

Exhibit I

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HEXAGON TRANSPORTATION CONSULTANTS, INC.



Corral de Tierra Fueling Station

Transportation Analysis Report

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Executive Summary

This report presents the results of the transportation impact analysis (TIA) conducted for a proposed fueling station to be located on the southeast corner of the intersection of Corral de Tierra Road and SR 68 at 1 Corral de Tierra Road in Corral de Tierra, Monterey County, CA. The project proposes to build a fueling station with 12 fuel stations and a convenience store. Access to the project site would be provided via one right-in-right out only driveway on SR 68, one right-in-right out only driveway to the north on Corral de Tierra Road, and a full access driveway to the south on Corral de Tierra Road. The right-in-right out driveway on SR 68 and the full access driveway on Corral de Tierra Road would provide access to the fueling station via internal driveways from the future Corral de Tierra Neighborhood Retail Village and would be built prior to the shopping village. Previously, there was a fueling station on the project site with the same number of fueling stations as proposed by the project. Access to the prior fueling station used to be via two driveways on SR 68 and two driveways on Corral de Tierra Road. Based on coordination with Monterey County and Caltrans staff, the driveways on SR 68 to the previous fueling station would be removed and access from SR 68 would be provided via the right-in-right out only driveway that is proposed at least 300 feet to the east of the SR 68 & Corral de Tierra Road intersection which is approved as part of the future Corral de Tierra Neighborhood Retail Village.

The study includes an analysis of the traffic operational effects of the project on the key intersections in the vicinity of the site and a review of site access and on-site circulation.

VMT Analysis

Transportation impacts under CEQA are evaluated using vehicle miles traveled (VMT). Monterey County has not yet adopted standards for VMT analysis. Therefore, recommendations from the Governor's Office of Planning and Research (OPR) were used for this study. The project would be considered a local-serving retail use (less than 50,000 square feet). Therefore, its VMT impact is considered less than significant according to State guidelines.

Local Transportation Analysis

A traffic operations analysis and review of site access and circulation analysis was conducted to quantify the number of trips generated by the project and identify any potential traffic operational issues. This analysis was performed solely for traffic operational purposes and not for the purposes of CEQA since VMT is the sole basis on which to identify and address environmental impacts under CEQA.

Project Trip Estimates

Vehicle trips generated by the project were estimated using the trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11th Edition* (2021) for "Convenience Store/Gas Station" (Land Use 945) located in a general Urban/Suburban area. The project is estimated to generate 3,181 vehicle trips daily, including 193 vehicle trips (97 in and 96 out) in the AM peak hour and 221 vehicle trips (111 in and 110 out) in the PM peak hour.

A pass-by trip reduction of 62 percent to AM peak hour trips and 56 percent to PM peak hour trips was applied to the trip generation. Trip reduction percentages were obtained from the ITE *Trip Generation Handbook, 3rd Edition*. After applying the pass-by trip reductions, the project would generate 73 new primary vehicle trips occurring during the AM peak hour and 97 new primary vehicle trips occurring during the PM peak hour.

Intersection Level of Service Analysis

Intersection Operations

The intersection delay and LOS for the study intersections are summarized in Table ES 1. Under existing conditions, the analysis shows that the intersection of San Benancio Road/SR 68 currently operates at LOS F during the AM peak hour and would continue to operate at LOS F with the proposed project.

Under background conditions, the analysis shows that the intersection of Corral de Tierra/SR 68 would operate at LOS F during the PM peak hour and the intersection of San Benancio Road/SR 68 would operate at LOS F during the AM peak hour. Both intersections would continue to operate at LOS F with the addition of project traffic under background plus project conditions.

The California Department of Transportation (Caltrans) in partnership with the Transportation Agency for Monterey County (TAMC) is proposing to improve traffic operations and reduce collisions with wildlife on an approximately nine-mile stretch of SR 68 in Monterey County by modifying the design of nine intersections from Josselyn Canyon Road to San Benancio Road via the Scenic Route 68 Corridor Improvements Project. The Draft Environmental Impact Report (EIR) for the SR 68 Corridor Improvements Project was released for public review in November 2023. Two build alternatives are being evaluated in the EIR as described below.

Build Alternative 1 – Roundabouts

Build Alternative 1 is proposing to convert all nine signalized intersections along the nine-mile stretch of the SR 68 corridor to roundabouts. Eight of the proposed nine roundabouts including the intersection of Corral de Tierra Road were analyzed for single lane roundabouts.

Build Alternative 2 – Signal and Lane Modifications

Build Alternative 2 would improve the nine existing intersections with modifications to lane configurations and upgrades to signal equipment.

All study intersections along SR 68 analyzed in this report are identified for improvements in the Scenic Route 68 Corridor Improvements Project. The draft EIR concludes that traffic operations would be improved under both Build Alternative 1 and Build Alternative 2 compared to the No Build alternative which would retain existing traffic controls and lane configurations under existing conditions. The project will be required to pay the Regional Development Impact Fee (RDIF). Payment of the RDIF by the project would satisfy the project's fair share contribution towards the implementation of Scenic Route 68 Corridor Improvements Project.

Cumulative conditions without and with the project were analyzed with both build alternatives identified in the Scenic Route 68 Corridor Improvements Project. The analysis shows that all study intersections along SR 68 would operate at LOS E or F during at least one of the peak hours under Build Alternative 1 without and with the project. Under Build Alternative 2, the analysis shows that all study intersections along SR 68 would operate at LOS D or better without and with the project.

Site Access and On-Site Circulation

The existing site has four driveways: two on Corral de Tierra Road and two on SR 68. The site plan shows that the project would close all four driveways and construct two new driveways on Corral de Tierra Road, south of the existing driveways and one right-in-right out only driveway on SR 68. The site plan also shows that there would be a short center median on Corral de Tierra Road near the project's northern driveway to prohibit left turns into and out of the fueling station. Prohibiting left turns at this driveway would ensure that queues would not block the Corral de Tierra/SR 68 intersection. The median would still allow left turns for the commercial property across the street. The southern driveway on Corral de Tierra Road would be a full access driveway that would allow left turns in and out of the project site. The driveway on SR 68 would be restricted to right-in and right-out only movements. The full access driveway on Corral de Tierra Road and the right-in-right out driveway on SR 68 would provide access to the fueling station via a reciprocal easement agreement through internal driveways from the future Corral de Tierra Neighborhood Retail Village and would be built prior to the shopping village.

Traffic Operations at Project Driveways

Northern Project Driveway

As shown in the level of service summary tables, the outbound trips are expected to have a vehicular delay of 11.1 seconds during the AM peak hour and 11.3 seconds during the PM peak hour. The analysis shows that this driveway would sometimes be blocked by the northbound vehicular queue at the Corral de Tierra/SR 68 signal.

Southern Project Driveway

The southbound left-turn trips into the project are expected to have a vehicular delay of 8.6 seconds per vehicle and 11.6 per vehicle during the AM and PM peak hours with a 95th percentile queue of no more than one vehicle. As shown in the level of service summary tables, the outbound trips are expected to have a vehicle delay of 20.2 seconds during the AM peak hour and 30.8 seconds during the PM peak hour. The analysis shows that the northbound vehicular queues at the Corral de Tierra Road/SR 68 intersection would generally not extend past the proposed southern driveway.

Truck Access and Circulation

Garbage bins are shown on the site plan east of the fueling stations. Garbage trucks could enter the site from the Corral de Tierra Road driveways and exit via the driveway on SR 68 or the driveways on Corral de Tierra Road by turning around on-site.

The underground gasoline storage tank openings are shown along the northern edge of the site. During fuel deliveries, the fuel tanker would park along the northern edge of the site, which would not block any of the fueling stations or drive aisles. A fuel delivery truck would enter from the southern Corral de Tierra Road driveway, go through the internal drive aisle and around the fueling station, and exit via the northern driveway or the driveway on SR 68. Fuel deliveries would occur infrequently and are typically scheduled for off-peak hours. Fire trucks would travel a similar path to the fuel delivery truck, except on site. On site, fire trucks would go between the fueling stations and the parking spaces in front of the convenience store before exiting the site via the northern driveway or the driveway on SR 68.

Table ES 1
Intersection Level of Service Summary

ID	Intersection	Control ¹	Peak Hour	Existing		Existing Plus Project		Background		Background Plus Project		Cumulative		Cumulative Plus Project	
				Avg. Delay ²	LOS	Avg. Delay ²	LOS	Avg. Delay ²	LOS	Avg. Delay ²	LOS	Avg. Delay ²	LOS	Avg. Delay ²	LOS
1	Corral de Tierra Road and Project Southern Driveway	OWSC	AM	N/A	N/A	16.5	C	15.6	B	20.2	C	15.9	C	20.5	C
			PM	N/A	N/A	13.9	B	21.3	C	30.8	D	21.7	C	31.6	D
2	Corral de Tierra Road and Project Northern Driveway	OWSC	AM	N/A	N/A	10.8	B	N/A	N/A	11.1	B	N/A	N/A	11.2	B
			PM	N/A	N/A	9.5	A	N/A	N/A	11.3	B	N/A	N/A	11.3	B
3	Corral de Tierra Road and SR 68	Existing (Signal)	AM	28.6	C	29.9	C	45.5	D	44.7	D	>80	F	>80	F
			PM	48.9	D	54.8	D	>80	F	>80	F	>80	F	>80	F
		Alt 1 (Rbt)	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	>80	F	>80	F
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	>80	F	>80	F
		Alt 2 (Signal)	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	26.4	C	27.1	C
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31.2	C	37.7	D
4	San Benancio Road and SR 68	Existing (Signal)	AM	>80	F	>80	F	>80	F	>80	F	>80	F	>80	F
			PM	20.3	C	20.4	C	26.9	C	27.3	C	67.9	E	68.7	E
		Alt 1 (Rbt)	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	>80	F	>80	F
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	79.9	F	>80	F
		Alt 2 (Signal)	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	43.7	D	44.2	D
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25.3	C	25.6	C
5	Laureles Grade and SR 68	Existing (Signal)	AM	12.8	B	13.1	B	13.7	B	14.1	B	62.9	E	65.1	E
			PM	31.2	C	32.4	C	41.0	D	43.3	D	>80	F	>80	F
		Alt 1 (Rbt)	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	>80	F	>80	F
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	62.9	F	68.6	F
		Alt 2 (Signal)	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.3	B	10.5	B
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	22.7	C	23.4	C
6	Pasadera Road and SR 68	Existing (Signal)	AM	12.7	B	12.7	B	13.6	B	13.7	B	52.0	D	52.6	D
			PM	26.3	C	26.7	C	32.3	C	33.0	C	>80	F	>80	F
		Alt 1 (Rbt)	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	>80	F	>80	F
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	37.1	E	37.9	E
		Alt 2 (Signal)	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.2	B	10.2	B
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.8	B	11.8	B
7	York Road and SR 68	Existing (Signal)	AM	8.9	A	8.9	A	9.5	A	9.5	B	30.1	C	30.2	C
			PM	32.2	C	32.5	C	39.1	D	39.6	D	61.4	E	61.7	E
		Alt 1 (Rbt)	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	>80	F	>80	F
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	31.4	D	31.7	D
		Alt 2 (Signal)	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8.4	A	8.4	A
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.7	B	10.7	B

Notes:

1. Control Type Definitions: OWSC = One-Way Stop Control, Rbt = Roundabout, N/A = Not Analyzed.

2. Intersection level of service for OWSC intersection is represented by the delay for the stop controlled approach. Intersection level of service for all other control types is represented by average delay for all movements. The OWSC intersections are the project driveways, and therefore, do not have an existing intersection.

1. Introduction

This report presents the results of the transportation analysis (TA) conducted for a proposed fueling station to be located on the southeast corner of the intersection of Corral de Tierra Road and Highway 68 at 1 Corral de Tierra Road in Corral de Tierra, Monterey County, CA (see Figure 1). The project proposes to build a fueling station with 12 fuel stations and a convenience store. Access to the project site would be provided via one right-in-right out only driveway on SR 68, one right-in-right out only driveway to the north on Corral de Tierra Road, and a full access driveway to the south on Corral de Tierra Road (see Figure 2). The right-in-right out driveway on SR 68 and the full access driveway on Corral de Tierra Road would provide access to the fueling station via internal driveways from the future Corral de Tierra Neighborhood Retail Village and would be built prior to the shopping village. Previously, there was a fueling station on the project site with the same number of fueling stations as proposed by the project. Access to the prior fueling station used to be via two driveways on SR 68 and two driveways on Corral de Tierra Road. Based on coordination with Monterey County and Caltrans staff, the driveways on SR 68 to the previous fueling station would be removed and access from SR 68 would be provided via the right-in-right out only driveway that is proposed at least 300 feet to the east of the SR 68 & Corral de Tierra Road intersection which is approved as part of the future Corral de Tierra Neighborhood Retail Village.

Scope of Study

The purpose of the study is to satisfy the requirements of the County of Monterey, Caltrans, and the California Environmental Quality Act (CEQA). Per California Senate Bill 743 (SB 743) and CEQA Guidelines, the study evaluates the project's impact on vehicle miles traveled (VMT). The study also includes a local transportation analysis (LTA) that evaluates the project in accordance with the standards and methodologies set forth by the County of Monterey and Caltrans.

Vehicle Miles Traveled (VMT) Analysis

Transportation impacts under CEQA are evaluated exclusively using vehicle miles traveled (VMT). At the time of this report Monterey County is undertaking a process of updating its significance thresholds to be consistent with SB 743 but has not released draft thresholds. In the absence of a County policy with numeric thresholds, this study utilizes OPR guidelines in analyzing VMT.

Local Transportation Analysis

The Local Transportation Analysis (LTA) includes a level of service (LOS) analysis of the project on the key intersections in the project area. The LTA also includes a site plan review.

Although not required by CEQA, County guidelines require all projects to measure intersection operations (LOS) and to provide improvements or address project related operational deficiencies.

Thus, this report contains a local transportation analysis to evaluate the project's consistency with the level of service standards set forth in the County General Plan and to identify feasible improvements to remedy any deficiencies. Study intersections along SR 68 are controlled by Caltrans, and impacts are based on VMT rather than LOS. LOS for the SR 68 intersections is analyzed for informational purposes only.

Study Intersections

1. Corral de Tierra Road & Project Southern Driveway (future unsignalized)
2. Corral de Tierra Road & Project Northern Driveway (future unsignalized)
3. Highway 68 & Corral de Tierra Road
4. Highway 68 & San Benancio Road
5. Highway 68 & Laureles Grade
6. Highway 68 & Pasadera Road
7. Highway 68 & York Road

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours of commute traffic. In the study area, the AM peak hour typically occurs between 7:00 AM and 9:00 AM, and the PM peak hour typically occurs between 4:00 PM and 6:00 PM. These are the peak commute hours during which most traffic congestion occurs on the roadway network.

Traffic conditions were evaluated for the scenarios described below.

- Scenario 1:** *Existing Conditions.* Existing traffic volumes at the study intersections were based on traffic counts conducted in May 2023. The study intersections were evaluated with a level of service analysis using Synchro software in accordance with the HCM 7th Edition Highway Capacity Manual methodology.
- Scenario 2:** *Background Conditions.* Background conditions were estimated by adding to existing traffic volumes the project traffic from approved but not yet completed and occupied developments in the study area. Approved project trips and approved project trip information were obtained from previous traffic studies. In addition, roadway improvements associated with the approved developments were assumed based on previous studies.
- Scenario 3:** *Existing plus Project Conditions.* Existing plus project traffic volumes were estimated by adding to existing traffic volumes the traffic generated by the proposed project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.
- Scenario 4:** *Background Plus Project Conditions.* Background traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project. Background plus project conditions were evaluated relative to background conditions in order to determine potential project operational deficiencies.
- Scenario 5:** *Cumulative No Project Conditions.* Cumulative no project traffic volumes were estimated by adding vehicle trips from “approved but not yet built” and “not occupied” development projects, and vehicles trips from pending development projects in the study area.
- Scenario 6:** *Cumulative plus Project Conditions.* Cumulative plus project traffic conditions were estimated by adding to the cumulative no project volumes, the additional traffic generated by the project. Cumulative plus project conditions were evaluated relative to cumulative no project conditions to determine potential operational deficiencies.

