the Dollar General Store's customers could walk to the store on a peak Saturday. This would equal to roughly 5 to 6 persons per hour at that time (i.e., 2 or 3 inbound and 2 or 3 outbound persons per hour).

Pedestrians walking to the Dollar General Store will do so using the existing paved shoulders on SR 281, and will walk along the edge of Point Lakeview Road. This level of occasional pedestrian activity will not create an appreciable safety problem along these streets and would not be appreciably different from the pedestrian activity already generated by other retail businesses in this area.

Bicycle Impacts. Similarly, the project may attract bicycle traffic from neighborhoods around the store. While there are no designated bicycle facilities, the existing paved shoulder on SR 281 will be adequate for this purpose.

CUMULATIVE IMPACTS

Based on Caltrans traffic study guidelines, this analysis considers cumulative traffic conditions occurring 20 years in the future.

Year 2036 Cumulative Impact Analysis

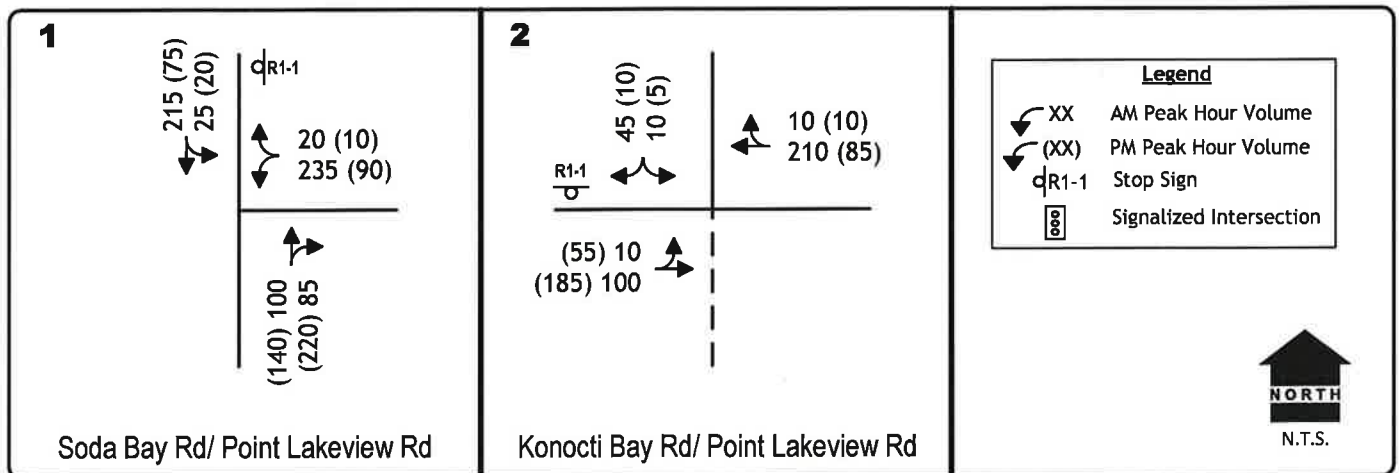
Volume Forecasts. Caltrans District 1's *SR 281 Transportation Concept Report* provides information regarding future traffic conditions on this state highway. Because relatively little regional through traffic is on SR 281 the growth identified for the state highway is likely indicative of growth on other streets in the area of the Dollar General Store.

The TCR identified an average daily volume on the SR 281 corridor under Year 2015 conditions, as well as forecasts for the Year 2035. The ratio of Year 2015 volumes (5,400 ADT) to Year 2035 volumes (8,100 ADT) is 1.50, or roughly 2.5% annually. For this analysis it has been assumed that this growth rate can be applied to all baseline traffic volumes to produce Year 2036 conditions without the Dollar General Store.

Figure 7 presents Cumulative Year 2036 volumes without the project, while Figure 8 presents volumes with the Dollar General Store.

Year 2030 Intersection Levels of Service. Table 10 identifies Year 2036 intersection Levels of Service with and without the Dollar General Store. As shown, while average delays may be slightly longer in the future, the Levels of Service for motorists waiting to turn onto and off of SR 281 will remain at LOS C or better. As LOS C satisfies the adopted minimum standard, the project's impact is not cumulatively significant.

Traffic Signal Warrants. Projected traffic volumes fall below the level that would justify a traffic signal under MUTCD rural criteria.

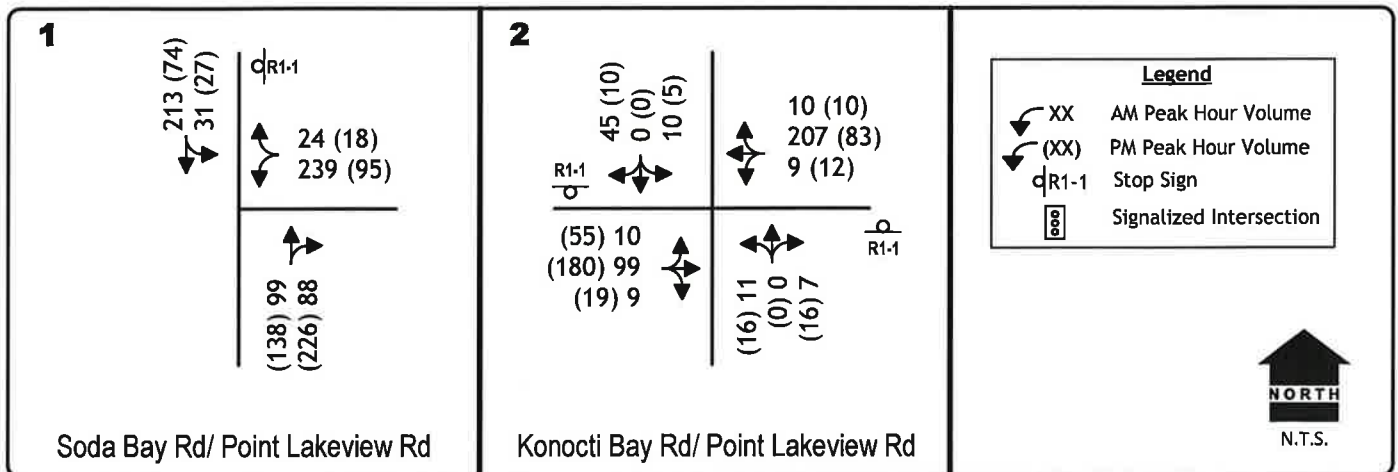


CUMULATIVE TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

7240-11 RA 7/06/2016

figure 7



CUMULATIVE PLUS PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

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figure 8

TABLE 10 CUMULATIVE PLUS PROJECT PEAK HOUR LEVELS OF SERVICE (YEAR 2016)										
Location	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warranted?
		Cumulative		Plus Project		Cumulative		Plus Project		
		LOS	Average Delay (sec/veh)	LOS	Average Delay (sec /veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	
SR 281 / Point Lakeview Rd	WB Stop									No
Westbound left+right turn		C	19	C	20	B	13	B	14	
Southbound left turn		A	1	A	1	A	2	A	3	
Point Lakeview Rd / Konocti Bay Rd	SB / NB Stop									No
Southbound left+right turn		B	10	B	10	B	10	B	12	
Northbound left+right turn		-	-	B	11	-	-	B	11	
Eastbound left turn		A	1	A	1	A	2	A	2	
Westbound left turn		-	-	A	1	-	-	A	1	

Left Turn Lane Channelization. The combination of opposing and advancing vehicles at the SR 281 / Point Lakeview Road intersection in the Year 2036 has been reviewed and compared to AASHTO guidelines to determine whether a separate westbound left turn lane is justified. While the greatest number of left turns will be expected during the a.m. peak hour, at that time the intersection would not justify a separate left turn lane. As shown in Table 11, the forecast traffic volumes still fall below the range that suggests a separate left turn lane is needed. Because the volume of traffic at the sight access is lower, a left turn lane would not be needed.

TABLE 11 TRAFFIC VOLUMES JUSTIFYING LEFT TURN LANES CUMULATIVE PLUS PROJECT VOLUMES				
Opposing Volume (veh/hr)	Advancing Volume (veh/hr)			
	5% Left Turns	10% Left Turns	20% Left Turns	30% Left Turns
40-mph operating speed				
800	330	240	180	160
600	410	305	225	200
400	510	380	275	245
200	640	470	350	305
100	720	515	390	340
50-mph operating speed				
800	280	210	165	135
600	350	260	195	170
400	430	320	240	210
364			101	
200	550	400	300	270
187		244		
100	615	445	335	295
Source: <i>A Policy on Geometric Design of Highway and Streets, AASHTO, 2012.</i>				
Year 2036 Plus Project AM Peak Hour at SR 281 / Point Lakeview Road				
Year 2036 Plus Project PM Peak Hour at SR 281 / Point Lakeview Road				

APPENDIX

ALL TRAFFIC DATA

7240-11

Lake County
All Vehicles & Utturns On Unshifted
Nothing On Bank 1
Nothing On Bank 2