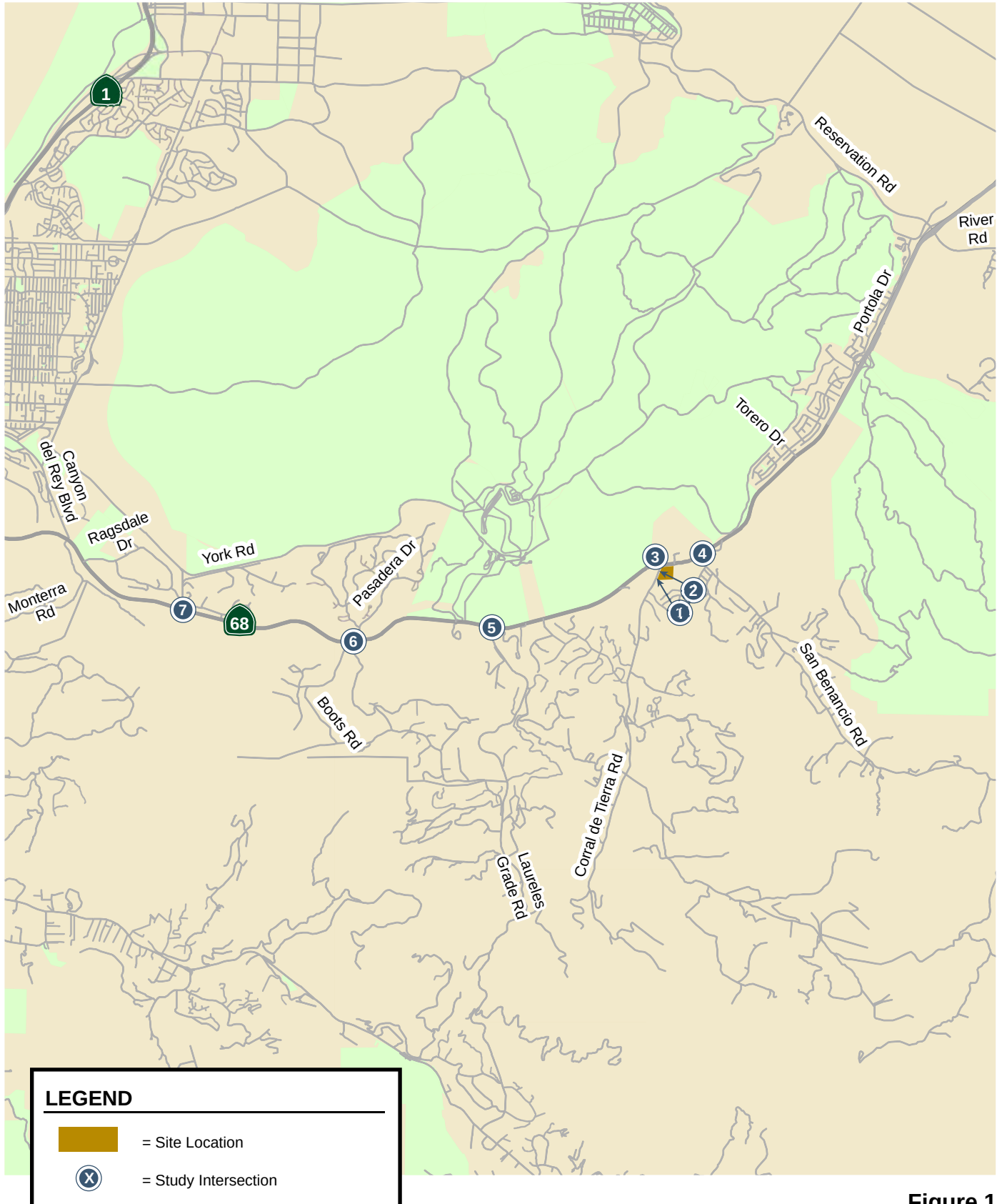


Figure 1
Site Location and Study Intersections

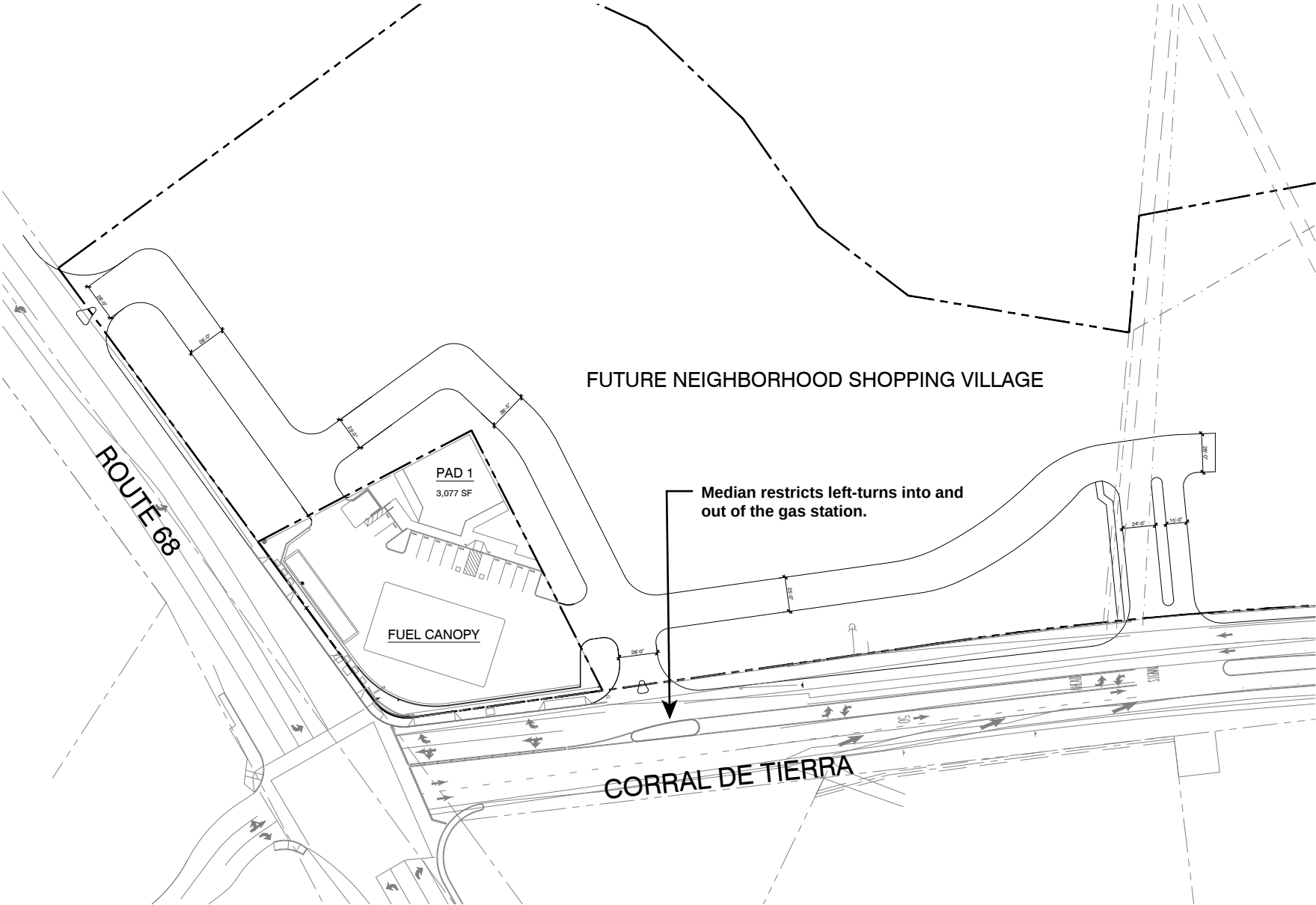


Figure 2
Proposed Project Site Plan

Intersection Operations Analysis Methodology

This section presents the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for this traffic study were obtained from Monterey County, Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11th Edition (2021)*, field observations, and previous traffic studies. The following data were collected from these sources:

- Existing traffic volumes,
- Existing lane configurations,
- Signal timing and phasing,
- Applicable trip generation rates, and
- Approved projects information.

Level of Service Standards and Analysis Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays.

Signalized Intersections

The County of Monterey evaluates level of service at signalized intersections based on the *Highway Capacity Manual (HCM)* level of service methodology using Synchro software. The HCM method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. With specified exceptions, the County of Monterey level of service standard for signalized study intersections is LOS D or better, based on Policy C-1.1 of the Monterey County General Plan. The correlation between average control delay and level of service is shown in Table 1.

Table 1
Signalized Intersection Level of Service Definitions Based on Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though some vehicles may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	greater than 80.0
Source: Transportation Research Board, <i>Highway Capacity Manual</i>		

Unsignalized Intersections

Level of service at the unsignalized study intersections was based on the HCM 7th Edition methodology using the Synchro software. This method is applicable for both two-way and all-way stop-controlled intersections. The unsignalized study intersections have stop controls on the driveways. The level of service reported for these intersections is based on the average delay of the worst stop-controlled approach. The correlation between average control delay and LOS for unsignalized intersections is shown in Table 2.

Table 2
Unsignalized Intersection Level of Service Based on Delay

Level of Service	Description	Average Delay Per Vehicle (Sec.)
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: Transportation Research Board, *Highway Capacity Manual*

Intersection Operations Criteria

Traffic operations on study intersections are based on the criteria and level of service standards of the jurisdiction in which the intersection is located. For this analysis, study intersections are analyzed based on Caltrans and the County of Monterey level of service standards.

Caltrans Criteria

Per the Caltrans Guide for the Preparation of Traffic Impact Studies (December 2002), Caltrans endeavors to maintain a target LOS at the transition between LOS “C” and LOS “D” on State highway facilities. However, Caltrans acknowledges that this may not always be feasible. If an existing State highway facility is operating at less than the appropriate target LOS, the existing LOS should be maintained. Caltrans now uses VMT and not LOS to evaluate development projects.

Monterey County Criteria

In general (and subject to the specified exceptions), acceptable level of service for County roads and intersections shall be LOS D (General Plan, Circulation Element, Policy C-1.1). County roads operating at LOS D or below should not be degraded further except as allowed through the Community Plan process. For intersections already operating at unacceptable level E or F, a project is deemed to contribute to operational deficiencies if it adds 0.01 or more during peak hours to the critical movement’s volume-to-capacity ratio per the Monterey County Guide for the Preparation of Traffic Impact Studies (March 2014).

All study intersections along SR 68 are under Caltrans jurisdictions and therefore evaluated based on Caltrans Criteria. The two project driveways were evaluated based on Monterey County criteria.

Relevant Plans and Policies

Regional Transportation Plan

The Transportation Agency for Monterey County (TAMC) is responsible for preparing the regional transportation plan (RTP) for Monterey County. The RTP includes policy guidance, plans, and programs to attain a balanced comprehensive, multimodal transportation system; proposed solutions to transportation issues; addresses all modes of travel; and identifies anticipated funding for projects and

programs. Goals of the RTP are embedded in the Association of Monterey Bay Area Government's 2035 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SC) and regional transportation plans for Monterey, San Benito, and Santa Cruz counties. The Association of Monterey Bay Area Governments (AMBAG) as the federally designated metropolitan planning organization representing Monterey, San Benito and Santa Cruz counties, is required by both federal and state law to prepare a long-range (at least 20 years) transportation planning document known as a metropolitan transportation plan. The metropolitan transportation plan contains a compilation of the projects proposed in the RTPs prepared by the Council of San Benito County Governments, the Santa Cruz County Regional Transportation Commission and TAMC. The metropolitan transportation plan is a document used to achieve a coordinated and balanced regional transportation system. The objective of the RTP and the MTP/SCS is to comply with current California Transportation Commission regional transportation plan guidelines.

Funding for Transportation Improvements

TAMC Regional Impact Fee Program

On August 27, 2008, the Transportation Agency for Monterey County (TAMC) and its member jurisdictions adopted a county-wide, Regional Development Impact Fee (RDIF) to cover the costs for studies and construction of many improvements throughout Monterey County. The RDIF applies to all new development within Monterey County and the program provides a mechanism through which land use growth pays for its fair share of regional roadway improvements needed to accommodate traffic growth in the county. The governing document for the allocation of fees to regional projects is the Regional Impact Fee Nexus Study. TAMC is legally mandated to update the RDIF program, via updated nexus study, every five years to ensure a comprehensive reevaluation of existing and projected county roadway deficiencies, regional improvement projects to address the deficiencies, and allocation of the fees to help fund those regional improvements. Since the fee's adoption in 2008, the RDIF program was updated in 2013 through the *2013 RDIF Nexus Study Update (Wood Rogers, July 2013)* and in 2018 through the *2018 Nexus Study Update (Wood Rogers, October 2018)*.

Several improvements to SR-68 have been identified to address regional commuter traffic impacts in each of the nexus studies.

The California Department of Transportation (Caltrans) in partnership with the Transportation Agency for Monterey County (TAMC) is proposing to improve traffic operations and reduce collisions with wildlife on an approximately nine-mile stretch of SR 68 in Monterey County by modifying the design of nine intersections from Josselyn Canyon Road to San Benancio Road. via the Scenic Route 68 Corridor Improvements Project. The Draft Environmental Impact Report (EIR) for the SR 68 Corridor Improvements Project was released for public review in November 2023. Two build alternatives are being evaluated in the EIR as described below.

Build Alternative 1 – Roundabouts

Build Alternative 1 is proposing to convert all nine signalized intersections along the nine-mile stretch of the SR 68 corridor to roundabouts. Eight of the proposed nine roundabouts including the intersection of Corral de Tierra Road were analyzed for single lane roundabouts.

Build Alternative 2 – Signal and Lane Modifications

Build Alternative 2 would improve the nine existing intersections with modifications to lane configurations and upgrades to signal equipment.

All study intersections along SR 68 analyzed in this report are identified for improvements in the Scenic Route 68 Corridor Improvements Project. The draft EIR concludes that traffic operations would be improved under both Build Alternative 1 and Build Alternative 2 compared to the No Build alternative which would retain existing traffic controls and lane configurations under existing conditions.

All land development projects will be required to pay the Regional Development Impact Fee (RDIF). Payment of the RDIF is considered to satisfy new development's fair share contribution to the implementation of these improvements for any regional impacts resulting from new development. TAMC collects fees and then allocates it out to the member agencies based on the priority of the projects in nexus study. Caltrans District 5 is one of the member agencies. Caltrans District 5 is the responsible lead agency for any/all improvements on State transportation facilities throughout Monterey County, including but not limited to, design, construction, operations, and maintenance of such facilities. TAMC's collection of the RDIF is proposed to be allocated to Caltrans who is the lead agency for the actual construction of improvements on SR-68.

TAMC Measure X Transportation Safety and Investment Plan

The voters of Monterey County in November 2016 approved Measure X. It is anticipated to generate an estimated \$20 million annually for a total of \$600 million over thirty years through retail transactions and use tax of a three-eighths' of one-percent (3/8%). The revenue from the sales tax measure will be used to fund transportation safety and mobility projects in Monterey County. Per the TAMC website, Measure X sales tax funds have been dedicated to the Scenic Route 68 Corridor Improvements Project, which is also a candidate for federal infrastructure funding and State funding from SB 1 programs.

Report Organization

This report is divided into seven chapters. Chapter 2 presents the VMT analysis. Chapter 3 describes the existing roadway network, transit services, and pedestrian and bicycle facilities. Chapter 4 presents the traffic conditions in the study area under background conditions. Chapter 5 describes the methods used to estimate the project traffic on the roadway network and presents the intersection operations under existing plus project and background plus project conditions. Chapter 6 presents the intersection operations under cumulative conditions. Chapter 7 provides an evaluation of other transportation related issues for the proposed project, such as vehicle queuing, site access and circulation, and parking.

2. Vehicle Miles Traveled Analysis

The OPR VMT Policy establishes screening criteria for developments that are expected to cause a less-than-significant transportation impact under CEQA with no further VMT analysis required. Any project component that does not meet the screening criteria is subject to further VMT analysis. The type of development projects that may meet screening criteria include local-serving retail projects, small projects, projects located within areas of low VMT, projects located within one-half mile of transit, and affordable housing projects.

Per OPR, local-serving retail projects are defined as projects with less than 50,000 s.f. These projects tend to redistribute existing trips instead of creating new trips. Local-serving retail developments like the fueling station and associated convenience store typically shorten vehicle trips and reduce VMT by diverting existing trips from farther retail businesses to the new retail project, which reduces trip lengths.

The proposed fueling station and convenience store is assumed to mostly generate local trips accessing the site from Corral de Tierra Road, San Benancio Road, and Laureles Grade Road connecting to nearby residential areas. There are gas stations and convenience stores located near the intersections of Highway 68 and Canyon Del Rey Boulevard (more than 6 miles to the west of the project site) and Toro Hills and Portola Drive (approximately 3 miles east from the project site). Therefore, few trips are assumed to travel from beyond three miles of the project site, other than pass-by trips. Since the project is considered a local-serving retail use with a size of less than 50,000 square feet, its VMT impact is considered less than significant according to State guidelines. As such, the project would result in a less than significant transportation impact pursuant to CEQA Guidelines Section 15064.3(b).

3.

Existing Conditions

This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit services, and pedestrian and bicycle facilities.

Existing Roadway Network

Regional access to the study area is provided by Highway 68 (SR 68).

Highway 68 (SR 68) is a two-lane east-west highway in the vicinity of the site. SR 68 extends westward to the Monterey Peninsula and eastward to US 101 in Salinas. Access to and from the project site is provided via a signalized intersection at Corral de Tierra Road.

Major roadways within or near the project area include York Road, Pasadera Drive/Boots Road, Laureles Grade Road, Corral de Tierra Road, San Benancio Road. These roads are described below.

York Road is a two-lane roadway that begins just north of SR 68. York Road has a posted speed limit of 30 mph in the study area and extends to the Laguna Seca Golf Ranch, where it ends. Bike lanes and sidewalks do not exist along either side of the street. Parking is prohibited along both sides of the street.

Pasadera Drive/Boots Road are two-lane roadways that begin at SR 68. Pasadera Drive is a driveway that provides access to multiple residential developments north of SR 68, and Boots Road is a private road that extends southward from SR 68 and provides access to a number of residential developments. Pasadera Drive and Boots Road have a posted speed limit of 25 mph. Bike lanes and sidewalks do not exist along either side of the street. Parking is prohibited along both sides of the street.

Laureles Grade Road is a north-south, two-lane roadway that begins at SR 68 and extends southward to Carmel Valley. The posted speed limit is 45 mph. Bike lanes and sidewalks do not exist along either side of the street. A sidewalk exists along the east side of the street for a short segment south of SR 68. Parking is prohibited along both sides of the street.

Corral de Tierra Road is a north-south, two-lane collector road that extends southward to multiple residential developments. The project site is located on this road at the intersection with SR 68. The posted speed limit is 35 mph. Bike lanes and sidewalks do not exist along either side of the street. Parking is prohibited along both sides of the street. Corral de Tierra Road would provide direct access to the project site.

San Benancio Road is a north-south 2-lane roadway that extends south of SR 68 and ultimately merges with Corral de Tierra Road. San Benancio Road provides access to multiple residential developments. The posted speed limit is 35 mph. Bike lanes and sidewalks do not exist along either side of the street. Parking is prohibited along both sides of the street.

Existing Transit Service

Transit service in Monterey County is provided by Monterey-Salinas Transit (MST). However, there are no bus routes near the site.

Existing Bicycle and Pedestrian Facilities

There are no existing bicycle facilities in the project vicinity. However, several facilities are planned (see Figure 3). The Monterey County Bike Map 2016 proposes bike lanes on SR 68, San Benancio Road, Corral de Tierra Road, Laureles Grade Road, and Carmel Valley Road. The bike plan also proposes bike routes on York Road and other residential roads.

There are almost no pedestrian facilities in the vicinity of the project site. The south leg of the intersection of Corral de Tierra and SR 68 has sidewalks, which end within a few feet of the intersection. The project proposes new sidewalks along its frontage on SR 68 and Corral de Tierra Road. The existing site has four driveways: two on Corral de Tierra Road and two on SR 68. The project would close all four driveways and construct two new driveways on Corral de Tierra Road, south of the existing driveways. This would improve safety for pedestrians and bicyclists. The shopping village, when built, will also provide sidewalks along its frontage on SR 68 and Corral de Tierra Road.

Collision Analysis

A review of collisions from the most recently available 5-years (2018 to 2022) of the California Highway Patrol Statewide Integrated Traffic Records Systems (SWITRS) data shows a total of 59 collisions near the intersection of SR 68 and Corral de Tierra Road. Sixteen collisions were within 100 feet of the intersection. Based on the total number of collisions within 100 feet of the intersection, the crash rate was calculated to be 0.36 (see Table 3). Compared to the statewide average of 0.74, the intersection has fewer crashes on average.

Table 3
Intersection Collision Data

Intersection	Type	AADT ¹	Total Collisions ²	Crash Rate ³	Statewide Average
Corral De Tierra Road/SR 68	4 leg, signalized	24,040	16	0.36	0.74
Notes: 1. AADT = the total number of entering vehicles during the AM peak hour multiplied by 10 2. Collision data source: California Highway Patrol Statewide Integrated Traffic Records System (SWITRS). 3. Crash rate expressed as crashes per 1 million vehicles entering the intersection.					

Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were obtained by observations in the field and are shown in Figure 4.

Existing Traffic Volumes

Existing weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak hour traffic volumes were obtained from new intersection turning movement counts in May 2023 (see Figure 5). Traffic count data for intersections are included in Appendix A. Turning movement traffic volumes at the study intersections for all scenarios of the traffic study are tabulated in Appendix B.

Existing Intersection Level of Service

The results of the intersection level of service analysis under existing conditions are summarized in Table 4. The results of the analysis show that four of the five signalized study intersections currently operate at LOS D or better. The San Benancio Road and SR 68 intersection currently operates at LOS F during the AM peak hour.

The intersection level of service sheets is included in Appendix C.

Table 4
Existing Level of Service Summary

ID	Intersection	Control ¹	Peak Hour	Count Date	Existing	
					Avg. Delay ²	LOS
1	Corral de Tierra Road and Project Southern Driveway	OWSC	AM	05/23/23	N/A	N/A
			PM	05/23/23	N/A	N/A
2	Corral de Tierra Road and Project Northern Driveway	OWSC	AM	05/23/23	N/A	N/A
			PM	05/23/23	N/A	N/A
3	Corral de Tierra Road and SR 68	Existing	AM	05/23/23	28.6	C
			PM	05/23/23	48.9	D
4	San Benancio Road and SR 68	Existing	AM	05/23/23	>80	F
			PM	05/23/23	20.3	C
5	Laureles Grade and SR 68	Existing	AM	05/23/23	12.8	B
			PM	05/23/23	31.2	C
6	Pasadera Road and SR 68	Existing	AM	05/23/23	12.7	B
			PM	05/23/23	26.3	C
7	York Road and SR 68	Existing	AM	05/23/23	8.9	C
			PM	05/23/23	32.2	C

Notes:

- Control Type Definitions: OWSC = One-Way Stop Control, N/A = Not Analyzed.
- Intersection level of service for all other control types is represented by average delay for all movements. The OWSC intersections are the project driveways, and therefore, do not have an existing intersection.

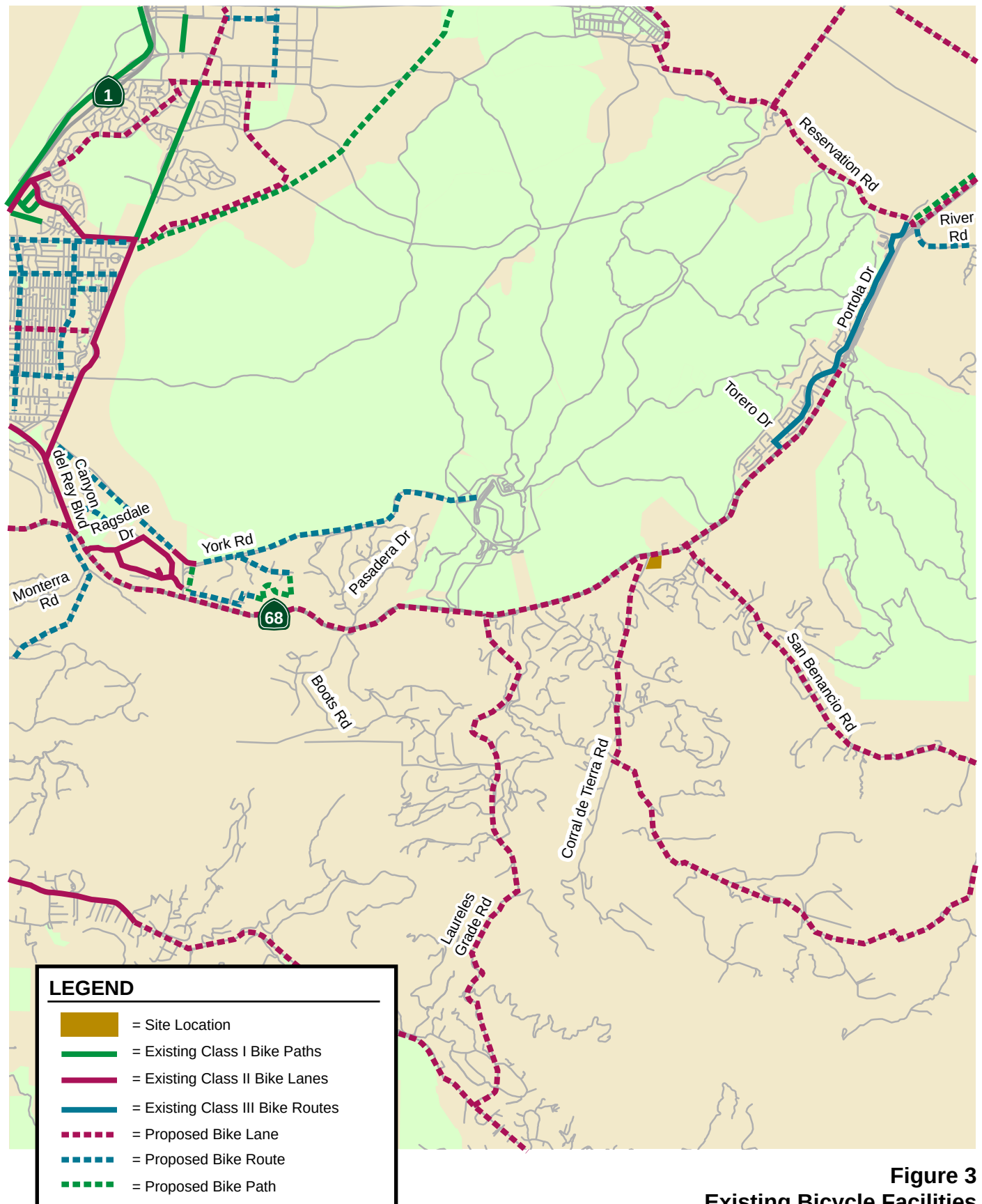


Figure 3
Existing Bicycle Facilities

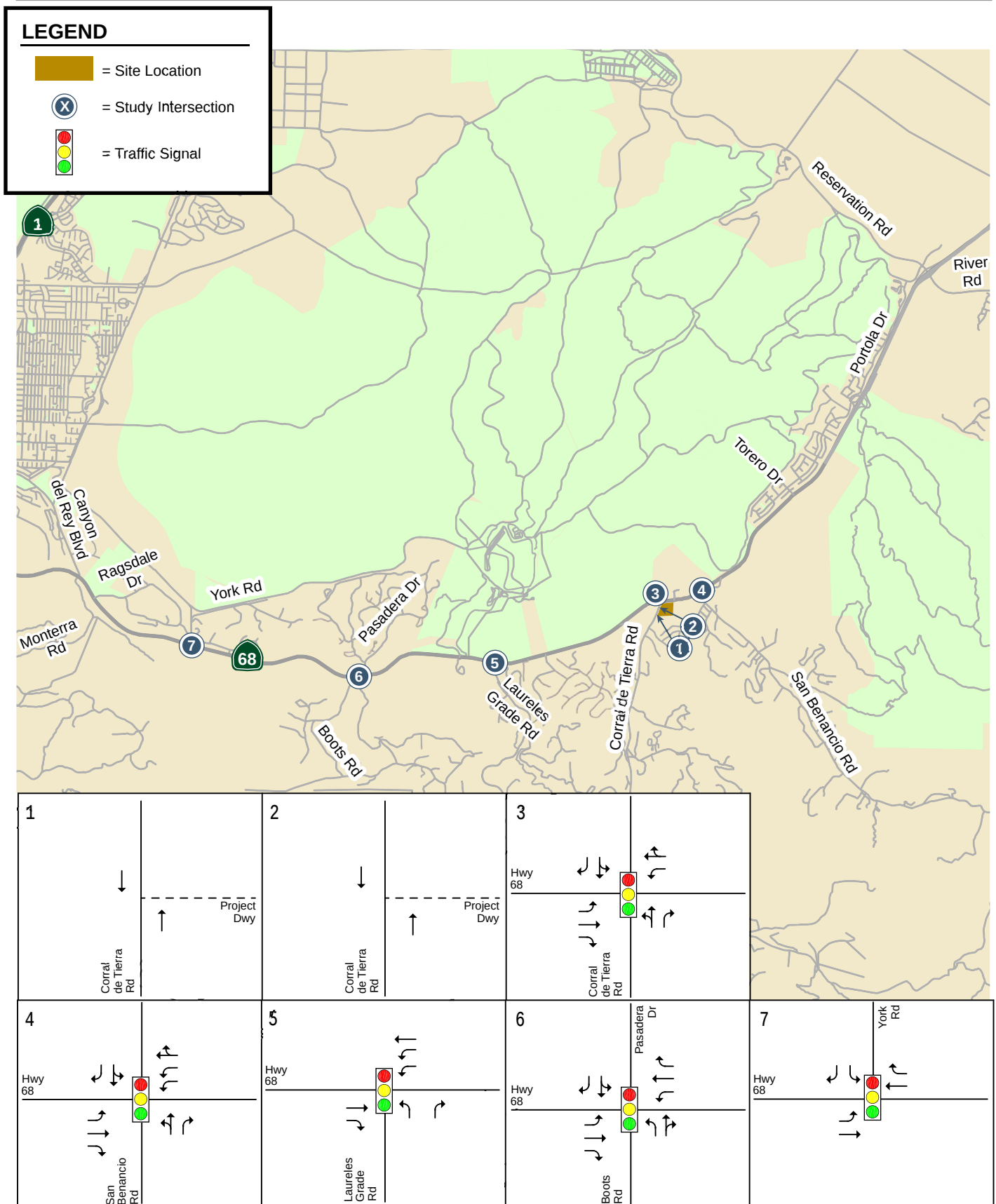


Figure 4
Existing Lane Configurations

LEGEND

-  = Site Location
-  = Study Intersection
- XX(XX) = AM(PM) Peak-Hour Traffic Volumes

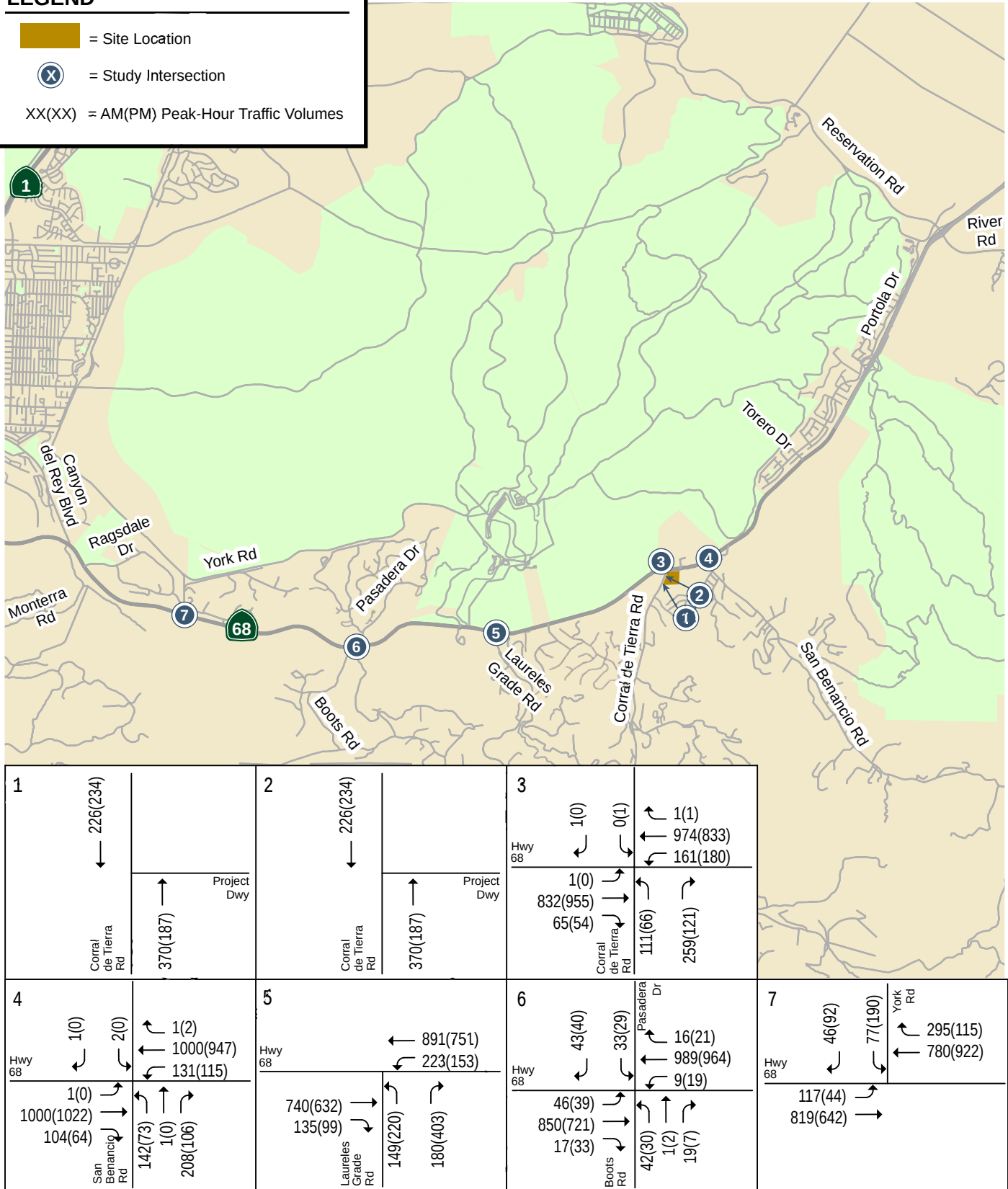


Figure 5
Existing Traffic Volumes

Observed Existing Conditions

Traffic conditions were observed in the field in June 2023 in order to identify existing operational deficiencies and to confirm the accuracy of calculated intersection levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to level of service, and (2) to identify any locations where the level of service analysis does not accurately reflect existing traffic conditions.

During the AM peak hour, there is a queue along westbound SR-68 at the two-lane to one-lane merge between the SR-68/Portola Drive interchange and the SR-68/Torero Drive intersection. This is due to the bottleneck caused by both the lane merge and the stop-controlled intersection at Torero Drive as westbound traffic on SR-68 slows to allow traffic from Torero Drive to turn right onto SR-68. At the SR-68/San Benancio Road and SR-68/Corral de Tierra Road intersections, all movements typically clear the intersections in one signal cycle. At the SR-68/York Road intersection, during the school student drop-off period, there is a queue on westbound SR-68 that intermittently does not clear in one signal.

During the PM peak hour, queues on eastbound SR-68 extend from the Corral de Tierra Road intersection to the upstream intersections of Laureles Grade and Pasadera Drive, and occasionally past York Road. Both the intersections of San Benancio Road/SR-68 and Corral de Tierra Road/SR-68 were observed to meter the eastbound traffic on SR-68. Traffic on westbound SR-68 often takes more than one signal cycle to clear the intersections.

4. Background Conditions

This chapter describes background traffic conditions without the project. Traffic volumes for background conditions include volumes from existing traffic counts plus traffic generated by other approved and under construction developments in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions.

Background Transportation Network

The transportation network for background conditions, including roadway and intersection lane configurations, has been analyzed with the same configurations as described under the existing conditions.

Approved Developments

Background traffic volumes were forecast based on the project trip assignments provided for the relevant approved but not yet completed projects. The list of approved and under construction projects was developed based on information provided by Monterey County Staff and from the Final Airport Master Plan EIR for the Monterey Regional Airport, November 2018. The approved but not constructed projects shown in Table 5 were considered under background conditions because they would contribute background trips to the study intersections. The Corral de Tierra Neighborhood Retail Village, adjacent to the proposed fueling station, is an approved project and is included in the background conditions analysis.

Intersection Traffic Volumes

Background peak-hour traffic volumes were calculated by adding to existing volumes the estimated traffic from approved developments. Trip generation and assignment for each project was obtained from the Final Airport Master Plan EIR for the Monterey Regional Airport, November 2018, or the project's available traffic impact analysis (TIA) or environmental impact report (EIR). Background traffic volumes are shown in Figure 6. Peak-hour intersection volumes for the study intersections are tabulated in Appendix B.

Table 5
Approved Projects

Approved Project		Size	Daily Trips	A.M. Peak-Hour Trips	P.M. peak-Hour Trips
City of Marina					
1	The Dunes on Monterey Bay Phase 1 (Remainder) ^{1,2}	—	34,135	1,619	3,050
2	CSUMB North Campus Housing ²	492 units	2,188	172	211
3	Veterans Hospital ²	100,000 sq.ft.	1,322	95	93
City of Seaside					
4	Seaside Resort ^{1,2}	—	5,672	267	362
City of Sand City					
5	The Collection at Monterey Bay ^{1,2}	—	3,669	194	279
6	Monterey Bay Shores ^{1,2}	—	2,032	117	155
City of Monterey					
7	Ryan Ranch Road (Storage Buildings) ²	14,280 sq.ft.	51	4	5
Unincorporated Monterey County					
8	East Garrison ^{1,2}	—	1,231	975	1,315
9	Montera Ranch ²	151 Homes	1,445	113	153
10	Pasadera ²	43 Homes	412	32	43
11	Harper 14 Lots of Record ²	14 Homes	134	11	14
12	Oaks Subdivision ²	11 Homes	105	8	11
13	Laguna Seca Business Park ²	104 units and 36,388 sq.ft. Office	1,229	115	131
14	Monterey Airport Expansion (Project 2) ²	355,000 sq.ft.	1,082	154	185
15	Corral De Tierra Neighborhood Retail Village ^{1,2}	—	5,100	95	235
16	Ferrini Ranch ^{1,2}	—	1,999	165	226
17	Monterey Regional Airport - Short-term ²	relocation of the 44 GA hangars and construction of 7 new GA hangars	10	1	2

Notes:

¹No project sizes given

²Trip generation and Trip Assignment from *Final Airport Master Plan EIR for the Monterey Regional Airport* Hatch Mott McDonald, November, 2018

³Trip generation and Trip Assignment from *Riverview at Las Palmas Traffic Impact Analysis*, Kieth Higgins, June 20, 2017

⁴Trip generation and Trip assignment from *Monterey Bay Operations and Maintenance Facility Project Impact Analysis* Hatch Mott McDonald, April 16, 2015

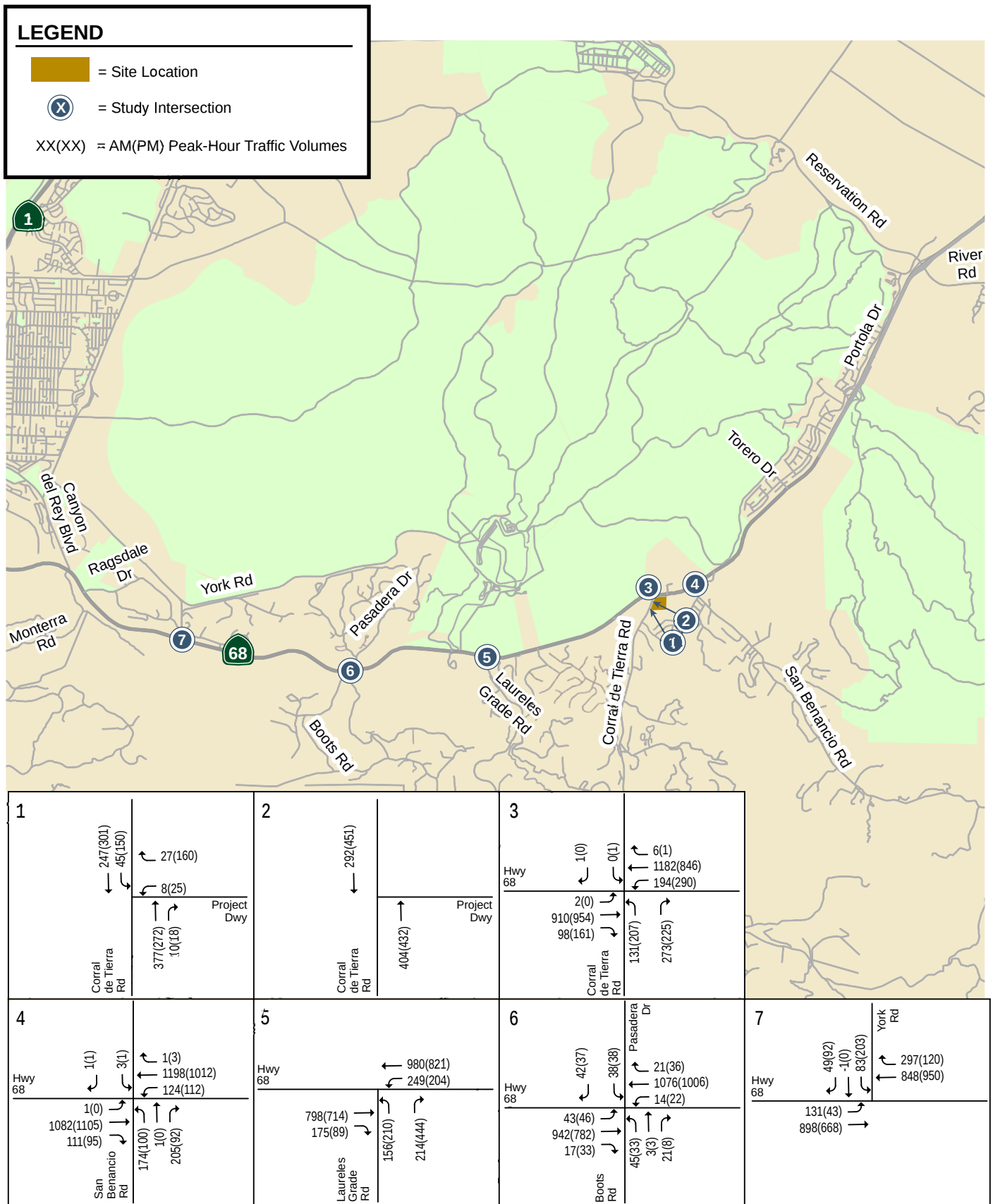


Figure 6
Background Traffic Volumes

Background Intersection Level of Service

The results of the intersection level of service analysis under background conditions are summarized in Table 6. The results of the analysis show that the signalized intersection of Corral de Tierra Road and SR 68 would operate at LOS F during the PM peak hour and the signalized intersection of San Benancio Road and SR 68 would operate at LOS F during the AM peak hour under background conditions with the existing transportation network.

The intersection level of service sheets is included in Appendix C.

Table 6
Background Level of Service Summary

ID	Intersection	Control ¹	Peak Hour	Existing		Background	
				Avg. Delay ²	LOS	Avg. Delay ²	LOS
1	Corral de Tierra Road and Project Southern Driveway	OWSC	AM	N/A	N/A	12.0	B
			PM	N/A	N/A	21.3	C
2	Corral de Tierra Road and Project Northern Driveway	OWSC	AM	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A
3	Corral de Tierra Road and SR 68	Existing	AM	28.6	C	45.5	D
			PM	48.9	D	>80	F
4	San Benancio Road and SR 68	Existing	AM	>80	F	>80	F
			PM	20.3	C	26.9	C
5	Laureles Grade and SR 68	Existing	AM	12.8	B	13.7	B
			PM	31.2	C	41.0	D
6	Pasadera Road and SR 68	Existing	AM	12.7	B	13.6	B
			PM	26.3	C	32.3	C
7	York Road and SR 68	Existing	AM	8.9	C	9.5	A
			PM	32.2	C	39.1	D

Notes:

- Control Type Definitions: OWSC = One-Way Stop Control, Rbt = Roundabout, N/A = Not Analyzed.
- Intersection level of service for all other control types is represented by average delay for all movements. The OWSC intersections are the project driveways, and therefore, do not have an existing intersection.

5. Project Conditions

This chapter describes the method by which project traffic is estimated and roadway traffic operations under existing plus project and background plus project conditions are evaluated.

Roadway Network

The roadway network under existing plus project conditions and background plus project conditions would be the same as described in Chapter 3 under existing conditions.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the proposed project site was estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Vehicle trips generated by the project were estimated using the trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11th Edition* (2021) for "Convenience Store /Gas Station – GFA 2-4k" (Land Use 945) located in a general Urban/Suburban area (see Table 6). As defined by the ITE, "Convenience Store/Gas Station" is a land use that includes gasoline/service stations with convenience markets. The proposed fueling station would have a convenience store of 3,100 s.f. and 12 fueling stations, therefore the ITE, "Convenience Store/Gas Station" category was used for the analysis. As shown in Table 7, the project is estimated to generate 3,181 vehicle trips daily, including 193 vehicle trips (97 in and 96 out) in the AM peak hour and 221 vehicle trips (111 in and 110 out) in the PM peak hour.