(816) 771-8700
order@atdtraffic.com

File Name : 16-7467-001 Konocit Bay Road & Point Lakeview Road
Date : 6/28/2016

Unshifted Count = All Vehicles & Utturns

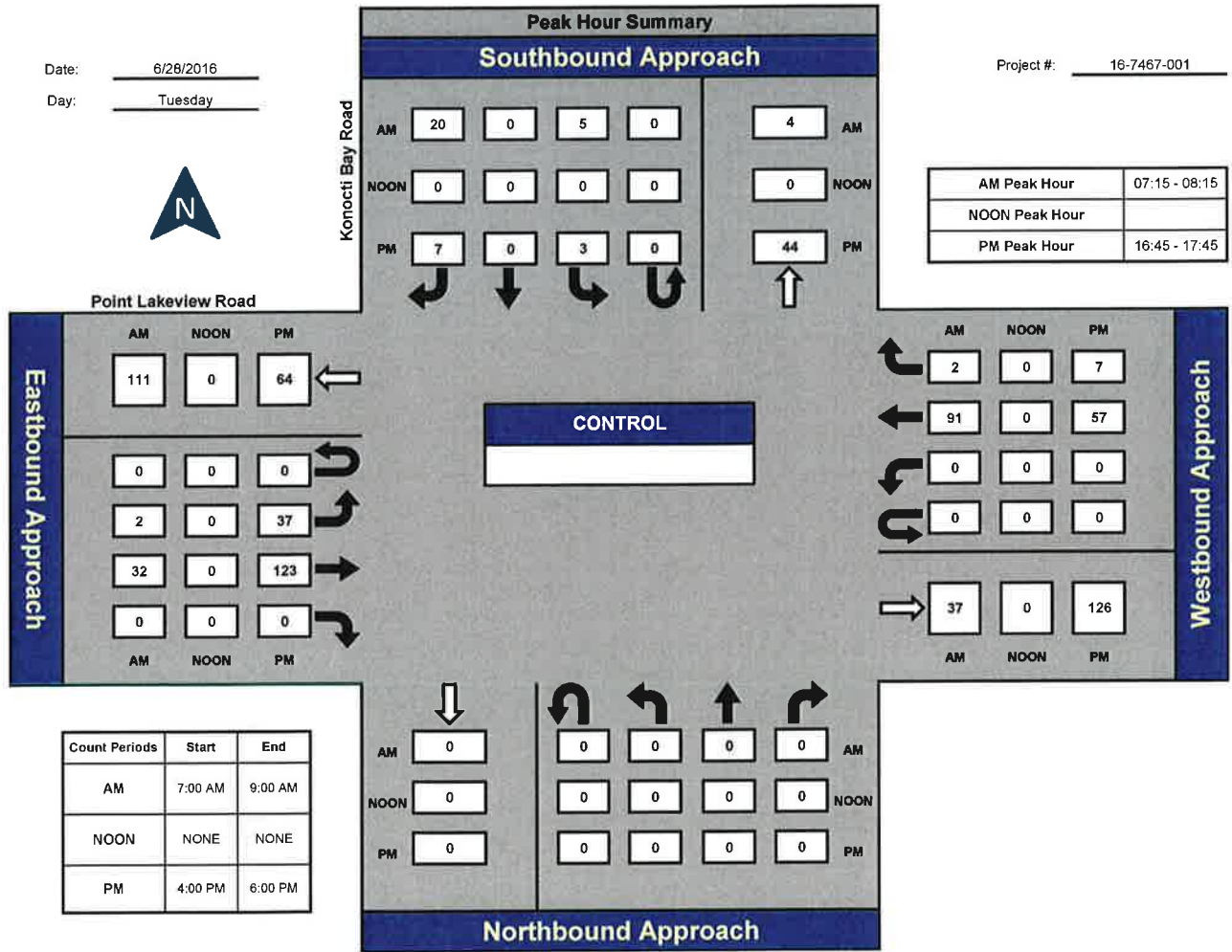
START TIME	Konocit Bay Road Southbound					Point Lakeview Road Westbound					Konocit Bay Road Northbound					Point Lakeview Road Eastbound					Total	Utturns Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL		
7:00	0	0	5	0	5	0	21	1	0	22	0	0	0	0	0	1	2	0	0	3	31	0
7:15	0	0	7	0	7	0	20	0	0	20	0	0	0	0	0	0	10	0	0	10	37	0
7:30	2	0	3	0	5	0	24	1	0	25	0	0	0	0	0	1	5	0	0	6	36	0
7:45	1	0	3	0	4	0	27	1	0	28	0	0	0	0	0	1	11	0	0	12	44	0
Total	3	0	19	0	22	0	92	3	0	95	0	0	0	0	0	3	28	0	0	31	148	0
8:00	2	0	7	0	9	0	20	0	0	20	0	0	0	0	0	0	6	0	0	6	35	0
8:15	0	0	2	0	2	0	19	0	0	19	0	0	0	0	0	0	12	0	0	12	33	0
8:30	1	0	5	0	6	0	24	2	0	26	0	0	0	0	0	0	5	0	0	5	37	0
8:45	0	0	3	0	3	0	20	1	0	21	0	0	0	0	0	0	7	0	0	7	31	0
Total	3	0	17	0	20	0	83	3	0	86	0	0	0	0	0	0	30	0	0	30	136	0
16:00	1	0	4	0	5	0	15	2	0	17	0	0	0	0	0	3	23	0	0	26	48	0
16:15	2	0	6	0	8	0	15	1	0	16	0	0	0	0	0	6	18	0	0	24	48	0
16:30	1	0	3	0	4	0	11	0	0	11	0	0	0	0	0	4	25	0	0	29	44	0
16:45	1	0	2	0	3	0	18	0	0	18	0	0	0	0	0	5	26	0	0	31	52	0
Total	5	0	15	0	20	0	59	3	0	62	0	0	0	0	0	18	92	0	0	110	192	0
17:00	0	0	1	0	1	0	10	3	0	13	0	0	0	0	0	10	25	0	0	35	49	0
17:15	1	0	3	0	4	0	11	2	0	13	0	0	0	0	0	0	31	0	0	37	54	0
17:30	1	0	1	0	2	0	18	2	0	20	0	0	0	0	0	16	41	0	0	57	79	0
17:45	1	0	3	0	4	0	12	4	0	16	0	0	0	0	0	4	27	0	0	31	51	0
Total	3	0	8	0	11	0	51	11	0	62	0	0	0	0	0	36	124	0	0	160	233	0
Grand Total	14	0	59	0	73	0	285	20	0	305	0	0	0	0	0	57	274	0	0	331	709	0
Approch %	19.2%	0.0%	80.8%	0.0%	10.3%	0.0%	93.4%	6.6%	0.0%	43.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.2%	82.8%	0.0%	0.0%	46.7%	100.0%	
Total %	2.0%	0.0%	8.3%	0.0%		0.0%	40.2%	2.8%	0.0%		0.0%	0.0%	0.0%	0.0%		8.0%	38.6%	0.0%	0.0%			

AM PEAK HOUR	Konocit Bay Road Southbound					Point Lakeview Road Westbound					Konocit Bay Road Northbound					Point Lakeview Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	0	0	7	0	7	0	20	0	0	20	0	0	0	0	0	0	10	0	0	10	37
7:30	2	0	3	0	5	0	24	1	0	25	0	0	0	0	0	1	5	0	0	6	36
7:45	1	0	3	0	4	0	27	1	0	28	0	0	0	0	0	1	11	0	0	12	44
8:00	2	0	7	0	9	0	20	0	0	20	0	0	0	0	0	0	6	0	0	6	35
Total Volume	5	0	20	0	25	0	91	2	0	93	0	0	0	0	0	2	32	0	0	34	152
% App Total	20.0%	0.0%	80.0%	0.0%		0.0%	97.8%	2.2%	0.0%		0.0%	0.0%	0.0%	0.0%		5.9%	94.1%	0.0%	0.0%		
PHF	.625	.000	.714	.000	.694	.000	.843	.500	.000	.830	.000	.000	.000	.000	.000	.500	.727	.000	.000	.708	.864
PM PEAK HOUR	Konocit Bay Road Southbound					Point Lakeview Road Westbound					Konocit Bay Road Northbound					Point Lakeview Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	1	0	2	0	3	0	18	0	0	18	0	0	0	0	0	5	26	0	0	31	52
17:00	0	0	1	0	1	0	10	3	0	13	0	0	0	0	0	10	25	0	0	35	49
17:15	1	0	3	0	4	0	11	2	0	13	0	0	0	0	0	6	31	0	0	37	54
17:30	1	0	1	0	2	0	18	2	0	20	0	0	0	0	0	16	41	0	0	57	79
Total Volume	3	0	7	0	10	0	57	7	0	64	0	0	0	0	0	37	123	0	0	160	234
% App Total	30.0%	0.0%	70.0%	0.0%		0.0%	89.1%	10.9%	0.0%		0.0%	0.0%	0.0%	0.0%		23.1%	76.9%	0.0%	0.0%		
PHF	.750	.000	.583	.000	.625	.000	.792	.583	.000	.800	.000	.000	.000	.000	.000	.578	.750	.000	.000	.702	.741

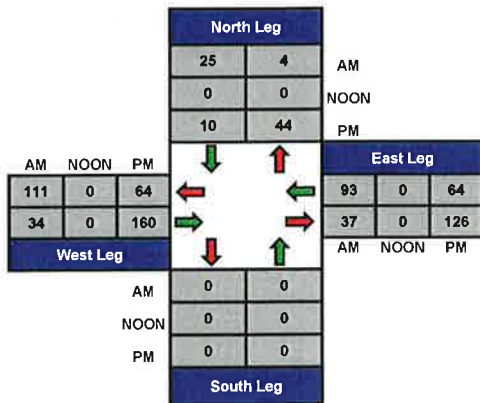
Konocti Bay Road & Point Lakeview Road

Date: 6/28/2016
Day: Tuesday

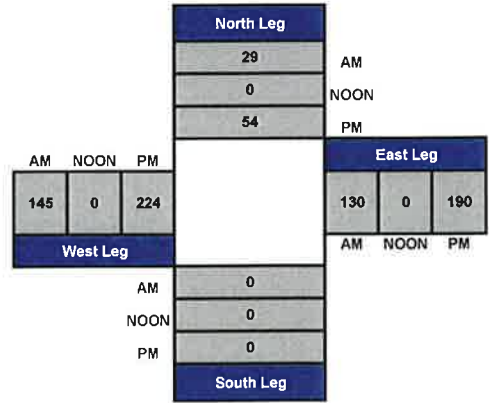
Project #: 16-7467-001



Total Ins & Outs



Total Volume Per Leg



ALL TRAFFIC DATA

7240-11

Lake County
All Vehicles & Uturns On Unshifted
Nothing On Bank 1
Nothing On Bank 2

(916) 771-8700
orders@aldtraffic.com

File Name : 16-7467-002 Soda Bay Road & Point Lakeview Road
Date : 6/28/2016

Unshifted Count - All Vehicles & Uturns

START TIME	Soda Bay Road Southbound					Point Lakeview Road Westbound					Soda Bay Road Northbound					Point Lakeview Road Eastbound					Total	Uturns Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL		
7:00	1	13	0	0	14	26	0	2	0	28	0	5	3	0	8	0	0	0	0	0	58	0
7:15	2	25	0	0	27	27	0	0	0	27	0	8	8	0	16	0	0	0	0	0	70	0
7:30	1	24	0	0	25	27	0	3	0	30	0	7	3	0	10	0	0	0	0	0	65	0
7:45	2	23	0	0	25	25	0	4	0	29	0	6	10	0	16	0	0	0	0	0	70	0
Total	6	85	0	0	91	105	0	9	0	114	0	26	24	0	50	0	0	0	0	0	255	0
8:00	3	24	0	0	27	26	0	1	0	27	0	10	3	0	13	0	0	0	0	0	67	0
8:15	2	14	0	0	16	20	0	1	0	21	0	12	10	0	22	0	0	0	0	0	59	0
8:30	0	13	0	0	13	26	0	3	0	29	0	8	5	0	13	0	0	0	0	0	55	0
8:45	0	15	0	0	15	21	0	1	0	22	0	8	7	0	15	0	0	0	0	0	53	0
Total	5	66	0	0	71	93	0	6	0	99	0	38	25	0	63	0	0	0	0	0	233	0
16:00	1	13	0	0	14	14	0	5	0	19	0	18	23	0	41	0	0	0	0	0	74	0
16:15	3	12	0	0	15	15	0	5	0	20	0	14	20	0	34	0	0	0	0	0	69	0
16:30	5	23	0	0	28	13	0	1	0	14	0	23	25	0	48	0	0	0	0	0	90	0
16:45	4	13	0	0	17	20	0	1	0	21	0	20	25	0	45	0	0	0	0	0	83	0
Total	13	61	0	0	74	62	0	12	0	74	0	75	93	0	168	0	0	0	0	0	316	0
17:00	3	11	0	0	14	10	0	1	0	11	0	27	33	0	60	0	0	0	0	0	85	0
17:15	3	12	0	0	15	10	0	4	0	14	0	16	34	0	50	0	0	0	0	0	79	0
17:30	2	12	0	0	14	18	0	2	0	20	0	29	54	0	83	0	0	0	0	0	117	0
17:45	1	7	0	0	8	11	0	3	0	14	0	12	30	0	42	0	0	0	0	0	84	0
Total	9	42	0	0	51	49	0	10	0	59	0	84	151	0	235	0	0	0	0	0	345	0
Grand Total	33	254	0	0	287	309	0	37	0	346	0	223	293	0	516	0	0	0	0	0	1149	0
Approch %	11.5%	88.5%	0.0%	0.0%	25.0%	89.3%	0.0%	10.7%	0.0%	30.1%	0.0%	43.2%	56.8%	0.0%	44.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Total %	2.9%	22.1%	0.0%	0.0%		26.9%	0.0%	3.2%	0.0%		0.0%	19.4%	25.5%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%		