A pass-by trip reduction of 62 percent to AM peak hour trips and 56 percent to PM peak hour trips was applied to the trip generation. Trip reduction percentages were obtained from the ITE *Trip Generation Handbook, 3rd Edition* (see Appendix E). Pass-by trips are trips that would already drive by the site on SR 68 (and are therefore already counted in the existing traffic) but would turn into the site while passing by. Pass-by trips are added to the project driveways along with the primary trips (see Figure 8). The trip generation conservatively does not account for internal trips to the shopping village, which

would also reduce trips. A higher proportion of pass-by trips were assumed along the peak directions on Hwy 68 (westbound during the AM peak hour and eastbound during the PM peak hour).

After applying the pass-by trip reductions, the project would generate 73 new primary vehicle trips occurring during the AM peak hour and 97 new primary vehicle trips occurring during the PM peak hour. Figure 9 shows the assignment of the primary trips. Figure 10 shows the pass-by trips and primary trips added together at Corral de Tierra Road and at the project driveways.

Table 7
Trip Generation Estimates

Land Use	Size	Units	Daily		Rate	AM Peak-Hour Trips			Rate	PM Peak-Hour Trips			
			Rate	Trips		In	Out	Total		In	Out	Total	
Proposed													
Gas Station ¹	12	fueling pumps	265.12	3,181	16.06	97	96	193	18.4	111	110	221	
Pass by Trips ²						(60)	(60)	(120)		(62)	(62)	(124)	
Net Trips Generated				3,181		37	36	73		49	48	97	
Notes:													
¹ Gas station trip generation based on the average rates published in the ITE <i>Trip Generation Manual, 11th Edition</i> (2021) for Convenience Store/Gas Station - GFA (2-4k) (Land Use Code 945).													
² Pass by trip reduction is based on the average rates for Gasoline/Service Station with Convenience Market (62% in the AM peak hour and 56% during the PM peak hour) published in the ITE <i>Trip Generation Handbook, 3rd Edition</i> (Land Use Code 945).													

Trip Distribution

Trips generated by the proposed project were distributed to the study network based on the existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The proposed fueling station and convenience store is assumed to mostly generate local trips accessing the site from Corral de Tierra Road, San Benancio Road, and Laureles Grade Road connecting to nearby residential areas. Few trips are assumed to travel from beyond three miles of the project site, other than pass-by trips. The trip distribution pattern for the project is shown in Figure 7. Figure 9 shows the assignment of project primary trips at each study intersection and Figure 10 shows the project trip assignment with pass-by trips in the immediate vicinity of the project site.

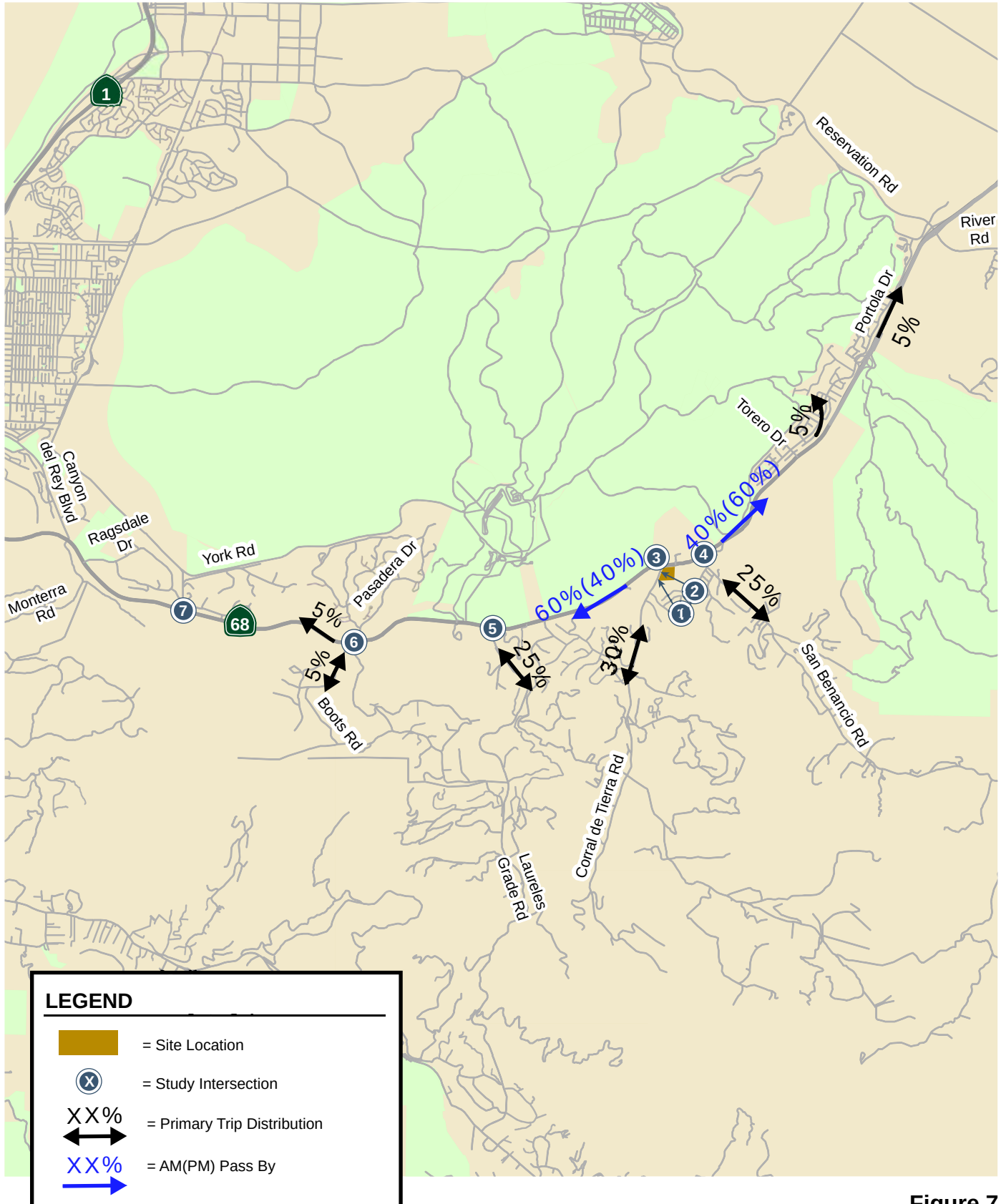


Figure 7
Project Trip Distribution

Corral de Tierra Fueling Station TA Report

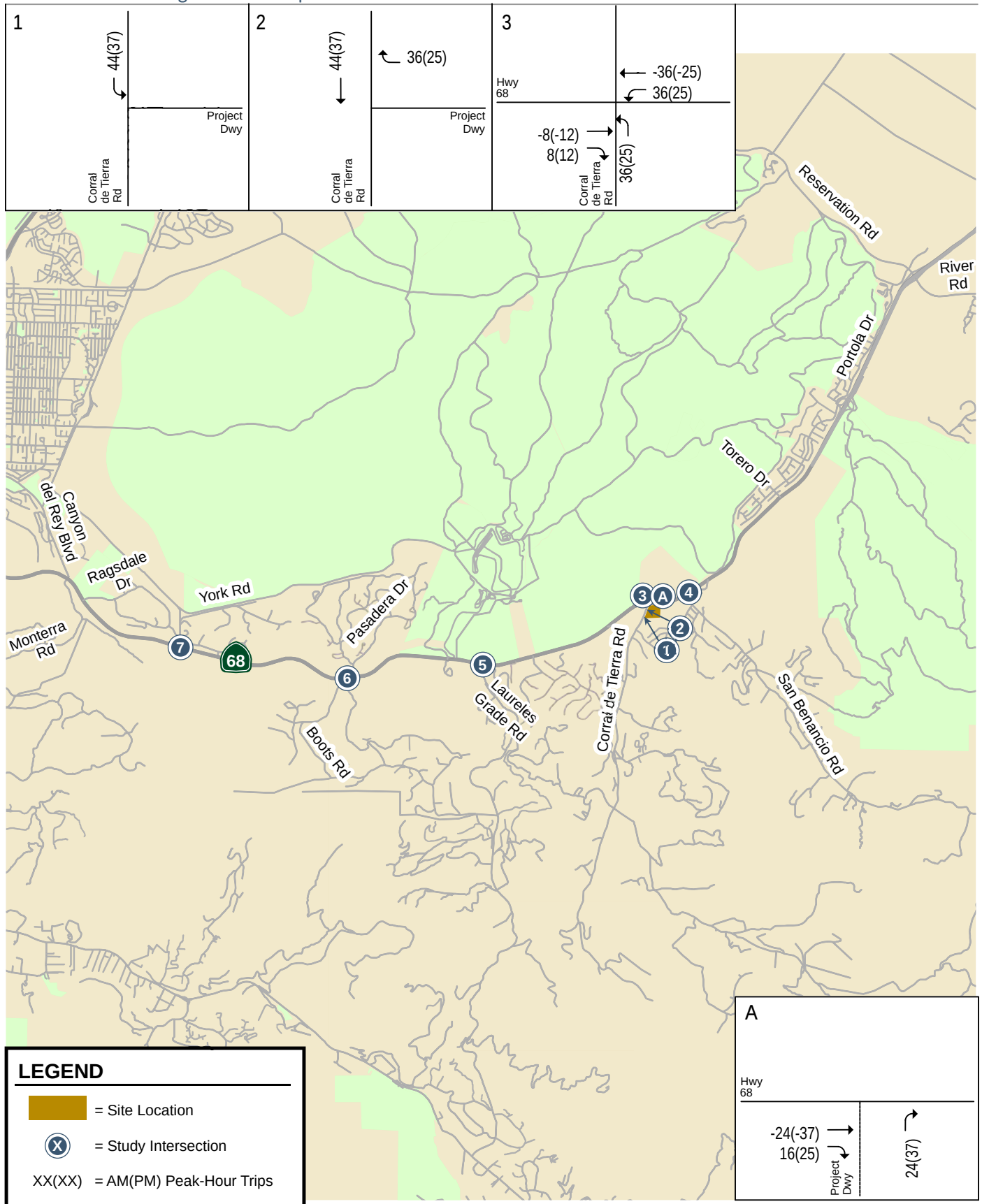


Figure 8
Pass-by Project Trips

Corral de Tierra Fueling Station TA Report

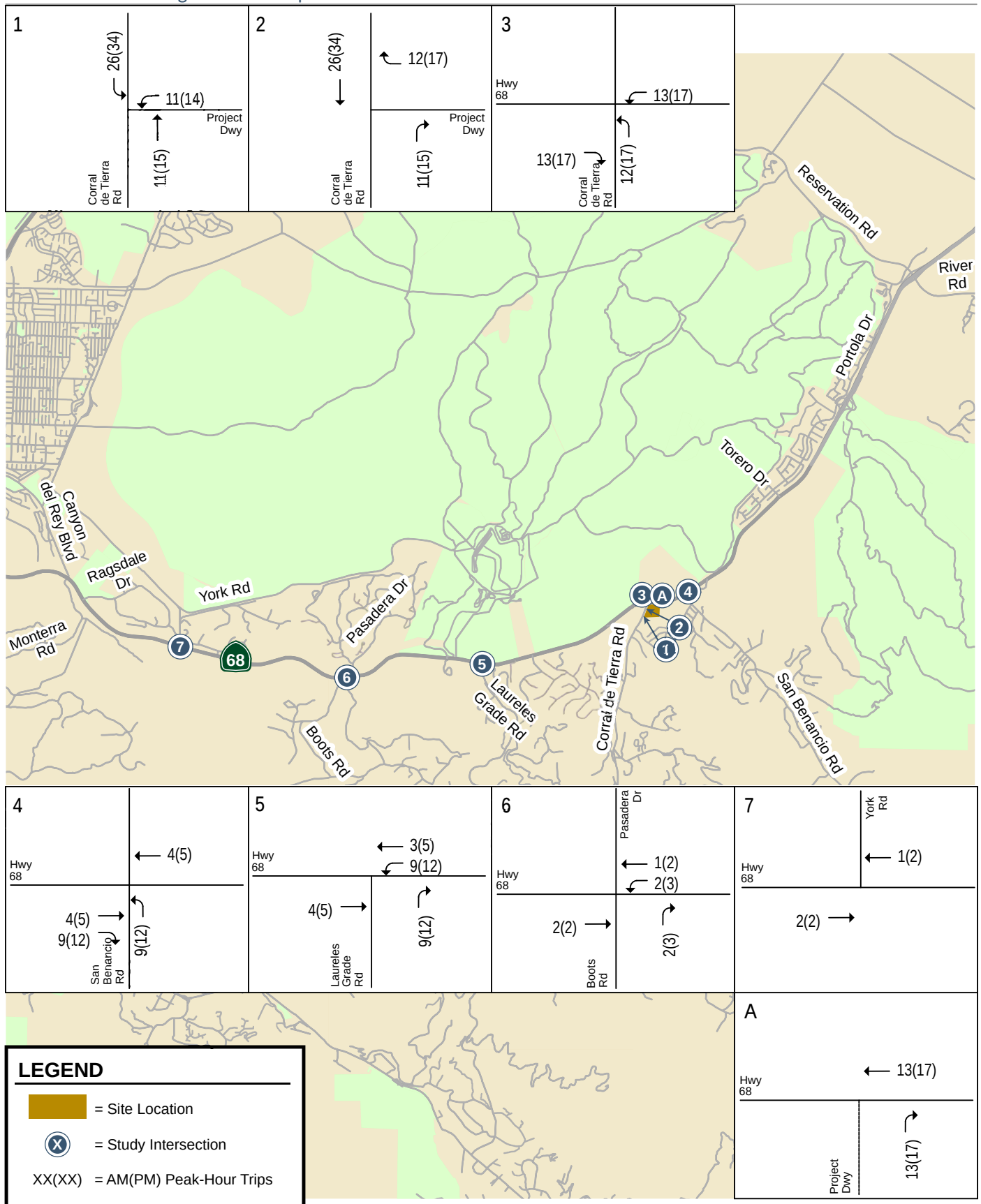


Figure 9
Project Trip Assignment (Primary Trips)

Corral de Tierra Fueling Station TA Report

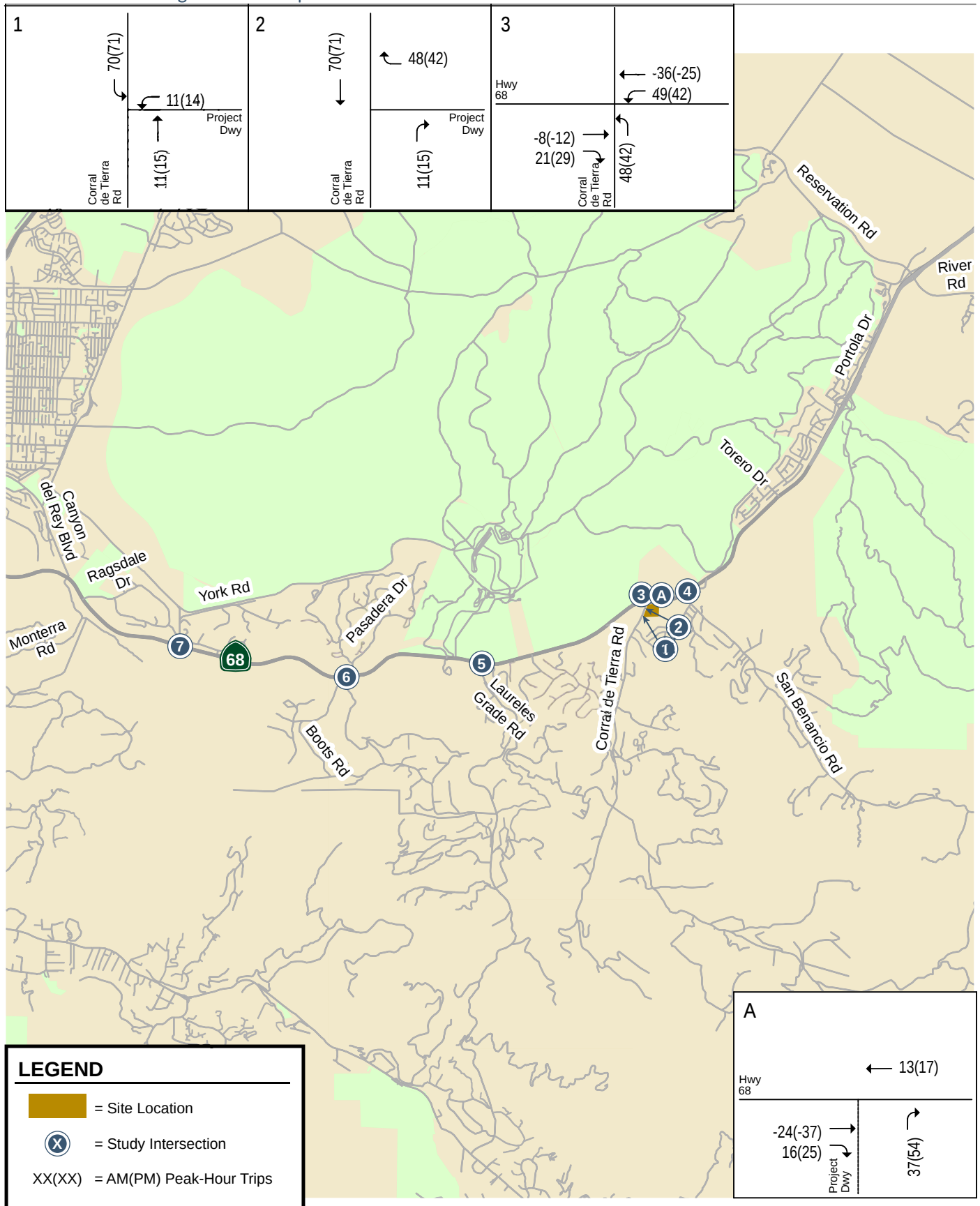


Figure 10
Project Trip Assignment With Pass-By Trips

Intersection Traffic Volumes Under Project Conditions

Project conditions were evaluated relative to both (1) existing traffic volumes and (2) background traffic volumes. For the existing plus project scenario, the new trips generated by the proposed project were added to the existing traffic volumes to derive the existing plus project traffic volumes (see Figure 11). For the background plus project scenario, the new trips generated by the proposed project were added to the background traffic volumes to derive the background plus project traffic volumes (see Figure 12).

Existing Plus Project Intersection Level of Service

The results of the intersection level of service analysis under existing plus project conditions show that the San Benancio Road/SR 68 intersection would continue to operate at LOS F during the AM peak hour with the project (see Table 8). All other intersections would operate at LOS D or better during both AM and PM peak hours with the project.

The intersection level of service sheets are Included in Appendix C.

Table 8
Existing Plus Project Level of Service Summary

ID	Intersection	Control ¹	Peak Hour	Existing		Existing Plus Project	
				Avg. Delay ²	LOS	Avg. Delay ²	LOS
1	Corral de Tierra Road and Project Southern Driveway	OWSC	AM	N/A	N/A	16.5	C
			PM	N/A	N/A	13.9	B
2	Corral de Tierra Road and Project Northern Driveway	OWSC	AM	N/A	N/A	10.8	B
			PM	N/A	N/A	9.5	A
3	Corral de Tierra Road and SR 68	Existing	AM	28.6	C	29.9	C
			PM	48.9	D	54.8	D
4	San Benancio Road and SR 68	Existing	AM	>80	F	>80	F
			PM	20.3	C	20.4	C
5	Laureles Grade and SR 68	Existing	AM	12.8	B	13.1	B
			PM	31.2	C	32.4	C
6	Pasadera Road and SR 68	Existing	AM	12.7	B	12.7	B
			PM	26.3	C	26.7	C
7	York Road and SR 68	Existing	AM	8.9	A	8.9	A
			PM	32.2	C	32.5	C

Notes:

- Control Type Definitions: OWSC = One-Way Stop Control, Rbt = Roundabout, N/A = Not Analyzed.
- Intersection level of service for OWSC intersection is represented by the delay for the stop controlled approach. Intersection level of service for all other control types is represented by average delay for all movements. The OWSC intersections are the project driveways, and therefore, do not have an existing intersection.

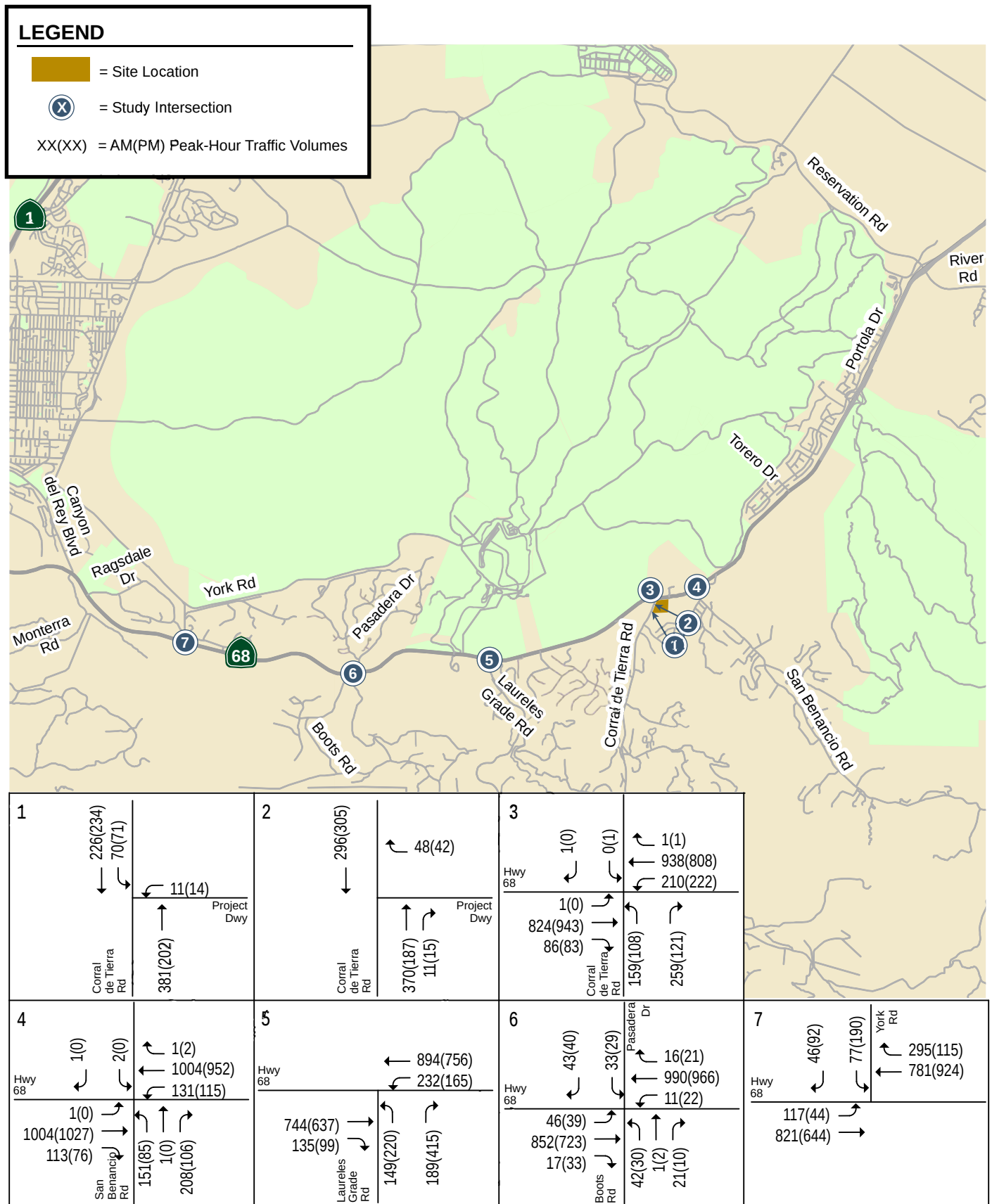


Figure 11
Existing Plus Project Traffic Volumes

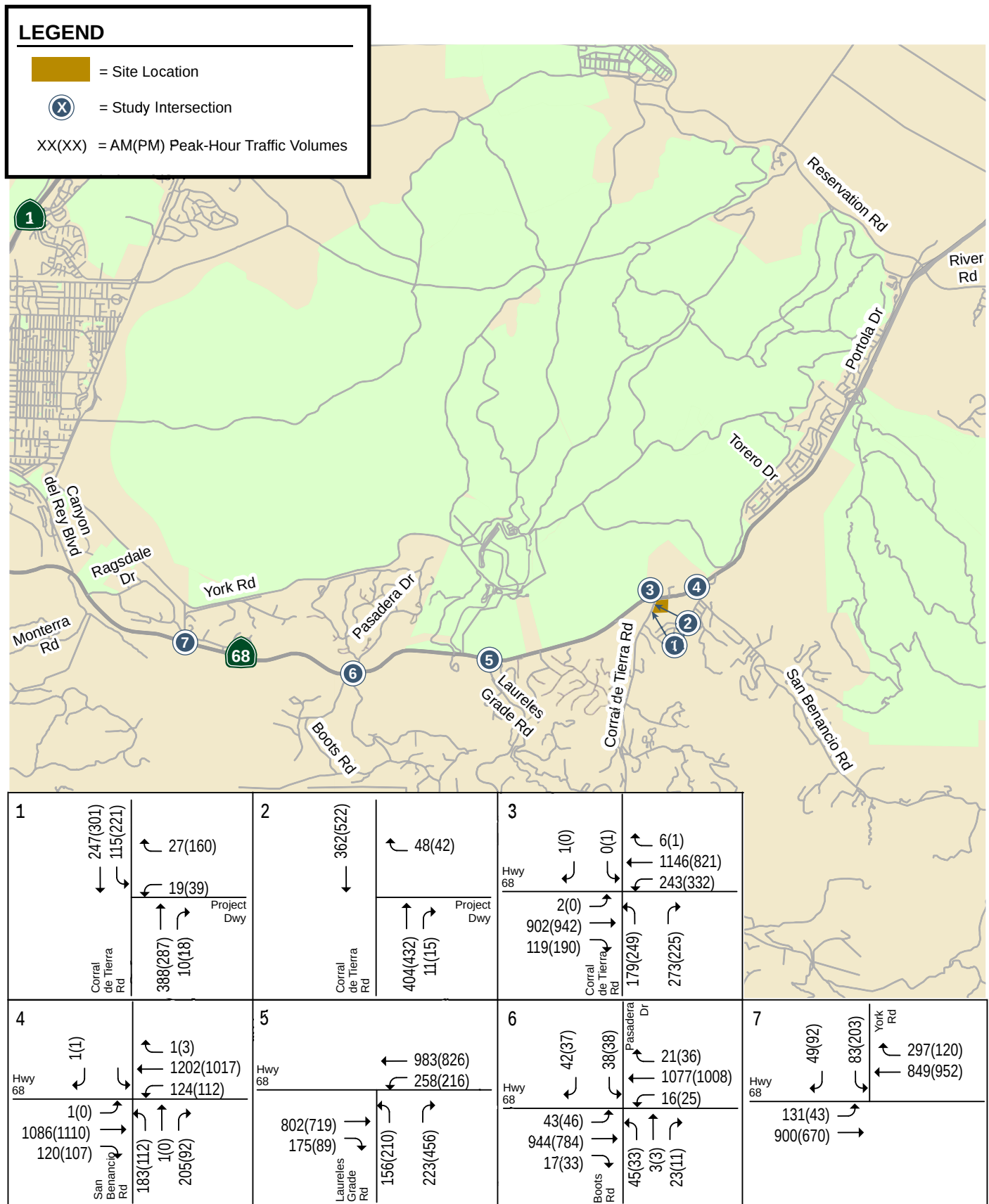


Figure 12
Background Plus Project Traffic Volumes

Background Plus Project Intersection Level of Service and Improvements

Under background conditions, the analysis shows that the intersection of San Benancio Road/SR 68 would operate at LOS F during the AM peak hour and would continue to operate at LOS F during the AM peak hour with the project traffic. The intersection of Corral de Tierra Road/SR 68 would operate at LOS F during the PM peak hour under background conditions and would continue to operate at LOS F during the PM peak hour with the project traffic. All other study intersections would operate at LOS D or better during both the AM and PM peak hours with the project traffic.

The California Department of Transportation (Caltrans) in partnership with the Transportation Agency for Monterey County (TAMC) is proposing to improve traffic operations and reduce collisions with wildlife on an approximately nine-mile stretch of SR 68 in Monterey County by modifying the design of nine intersections from Josselyn Canyon Road to San Benancio Road. The Draft Environmental Impact Report (EIR) for the Scenic Route 68 Corridor Improvements Project was released for public review in November 2023. Two build alternatives are being evaluated in the EIR as described below. Layouts of these improvements is included in Appendix D.

Build Alternative 1 – Roundabouts

Build Alternative 1 is proposing to convert all nine signalized intersections along the nine-mile stretch of the SR 68 corridor to roundabouts. Eight of the proposed nine roundabouts including the intersection of Corral de Tierra Road were analyzed for single lane roundabouts.

Build Alternative 2 – Signal and Lane Modifications

Build Alternative 2 would improve the nine existing intersections with modifications to lane configurations and lengths and upgrades to signal equipment.

All study intersections along SR 68 analyzed in this report are identified for improvements in the Scenic Route 68 Corridor Improvements Project. The draft EIR concludes that traffic operations would be improved under both Build Alternative 1 and Build Alternative 2 compared to the No Build alternative which would retain existing traffic controls and lane configurations under existing conditions. The project will be required to pay the Regional Development Impact Fee (RDIF). Payment of the RDIF by the project would satisfy the project's fair share contribution towards the implementation of SR 68 corridor improvements.

Table 9
Background Plus Project Level of Service Summary

ID	Intersection	Control ¹	Peak Hour	Background		Background Plus Project	
				Avg. Delay ²	LOS	Avg. Delay ²	LOS
1	Corral de Tierra Road and Project Southern Driveway	OWSC	AM	15.6	B	20.2	C
			PM	21.3	C	30.8	D
2	Corral de Tierra Road and Project Northern Driveway	OWSC	AM	N/A	N/A	11.1	B
			PM	N/A	N/A	11.3	B
3	Corral de Tierra Road and SR 68	Existing (Signal)	AM	45.5	D	44.7	D
			PM	>80	F	>80	F
4	San Benancio Road and SR 68	Existing (Signal)	AM	>80	F	>80	F
			PM	26.9	C	27.3	C
5	Laureles Grade and SR 68	Existing (Signal)	AM	13.7	B	14.1	B
			PM	41.0	D	43.3	D
6	Pasadera Road and SR 68	Existing (Signal)	AM	13.6	B	13.7	B
			PM	32.3	C	33.0	C
7	York Road and SR 68	Existing (Signal)	AM	9.5	A	9.5	B
			PM	39.1	D	39.6	D

Notes:

- Control Type Definitions: OWSC = One-Way Stop Control, Rbt = Roundabout, N/A = Not Analyzed.
- Intersection level of service for OWSC intersection is represented by the delay for the stop controlled approach. Intersection level of service for all other control types is represented by average delay for all movements. The OWSC intersections are the project driveways, and therefore, do not have an existing intersection.

6.

Cumulative Conditions

This chapter describes the roadway traffic operations under cumulative no project conditions and cumulative plus project conditions. Cumulative traffic volumes reflect traffic generated by the approved development projects and traffic growth contributed by the pending developments in the study area. Cumulative plus project conditions were evaluated relative to cumulative no project conditions to determine traffic operational levels.

Cumulative Transportation Network

Improvements identified in the Scenic Route 68 Corridor Improvements Projects as Build Alternative 1 and Build Alternative 2 were analyzed for all study intersections under cumulative conditions with and without the project.

Cumulative Traffic Volumes

The cumulative no project traffic volumes were estimated by adding vehicle trips from the Background No Project growth assumptions (“approved but not yet built” and “not occupied” development projects), and vehicle trips from pending development projects in the study area. The list of pending projects was developed based on information from the Final Airport Master Plan EIR for the Monterey Regional Airport, November 2018. The pending projects shown in Table 10 were considered under cumulative conditions because they would contribute cumulative trips to the study intersections. Trip generation and assignment for pending projects under cumulative conditions was obtained from the Final Airport Master Plan EIR for the Monterey Regional Airport, November 2018. Cumulative traffic volumes are shown in Figure 13.

The project trip estimates in Chapter 4 were then added to the cumulative no project traffic volumes to yield cumulative plus project traffic volumes (see Figure 14). Traffic volumes for all components of traffic are tabulated in Appendix B

Table 10
Pending Projects

Pending Project ¹		Size	Daily Trips	A.M. Peak-Hour Trips	P.M. peak-Hour Trips
City of Marina					
1	The Dunes on Monterey Bay Phases 2 & 3	--	45,662	2,896	1,134
2	CSUMB Students (2014-2025)	6,107 students	5,918	524	524
City of Seaside					
3	The Projects at Main Gate	--	26,067	716	1,931
4	Veterans Cemetery	164 Acres	776	28	138
5	West Broadway Corridor	--	3,783	350	362
6	In-N-Out Restaurant	159 Seats	2,251	22	172
7	Dadwal proposed hotel and restaurant	110 rooms and 8,000 sq.ft.	1,628	144	145
8	Monterey Downs and Horse Park	1,280 homes, 330,000 sq.ft. commercial center, 256 rooms hotel, 100,000 sq.ft. office park, 200 room hotel, 5,000 sq.ft. tennis and swim club	28,503	1,714	2,782
Unincorporated Monterey County					
9	Wang Subdivision	29 single family units	255	20	26
10	Harper Canyon/Encina Hills Subdivision	17 units	163	13	17
11	Monterey Regional Airport - Long-term	industrial, 464,000 sq.ft. office, 10,000 sq.ft. restaurant	10,991	1,370	1,368
Carmel Valley					
12	September Ranch	110 units	1,053	83	111
13	Rancho Canada	281 units	2,689	211	284
Notes:					
¹ Trip generation and Trip Assignment from <i>Final Airport Master Plan EIR for the Monterey Regional Airport</i> , Hatch Mott McDonald, November, 2018					

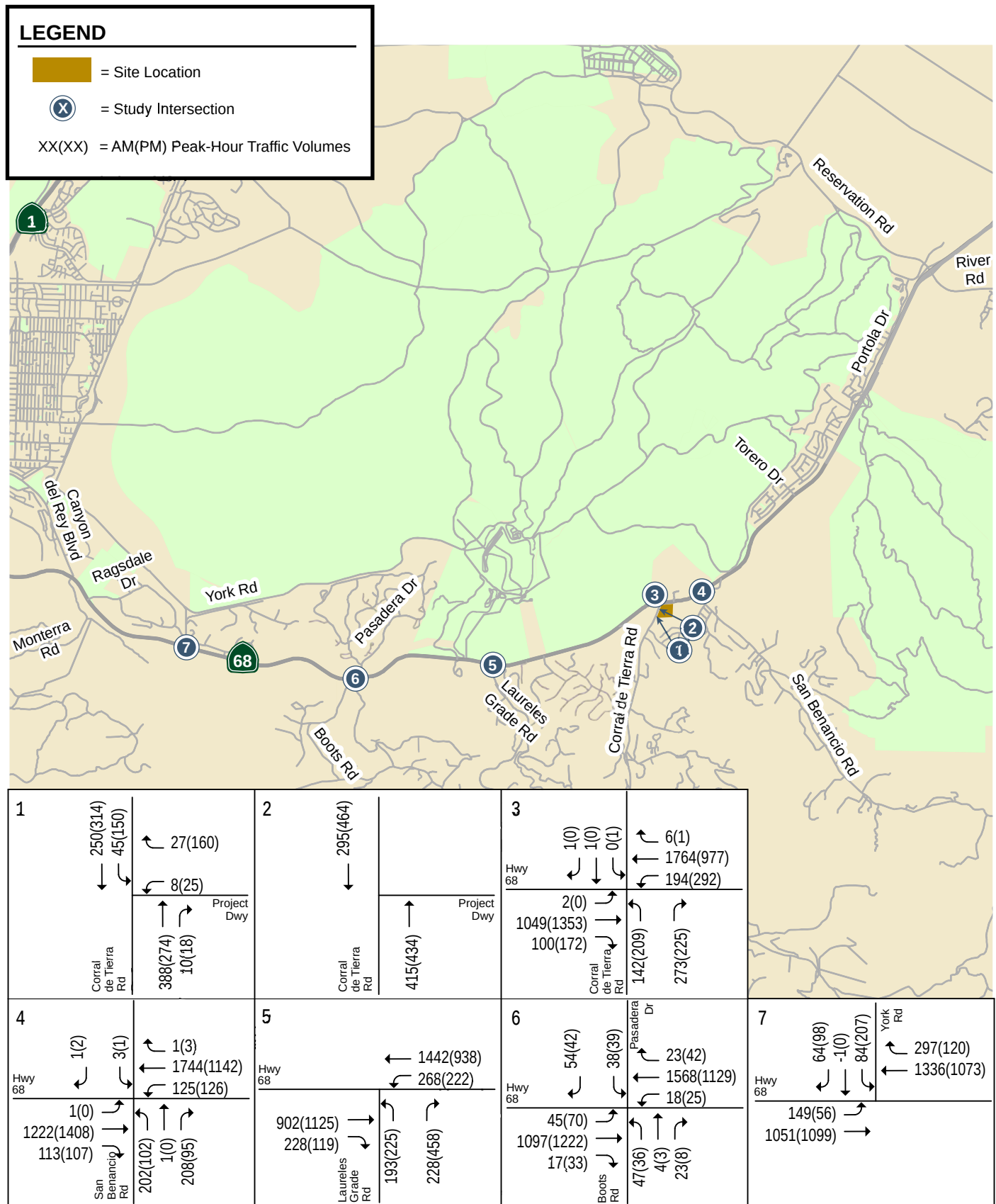


Figure 13
Cumulative No Project Traffic Volumes

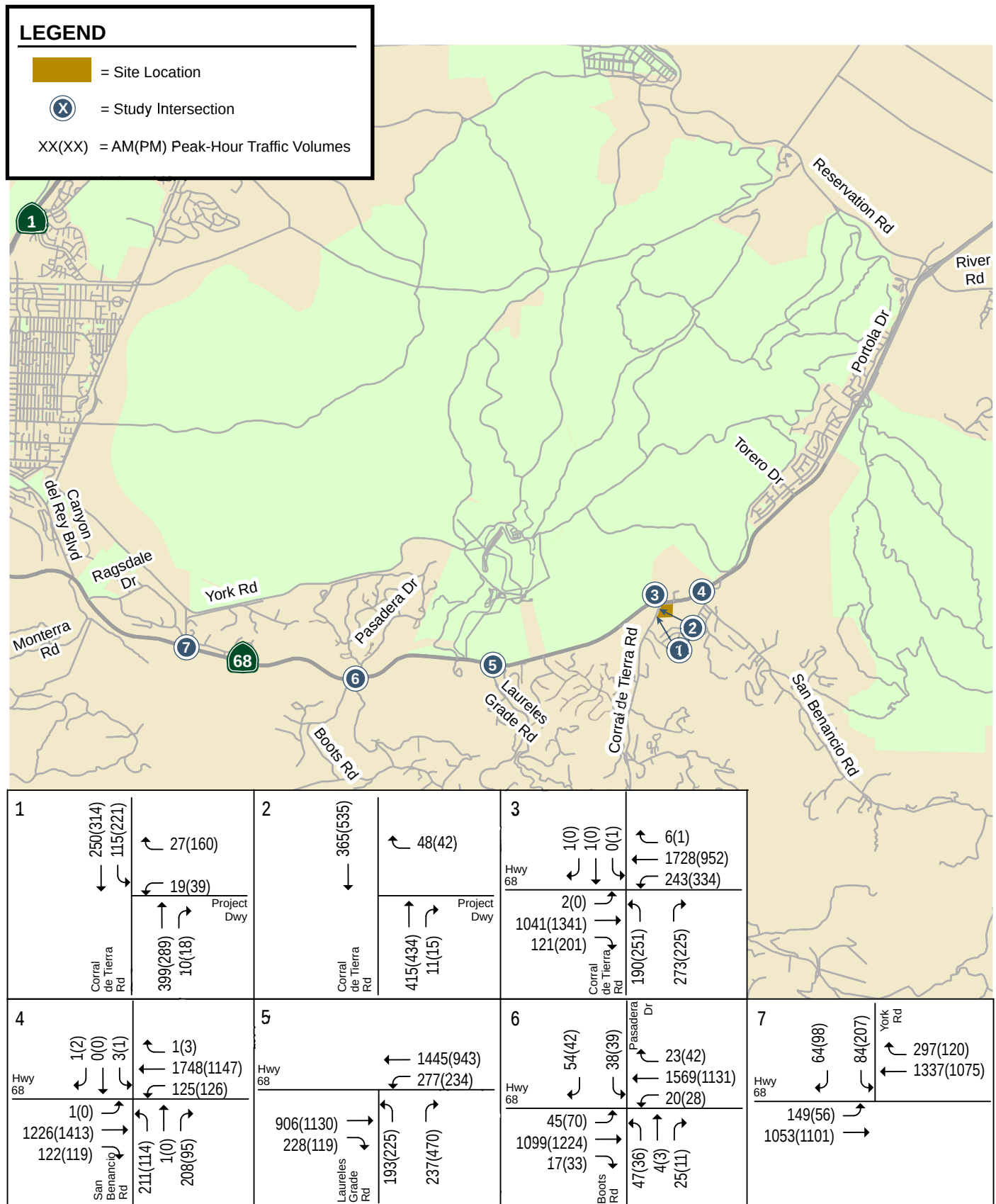


Figure 14
Cumulative Plus Project Traffic Volumes

Cumulative Intersection Level of Service and Improvements

The results of the intersection level of service analysis under cumulative no project and cumulative plus project conditions are summarized in Table 11. Cumulative conditions without and with the project were analyzed with both build alternatives identified in the Scenic Route 68 Corridor Improvements Project. The analysis shows that all of the study intersections along SR 68 would operate at LOS F during at least one of the peak hours under Build Alternative 1 without and with the project. Under Build Alternative 2, all study intersections along SR 68 would operate at LOS D or better with the project.