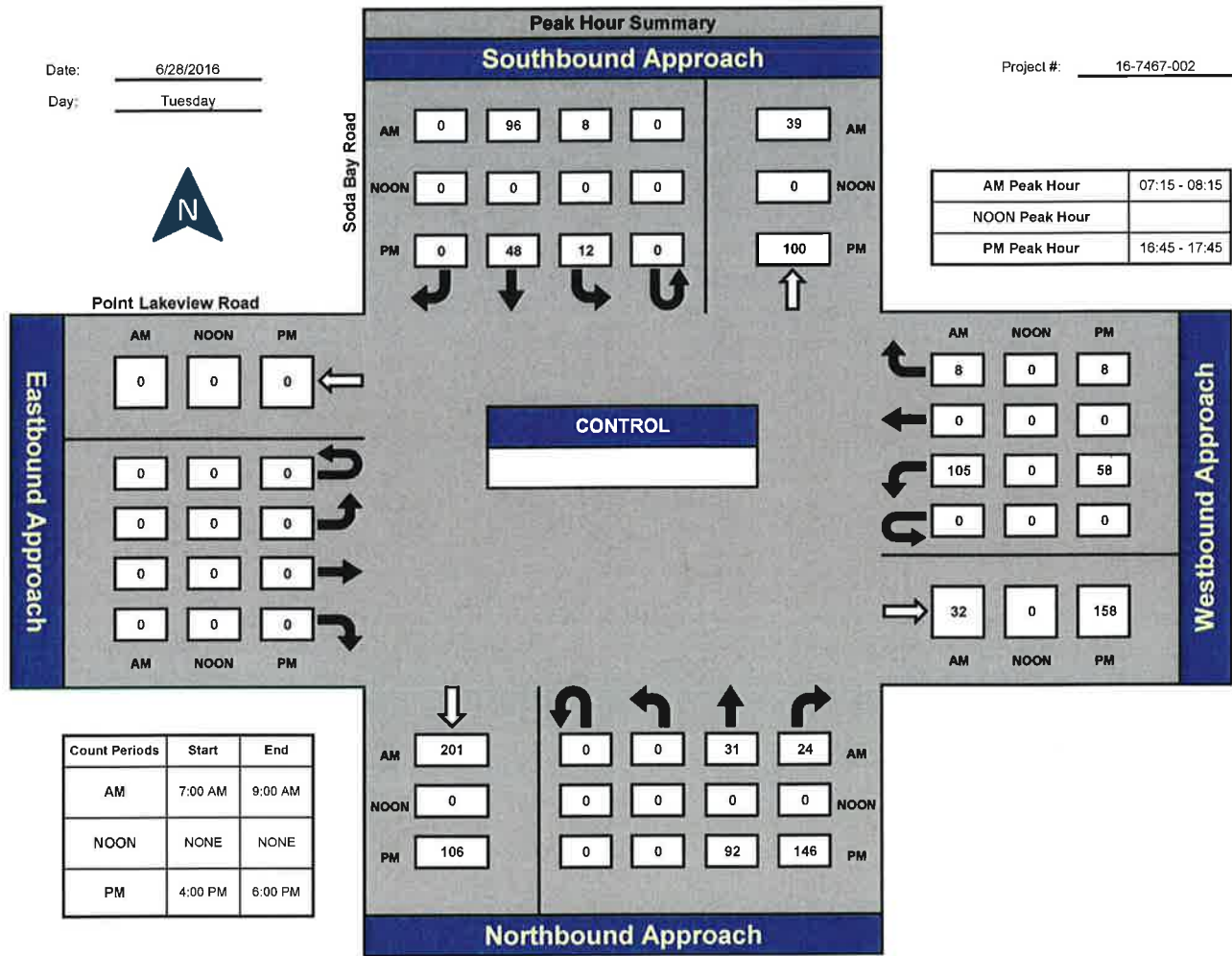
AM PEAK HOUR	Soda Bay Road Southbound					Point Lakeview Road Westbound					Soda Bay Road Northbound					Point Lakeview Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	
Peak Hour Analysis From 07:15 to 08:15																					
Peak Hour For Entire Intersection Begins at 07:15																					
7:15	2	25	0	0	27	27	0	0	0	27	0	8	8	0	16	0	0	0	0	0	70
7:30	1	24	0	0	25	27	0	3	0	30	0	7	3	0	10	0	0	0	0	0	65
7:45	2	23	0	0	25	25	0	4	0	29	0	6	10	0	16	0	0	0	0	0	70
8:00	3	24	0	0	27	26	0	1	0	27	0	10	3	0	13	0	0	0	0	0	87
Total Volume	8	96	0	0	104	105	0	8	0	113	0	31	24	0	55	0	0	0	0	0	272
% App Total	7.7%	92.3%	0.0%	0.0%		92.9%	0.0%	7.1%	0.0%		0.0%	56.4%	43.6%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.667	.960	.000	.000	.963	.972	.000	.500	.000	.942	.000	.775	.600	.000	.859	.000	.000	.000	.000	.000	.971

PM PEAK HOUR	Soda Bay Road Southbound					Point Lakeview Road Westbound					Soda Bay Road Northbound					Point Lakeview Road Eastbound					Total
	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	LEFT	THRU	RIGHT	UTURNS	APP TOTAL	
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	4	13	0	0	17	20	0	1	0	21	0	20	25	0	45	0	0	0	0	0	83
17:00	3	11	0	0	14	10	0	1	0	11	0	27	33	0	60	0	0	0	0	0	85
17:15	3	12	0	0	15	10	0	4	0	14	0	16	34	0	50	0	0	0	0	0	79
17:30	2	12	0	0	14	18	0	2	0	20	0	29	54	0	83	0	0	0	0	0	117
Total Volume	12	48	0	0	60	58	0	6	0	66	0	92	146	0	238	0	0	0	0	0	364
% App Total	20.0%	80.0%	0.0%	0.0%		87.9%	0.0%	12.1%	0.0%		0.0%	38.7%	61.3%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.750	.923	.000	.000	.882	.725	.000	.500	.000	.780	.000	.793	.676	.000	.717	.000	.000	.000	.000	.000	.778

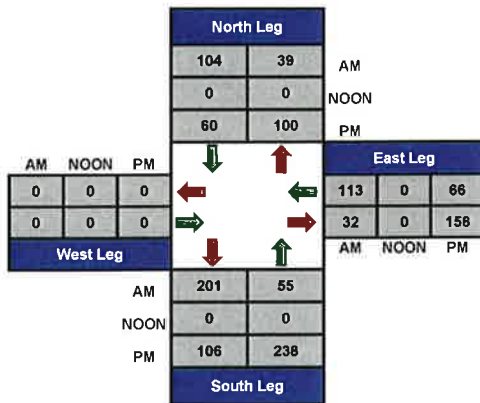
Soda Bay Road & Point Lakeview Road

Date: 6/28/2016
Day: Tuesday

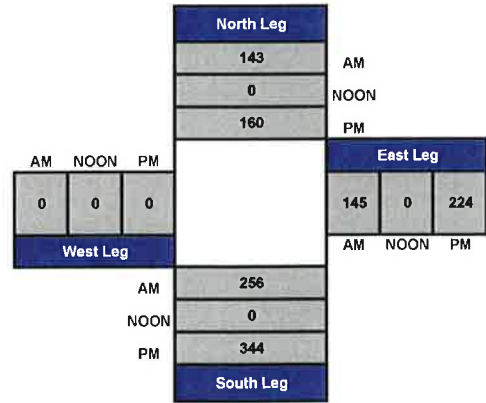
Project #: 16-7467-002



Total Ins & Outs



Total Volume Per Leg



HCM Unsignalized Intersection Capacity Analysis

1: SODA BAY RD (SR 281) & POINT LAEKVIEW RD

EXISTING AM
7/6/2016















Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	105	8	31	24	8	96
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	122	9	36	28	9	112
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	180	50			64	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	180	50			64	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	85	99			99	
cM capacity (veh/h)	804	1018			1538	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	131	64	121
Volume Left	122	0	9
Volume Right	9	28	0
cSH	817	1700	1538
Volume to Capacity	0.16	0.04	0.01
Queue Length 95th (ft)	14	0	0
Control Delay (s)	10.3	0.0	0.6
Lane LOS	B		A
Approach Delay (s)	10.3	0.0	0.6
Approach LOS	B		

Intersection Summary			
Average Delay		4.5	
Intersection Capacity Utilization		24.6%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
5: POINT LAKEVIEW ROAD & DOLLAR GENERAL ACCESS

EXISTING AM
7/6/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	2	32	0	0	91	2	0	0	0	5	0	20
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	2	37	0	0	106	2	0	0	0	6	0	23
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	108			37			172	150	37	149	149	107
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	108			37			172	150	37	149	149	107
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	99	100	98
cM capacity (veh/h)	1482			1573			771	740	1035	818	742	947
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	40	108	0	29								
Volume Left	2	0	0	6								
Volume Right	0	2	0	23								
cSH	1482	1573	1700	918								
Volume to Capacity	0.00	0.00	0.00	0.03								
Queue Length 95th (ft)	0	0	0	2								
Control Delay (s)	0.4	0.0	0.0	9.0								
Lane LOS	A		A	A								
Approach Delay (s)	0.4	0.0	0.0	9.0								
Approach LOS			A	A								
Intersection Summary												
Average Delay			1.6									
Intersection Capacity Utilization			14.9%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

1: SODA BAY RD (SR 281) & Point Lakeview

EXISTING PM
7/6/2016

















	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↖		↑			↗↘
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	58	8	92	146	12	48
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	74	10	118	187	15	62
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	304	212			305	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	304	212			305	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	89	99			99	
cM capacity (veh/h)	680	829			1256	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	85	305	77
Volume Left	74	0	15
Volume Right	10	187	0
cSH	695	1700	1256
Volume to Capacity	0.12	0.18	0.01
Queue Length 95th (ft)	10	0	1
Control Delay (s)	10.9	0.0	1.7
Lane LOS	B		A
Approach Delay (s)	10.9	0.0	1.7
Approach LOS	B		

Intersection Summary			
Average Delay		2.3	
Intersection Capacity Utilization		24.2%	ICU Level of Service
Analysis Period (min)		15	A

HCM Unsignalized Intersection Capacity Analysis
5: POINT LAKEVIEW ROAD & DOLLAR GENERAL ACCESS







EXISTING PM
7/6/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	37	123	0	0	57	7	0	0	0	3	0	7
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	50	166	0	0	77	9	0	0	0	4	0	9
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	86			166			357	353	166	348	348	82
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	86			166			357	353	166	348	348	82
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			100	100	100	99	100	99
cM capacity (veh/h)	1510			1412			577	553	878	591	557	978
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	216	86	0	14								
Volume Left	50	0	0	4								
Volume Right	0	9	0	9								
cSH	1510	1412	1700	818								
Volume to Capacity	0.03	0.00	0.00	0.02								
Queue Length 95th (ft)	3	0	0	1								
Control Delay (s)	1.9	0.0	0.0	9.5								
Lane LOS	A		A	A								
Approach Delay (s)	1.9	0.0	0.0	9.5								
Approach LOS			A	A								
Intersection Summary												
Average Delay			1.7									
Intersection Capacity Utilization			25.2%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
1: POINT LAKEVIEW RD & SODA BAY RD (SR 281)













BASELINE AM

7/6/2016

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑			↑
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	154	15	65	56	17	145
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	179	17	76	65	20	169
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	316	108			141	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	316	108			141	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	73	98			99	
cM capacity (veh/h)	667	946			1442	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	197	141	188			
Volume Left	179	0	20			
Volume Right	17	65	0			
cSH	685	1700	1442			
Volume to Capacity	0.29	0.08	0.01			
Queue Length 95th (ft)	30	0	1			
Control Delay (s)	12.4	0.0	0.9			
Lane LOS	B		A			
Approach Delay (s)	12.4	0.0	0.9			
Approach LOS	B					
Intersection Summary						
Average Delay		4.9				
Intersection Capacity Utilization		34.9%		ICU Level of Service		A
Analysis Period (min)		15				










HCM Unsignalized Intersection Capacity Analysis
5: POINT LAKEVIEW RD & KONOCTI BAY ROAD

BASELINE AM
7/6/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	7	67	0	0	139	5	0	0	0	8	0	28
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	8	78	0	0	162	6	0	0	0	9	0	33
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	167			78			291	262	78	259	259	165
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	167			78			291	262	78	259	259	165
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	99	100	96
cM capacity (veh/h)	1410			1521			634	640	983	691	642	880
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	86	167	0	42								
Volume Left	8	0	0	9								
Volume Right	0	6	0	33								
cSH	1410	1521	1700	830								
Volume to Capacity	0.01	0.00	0.00	0.05								
Queue Length 95th (ft)	0	0	0	4								
Control Delay (s)	0.8	0.0	0.0	9.6								
Lane LOS	A		A	A								
Approach Delay (s)	0.8	0.0	0.0	9.6								
Approach LOS			A	A								
Intersection Summary												
Average Delay			1.6									
Intersection Capacity Utilization			19.4%		ICU Level of Service				A			
Analysis Period (min)			15									













HCM Unsignalized Intersection Capacity Analysis
1: POINT LAKEVIEW RD & SODA BAY RD (SR 281)

BASELINE PM
7/6/2016

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	58	8	92	146	12	48
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	74	10	118	187	15	62
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	304	212			305	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	304	212			305	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	89	99			99	
cM capacity (veh/h)	680	829			1256	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	85	305	77			
Volume Left	74	0	15			
Volume Right	10	187	0			
cSH	695	1700	1256			
Volume to Capacity	0.12	0.18	0.01			
Queue Length 95th (ft)	10	0	1			
Control Delay (s)	10.9	0.0	1.7			
Lane LOS	B		A			
Approach Delay (s)	10.9	0.0	1.7			
Approach LOS	B					
Intersection Summary						
Average Delay			2.3			
Intersection Capacity Utilization	24.2%		ICU Level of Service		A	
Analysis Period (min)	15					










HCM Unsignalized Intersection Capacity Analysis
5: POINT LAKEVIEW RD & KONOCTI BAY ROAD