Table 11
Cumulative Plus Project Level of Service Summary

ID	Intersection	Control ¹	Peak Hour	Cumulative		Cumulative Plus Project	
				Avg. Delay ²	LOS	Avg. Delay ²	LOS
1	Corral de Tierra Road and Project Southern Driveway	OWSC	AM	15.9	C	20.5	C
			PM	21.7	C	31.6	D
2	Corral de Tierra Road and Project Northern Driveway	OWSC	AM	N/A	N/A	11.2	B
			PM	N/A	N/A	11.3	B
3	Corral de Tierra Road and SR 68	Existing (Signal)	AM	>80	F	>80	F
			PM	>80	F	>80	F
		Alt 1 (Rbt)	AM	>80	F	>80	F
			PM	>80	F	>80	F
		Alt 2 (Signal)	AM	26.4	C	27.1	C
			PM	31.2	C	37.7	D
4	San Benancio Road and SR 68	Existing (Signal)	AM	>80	F	>80	F
			PM	67.9	E	68.7	E
		Alt 1 (Rbt)	AM	>80	F	>80	F
			PM	79.9	F	>80	F
		Alt 2 (Signal)	AM	43.7	D	44.2	D
			PM	25.3	C	25.6	C
5	Laureles Grade and SR 68	Existing (Signal)	AM	62.9	E	65.1	E
			PM	>80	F	>80	F
		Alt 1 (Rbt)	AM	>80	F	>80	F
			PM	62.9	F	68.6	F
		Alt 2 (Signal)	AM	10.3	B	10.5	B
			PM	22.7	C	23.4	C
6	Pasadera Road and SR 68	Existing (Signal)	AM	52.0	D	52.6	D
			PM	>80	F	>80	F
		Alt 1 (Rbt)	AM	>80	F	>80	F
			PM	37.1	E	37.9	E
		Alt 2 (Signal)	AM	10.2	B	10.2	B
			PM	11.8	B	11.8	B
7	York Road and SR 68	Existing (Signal)	AM	30.1	C	30.2	C
			PM	61.4	E	61.7	E
		Alt 1 (Rbt)	AM	>80	F	>80	F
			PM	31.4	D	31.7	D
		Alt 2 (Signal)	AM	8.4	A	8.4	A
			PM	10.7	B	10.7	B

Notes:

1. Control Type Definitions: OWSC = One-Way Stop Control, Rbt = Roundabout, N/A = Not Analyzed.
2. Intersection level of service for OWSC intersection is represented by the delay for the stop controlled approach. Intersection level of service for all other control types is represented by average delay for all movements. The OWSC intersections are the project driveways, and therefore, do not have an existing intersection.

7. Other Transportation Issues

This chapter presents an analysis of other transportation issues associated with the project, including site access and circulation.

Unlike the level of service methodology, which is adopted by Caltrans and Monterey County, the analyses in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community. Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the project environment.

Site Access and Circulation

The evaluation of site access and circulation is based on the plan prepared by mcg architecture, dated September 13, 2024. Site access and circulation were reviewed in accordance with generally accepted traffic engineering standards.

Site Access

The existing site has four driveways: two on Corral de Tierra Road and two on SR 68. The site plan shows that the project would close all four driveways and construct two new driveways on Corral de Tierra Road, south of the existing driveways. The site plan also shows that there would be a short center median on Corral de Tierra Road near the project's northern driveway to prohibit left turns into and out of the fueling station. Prohibiting left turns at this driveway would ensure that queues would not block the Corral de Tierra/SR 68 intersection. The median would still allow left turns for the commercial property across the street. The southern driveway on Corral de Tierra Road would be a full access driveway that would allow left turns in and out of the project site. The full access driveway on Corral de Tierra Road would provide access to the fueling station via a reciprocal easement agreement through an internal driveway from the future Corral de Tierra Neighborhood Retail Village and would be built prior to the shopping village.

Sight Distance at Project Driveway

The project driveways on Corral de Tierra Road are shown 190 feet and 450 feet south of Highway 68. The project driveway should be free and clear of any obstructions to optimize sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on adjacent roadways. Any landscaping and signage should be located in such a way as to ensure an unobstructed view for drivers entering and exiting the site. Adequate corner sight distance (sight

distance triangles) should be provided at all site access points in accordance with Caltrans recommended stopping sight distance. The speed limit on Corral de Tierra Road is 35 mph. The Caltrans recommended stopping sight distance for this roadway is 250 feet. As shown on the site plan, the project proposes no tall vegetation or objects that would block a driver's ability to see 250 feet looking southerly down the road.

Driveway Design

The project driveway, shopping village driveway, and internal driveways to the project site are shown to be between 24 feet and 30 feet wide, which meets the Monterey County standard.

Traffic Operations at Project Driveway

Traffic operations at the project driveways were evaluated to identify whether there would be vehicle queuing issues. The gross site trips that would occur at the project driveways are 97 inbound trips and 96 outbound trips during the AM peak hour, and 111 inbound trips and 110 outbound trips during the PM peak hour (see Figure 11). The queueing analysis for movements to which the proposed project would add traffic at the intersection of Corral de Tierra Road/SR 68 is shown in Table 12. As shown in Table 12, the average queues for the westbound left-turn movement at the Corral de Tierra/SR 68 intersection would be accommodated within the existing storage under existing plus project, background, and background plus project conditions. The analysis shows that the 95th percentile queue for the westbound left-turn lane would be longer than the available storage length under existing, existing plus project, background conditions and background plus project conditions. The project would add approximately two vehicles and four vehicles during the AM and PM peak hours respectively to the 95th percentile westbound left-turn queue under background conditions. The left turn pocket could be lengthened by restriping, should Caltrans elect to do so in order to address the existing storage issue under the 95th percentile queue. The left turn pocket is back-to-back with another left turn pocket serving 5 homes on the north side of Highway 68. The left turn pocket to the homes is much longer than it needs to be. It could be shortened in order to provide room to lengthen the left turn pocket at Corral de Tierra Road.

Northern Project Driveway

The northern driveway on Corral de Tierra Road would be located approximately 190 feet south of SR 68 and would be restricted to right-turns only. The project trips that are estimated to occur at the northern driveway are 11 inbound trips and 48 outbound trips during the AM peak hour and 15 inbound trips and 42 outbound trips during the PM peak hour. As shown in the level of service summary tables, the outbound trips are expected to have a vehicle delay of 11.1 seconds during the AM peak hour and 11.3 seconds during the PM peak hour. The analysis shows that this driveway would sometimes be blocked by the northbound vehicular queue from the Corral de Tierra/SR 68 signal.

Southern Project Driveway

The southern driveway on Corral de Tierra Road would be located approximately 450 feet south of SR 68. The project trips that are estimated to occur at the southern driveway are 70 inbound trips and 11 outbound trips during the AM peak hour and 71 inbound trips and 14 outbound trips during the PM peak hour. Most of the traffic is expected to make a left turn into the driveway from southbound Corral de Tierra Road. The southbound left-turn trips are expected to have a vehicular delay of less than 10 seconds per vehicle during the AM and PM peak hours with a 95th percentile queue of no more than one vehicle. The average northbound vehicular queue at the intersection of Corral de Tierra Road/SR 68 is not anticipated to extend as far as the southern driveway, and therefore southbound left-turning vehicles would be able to turn easily into the driveway. As shown in the level of service summary

tables, the outbound trips are expected to have a vehicle delay of 20.2 seconds during the AM peak hour and 30.8 seconds during the PM peak hour.

Table 12
Queuing Analysis

Analysis Scenario	Corral de Tierra and Hwy 68							
	EBR		WBL		NBL/T ²		NBR	
	AM	PM	AM	PM	AM	PM	AM	PM
Existing								
50th % Queue ¹ (veh/ln)	0	0	4	7	3	5	0	0
50th %. Queue ¹ (ft/ln)	0	0	89	164	63	117	0	0
95th %. Queue ¹ (veh/ln)	1	1	10	14	7	7	4	3
95th %. Queue ¹ (ft./ln)	21	13	241	354	177	176	89	64
Storage (ft/ln)	425	425	225	225	1500	1500	120	120
Adequate (Y/N)	Y	Y	N	N	Y	Y	Y	Y
Existing Plus Project								
50th % Queue ¹ (veh/ln)	0	0	5	9	4	4	0	0
50th %. Queue ¹ (ft/ln)	0	0	128	224	98	99	0	0
95th %. Queue ¹ (veh/ln)	1	1	13	18	10	7	3	3
95th %. Queue ¹ (ft./ln)	25	26	327	446	246	176	87	63
Storage (ft./ ln.)	425	425	225	225	1500	1500	120	120
Adequate (Y/N)	Y	Y	N	N	Y	Y	Y	Y
Background								
50th % Queue ¹ (veh/ln)	0	0	7	12	5	8	0	0
50th %. Queue ¹ (ft/ln)	0	0	175	301	119	200	0	0
95th %. Queue ¹ (veh/ln)	1	2	14	22	9	16	4	3
95th %. Queue ¹ (ft./ln)	27	49	355	540	220	395	96	85
Storage (ft/ln)	425	425	225	225	1500	1500	120	120
Adequate (Y/N)	Y	Y	N	N	Y	Y	Y	Y
Background Plus Project								
50th % Queue ¹ (veh/ln)	0	0	9	15	7	11	0	0
50th %. Queue ¹ (ft/ln)	0	0	230	385	167	269	0	0
95th %. Queue ¹ (veh/ln)	1	2	19	26	14	20	4	3
95th %. Queue ¹ (ft./ln)	30	54	483	639	353	492	97	85
Storage (ft/ln)	425	425	225	225	1500	1500	120	120
Adequate (Y/N)	Y	Y	N	N	Y	Y	Y	Y
Notes: NBL = northbound left-turn movement; NBT = northbound through movement; NBR = northbound right-turn movement; SBL = southbound left-turn movement; EBR = eastbound right-turn movement; WBL = ¹ Queue lengths are presented in feet in Synchro. Number of vehicles queued are calculated as 25 feet per vehicle. ² The storage length is measured from the intersection to Mountain Quail Road.								

On-Site Circulation

Within the site, there would be a two-way drive aisle with a 20-foot distance between the fueling pump canopies and the parking spaces and a 28-foot drive aisle that continues to the rest of the site.

Parking spaces would be provided at 90 degrees along the drive aisle between the fueling station and the convenience store. The stall depth (18 feet) of the parking spaces would meet typical parking stall standards.

Truck Access and Circulation

Garbage bins are shown on the site plan east of the fueling stations. Garbage trucks could enter and exit the site from the Corral de Tierra Road driveways, turning around on-site.

Figure 15 shows the turning path of a fuel delivery truck entering from the southern Corral de Tierra Road driveway, going through the internal drive aisle and around the fueling station, and exiting via the northern driveway on Corral de Tierra Road or the driveway on SR 68. The underground gasoline storage tank openings are shown along the northern edge of the site. During fuel deliveries, the fuel tanker would park along the northern edge of the site, which would not block any of the fueling stations or drive aisles. Fuel deliveries would occur infrequently and are typically scheduled for off-peak hours. Fire trucks would travel a similar path to the fuel delivery truck, except on site. On site, fire trucks would go between the fueling stations and the parking spaces in front of the convenience store before exiting the site via the northern Corral de Tierra Road driveway or the driveway on SR 68 (see Figure 16).

Parking

The review of on-site parking is based on the plan set prepared by Whitson Engineers, dated August 15, 2023 and on the Monterey County Municipal Code parking requirements.

Vehicle Parking

According to the Monterey County Zoning Code, Table 21.58.040, general retail requires one vehicular parking space per 250 sq. ft. Based on these requirements, the convenience store of 3,100 sq. ft. is required to provide, at most, 12 vehicular parking spaces. The proposed site plan shows 12 vehicular parking spaces and therefore, meets the County's vehicular parking requirement.

Accessible Parking

According to the Monterey County Zoning Code, Section 20.58.050, non-residential parking lots with fewer than 40 spaces must provide at least one accessible parking as required by Title 24 of the California Administrative Code. The site plan shows two accessible parking spaces, satisfying the requirements of the zoning code.

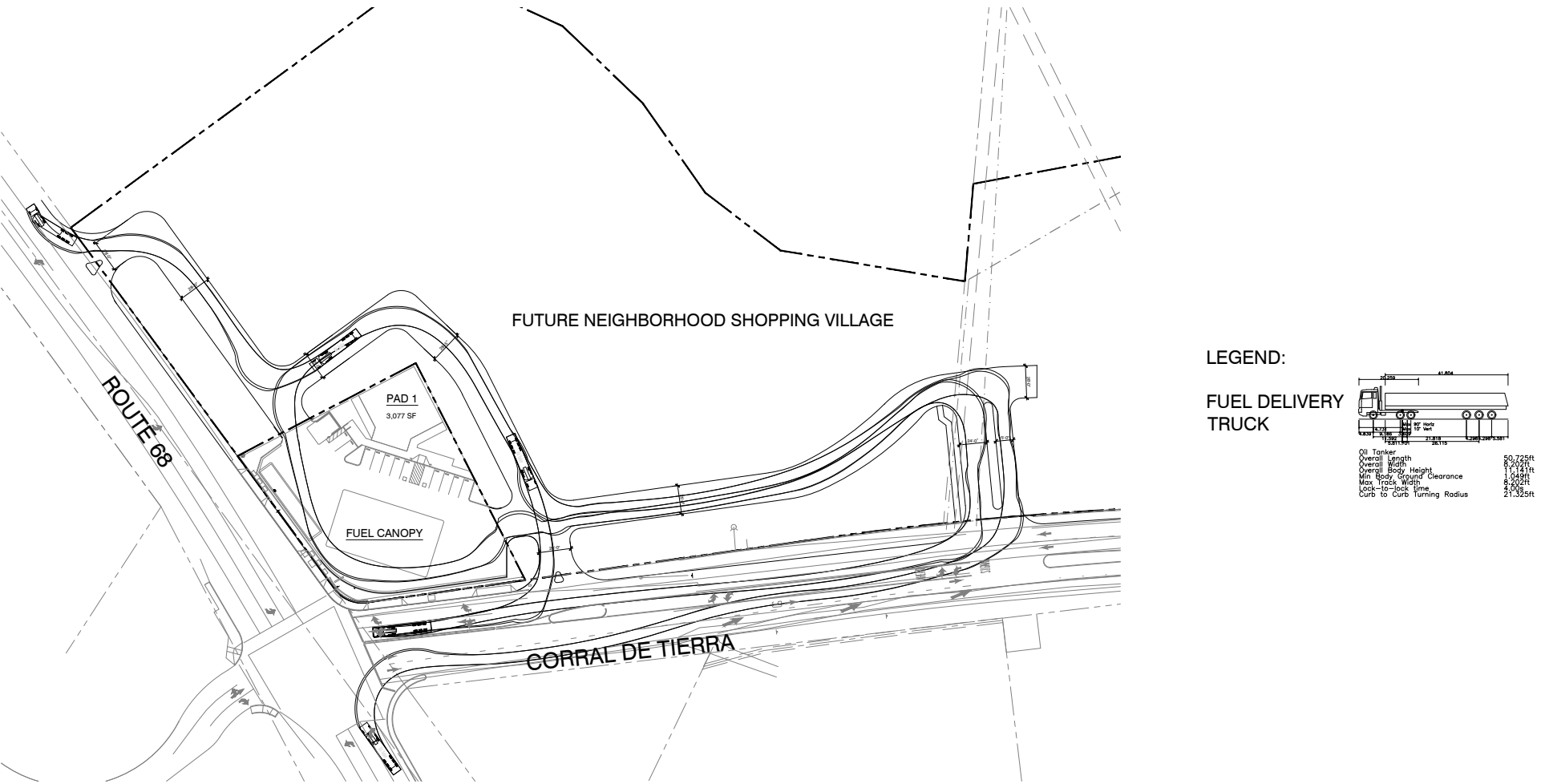


Figure 15
Fuel Delivery Truck Turning Path

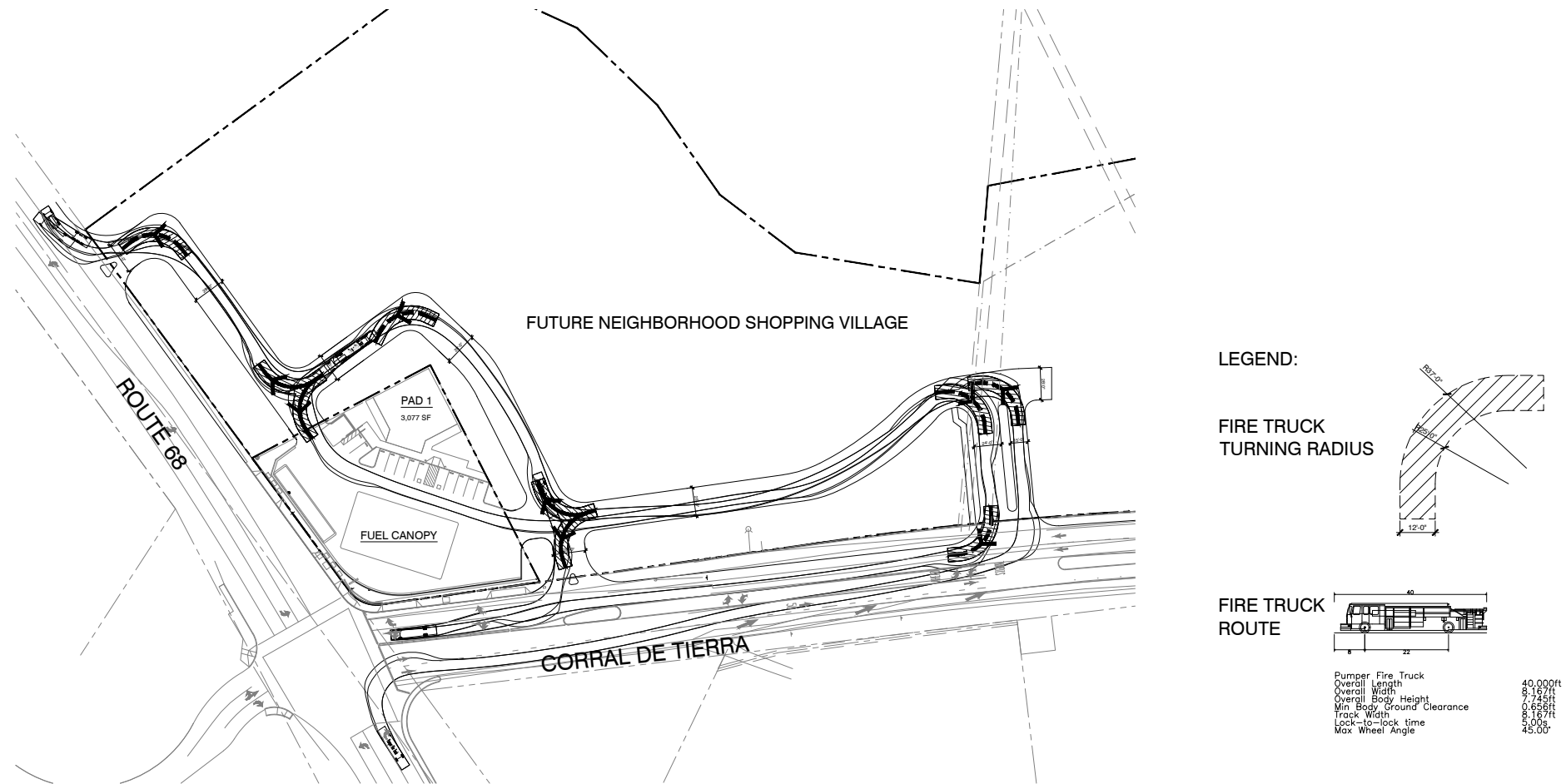


Figure 16
Fire Truck Turning Path

Corral de Tierra Fueling Station Traffic Impact Analysis Report Technical Appendices