BASELINE PM
7/6/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	37	123	0	0	57	7	0	0	0	3	0	7
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	50	166	0	0	77	9	0	0	0	4	0	9
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	86			166			357	353	166	348	348	82
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	86			166			357	353	166	348	348	82
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			100	100	100	99	100	99
cM capacity (veh/h)	1510			1412			577	553	878	591	557	978
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	216	86	0	14								
Volume Left	50	0	0	4								
Volume Right	0	9	0	9								
cSH	1510	1412	1700	818								
Volume to Capacity	0.03	0.00	0.00	0.02								
Queue Length 95th (ft)	3	0	0	1								
Control Delay (s)	1.9	0.0	0.0	9.5								
Lane LOS	A		A	A								
Approach Delay (s)	1.9	0.0	0.0	9.5								
Approach LOS			A	A								
Intersection Summary												
Average Delay			1.7									
Intersection Capacity Utilization			25.2%		ICU Level of Service		A					
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
1: POINT LAKEVIEW RD & SODA BAY RD (SR 281)

BASELINE AM PLUS PROJECT
7/6/2016

















						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	158	19	64	60	22	143
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	184	22	74	70	26	166
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	327	109			144	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	327	109			144	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	72	98			98	
cM capacity (veh/h)	656	944			1438	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	206	144	192
Volume Left	184	0	26
Volume Right	22	70	0
cSH	678	1700	1438
Volume to Capacity	0.30	0.08	0.02
Queue Length 95th (ft)	32	0	1
Control Delay (s)	12.6	0.0	1.1
Lane LOS	B		A
Approach Delay (s)	12.6	0.0	1.1
Approach LOS	B		

Intersection Summary			
Average Delay		5.2	
Intersection Capacity Utilization		35.7%	ICU Level of Service
Analysis Period (min)		15	A










HCM Unsignalized Intersection Capacity Analysis
5: POINT LAKEVIEW RD & KONOCTI BAY ROAD

BASELINE AM PLUS PROJECT
7/6/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	7	66	9	9	136	5	11	0	7	8	0	28
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	8	77	10	10	158	6	13	0	8	9	0	33
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	164			87			313	283	82	288	285	161
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	164			87			313	283	82	288	285	161
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			98	100	99	99	100	96
cM capacity (veh/h)	1414			1509			610	618	978	652	616	884
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	95	174	21	42								
Volume Left	8	10	13	9								
Volume Right	10	6	8	33								
cSH	1414	1509	715	819								
Volume to Capacity	0.01	0.01	0.03	0.05								
Queue Length 95th (ft)	0	1	2	4								
Control Delay (s)	0.7	0.5	10.2	9.6								
Lane LOS	A	A	B	A								
Approach Delay (s)	0.7	0.5	10.2	9.6								
Approach LOS			B	A								
Intersection Summary												
Average Delay			2.3									
Intersection Capacity Utilization			19.6%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
1: SODA BAY RD (SR 281) &

EXISTING PM PLUS PROJECT
7/6/2016

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	63	16	90	152	19	47
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	81	21	115	195	24	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	322	213			310	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	322	213			310	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	88	98			98	
cM capacity (veh/h)	659	827			1250	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	101	310	85
Volume Left	81	0	24
Volume Right	21	195	0
cSH	687	1700	1250
Volume to Capacity	0.15	0.18	0.02
Queue Length 95th (ft)	13	0	1
Control Delay (s)	11.1	0.0	2.4
Lane LOS	B		A
Approach Delay (s)	11.1	0.0	2.4
Approach LOS	B		

















Intersection Summary			
Average Delay		2.7	
Intersection Capacity Utilization		30.3%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis

EXISTING PM PLUS PROJECT










5: POINT LAKEVIEW ROAD & DOLLAR GENERAL ACCESS

7/6/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	37	118	19	9	55	7	16	0	16	3	0	7
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	50	159	26	12	74	9	22	0	22	4	0	9
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	84			185			385	380	172	397	389	79
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	84			185			385	380	172	397	389	79
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			96	100	98	99	100	99
cM capacity (veh/h)	1513			1389			550	529	871	531	524	981
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	235	96	43	14								
Volume Left	50	12	22	4								
Volume Right	26	9	22	9								
cSH	1513	1389	674	783								
Volume to Capacity	0.03	0.01	0.06	0.02								
Queue Length 95th (ft)	3	1	5	1								
Control Delay (s)	1.8	1.0	10.7	9.7								
Lane LOS	A	A	B	A								
Approach Delay (s)	1.8	1.0	10.7	9.7								
Approach LOS			B	A								
Intersection Summary												
Average Delay			2.9									
Intersection Capacity Utilization			25.3%		ICU Level of Service		A					
Analysis Period (min)			15									













HCM Unsignalized Intersection Capacity Analysis
1: POINT LAKEVIEW RD & SODA BAY RD (SR 281)

CUMULATIVE AM
7/6/2016

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	235	20	100	85	25	215
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	273	23	116	99	29	250
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	474	166			215	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	474	166			215	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	49	97			98	
cM capacity (veh/h)	537	879			1355	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	297	215	279			
Volume Left	273	0	29			
Volume Right	23	99	0			
cSH	554	1700	1355			
Volume to Capacity	0.53	0.13	0.02			
Queue Length 95th (ft)	79	0	2			
Control Delay (s)	18.7	0.0	1.0			
Lane LOS	C		A			
Approach Delay (s)	18.7	0.0	1.0			
Approach LOS	C					
Intersection Summary						
Average Delay		7.4				
Intersection Capacity Utilization		47.4%		ICU Level of Service		A
Analysis Period (min)		15				










HCM Unsignalized Intersection Capacity Analysis 5: POINT LAKEVIEW RD & KONOCTI BAY ROAD

CUMULATIVE AM
7/6/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	100	0	0	210	10	0	0	0	10	0	45
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	12	116	0	0	244	12	0	0	0	12	0	52
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	256			116			442	395	116	390	390	250
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	256			116			442	395	116	390	390	250
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			100			100	100	100	98	100	93
cM capacity (veh/h)	1309			1472			488	537	936	566	541	789
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	128	256	0	64								
Volume Left	12	0	0	12								
Volume Right	0	12	0	52								
cSH	1309	1472	1700	736								
Volume to Capacity	0.01	0.00	0.00	0.09								
Queue Length 95th (ft)	1	0	0	7								
Control Delay (s)	0.8	0.0	0.0	10.4								
Lane LOS	A		A	B								
Approach Delay (s)	0.8	0.0	0.0	10.4								
Approach LOS			A	B								
Intersection Summary												
Average Delay			1.7									
Intersection Capacity Utilization			23.6%		ICU Level of Service				A			
Analysis Period (min)			15									

















HCM Unsignalized Intersection Capacity Analysis
1: POINT LAKEVIEW RD & SODA BAY RD (SR 281)

CUMULATIVE AM PLUS PROJECT
7/6/2016

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	239	24	99	88	31	213
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	278	28	115	102	36	248
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	486	166			217	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	486	166			217	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	47	97			97	
cM capacity (veh/h)	526	878			1352	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	306	217	284			
Volume Left	278	0	36			
Volume Right	28	102	0			
cSH	546	1700	1352			
Volume to Capacity	0.56	0.13	0.03			
Queue Length 95th (ft)	86	0	2			
Control Delay (s)	19.7	0.0	1.2			
Lane LOS	C		A			
Approach Delay (s)	19.7	0.0	1.2			
Approach LOS	C					
Intersection Summary						
Average Delay			7.9			
Intersection Capacity Utilization			48.2%	ICU Level of Service	A	
Analysis Period (min)			15			










HCM Unsignalized Intersection Capacity Analysis 5: POINT LAKEVIEW RD & KONOCTI BAY ROAD

CUMULATIVE AM PLUS PROJECT
7/6/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	99	9	9	207	10	11	0	7	10	0	45
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	12	115	10	10	241	12	13	0	8	12	0	52
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	252			126			463	417	120	419	416	247
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	252			126			463	417	120	419	416	247
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			97	100	99	98	100	93
cM capacity (veh/h)	1313			1461			469	518	931	533	519	792
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	137	263	21	64								
Volume Left	12	10	13	12								
Volume Right	10	12	8	52								
cSH	1313	1461	582	728								
Volume to Capacity	0.01	0.01	0.04	0.09								
Queue Length 95th (ft)	1	1	3	7								
Control Delay (s)	0.7	0.4	11.4	10.4								
Lane LOS	A	A	B	B								
Approach Delay (s)	0.7	0.4	11.4	10.4								
Approach LOS			B	B								
Intersection Summary												
Average Delay			2.3									
Intersection Capacity Utilization			23.6%		ICU Level of Service				A			
Analysis Period (min)			15									

















HCM Unsignalized Intersection Capacity Analysis 1: SODA BAY RD (SR 281) & ~~POINT LAKEVIEW~~ *LAKEVIEW*

CUMULATIVE PM
7/6/2016

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	90	10	140	220	20	75
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	115	13	179	282	26	96
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	468	321			462	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	468	321			462	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	79	98			98	
cM capacity (veh/h)	541	720			1100	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	128	462	122			
Volume Left	115	0	26			
Volume Right	13	282	0			
cSH	554	1700	1100			
Volume to Capacity	0.23	0.27	0.02			
Queue Length 95th (ft)	22	0	2			
Control Delay (s)	13.4	0.0	1.9			
Lane LOS	B		A			
Approach Delay (s)	13.4	0.0	1.9			
Approach LOS	B					
Intersection Summary						
Average Delay			2.7			
Intersection Capacity Utilization	33.5%		ICU Level of Service		A	
Analysis Period (min)	15					










HCM Unsignalized Intersection Capacity Analysis 5: POINT LAKEVIEW ROAD & DOLLAR GENERAL ACCESS

CUMULATIVE PM
7/6/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	55	185	0	0	85	10	0	0	0	5	0	10
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	74	250	0	0	115	14	0	0	0	7	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												
vC, conflicting volume	128			250			534	527	250	520	520	122
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	128			250			534	527	250	520	520	122
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			100			100	100	100	98	100	99
cM capacity (veh/h)	1457			1316			433	433	789	448	437	930
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	324	128	0	20								
Volume Left	74	0	0	7								
Volume Right	0	14	0	14								
cSH	1457	1316	1700	685								
Volume to Capacity	0.05	0.00	0.00	0.03								
Queue Length 95th (ft)	4	0	0	2								
Control Delay (s)	2.1	0.0	0.0	10.4								
Lane LOS	A		A	B								
Approach Delay (s)	2.1	0.0	0.0	10.4								
Approach LOS			A	B								
Intersection Summary												
Average Delay			1.9									
Intersection Capacity Utilization			29.4%		ICU Level of Service				A			
Analysis Period (min)			15									

















HCM Unsignalized Intersection Capacity Analysis
1: POINT LAKEVIEW RD & SODA BAY RD (SR 281)

CUMULATIVE PM PLUS PROJECT
7/6/2016

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	95	18	138	226	27	74
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	122	23	177	290	35	95
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	486	322			467	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	486	322			467	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	77	97			97	
cM capacity (veh/h)	523	719			1095	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	145	467	129			
Volume Left	122	0	35			
Volume Right	23	290	0			
cSH	547	1700	1095			
Volume to Capacity	0.26	0.27	0.03			
Queue Length 95th (ft)	26	0	2			
Control Delay (s)	13.9	0.0	2.5			
Lane LOS	B		A			
Approach Delay (s)	13.9	0.0	2.5			
Approach LOS	B					
Intersection Summary						
Average Delay		3.2				
Intersection Capacity Utilization		40.6%		ICU Level of Service		A
Analysis Period (min)		15				

HCM Unsignalized Intersection Capacity Analysis
5: POINT LAKEVIEW RD & KONOCTI BAY ROAD

CUMULATIVE PM PLUS PROJECT
7/6/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	55	180	19	12	83	10	16	0	16	5	0	10
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Hourly flow rate (vph)	74	243	26	16	112	14	22	0	22	7	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												
vC, conflicting volume	126			269			570	563	256	578	569	119
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	126			269			570	563	256	578	569	119
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			95	100	97	98	100	99
cM capacity (veh/h)	1461			1295			406	408	783	395	405	933
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	343	142	43	20								
Volume Left	74	16	22	7								
Volume Right	26	14	22	14								
cSH	1461	1295	534	642								
Volume to Capacity	0.05	0.01	0.08	0.03								
Queue Length 95th (ft)	4	1	7	2								
Control Delay (s)	2.0	1.0	12.3	10.8								
Lane LOS	A	A	B	B								
Approach Delay (s)	2.0	1.0	12.3	10.8								
Approach LOS			B	B								
Intersection Summary												
Average Delay			2.9									
Intersection Capacity Utilization			30.3%		ICU Level of Service				A			
Analysis Period (min)			15									



ALH Urban & Regional Economics

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May 27, 2016

Mr. Shane Harvey
Mr. Joe Dell
Cross Development, LLC
17430 Campbell Road, Suite 225
Dallas, TX 75252

Re: Dollar General Economic Analysis in Clearlake Riviera, California

Dear Messrs. Harvey and Dell:

ALH Urban & Regional Economics (ALH Economics) has prepared a brief economic analysis of the proposed Dollar General store in Clearlake Riviera, California. The purpose of the analysis is to demonstrate the degree of potential market support for the store and an assessment of the potential for the store to coexist with existing retailers already present in Clearlake Riviera. To accomplish this analysis, ALH Economics engaged in the following tasks:

- Obtained information about the planned Dollar General store
- Reviewed Dollar General documents regarding store sales, operations, and typical market draw
- Visited the prospective store site and surrounding retail establishments
- Estimated the likely market area for Dollar General store draw
- Estimated market area retail demand
- Analyzed anticipated Dollar General sales in the context of market area demand
- Assessed the implications of Dollar General's operations in Clearlake Riviera

A summary of the task findings follows. These findings are subject to the assumptions and general limiting conditions included at the end of the report. Select tables are included in the text, with exhibits presented in Appendix A. For general information purposes a description of ALH Economics and resume of the firm Principal, Amy L. Herman, is included in the Appendix B.

PROPOSED DOLLAR GENERAL STORE

Dollar General is seeking to open a Dollar General store in Clearlake Riviera, California, located at the southeast corner of Point Lakeview Road and Soda Bay Road/State Highway 281. The site is also bounded by Emerald Drive to the east and Broadmoor Way to the south. The wooded site is currently improved with an approximately 3,120-square-foot commercial structure with approximately eight tenant spaces, only one of which is occupied with a personal care services tenant. Other commercial uses close to the site include attorney's offices and an auto service shop to the south on Broadmoor Way and a real estate office to the southwest also on Broadmoor Way. The site is generally located at the northernmost end of Clearlake Riviera's limited commercial district.

Clearlake Riviera is one of several small communities in Lake County, which generally ring Clear Lake. Clearlake Riviera is less than a mile distant from the lake. Known as a golf course community, a significant feature of Clearlake Riviera is the Riviera Hills Golf Club and Country Club, a 9-hole public golf course with a restaurant and a private club with tennis courts and pools.

Clearlake Riviera is a census-designated place (CDP), with an estimated 2010 population of 3,090. This was a small increase over the estimated year 2000 population of 2,283. Current estimates prepared by Nielsen, a national vendor of economic and demographic data based upon sophisticated modeling techniques, suggest the Clearlake Riviera population is slightly lower than the 2010 level at 2,848. The city closest to Clearlake Riviera is Clearlake, located 13.5 miles to the east. The estimated travel time to the center of Clearlake from Clearlake Riviera is about 17 minutes. The next nearest city to Clearlake Riviera is Lakeport, which is 16.1 miles to the west of Clearlake Riviera, with a travel time of 20 minutes. The next nearest cities of some substance include Ukiah, located 45 miles to the northwest of Clearlake Riviera, and Santa Rosa, located 57 miles to the southwest of Clearlake Riviera. Thus, Clearlake Riviera is located quite a distance from more heavily populated areas with substantial retail shopping opportunities.

The proposed Dollar General store will be developed on a 1.56-acre site in Clearlake Riviera that currently has a small commercial structure totaling 3,120 square feet that will be demolished. The store is anticipated to total 9,100 square feet, of which approximately 7,302 square feet will comprise sales floor area. The balance of the space will comprise a range of uses, such as office, break room, restrooms, restroom corridor, storage area, etc. The Dollar General store will be developed at the northern edge of Clearlake Riviera's commercial district, which includes an older shopping center and several additional one or two story commercial structures. There is an additional convenience-oriented store and several commercial uses at Kit's Corner about 2.0 miles south on Soda Bay Road at the turnoff from Highway 29 for Clearlake Riviera.

DOLLAR GENERAL STORE OPERATIONS INFORMATION

Dollar General is a discount general merchandise retailer offering a broad selection of merchandise, including consumables, seasonal, home products, and apparel. The store merchandise includes high quality national brands from leading manufacturers as well as comparable quality private brand selections with prices at substantial discounts to national brands, including a Dollar General brand. The store's product offerings include most necessities, such as basic packaged and refrigerated food and dairy products, cleaning supplies, paper products, health and beauty care items, basic apparel, housewares, hardware and automotive supplies, among others. Across all Dollar General stores the average selling space is about 7,400 square feet. Through its broad merchandise offering, Dollar General seeks to enable customers to fulfill their routine shopping requirements.¹

Dollar General differentiates itself from other retailers by offering low prices in a small-store format. Dollar General locates its stores in a variety of rural, suburban, and urban communities, with

¹ See Dollar General Corp, Form 10-K, Filed 3/22/16 for the Period Ending 01/29/16, pages 3 and 4 for most of the information in this paragraph.

approximately 70% serving communities with populations of fewer than 20,000. According to materials published by Dollar General, the stores are located in close proximity to their customers.²

In 2015, average net store sales totaled \$226 per square foot throughout the U.S. This figure comprised modest increases over prior year figures, which were \$223 in 2014, \$220 in 2013, and \$216 in 2012.³ These net sales figures were calculated by Dollar General based on average selling square footage of Dollar General stores. Assuming a modest increase in sales for 2016 similar to past year increases, this results in a 2016 store sales estimate of \$229 per square foot. As average figures, these sales estimates most directly pertain to mature stores that have achieved stabilized sales. Typically, stores achieve stabilization over time, such as up to three years.

While the \$229 per square foot figure pertains to mature stores, this analysis conservatively assumes that the Clearlake Riviera Dollar General store will perform consistent with the retailer's national average. This results in a stabilized store sales estimate of \$1,674,510 in 2016 dollars (i.e., 7,302 square feet of sales area x \$229 per square foot), which rounds to \$1.7 million. As noted, this is a figure that typically pertains to mature, or stabilized, stores, not new stores during the initial ramp up period. As such, initial sales at the proposed Clearlake Riviera store are likely to be lower than this \$1.7 million estimate, but the analysis is conservatively benchmarked to a stabilized estimate of sales.

As noted above, Dollar General categorizes store sales into four major merchandising categories – consumables, seasonal, home products, and apparel. The percentage of store sales occurring across these categories, and the type of merchandise represented, is summarized in Table 1.

Table 1. Dollar General Merchandise Categories

Category	Percent of Sales	Type of Merchandise
Consumables	75.9%	Paper and cleaning products, packaged food, perishables, snacks, health and beauty, pet, and tobacco products
Seasonal	12.4%	Decorations, toys, batteries, small electronics, greeting cards, stationery, prepaid phones and accessories, gardening supplies, hardware, automotive, and home office supplies
Home Products	6.3%	Kitchen supplies, cookware, small appliances, light bulbs, storage containers, frames, candles, craft supplies, and kitchen, bed, and bath soft goods
Apparel	5.4%	Casual everyday apparel for infants, toddlers, girls, boys, women and men, including socks, underwear, disposable diapers, shoes, and accessories

Source: Dollar General Corp., Form 10-K, Filed 03/22/16 for the Period Ending 01/29/16, p 4.

² See Dollar General Corp, Form 10-K, Filed 3/22/16 for the Period Ending 01/29/16, pages 3 and 4 for most of the information in this paragraph.

³ Ibid, page 22.

Based upon these store sales categories, and the \$1.7 million Clearlake Riviera store sales estimate, the Clearlake Riviera Dollar General store sales would be distributed by category as presented in Table 2. This information indicates that approximately \$1.3 million in store sales is estimated to comprise consumables, including food as well as non-food items. With respect to food items, based upon field visits to Dollar General stores in several California locations, these consumables do not include fresh produce such as fruits and vegetables. In addition, Dollar General carries a limited array of meats and cheeses, and does not include typical butcher or seafood counter food items. Further, while Dollar General sells beer and wine, these options are limited, and the store does not sell other types of alcohol products such as hard liquor. Dollar General also does not sell the type of prepared food items typically found in a deli or hot food counter in a grocery store or some convenience markets.

**Table 2. Estimated Distribution of
Clearlake Riviera Dollar General Sales**

Category	Percent of Sales	Sales
Consumables	75.9%	\$1,270,953
Seasonal	12.4%	\$207,639
Home Products	6.3%	\$105,494
Apparel	5.4%	\$90,424
	<u>100.0%</u>	<u>\$1,674,510</u>

Sources: Table 1 and ALH Urban & Regional
Economics.

Thus, while Dollar General sells many food items, the options are limited, including the range of food products, requiring consumers seeking a wider range of products to continue to shop elsewhere.

EXISTING CLEARLAKE RIVIERA CONDITIONS

Clearlake Riviera's commercial establishments are clustered on Soda Bay Road, just south of Point Lakeview Road. This cluster is located about 1.8 to 2.0 miles north of the Highway 29 turnoff to Clearlake Riviera. There is a gas station right at Highway 29 and Soda Bay Road that includes a gas station convenience store, Kit's Corner, along with other retail and service establishments, including an audio store, hair salon, pet groomer, and real estate office. The convenience store is a fairly typical gas station convenience store, selling snacks, drinks, alcohol (beer, wine, and hard liquor), cigarettes, automotive products, fishing supplies, and some household goods such as eggs, butter, milk, pet food, personal care items. The store also sells select canned and boxed food products, gloves (winter, garden, and household), greeting cards, hats, and a very limited supply of fruit. Based on examination of Google-based mapping software, ALH Economics estimates the commercial building at this location totals about 4,500 square feet, of which ALH Economics further generally estimates that one-third is occupied by the convenience store. Overall, the condition of this store, pictured below, is consistent with what one would expect in a small rural community, with the building in reasonable, but not pristine condition. There is also a small motel located across a parking lot from this commercial building.



Kits Corner, 7990 CA-29

Riviera Shopping Center, pictured below, is the major commercial center located in Clearlake Riviera. This center, located on the east side of Soda Bay Road between Tenaya Way and Fairway Drive, includes two 24-hour gas pumps, a full-service grocery store, a fitness facility, coffee shop, dentist, packing store, video store, and pizza restaurant. There appears to be one small retail vacancy in this center between the grocery store and fitness center. The full-service grocery store, Riviera Foods, occupies the largest portion of the shopping center space, estimated by ALH Economics based on Google-based mapping software to total about 11,500 square feet (see entryway on next page). This is an approximate estimate. This store features fresh packaged meats, an ample array of fresh fruits and vegetables, a broad selection of canned foods, pasta, cereals and baking goods, frozen seafood, a deli counter with salads and sandwiches made to order, greeting cards and small toys, select small hardware items, holistic food products such as Bob's Red Mill grains, and beer, wine, and hard liquor, and cigarettes. This grocery store is the only full-service grocery store in the portion of Lake County between Clearlake and Lakeport, and thus serves a key portion of Lake County. There are La Monarca Hispanic-oriented markets with meat counters and produce closer than these two cities in Lower Lake to the east and Kelseyville to the west, but these markets are not full-service and focus primarily on Hispanic merchandise options.



Riviera Shopping Center, Soda Bay Road



Entry to Riviera Foods, 9730 Soda Bay Road

Other commercial buildings and establishments along Soda Bay Road include several buildings of similar construction to Riviera Market. Most of these buildings are located on the west side of Soda Bay Road, generally across from the Riviera Shopping Center. These include, below, a two-story structure at 9739 Soda Bay Road housing a hair salon, offices for Forest Product Inspection, and a possible third office tenant. Next to this building is a small one-story office building for the Mount Konocti Mutual Water Company at 9733 Soda Bay Road (not pictured).