Appendix A

Traffic Counts



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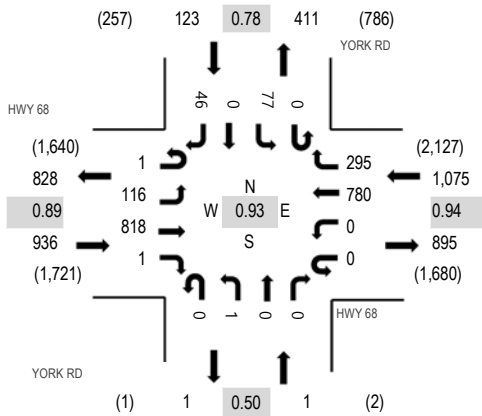
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Date: Tuesday, May 23, 2023

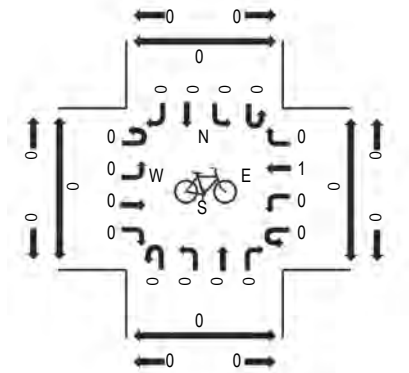
Peak Hour: 07:30 AM - 08:30 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

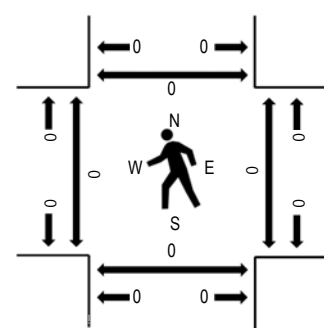
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 68 Eastbound				HWY 68 Westbound				YORK RD Northbound				YORK RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	7	159	0	0	0	184	55	0	0	0	0	0	7	0	7	419	2,034	0	0	0	0
7:15 AM	0	22	182	0	0	0	195	61	0	0	0	0	0	11	0	10	481	2,133	0	0	0	0
7:30 AM	0	18	247	0	0	0	216	62	0	0	0	0	0	20	0	11	574	2,135	0	0	0	0
7:45 AM	0	19	222	0	0	0	205	82	0	0	0	0	0	19	0	13	560	2,079	0	0	0	0
8:00 AM	0	38	193	0	0	0	188	74	0	0	0	0	0	17	0	8	518	2,073	0	0	0	0
8:15 AM	1	41	156	1	0	0	171	77	0	1	0	0	0	21	0	14	483		0	0	0	0
8:30 AM	0	20	193	0	0	0	176	80	0	0	0	1	0	28	0	20	518		0	0	0	0
8:45 AM	0	28	174	0	0	0	199	102	0	0	0	0	0	30	0	21	554		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	5
Lights	1	116	798	1	0	0	757	293	0	1	0	0	0	76	0	44	2,087
Mediums	0	0	18	0	0	0	20	2	0	0	0	0	0	1	0	2	43
Total	1	116	818	1	0	0	780	295	0	1	0	0	0	77	0	46	2,135



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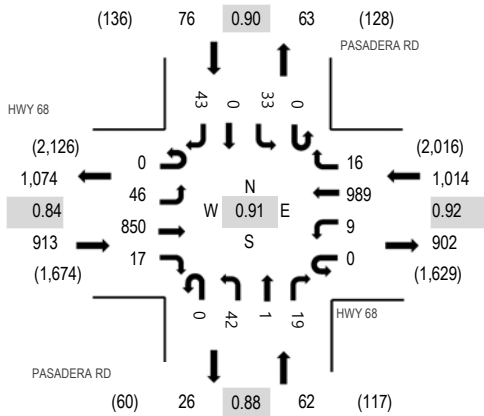
Location: 2 PASADERA RD & HWY 68 AM

Date: Tuesday, May 23, 2023

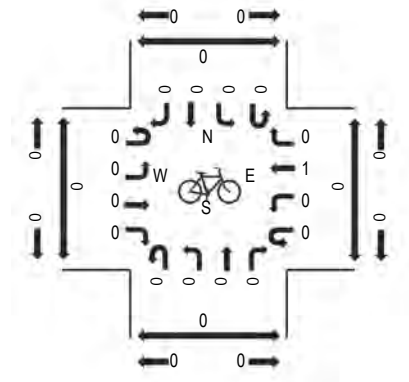
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

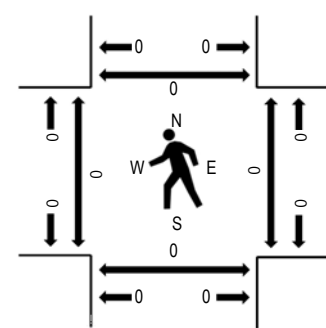
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 68 Eastbound				HWY 68 Westbound				PASADERA RD Northbound				PASADERA RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	3	148	1	0	1	229	7	0	7	0	1	0	5	0	10	412	2,005	0	0	0	0
7:15 AM	0	8	182	2	0	2	229	2	0	8	0	3	0	9	0	12	457	2,065	0	0	0	0
7:30 AM	0	11	237	4	0	0	274	4	0	7	1	8	0	7	0	14	567	2,057	0	0	0	0
7:45 AM	0	17	249	5	0	5	259	2	0	11	0	4	0	9	0	8	569	2,011	0	0	0	0
8:00 AM	0	10	182	6	0	2	227	8	0	16	0	4	0	8	0	9	472	1,938	0	0	0	0
8:15 AM	0	5	156	9	0	1	239	5	0	10	1	8	0	1	0	14	449		0	0	0	0
8:30 AM	0	9	210	10	0	1	257	8	0	11	0	2	0	4	0	9	521		0	0	0	0
8:45 AM	0	19	184	7	0	4	243	7	0	10	1	4	0	4	0	13	496		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	6	0	0	1	5	0	0	0	0	0	0	0	0	0	12
Lights	0	42	825	16	0	8	960	15	0	42	1	19	0	31	0	42	2,001
Mediums	0	4	19	1	0	0	24	1	0	0	0	0	0	2	0	1	52
Total	0	46	850	17	0	9	989	16	0	42	1	19	0	33	0	43	2,065



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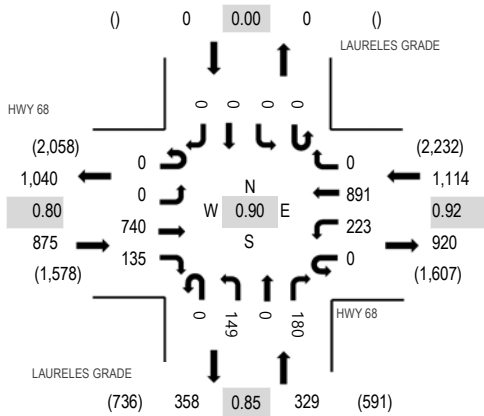
Location: 3 LAURELES GRADE & HWY 68 AM

Date: Tuesday, May 23, 2023

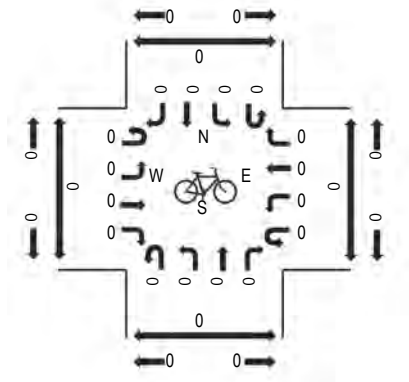
Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

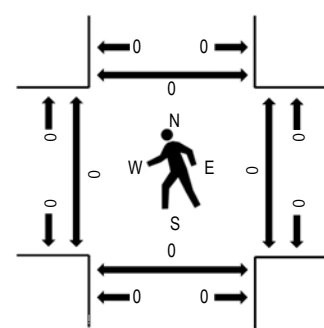
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 68 Eastbound				HWY 68 Westbound				LAURELES GRADE Northbound				LAURELES GRADE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	123	17	0	78	230	0	0	19	0	29	0	0	0	0	496	2,288	0	0	0	0
7:15 AM	0	0	162	30	0	59	213	0	0	31	0	38	0	0	0	0	533	2,318	0	0	0	0
7:30 AM	0	0	192	31	0	65	252	0	0	30	0	47	0	0	0	0	617	2,278	0	0	0	0
7:45 AM	0	0	239	34	0	54	218	0	0	49	0	48	0	0	0	0	642	2,221	0	0	0	0
8:00 AM	0	0	147	40	0	45	208	0	0	39	0	47	0	0	0	0	526	2,113	0	0	0	0
8:15 AM	0	0	141	34	0	45	210	0	0	28	0	35	0	0	0	0	493		0	0	0	0
8:30 AM	0	0	141	47	0	59	231	0	0	46	0	36	0	0	0	0	560		0	0	0	0
8:45 AM	0	0	152	48	0	50	215	0	0	39	0	30	0	0	0	0	534		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	3	0	0	4	8	0	0	0	0	1	0	0	0	0	16
Lights	0	0	720	133	0	211	861	0	0	145	0	176	0	0	0	0	2,246
Mediums	0	0	17	2	0	8	22	0	0	4	0	3	0	0	0	0	56
Total	0	0	740	135	0	223	891	0	0	149	0	180	0	0	0	0	2,318



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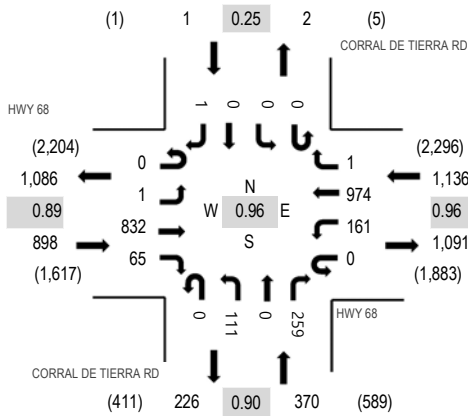
Location: 4 CORRAL DE TIERRA RD & HWY 68 AM

Date: Tuesday, May 23, 2023

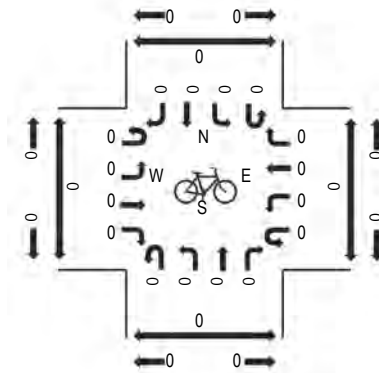
Peak Hour: 07:30 AM - 08:30 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

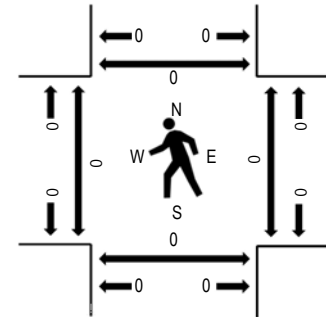
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 68 Eastbound				HWY 68 Westbound				CORRAL DE TIERRA RD Northbound				CORRAL DE TIERRA RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	141	10	0	13	277	1	0	19	0	25	0	0	0	0	486	2,247	0	0	0	0
7:15 AM	0	0	179	7	0	19	262	0	0	19	0	37	0	0	0	0	523	2,358	0	0	0	0
7:30 AM	0	0	215	19	0	24	276	0	0	28	0	52	0	0	0	0	614	2,405	0	0	0	0
7:45 AM	0	0	239	13	0	38	245	1	0	23	0	65	0	0	0	0	624	2,348	0	0	0	0
8:00 AM	0	0	208	15	0	43	227	0	0	23	0	80	0	0	0	1	597	2,256	0	0	0	0
8:15 AM	0	1	170	18	0	56	226	0	0	37	0	62	0	0	0	0	570		0	0	0	0
8:30 AM	0	0	168	23	0	36	261	0	0	31	1	37	0	0	0	0	557		0	0	0	0
8:45 AM	0	0	169	22	0	55	236	0	0	13	1	36	0	0	0	0	532		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	5	1	0	1	4	0	0	0	0	0	0	0	0	0	11
Lights	0	1	805	61	0	150	915	1	0	105	0	254	0	0	0	1	2,293
Mediums	0	0	22	3	0	10	55	0	0	6	0	5	0	0	0	0	101
Total	0	1	832	65	0	161	974	1	0	111	0	259	0	0	0	1	2,405



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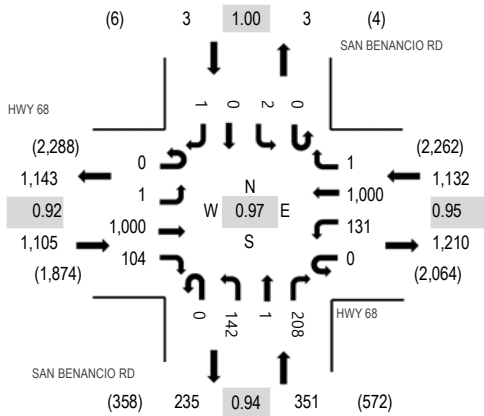
Location: 5 SAN BENANCIO RD & HWY 68 AM

Date: Tuesday, May 23, 2023

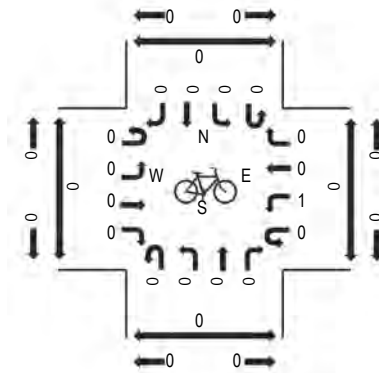
Peak Hour: 07:30 AM - 08:30 AM

Peak 15-Minutes: 07:45 AM - 08:00 AM

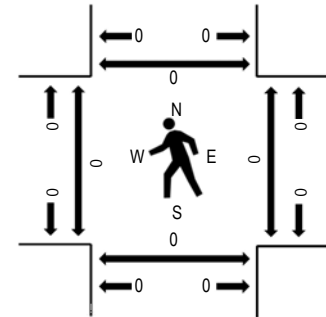
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 68 Eastbound				HWY 68 Westbound				SAN BENANCIO RD Northbound				SAN BENANCIO RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	154	7	0	16	261	0	0	19	0	21	0	0	0	0	478	2,328	0	0	0	0
7:15 AM	0	0	206	11	0	9	257	0	0	31	0	34	0	0	0	1	549	2,488	0	0	0	0
7:30 AM	0	0	255	14	0	15	266	1	0	38	0	45	0	1	0	0	635	2,591	0	0	0	0
7:45 AM	0	0	278	21	0	25	253	0	0	31	0	57	0	1	0	0	666	2,519	0	0	0	0
8:00 AM	0	1	244	31	0	37	231	0	0	33	1	59	0	0	0	1	638	2,386	0	0	0	0
8:15 AM	0	0	223	38	0	54	250	0	0	40	0	47	0	0	0	0	652		0	0	0	0
8:30 AM	0	0	190	12	0	32	262	0	0	31	1	35	0	0	0	0	563		0	0	0	0
8:45 AM	0	0	181	8	0	28	265	0	0	16	0	33	0	0	0	2	533		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	4	0	0	0	11	0	0	0	0	0	0	0	0	0	15
Lights	0	1	975	100	0	122	951	1	0	140	1	203	0	2	0	1	2,497
Mediums	0	0	21	4	0	9	38	0	0	2	0	5	0	0	0	0	79
Total	0	1	1,000	104	0	131	1,000	1	0	142	1	208	0	2	0	1	2,591



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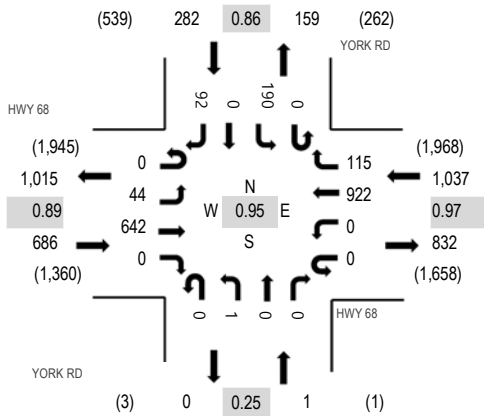
Location: 1 YORK RD & HWY 68 PM

Date: Tuesday, May 23, 2023

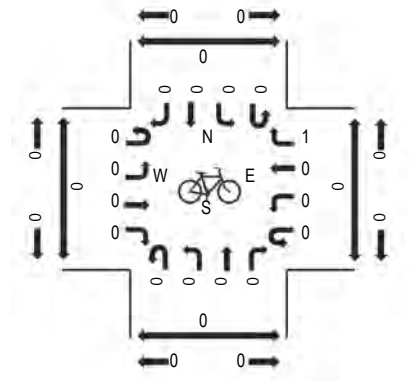
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

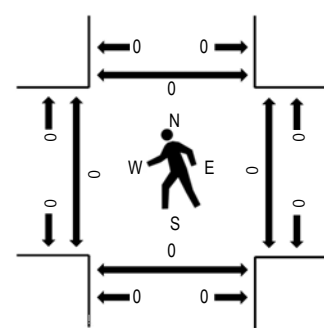
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 68 Eastbound				HWY 68 Westbound				YORK RD Northbound				YORK RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	11	182	0	0	0	229	29	0	1	0	0	0	53	0	25	530	2,006	0	0	0	0
4:15 PM	0	11	155	0	0	0	213	36	0	0	0	0	0	48	0	23	486	1,968	0	0	0	0
4:30 PM	0	9	148	0	0	0	235	26	0	0	0	0	0	54	0	20	492	1,967	0	0	0	0
4:45 PM	0	13	157	0	0	0	245	24	0	0	0	0	0	35	0	24	498	1,945	0	0	0	0
5:00 PM	0	9	135	0	0	0	242	22	0	0	0	0	0	65	0	19	492	1,862	0	0	0	0
5:15 PM	0	8	156	2	0	0	222	26	0	0	0	0	0	46	0	25	485		0	0	0	0
5:30 PM	0	10	174	1	0	0	228	7	0	0	0	0	0	38	0	12	470		0	0	0	0
5:45 PM	0	10	169	0	0	0	173	11	0	0	0	0	0	43	0	9	415		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	4	0	0	0	0	4	0	0	0	0	0	1	0	0	9
Lights	0	44	632	0	0	0	905	110	0	1	0	0	0	188	0	91	1,971
Mediums	0	0	6	0	0	0	13	5	0	0	0	0	0	1	0	1	26
Total	0	44	642	0	0	0	922	115	0	1	0	0	0	190	0	92	2,006



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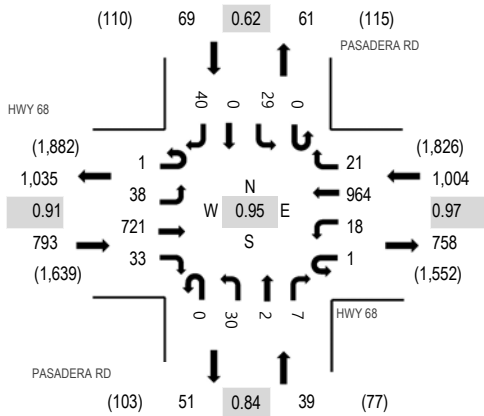
Location: 2 PASADERA RD & HWY 68 PM

Date: Tuesday, May 23, 2023

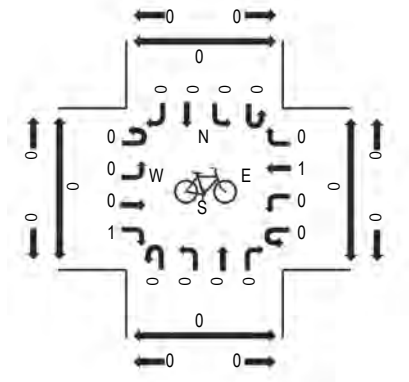
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