9739 Soda Bay Road

Immediately to the north of the preceding cluster of commercial buildings on Soda Bay Road there is a small one-story structure with three commercial establishments, including Alexander Baking (a specialty bakery), Anna's Boutique, and Pear Blossom Beads and Gifts. This building, pictured below, appears to be in moderate physical condition. Up the hill from this building on Fairway Drive is Fairway Plaza, another multi-story commercial structure (not pictured), with multiple tenants including a relocated beauty salon from the commercial building on the proposed Dollar General store site.



Commercial Strip with 3 retail establishments including Alexander Baking, Soda Bay Road

Further, there is a small real estate office located off Soda Bay Road on Broadmoor Way to the north of the Riviera Shopping Center, pictured below. This small building appears to be very well maintained.



9700 Broadmoor Way

In addition to these occupied commercial buildings, there are three vacant or largely vacant properties in Clearlake Riviera. One of these is the site of the former Blue Moon Café, closed earlier this year. This building is located just to the north of the commercial building housing Alexander Baking, at 9703 Soda Bay Road. Across Soda Bay Road from this building on the east side of Soda Bay Road is the most poorly maintained commercial structure in Clearlake Riviera, at what appears to be 9700 Soda Bay Road. During fieldwork observations ALH Economics could not discern the former use for this building, pictured below. Real estate records indicate this building totals 2,435 square feet and is an office structure.⁴ Finally, as noted previously, the commercial building located on the proposed Dollar General store site at 9781 Point Lakeview Road is largely vacant, with only a personal care services tenant occupying space in the building (not pictured).



Vacant building, 9700 Soda Bay Road

The preceding commercial establishments and buildings comprise the bulk of Clearlake Riviera's commercial base. As noted in the site description, there is also a commercial building on Broadmoor Way behind the Dollar General site with attorney's offices and a neighboring auto service provider.

Of the commercial buildings located in Clearlake Riviera, most are in moderate condition. The main exception includes the boarded up vacant office building at 9700 Soda Bay Road. Almost all the commercial buildings in Clearlake Riviera are characterized by the same brick construction material.

Overall, the condition of the commercial real estate in Clearlake Riviera is consistent with what one would expect in a rural community, with most buildings in reasonable, but not pristine condition. Real estate conditions in Clearlake Riviera appear moderate to good, consistent with its function as a lake community that mixes local and some tourism traffic, associated with proximity to Clear Lake and Lake County's growing wine industry. The addition of a Dollar General store with its consumer draw for basic necessities could help strengthen this area-serving focus, enabling area residents to meet more of their shopping needs locally and boosting the visibility and attraction of the existing uses.

⁴ Realquest.

MARKET AREA DEFINITION AND DEMOGRAPHIC CHARACTERISTICS

As noted earlier, Dollar General tends to locate stores in a variety of rural, suburban, and urban communities, with approximately 70% serving communities with populations fewer than 20,000. Clearlake Riviera meets the definition of this type of community with a low population basis. As further noted earlier, Dollar General typically draws customers from within a close proximity.

Clearlake Riviera is located 13.5 miles from Clearlake, the nearest city with a degree of a retail base. Lakeport is further from Clearlake Riviera, at a distance of 16.1 miles, but with a slightly smaller retail base than Clearlake. In 2013, taxable retail sales in Lakeport totaled \$103 million. This compares to \$115 million in Clearlake, \$366 million in Ukiah, and \$2.4 billion in Santa Rosa.

Dollar General is most comparable to and competitive with other general merchandise retailers. In Clearlake this includes a Walmart store, located approximately a 15-minute drive time from the Clearlake Riviera Dollar General site. In Lakeport this includes a K-mart, located approximately an 18-minute drive time from the Dollar General site. Both these and all cited drive times are estimated by Google Maps. Based on these travel times, ALH Economics estimates that a likely market area for the Dollar General store comprises the population and household base within an approximately 7-minute drive time of the proposed site. People and households living beyond this 7-minute drive time to the east are assumed to be more likely to shop in Clearlake while people and households to the west are assumed to be more likely to shop in Lakeport. Both cities have a greater critical mass of retail shopping opportunities than Clearlake Riviera (such as four full-service grocery stores in Clearlake, e.g., Safeway, Foods Etc., Ray's Food Place, and Grocery Outlet), and thus provide more opportunities for consumers to meet their retail shopping needs.

However, beyond this area still remains a portion of the regional geography that is distant from more retail rich locations. Thus, ALH Economics anticipates that the market area for the Clearlake Riviera Dollar General store could extend further than a 7-minute travel time from the site, especially to the south and northwest. Yet, these more distant areas are not heavily populated, resulting in a 7-minute travel time market area comprising a reasonable, yet conservative estimate of the store's market area.

ALH Economics obtained demographic estimates for the population base within the 7-minute travel time of the Dollar General store site from Nielsen Reports, which is a leader in the United States in providing demographic and economic data, including modeled data. According to Nielsen, in 2016 there are 3,343 people and 1,405 households within the 7-minute travel time. The average household income for these households is about \$70,300. As cited earlier, Nielsen estimates that the Clearlake Riviera CDP population totals 2,848; thus, the CDP's population comprises 85% of the 7-minute travel time market area population base.

MARKET AREA RETAIL DEMAND

ALH Economics maintains a retail demand model that estimates household spending on retail. The model is based upon analysis of taxable statewide retail sales combined with an estimate of household spending on retail by income. The model assumes that households in a market area will make retail expenditures comparable to the pattern of retail sales in the State of California. Exhibit 1 in Appendix A presents the results of this analysis. This exhibit indicates that among the nine major retail categories tracked by the State of California Board of Equalization, household spending is

anticipated to be greatest for Food & Beverage sales at 17.1% of all retail spending and lowest for Home Furnishings & Appliances at 5.2% of all retail spending.

Pursuant to data published by the U.S. Bureau of Labor Statistics, 2014 Consumer Expenditures Survey, households in the income group with annual household incomes between \$50,000 and \$69,999 throughout the United States spent an average of 35% of household income on the type of retail goods tracked by the State of California Board of Equalization (BOE). The average household income in this bracket in 2014 was \$59,111. The next income bracket reported by the U.S. Bureau of Labor Statistics is the highest income bracket, with household incomes \$70,000 and above. These households spent an average of 24% of income on retail goods. In this income bracket, the average household income was \$137,249 (see Exhibit 2 in Appendix A). Because the market area's average household income is approximately \$70,314, and is closer to the average income in the \$70,000 and above bracket than to the lower income bracket, ALH Economics estimates based on interpolation that the market area households will spend an average of 33% of income on retail goods.

Market area household retail demand was estimated based upon this 33% share of income spent on retail and the estimated distribution of retail spending pursuant to Exhibit 1. The results are presented in Table 3, which indicates total market area retail demand potential of \$32.6 million for the 7-minute travel time market area. Not all this demand is in categories representative of Dollar General sales. The categories not reflected by Dollar General sales most notably include Motor Vehicles & Parts Dealers, Gasoline Stations, and Food Services & Drinking Places (e.g., restaurants and bars). While there is some overlap with Motor Vehicle Parts, the majority of this category is most likely measuring demand for automobile sales.

Table 3. Estimated 7-minute Travel Time Clearlake Riviera Market Area Demand for Retail Goods

Retail Category	Distribution of Demand	Market Area Demand	
		Per HH	Total
Food & Beverage Stores	17.1%	\$3,964	\$5,570,586
General Merchandise Stores	13.9%	\$3,225	\$4,531,599
Motor Vehicle & Parts Dealers	13.8%	\$3,197	\$4,492,719
Food Services & Drinking Places	12.7%	\$2,952	\$4,148,424
Gasoline Stations	11.5%	\$2,674	\$3,757,494
Other Retail Group	12.7%	\$2,958	\$4,156,717
Clothing & Clothing Accessories	7.1%	\$1,642	\$2,307,474
Building Materials & Garden Equipment	6.0%	\$1,396	\$1,961,335
Home Furnishings & Appliances	5.2%	\$1,195	\$1,679,225
Retail Spending	100.0%	\$23,204	\$32,605,574

Source: ALH Urban & Regional Economics.

Excluding the three categories of Motor Vehicles & Parts dealers, Gasoline Stations, and Food Services & Drinking Places results in a 7-minute travel time market area retail demand estimate of \$20.2 million for goods inclusive of the type of merchandise sold by Dollar General. Of note, the "Other Retail Group" category presented in Table 3 includes drug stores, health and personal care, gifts, art goods and novelties, sporting goods, florists, photographic equipment and supplies, musical instruments, stationary and books, office and school supplies, second-hand merchandise, and

miscellaneous other retail stores. Many of these types of goods are sold at Dollar General, although not all of them.

EXISTING RETAIL SALES

Because it is a small unincorporated area, reliable estimates of the retail sales achieved by retail outlets in the Clearlake Riviera area are not available. The only available government-generated data are from the U.S. Census Bureau, Zip Code Business Patterns for the Clearlake Riviera zip code of 95451, which includes information on retail outlets by type and size that include paid employees, excluding government. Thus, owner-operated businesses with no employees are not included. The most recent data available are from 2013. The 95451 zip code also includes the CDPs of Soda Bay and Kelseyville as well as other unincorporated Lake County areas. This information includes only 11 retail outlet listings, with the largest comprising a home center with 50-99 employees. This is most likely Kelseyville Lumber, which is located at 3555 N. Main Street in Kelseyville. The other types of outlets included in this resource include supermarkets and other grocery stores (2), convenience stores (2), pharmacies and drug stores (1), gasoline stations (3), other general merchandise (1), and electronic shopping (1). As there are other retailers in Clearlake Riviera and Kelseyville, among other locations, these data are of only limited use, and, most importantly, not indicative of sales. Yet they help characterize the retail base in Clearlake Riviera as limited.

There is one store in Clearlake Riviera that is likely to be competitive with Dollar General. This is the Riviera Foods full-service grocery store located in the Riviera Shopping Center very proximate to the proposed Dollar General site. As noted earlier, the estimated size of Riviera Foods is 11,500 square feet. Sales performance for this store is not publicly available, so for the sake of analysis ALH Economics assumes a generic performance estimate of \$400 per square. This is a generalized figure based on sales per square foot performance for regional, small town/low density grocery store chains reported by Retail Maxim, an industry resource on retail store productivity.

Pursuant to this sales estimate, ALH Economics estimates that Riviera Foods annual sales total \$4.6 million. Based upon the preceding retail demand categories, the Riviera Foods sales would reflect Food & Beverage store sales, although as noted earlier the store sells other merchandise that crosses into other retail categories, such as Building Materials for the small selection of hardware goods. Even comparing this full \$4.6 million sales estimate to the market area \$5.6 million demand in the Food & Beverage stores category indicates that additional market area demand remains for other food store sales, the balance of which likely is leaked to nearby Clearlake, or to a lesser extent Lakeport, the nearest locations with any significant retail base. The other retailers located in Clearlake Riviera do not appear to sell merchandise that entails much, if any overlap with Dollar General.

The small gas station-based convenience store at Kit's Corner at the intersection of Soda Bay Road and Highway 29 will likely be only partially competitive with Dollar General. Albeit with some exceptions, this store primarily sells convenience-oriented goods typical of gas station convenience stores. Because of its location on Highway 29, close to 2 miles from the commercial core of Clearlake Riviera, this store most likely primarily serves travelers along Highway 29, or people seeking convenience-oriented goods rather than stocking up on key merchandise items. Thus, given that the market area is estimated to generate demand for \$5.6 million in a full range of Food & Beverage sales, and that the store at Kit's Corner has limited offerings, it is clear that a significant portion of

market area demand in food sales comprises leakage remaining for other stores, including Dollar General and grocery stores in more distant locations.

In addition to referenced leakage of grocery store demand, it is highly likely that most of the market area's demand for other goods comprises leakage to other communities, since there are few shopping opportunities available in Clearlake Riviera, with none to very little available to meet market area shopping needs in key retail categories such as general merchandise, clothing, home furnishings and appliances, and a range of other retail goods, such as sporting goods, pet supplies, and office supplies.

DOLLAR GENERAL RETAIL DEMAND CAPTURE RATE

Based upon its \$1.7 million store sales estimate the proposed Clearlake Riviera Dollar General store will need to capture only a small portion of market area demand to achieve stabilized sales consistent with national Dollar General store performance standards. Across all categories of market area demand, this would be 5.1% of the \$32.6 million in 7-minute travel time market area demand. However, demand for Dollar General merchandise will not originate from all categories of market area demand. Therefore, this capture rate increases to an overall 8.3% of the \$20.2 million 7-minute travel time market area demand for all retail excluding demand for Motor Vehicles, Gasoline, and Food Services & Drinking Places (e.g., restaurants). These figures are presented in Table 4, which also estimates potential market area capture rates in the specific demand categories most likely to correspond with Dollar General's store sales.

Table 4. Dollar General 7-minute Travel Time Clearlake Riviera Market Area Demand Capture Rate Analysis

Retail Category	Dollar General Sales (1)	Market Area Demand	Dollar General Capture Rate
Food & Beverage Stores	\$381,286 (2)	\$5,570,586	6.8%
General Merchandise Stores	\$889,667 (2)	\$4,531,599	19.6%
Motor Vehicle & Parts Dealers	\$0 (3)	\$4,492,719	0.0%
Food Services & Drinking Places	\$0	\$4,148,424	0.0%
Gasoline Stations	\$0	\$3,757,494	0.0%
Other Retail Group	\$207,639 (4)	\$4,156,717	5.0%
Clothing & Clothing Accessories	\$90,424	\$2,307,474	3.9%
Building Materials & Garden Equipment	\$0 (3)	\$1,961,335	0.0%
Home Furnishings & Appliances	\$105,494	\$1,679,225	6.3%
Total All Retail	\$1,674,510	\$32,605,574	5.1%
Total Less Motor Vehicles, Gas, and Rests.	\$1,674,510	\$20,206,936	8.3%

Source: ALH Urban & Regional Economics.

(1) See Table 2.

(2) For the sake of analysis, and based upon visual observation, the store's "Consumables" sales are anticipated to be divided between these two categories 30% food/70% general merchandise, as not all consumables are food or beverage-based products.

(3) Some sales anticipated in these categories, but they are anticipated to be nominal compared to the other retail categories.

(4) Corresponds with the "Seasonal" sales estimate.

The market area demand capture rates by retail category for the Dollar General 7-minute travel time market area range from 3.9% in Clothing & Accessories to 19.6% in General Merchandise. Notably, there is very little existing competition in Clearlake Riviera or elsewhere in the market area to obtain basic household necessities other than food and some sundry items. Therefore, in most of the categories listed, Dollar General will bring a mix of retail merchandise to Clearlake Riviera that is not already present. This will enable market area residents to reduce their travel time and the associated transportation costs (both personal and environmental) to obtain basic household necessities. This includes home furnishings and supplies such as towels, shower curtains, area rugs, vases, ironing boards, laundry baskets, and picture frames; electronics such as wall clocks, alarm clocks, and cell phones; and apparel such as baby and toddler clothes, women and men's underwear, and t-shirts.

There will, however, be potential sales merchandise overlap with the market area's existing grocery store selling food items, e.g., Riviera Foods. The portion of Dollar General sales anticipated to be most competitive with this store includes \$381,300 (rounded) in food sales. Some of the Dollar General merchandise similar to this store, and to a lesser extent the Kit's Corner convenience store, includes canned foods, baking goods, soda, wine, cigarettes, first aid supplies, personal care products, cleaning supplies, pet supplies, and cooler items such as milk, cheese, butter, and sandwich meats. Riviera Foods, however, sells many products not represented at Dollar General, such as fresh packaged meat, an ample array of fruits and vegetables, frozen seafood, fresh coffee beans, a broader range of packaged, canned, and boxed items such as pasta, soups, and cereals, more holistic products such as Bob's Red Mill grains, and a broader range of alcoholic beverages than typically sold at Dollar General. The provision of these more full-service grocery items indicates that market area shoppers will still need to frequent Riviera Foods to purchase important weekly food items necessary to prepare healthy meals. This will help insulate the store from the modest amount of competitive food item sales anticipated at Dollar General. Moreover, as a store with a larger area devoted to foods sales with an established customer base, Riviera Foods will have the ability to modify its product mix to maximize sales in products not available at Dollar General yet targeted to meet the needs of its loyal customers.

Assuming the Riviera Foods food sales estimate is reasonably on point, the demand analysis indicates the potential for yet additional food sales to be absorbed in Clearlake Riviera without impacting the existing food store sales. Therefore, Dollar General's capture of an estimated \$381,300 in sales volume is not likely to have a negative impact on the existing sales at Riviera Foods, or even Kits Corner, especially given the latter's appeal to Highway 29 travelers. The same is anticipated to be the case for the other Dollar General sales categories, especially as there are very few retail outlets in Clearlake Riviera with competitive sales.

Lastly, the store will add to the critical mass of retailing opportunities in Clearlake Riviera. Because of the relative lack of shopping opportunities in Clearlake Riviera, market area consumers are leaving the area to make purchases for goods not available locally. At these times, consumers are also in all likelihood taking advantage of more cost effective grocery shopping opportunities available in these more heavily retailed areas. The presence of Dollar General will therefore help reduce the need for some of these out of community shopping trips, thus retaining more consumer dollars within the market area, which could ultimately increase the sales captured by other Clearlake Riviera commercial establishments.

CONCLUSION

In conclusion, this analysis indicates that Clearlake Riviera's 7-minute travel time market area is underserved by retail goods, including food sales. This demonstrates that the area is a sales leakage community. The Dollar General store can therefore help strengthen the retail base, enabling market area consumers to meet more of their retail shopping needs close to home. Even with absorption of Dollar General sales, market area residents will still need to shop for many retail goods in locations with more ample shopping opportunities, especially Clearlake and Lakeport, and even the more distant cities of Ukiah and Santa Rosa, which have retailers offering a wide range of retail goods required by market area households, including food shopping, general merchandise shopping, home improvement stores, clothing stores, and others. However, because the Dollar General store will enhance the critical mass of commercial outlets in Clearlake Riviera, existing commercial establishments are anticipated to achieve greater visibility, resulting in enhanced market demand, which in turn will help preserve the physical condition of the existing commercial physical stock.

Because of Dollar General's relatively low sales volume, which will be divided among many retail categories, compounded by Clearlake Riviera's limited supply of existing retailers, it seems likely that Dollar General's capture of market area retail demand would not result in existing Clearlake Riviera stores losing a significant volume of existing sales through sales diversion. Thus, existing stores are anticipated to be able to coexist with the Dollar General store and thus not incur a risk of closure. This, in turn, will result in no negative impacts on the existing commercial real estate base, which is more likely to reap positive impacts associated with greater visibility and hence enhancement of area demand.

CLOSING COMMENTS

ALH Urban & Regional Economics was pleased to prepare these findings pertinent to the proposed Dollar General store in Clearlake Riviera, California. Please let us know if you have any comments or questions on the analysis.

Sincerely,

ALH Urban & Regional Economics



Amy L. Herman
Principal

ASSUMPTIONS AND GENERAL LIMITING CONDITIONS

ALH Urban & Regional Economics has made extensive efforts to confirm the accuracy and timeliness of the information contained in this study. Such information was compiled from a variety of sources, including interviews with government officials, review of City and County documents, and other third parties deemed to be reliable. Although ALH Urban & Regional Economics believes all information in this study is correct, it does not warrant the accuracy of such information and assumes no responsibility for inaccuracies in the information by third parties. We have no responsibility to update this report for events and circumstances occurring after the date of this report. Further, no guarantee is made as to the possible effect on development of present or future federal, state or local legislation, including any regarding environmental or ecological matters.

The accompanying projections and analyses are based on estimates and assumptions developed in connection with the study. In turn, these assumptions, and their relation to the projections, were developed using currently available economic data and other relevant information. It is the nature of forecasting, however, that some assumptions may not materialize, and unanticipated events and circumstances may occur. Therefore, actual results achieved during the projection period will likely vary from the projections, and some of the variations may be material to the conclusions of the analysis.

Contractual obligations do not include access to or ownership transfer of any electronic data processing files, programs or models completed directly for or as by-products of this research effort, unless explicitly so agreed as part of the contract.

APPENDIX A
REPORT EXHIBITS

Exhibit 1
State of California BOE Taxable Retail Sales Estimate by Retail Category
in Current Dollars
2013
(in \$000s)

Type of Retailer	Total Taxable Sales (1)	State of California Taxable Sales Adjusted to Total Retail	% of Total
Motor Vehicle & Parts Dealers	\$67,986,436	\$67,986,436	13.8%
Home Furnishings & Appliances	\$25,411,008	\$25,411,008	5.2%
Building Materials & Garden Equipment	\$29,680,053	\$29,680,053	6.0%
Food & Beverage Stores	\$25,289,203	\$84,297,343 (2)	17.1%
Gasoline Stations	\$56,860,585	\$56,860,585	11.5%
Clothing & Clothing Accessories	\$34,918,036	\$34,918,036	7.1%
General Merchandise Stores	\$51,431,094	\$68,574,792 (3)	13.9%
Food Services & Drinking Places	\$62,776,360	\$62,776,360	12.7%
Other Retail Group (4)	\$48,086,943	\$62,901,852 (5)	12.7%
Total (6)	\$402,439,718	\$493,406,465	100%

Sources: California State Board of Equalization (BOE), "Taxable Sales in California (Sales & Use Tax) during 2013; U.S. Economic Census, "Retail Trade: Subject Series - Product Lines: Product Lines Statistics by Kind of Business for the United States and States: 2007"; and ALH Urban & Regional Economics.

(1) Taxable sales are pursuant to reporting by the BOE.

(2) Sales for Food and Beverage Stores have been adjusted to account for non-taxable sales; only 30.0% of all food store sales are estimated to be taxable.

(3) Sales for General Merchandise Stores have been adjusted to account for non-taxable food sales, since some General Merchandise Store sales include non-taxable food items. ALH Urban & Regional Economics estimates that at least 25% of General Merchandise sales are for grocery items that are also non-taxable. This estimate is based on analysis of the 2007 U.S. Economic Census, which attributes approximately 26% of General Merchandise Stores sales to food.

(4) Other Retail Group includes drugs stores, health and personal care, gifts, art goods and novelties, sporting goods, florists, photographic equipment and supplies, musical instruments, stationary and books, office and school supplies, second-hand merchandise, and miscellaneous other retail stores.

(5) Sales for Other Retail Group have been adjusted to account for non-taxable drug store sales, since drug store sales are included in the Other Retail Group category. ALH Urban & Regional Economics estimates that 33.0% of drug store sales are taxable, based on discussions with the California BOE and examination of U.S. Census data. In California, drug store sales in 2013 represented approximately 14.06% of all Other Retail Group sales. ALH Urban & Regional Economics applied that percentage and then adjusted upward for non-taxable sales.

(6) Totals may not add up due to rounding.

Exhibit 2
Household Income Spent on Retail (1)
United States
In Current Dollars
2014

Characteristic	All Consumer Units	Household Income Range		
		\$40,000 to \$49,999	\$50,000 to \$69,999	\$70,000 and more
Average HH Income	\$66,877	\$44,679	\$59,111	\$137,249
Amount Spent on Retail (2)	\$20,846	\$18,399	\$20,652	\$32,659
Percent Spent on Retail (3)	31%	41%	35%	24%

Sources: Table 1202. Income before taxes: Annual expenditure means, shares, standard errors, and coefficient of variation, Consumer Expenditure Survey, 2014, U.S. Bureau of Labor Statistics; and ALH Urban & Regional Economics.

(1) Includes retail categories estimated to be equivalent to the retail sales categories compiled by the State of California, Board of Equalization.

(2) Includes the Consumer Expenditures categories of: food; alcoholic beverages; laundry and cleaning supplies; other household products; household furnishings and equipment; apparel and services; vehicle purchases, cars and trucks, new; vehicle purchases, cars and trucks, used; vehicle purchases, other vehicles; gasoline and motor oil; 1/2 of maintenance and repairs (as a proxy for taxable parts); drugs; medical supplies; audio and visual equipment and services; pets, toys, hobbies, and playground equipment; other entertainment supplies, equipment, and services; personal care products and services; and reading; tobacco products and smoking supplies.

(3) Percentages may be low as some expenditure categories may be conservatively undercounted by ALH Economics.

APPENDIX B

FIRM QUALIFICATIONS AND PRINCIPAL RESUME

FIRM INTRODUCTION

ALH Urban & Regional Economics (ALH Economics) is a sole proprietorship devoted to providing urban and regional economic consulting services to clients throughout California. The company was formed in June 2011. Until that time, Amy L. Herman, Principal and Owner (100%) of ALH Economics, was a Senior Managing Director with CBRE Consulting in San Francisco, a division of the real estate services firm CB Richard Ellis. CBRE Consulting was the successor firm to Sedway Group, in which Ms. Herman was a part owner, which was a well-established urban economic and real estate consulting firm acquired by CB Richard Ellis in late 1999.

ALH Economics provides a range of economic consulting services, including:

- fiscal and economic impact analysis
- CEQA-prescribed urban decay analysis
- economic studies in support of general plans, specific plans, and other long-range planning efforts
- market feasibility analysis for commercial, housing, and industrial land uses
- economic development and policy analysis
- other specialized economic analyses tailored to client needs

Ms. Herman's clients have included numerous cities and redevelopment agencies throughout California, transportation agencies, medical and educational institutions, nonprofits, commercial and residential developers, and many of the top Fortune 100 companies. Since forming ALH Economics, Ms. Herman's client roster includes California cities, major universities, environmental consulting firms, commercial developers, and law firms. A select list of ALH Economics clients include the University of California at Berkeley; LSA Associates; Raney Planning and Management, Inc.; During Associates; Lamphier-Gregory; Gresham Savage Nolan & Tilden, PC; California Gold Development Corporation; Environmental Science Associates (ESA); Arcadia Development Co.; Catellus Development Corporation; Sedgwick LLP; First Carbon Solutions - Michael Brandman Associates; the City of Concord; Hospital Council of Northern and Central California; Howard Hughes Corporation dba Victoria Ward, LLC; Signature Flight Support Corporation; Blu Homes, Inc.; Ronald McDonald House; Infrastructure Management Group, Inc.; Charter Properties; Equity One Realty & Management CA, Inc.; Remy Moose Manley; Orchard Supply Hardware; Office of Community Investment and Infrastructure as Successor Agency to the Redevelopment Agency of the City and County of San Francisco; City of Los Banos; Dudek; City of Tracy; Bay Area Rapid Transit District; Eagle Commercial Partners, LLC; City of Dublin; China Harbour Engineering Company; and Alameda County Community Development Agency.

PRINCIPAL INTRODUCTION

Ms. Amy Herman, Principal of ALH Economics, has directed assignments for corporate, institutional, non-profit, and governmental clients in key service areas, including commercial market analysis, fiscal and economic impact analysis, economic development and redevelopment, location analysis, strategic planning, and policy analysis. During her career spanning 30 years, Ms. Herman has supported client goals in many ways, such as to assess supportable real estate development, demonstrate public and other project benefits, to assess public policy implications, and to evaluate

and maximize the value of real estate assets. In addition, her award-winning economic development work has been recognized by the American Planning Association, the California Redevelopment Association, and the League of California Cities.

Ms. Herman holds a Master of Community Planning degree from the University of Cincinnati and a Bachelor of Arts degree in urban policy studies from Syracuse University. She pursued additional post-graduate studies in the Department of City and Regional Planning at the University of California at Berkeley. She is President of the Board of Directors of Rebuilding Together East Bay - North (formerly Christmas in April) and serves as an officer on yet other non-profit boards.

Prior to forming ALH Economics, Ms. Herman worked for 20 years as an urban economist with Sedway Group and then CBRE Consulting's Land Use and Economics practice. Her prior professional work experience included 5 years in the Real Estate Consulting Group of the now defunct accounting firm Laventhol & Horwath (L&H), preceded by several years with the real estate consulting firm Land Economics Group, which was acquired by L&H. During the course of her career Ms. Herman has established a strong professional network and client base providing access to contacts and experts across a wide spectrum of real estate and urban development resources. A professional resume for Ms. Herman follows.



**AMY L. HERMAN, AICP
PRINCIPAL**

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Economics
Berkeley, California

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OTHER CLIENTS

- Arcadia Development Company
- Blu Homes, Inc.
- China Harbor Engineering Corporation
- City of Dublin
- Essex Property Trust
- General Electric Company
- Gresham Savage Nolan & Tilden
- Howard Hughes Corporation
- Infrastructure Management Group
- Kaiser Permanente
- Lawrence Berkeley National Laboratory
- Lennar
- City of Los Banos
- Merlone Geier Partners
- Michael Brandman Associates
- Mills Corporation
- City of Mountain View
- Port of San Francisco
- The Presidio Trust
- Public Storage
- Pulte Homes
- Santa Clara Valley Transportation Authority
- City of Santa Rosa
- Shea Properties
- Sheppard Mullin Richter & Hampton LLP
- Simon Property Group
- Southbay Development
- City of Sunnyvale
- Sunset Development Co.
- City of Tracy

Amy L. Herman, Principal of ALH Urban & Regional Economics, has provided urban and regional consulting services for over 30 years. During this time she has been responsible for directing assignments for corporate, institutional, non-profit, and governmental clients in key service areas, including fiscal and economic impact analysis, economic development and redevelopment, feasibility analysis, location analysis, strategic planning, policy analysis, and transit-oriented development. Her award-winning economic development work has been recognized by the American Planning Association, the California Redevelopment Association, and the League of California Cities.

Prior to forming ALH Urban & Regional Economics in 2011, Ms. Herman's professional tenure included 20 years with Sedway Group, inclusive of its acquisition by CB Richard Ellis and subsequent name change to CBRE Consulting. Her prior professional work experience includes five years in the Real Estate Consulting Group of the now defunct accounting firm Laventhol & Horwath (L&H), preceded by several years with the land use consulting firm Land Economics Group, which was acquired by L&H.

Following are descriptions of select consulting assignments managed by Ms. Herman.

FISCAL IMPACT ANALYSIS

Stanford Management Company and Stanford Hospitals. Managed numerous assignments involving fiscal impact analysis for planned facilities developed by Stanford Management Company or Stanford Hospitals, including a satellite medical campus in Redwood City, a hotel and office complex in Menlo Park, and expansion of the hospital complex and the Stanford School of Medicine in Palo Alto.

Office of Community Investment and Infrastructure as Successor Agency to the Redevelopment Agency of the City and County of San Francisco. Managed financial analysis estimating the tax payments in lieu of property taxes associated with UCSF development of medical office space in the former Mission Bay Redevelopment Project area.

City of Concord. Structured and managed fiscal impact analysis designed to test the net fiscal impact of multiple land use alternatives pertaining to the reuse of the 5,170-acre former Concord Naval Weapons Station, leading to possible annexation into the City of Concord, California.

Ronald McDonald House. Analyzed the fiscal impact of the expansion of Ronald McDonald House in the City of Palo Alto.

San Francisco Mayor's Office of Economic Development. Conducted fiscal and economic impact analysis of redevelopment and expansion of San Francisco's Parkmerced residential community, including assessing the project's impacts on the San Francisco Municipal Transportation Agency.

ECONOMIC IMPACT ANALYSIS

Hospital Council of Northern and Central California. Prepared an analysis highlighting the economic impacts of hospitals and long-term care facilities in Santa Clara County. The analysis included multiplier impacts for hospital spending, county employment, and wages. A similar analysis was completed for the Monterey Bay Area Region.

University of California. Conducted economic impact studies and frequent updates for five University of California campuses: Berkeley, Davis, Riverside, San Francisco, and San Diego. Prepared models suitable for annual updates by campus personnel.

Bay Area Regional Transit District. Managed economic benefits analysis of BART's contributions to the Bay Area economy, labor force expansion, and regional economic impacts associated with capital projects.

Various EIR Firms. Managed numerous assignments analyzing the potential for urban decay to result from development of major big box and other shopping center retailers. The analysis comprises a required Environmental Impact Report component pursuant to CEQA. A representative project includes the proposed Fresno 40 project in Fresno, CA.

AMY L. HERMAN, AICP
Principal

DEVELOPMENT FEASIBILITY

The Mehmet Noyan Company. Conducted market feasibility analysis of a prospective grocery store anchored shopping center in Fresno, including assessment of impacts on existing area grocery stores.

Charter Properties. Assessed the long-term supportability of sites zoned for retail in the City of Dublin, focused on the retail suitability of a small infill site adjacent to residential development.

PCR Services Corporation. Analyzed the retail supportability of the planned mixed-use development of the UTC/Rocketdyne site in the Warner Center area of Los Angeles

ChevronTexaco. Conducted a regional market analysis of an 8,400-acre oil field retired from active oil production in the New Orleans, Louisiana metropolitan area.

City of San Jose. Managed alternative City Hall location analysis, focused on recommending a long-term occupation strategy for the City. Following relocation of City Hall conducted a study examining the feasibility of redeveloping the City's former City Hall location and nearby parking facilities for residential, retail, and civic land uses.

General Motors Corporation. Managed reuse studies for closed manufacturing facilities in Indiana (250 acres, 14 sites) and New Jersey (80 acres). Studies focused on the long term reuse and redevelopment potential of the closed manufacturing sites.

ECONOMIC DEVELOPMENT AND REDEVELOPMENT

Catellus/City of Alameda. Prepared a retail leasing strategy for Alameda Landing, a regional shopping center planned on the site of the former U.S. Navy's Fleet Industrial Supply Center in Alameda.

City of Morgan Hill. Reviewed the City's economic development practices and compared them with "best practices" to other competitive Bay Area cities.

City of San Jose Redevelopment Agency. Prepared a study analyzing the costs and benefits associated with creating a bioscience incentive zone in the Edenvale industrial redevelopment area.

City of Palo Alto. Conducted a retail study targeting six of Palo Alto's retail business districts for revitalization, including the identification of barriers to revitalization and recommended strategies tailored to the priorities established for each of the individual target commercial areas.

East Bay Municipal Water District. Managed economic, demographic, and real estate data analysis in support of developing market-sensitive adjustments to long-term water demand forecasts.

CORPORATE LOCATION ANALYSIS

Toyota Motor Corporation. Conducted a location analysis study for a distribution facility in the San Francisco Bay Area, designed to minimize travel time distance to the majority of area dealerships.

Cisco Systems. Managed multiple corporate location studies for Cisco Systems, headquartered in San Jose, California. These studies focused on the formulation of both a regional and a North American location strategy.

Starbucks Coffee Company. Directed analysis examining alternative locations for a new coffee roasting plant in the Western United States. A variety of economic, business, and labor market data were collected. The roasting plant was successfully sited in Sparks, Nevada.

Sacramento Regional Transportation District (RTD). Managed a consultant team assisting the RTD in planning for its immediate and long-term administrative office space needs, and in developing a strategy for maximizing the value of the existing RTD complex.

Hines. Managed comparative analysis highlighting business and employee costs associated with business locations in three competitive Bay Area locations.

AMY L. HERMAN, AICP
Principal

EDUCATION

- Ms. Herman holds a Bachelor of Arts degree in urban studies, magna cum laude, from Syracuse University. She also holds a Master of Community Planning degree from the University of Cincinnati. She has also pursued advanced graduate studies in City and Regional Planning at the University of California at Berkeley.

VOLUNTEER ACTIVITIES

- President, Rebuilding Together (formerly Christmas in April), East Bay - North
- Past President, Diablo Pacific Short Line, 501 (c)(3) Portable Modular Train Organization
- Secretary and Volunteer, Swanton Pacific Railroad, Santa Cruz County, California
- Volunteer, Redwood Valley Railway, Tilden Regional Park, California

RECEIPT

RECEIPT NUMBER: PL17000037

OWNER: HARVEY ROBERT J & LINDA S
4336 MARSH RIDGE ROAD
CARROLLTON, TX, 75010

TYPE: Planning Activity
PROJECT #: AB17-02
OTHER PROJECT #S: UP16-04
IS16-07
DR17-02

SITE ADDRESS: 9795 POINT LAKEVIEW RD KLSY
PARCELS: 043-551-06
043-551-07
043-551-47

DESCRIPTION: APPEAL TO BOS OF PC DENIAL OF UP

TRANSACTION DATE: 03/02/2017 TOTAL PAYMENT: 697.00

TRANSACTION LIST:

Type	Method	Description	Amount
Payment	Check	8666	697.00
TOTAL:			697.00

ACCOUNT ITEM LIST:

Description	Account Code	Current Pmts
AB	001-2702-461.66-	509.00
AB Reporter	001-2702-492.79-	188.00
TOTAL:		697.00

BALANCE DUE: \$0.00

RECEIVED FROM:
RECEIPT ISSUED BY: COUNTER
ENTERED DATE: 03/02/2017

INITIALS: MGT
TIME: 10:58 AM