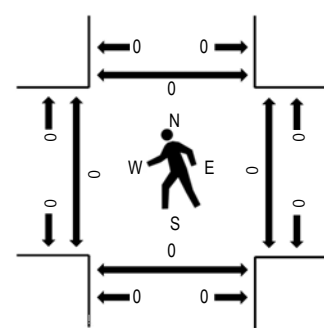
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 68 Eastbound				HWY 68 Westbound				PASADERA RD Northbound				PASADERA RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	10	202	8	1	8	245	5	0	5	0	1	0	7	0	7	499	1,905	0	0	0	0
4:15 PM	1	5	190	11	0	4	240	3	0	9	0	3	0	5	0	10	481	1,804	0	0	0	0
4:30 PM	0	7	135	5	0	2	237	9	0	12	1	1	0	12	0	16	437	1,802	0	0	0	0
4:45 PM	0	16	194	9	0	4	242	4	0	4	1	2	0	5	0	7	488	1,822	0	0	0	0
5:00 PM	0	10	160	7	0	0	188	6	0	9	0	5	0	2	1	10	398	1,747	0	0	0	0
5:15 PM	0	3	204	10	0	4	235	3	0	8	0	1	0	3	0	8	479		0	0	0	0
5:30 PM	1	15	211	6	0	6	201	5	0	5	0	1	0	1	0	5	457		0	0	0	0
5:45 PM	0	7	202	10	0	8	161	5	0	6	0	3	0	1	0	10	413		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	5	0	0	0	5	0	0	0	0	0	0	1	0	0	11
Lights	1	38	701	33	1	17	945	20	0	29	2	7	0	27	0	36	1,857
Mediums	0	0	15	0	0	1	14	1	0	1	0	0	0	1	0	4	37
Total	1	38	721	33	1	18	964	21	0	30	2	7	0	29	0	40	1,905



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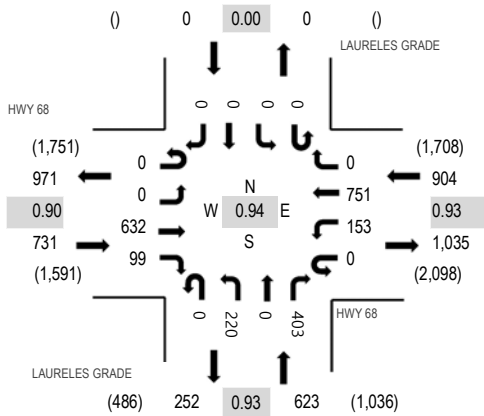
Location: 3 LAURELES GRADE & HWY 68 PM

Date: Tuesday, May 23, 2023

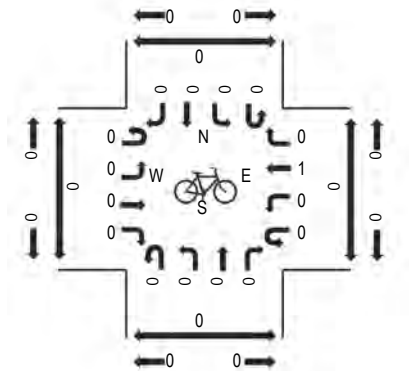
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:30 PM - 04:45 PM

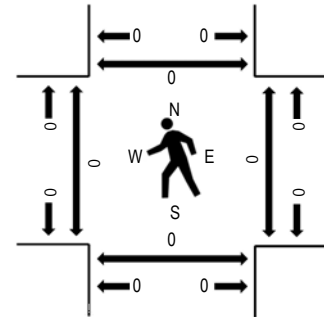
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 68 Eastbound				HWY 68 Westbound				LAURELES GRADE Northbound				LAURELES GRADE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	152	31	0	39	196	0	0	56	0	102	0	0	0	0	576	2,258	0	0	0	0
4:15 PM	0	0	158	23	0	33	179	0	0	54	0	93	0	0	0	0	540	2,165	0	0	0	0
4:30 PM	0	0	157	31	0	43	200	0	0	57	0	111	0	0	0	0	599	2,179	0	0	0	0
4:45 PM	0	0	165	14	0	38	176	0	0	53	0	97	0	0	0	0	543	2,132	0	0	0	0
5:00 PM	0	0	171	23	0	41	140	0	0	34	0	74	0	0	0	0	483	2,077	0	0	0	0
5:15 PM	0	0	198	17	0	33	195	0	0	37	0	74	0	0	0	0	554		0	0	0	0
5:30 PM	0	0	187	26	0	42	181	0	0	30	0	86	0	0	0	0	552		0	0	0	0
5:45 PM	0	0	216	22	0	30	142	0	0	21	0	57	0	0	0	0	488		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	7	0	0	0	2	0	0	0	0	1	0	0	0	0	10
Lights	0	0	615	99	0	150	731	0	0	218	0	389	0	0	0	0	2,202
Mediums	0	0	10	0	0	3	18	0	0	2	0	13	0	0	0	0	46
Total	0	0	632	99	0	153	751	0	0	220	0	403	0	0	0	0	2,258



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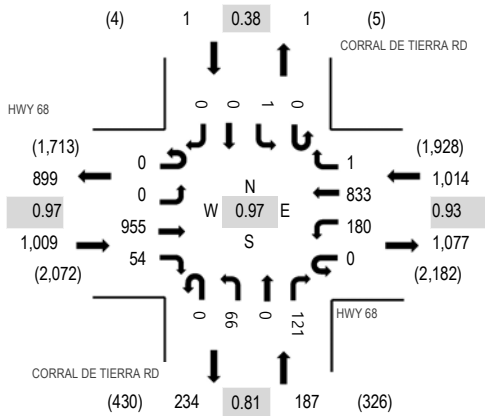
Location: 4 CORRAL DE TIERRA RD & HWY 68 PM

Date: Tuesday, May 23, 2023

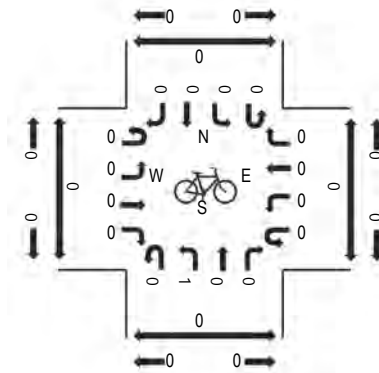
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

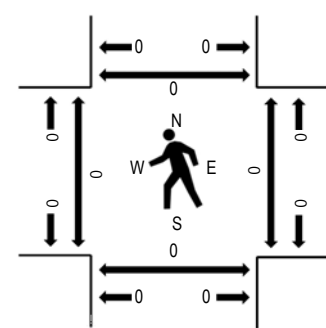
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 68 Eastbound				HWY 68 Westbound				CORRAL DE TIERRA RD Northbound				CORRAL DE TIERRA RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	231	10	0	57	215	1	0	23	0	35	0	0	0	0	572	2,211	0	0	0	0
4:15 PM	0	0	249	12	0	31	210	0	0	15	0	26	0	1	0	0	544	2,157	0	0	0	0
4:30 PM	0	0	224	13	0	49	207	0	0	17	0	31	0	0	0	0	541	2,169	0	0	0	0
4:45 PM	0	0	251	19	0	43	201	0	0	11	0	29	0	0	0	0	554	2,180	0	0	0	0
5:00 PM	0	0	247	13	0	38	184	0	0	5	0	29	0	1	0	1	518	2,119	0	0	0	0
5:15 PM	0	1	249	7	0	33	225	0	0	14	0	26	0	1	0	0	556		0	0	0	0
5:30 PM	0	0	255	18	0	34	209	2	0	15	0	19	0	0	0	0	552		0	0	0	0
5:45 PM	0	0	256	17	0	36	153	0	0	8	1	22	0	0	0	0	493		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	7	0	0	2	3	0	0	0	0	0	0	0	0	0	12
Lights	0	0	898	54	0	171	810	1	0	59	0	115	0	1	0	0	2,109
Mediums	0	0	50	0	0	7	20	0	0	7	0	6	0	0	0	0	90
Total	0	0	955	54	0	180	833	1	0	66	0	121	0	1	0	0	2,211



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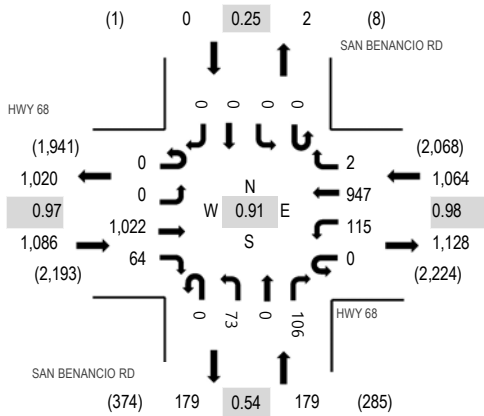
Location: 5 SAN BENANCIO RD & HWY 68 PM

Date: Tuesday, May 23, 2023

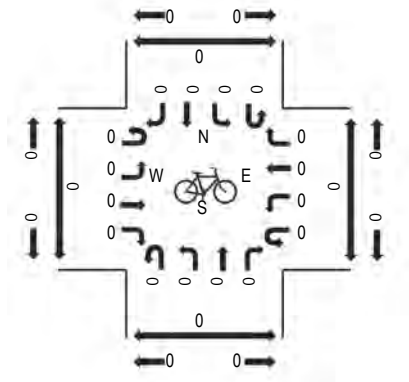
Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:00 PM - 04:15 PM

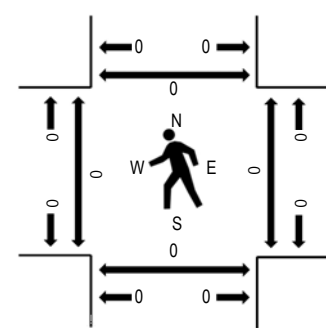
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	HWY 68 Eastbound				HWY 68 Westbound				SAN BENANCIO RD Northbound				SAN BENANCIO RD Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	261	16	0	37	243	0	0	32	0	51	0	0	0	0	640	2,329	0	0	0	0
4:15 PM	0	0	256	16	0	27	234	0	0	18	0	24	0	0	0	0	575	2,245	0	0	0	0
4:30 PM	0	0	247	14	0	18	233	0	0	14	0	20	0	0	0	0	546	2,257	0	0	0	0
4:45 PM	0	0	258	18	0	33	237	2	0	9	0	11	0	0	0	0	568	2,281	0	0	0	0
5:00 PM	0	0	256	16	0	33	224	0	0	10	0	17	0	0	0	0	556	2,218	0	0	0	0
5:15 PM	0	1	264	20	0	36	237	1	0	8	0	20	0	0	0	0	587		0	0	0	0
5:30 PM	0	1	257	16	0	27	239	2	0	13	0	14	0	1	0	0	570		0	0	0	0
5:45 PM	0	1	249	26	0	21	184	0	0	6	0	18	0	0	0	0	505		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	7	0	0	0	4	0	0	0	0	0	0	0	0	0	11
Lights	0	0	984	61	0	115	928	2	0	73	0	105	0	0	0	0	2,268
Mediums	0	0	31	3	0	0	15	0	0	0	0	1	0	0	0	0	50
Total	0	0	1,022	64	0	115	947	2	0	73	0	106	0	0	0	0	2,329

Appendix B

Volume Summary

Corral de Tierra Gas Station TIA

Intersection Number: 1
 Traffix Node Number: 1
 Intersection Name: Corral de Tierra Road & South Project Driveway
 Peak Hour: AM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station
 Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	0	226	0	0	0	0	0	370	0	0	0	0	596
Approved Project Trips													
Monterey Regional Airport Study	0	21	45	27	0	8	10	7	0	0	0	0	118
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	0	247	45	27	0	8	10	377	0	0	0	0	714
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	70	0	0	11	0	11	0	0	0	0	92
Net Project Trips	0	0	70	0	0	11	0	11	0	0	0	0	92
Existing + Project	0	226	70	0	0	11	0	381	0	0	0	0	688
Background + Project	0	247	115	27	0	19	10	388	0	0	0	0	806
Cumulative Project Trips													
Monterey Regional Airport Study	0	3	0	0	0	0	0	11	0	0	0	0	14
Cumulative Conditions	0	250	45	27	0	8	10	388	0	0	0	0	728
Cumulative w/ Project	0	250	115	27	0	19	10	399	0	0	0	0	820

Intersection Number: 2
 Traffix Node Number: 2
 Intersection Name: Corral de Tierra Road & North Project Driveway
 Peak Hour: AM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station
 Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	0	226	0	0	0	0	0	370	0	0	0	0	596
Approved Project Trips													
Monterey Regional Airport Study	0	66	0	0	0	0	0	34	0	0	0	0	100
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	0	292	0	0	0	0	0	404	0	0	0	0	696
Project Trips Under Existing and Background Conditions													
Project Trips	0	70	0	48	0	0	11	0	0	0	0	0	129
Net Project Trips	0	70	0	48	0	0	11	0	0	0	0	0	129
Existing + Project	0	296	0	48	0	0	11	370	0	0	0	0	725
Background + Project	0	362	0	48	0	0	11	404	0	0	0	0	825
Cumulative Project Trips													
Monterey Regional Airport Study	0	3	0	0	0	0	0	11	0	0	0	0	14
Cumulative Conditions	0	295	0	0	0	0	0	415	0	0	0	0	710
Cumulative w/ Project	0	365	0	48	0	0	11	415	0	0	0	0	839

Corral de Tierra Gas Station TIA

Intersection Number: 3
 Traffix Node Number: 3
 Intersection Name: Corral de Tierra Road & Highway 68
 Peak Hour: AM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station

Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	1	0	0	1	974	161	259	0	111	65	832	1	2405
Approved Project Trips													
Monterey Regional Airport Study	0	0	0	5	208	33	14	0	20	33	78	1	392
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	1	0	0	6	1182	194	273	0	131	98	910	2	2797
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	-36	49	0	0	48	21	-8	0	74
Net Project Trips	0	0	0	0	-36	49	0	0	48	21	-8	0	74
Existing + Project	1	0	0	1	938	210	259	0	159	86	824	1	2479
Background + Project	1	0	0	6	1146	243	273	0	179	119	902	2	2871
Cumulative Project Trips													
Monterey Regional Airport Study	0	1	0	0	582	0	0	0	11	2	139	0	735
Cumulative Conditions	1	1	0	6	1764	194	273	0	142	100	1049	2	3532
Cumulative w/ Project	1	1	0	6	1728	243	273	0	190	121	1041	2	3606

Intersection Number: 4
 Traffix Node Number: 4
 Intersection Name: San Benancio Road & Highway 68
 Peak Hour: AM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station

Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	1	0	2	1	1000	131	208	1	142	104	1000	1	2591
Approved Project Trips													
Monterey Regional Airport Study	0	0	1	0	198	-7	-3	0	32	7	82	0	310
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	1	0	3	1	1198	124	205	1	174	111	1082	1	2901
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	4	0	0	0	9	9	4	0	26
Net Project Trips	0	0	0	0	4	0	0	0	9	9	4	0	26
Existing + Project	1	0	2	1	1004	131	208	1	151	113	1004	1	2617
Background + Project	1	0	3	1	1202	124	205	1	183	120	1086	1	2927
Cumulative Project Trips													
Monterey Regional Airport Study	0	0	0	0	546	1	3	0	28	2	140	0	720
Cumulative Conditions	1	0	3	1	1744	125	208	1	202	113	1222	1	3621
Cumulative w/ Project	1	0	3	1	1748	125	208	1	211	122	1226	1	3647

Corral de Tierra Gas Station TIA

Intersection Number: **5**
 Trafix Node Number: 5
 Intersection Name: Laureles Grade & Highway 68
 Peak Hour: AM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station
 Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	0	0	0	0	891	223	180	0	149	135	740	0	2318
Approved Project Trips													
Monterey Regional Airport Study	0	0	0	0	89	26	34	0	7	40	58	0	254
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	0	0	0	0	980	249	214	0	156	175	798	0	2572
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	3	9	9	0	0	0	4	0	25
Net Project Trips	0	0	0	0	3	9	9	0	0	0	4	0	25
Existing + Project	0	0	0	0	894	232	189	0	149	135	744	0	2343
Background + Project	0	0	0	0	983	258	223	0	156	175	802	0	2597
Cumulative Project Trips													
Monterey Regional Airport Study	0	0	0	0	462	19	14	0	37	53	104	0	689
Cumulative Conditions	0	0	0	0	1442	268	228	0	193	228	902	0	3261
Cumulative w/ Project	0	0	0	0	1445	277	237	0	193	228	906	0	3286

Intersection Number: **6**
 Trafix Node Number: 6
 Intersection Name: Pasadera Drive/Boots & Highway 68
 Peak Hour: AM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station
 Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	43	0	33	16	989	9	19	1	42	17	850	46	2065
Approved Project Trips													
Monterey Regional Airport Study	-1	0	5	5	87	5	2	2	3	0	92	-3	197
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	42	0	38	21	1076	14	21	3	45	17	942	43	2262
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	1	2	2	0	0	0	2	0	7
<i>Net Project Trips</i>	0	0	0	0	1	2	2	0	0	0	2	0	7
Existing + Project	43	0	33	16	990	11	21	1	42	17	852	46	2072
Background + Project	42	0	38	21	1077	16	23	3	45	17	944	43	2269
Cumulative Project Trips													
Monterey Regional Airport Study	12	0	0	2	492	4	2	1	2	0	155	2	672
Cumulative Conditions	54	0	38	23	1568	18	23	4	47	17	1097	45	2934
Cumulative w/ Project	54	0	38	23	1569	20	25	4	47	17	1099	45	2941

Corral de Tierra Gas Station TIA

Intersection Number: **7**
 Trafix Node Number: 7
 Intersection Name: York Road & Highway 68
 Peak Hour: AM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station
 Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	46	0	77	295	780	0	0	0	0	0	819	117	2134
Approved Project Trips													
Monterey Regional Airport Study	3	0	6	2	68	0	0	0	0	0	79	14	172
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	49	0	83	297	848	0	0	0	0	0	898	131	2306
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	1	0	0	0	0	0	2	0	3
Net Project Trips	0	0	0	0	1	0	0	0	0	0	2	0	3
Existing + Project	46	0	77	295	781	0	0	0	0	0	821	117	2137
Background + Project	49	0	83	297	849	0	0	0	0	0	900	131	2309
Cumulative Project Trips													
Monterey Regional Airport Study	15	0	1	0	488	0	0	0	0	0	153	18	675
Cumulative Conditions	64	0	84	297	1336	0	0	0	0	0	1051	149	2981
Cumulative w/ Project	64	0	84	297	1337	0	0	0	0	0	1053	149	2984

Intersection Number: **8**
 Trafix Node Number: 8
 Intersection Name: Project Driveway & Highway 68
 Peak Hour: AM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station
 Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	0	0	0	0	1135	0	0	0	0	0	1091	0	2226
Approved Project Trips													
Monterey Regional Airport Study	0	0	0	0	247	0	4	0	0	10	92	0	353
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	0	0	0	0	1382	0	4	0	0	10	1173	0	2579
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	13	0	37	0	0	16	-24	0	42
<i>Net Project Trips</i>	0	0	0	0	13	0	37	0	0	16	-24	0	42
Existing + Project	0	0	0	0	1148	0	37	0	0	16	1067	0	2268
Background + Project	0	0	0	0	1395	0	41	0	0	26	1149	0	2611
Cumulative Project Trips													
Monterey Regional Airport Study	0	0	0	0	582	0	0	0	0	0	149	0	731
Cumulative Conditions	0	0	0	0	1964	0	4	0	0	10	1312	0	3290
Cumulative w/ Project	0	0	0	0	1977	0	41	0	0	26	1288	0	3332

Corral de Tierra Gas Station TIA

Intersection Number: 1
 Traffix Node Number: 1
 Intersection Name: Corral de Tierra Roa & South Project Driveway
 Peak Hour: PM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station
 Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	0	234	0	0	0	0	0	187	0	0	0	0	421
Approved Project Trips													
Monterey Regional Airport Study	0	67	150	160	0	25	18	85	0	0	0	0	505
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	0	301	150	160	0	25	18	272	0	0	0	0	926
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	71	0	0	14	0	15	0	0	0	0	100
Net Project Trips	0	0	71	0	0	14	0	15	0	0	0	0	100
Existing + Project	0	234	71	0	0	14	0	202	0	0	0	0	521
Background + Project	0	301	221	160	0	39	18	287	0	0	0	0	1026
Cumulative Project Trips													
Monterey Regional Airport Study	0	13	0	0	0	0	0	2	0	0	0	0	15
Cumulative Conditions	0	314	150	160	0	25	18	274	0	0	0	0	941
Cumulative w/ Project	0	314	221	160	0	39	18	289	0	0	0	0	1041

Intersection Number: 2
 Traffix Node Number: 2
 Intersection Name: Corral de Tierra Roa & North Project Driveway
 Peak Hour: PM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station
 Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	0	234	0	0	0	0	0	187	0	0	0	0	421
Approved Project Trips													
Monterey Regional Airport Study	0	217	0	0	0	0	0	245	0	0	0	0	462
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	0	451	0	0	0	0	0	432	0	0	0	0	883
Project Trips Under Existing and Background Conditions													
Project Trips	0	71	0	42	0	0	15	0	0	0	0	0	128
Net Project Trips	0	71	0	42	0	0	15	0	0	0	0	0	128
Existing + Project	0	305	0	42	0	0	15	187	0	0	0	0	549
Background + Project	0	522	0	42	0	0	15	432	0	0	0	0	1011
Cumulative Project Trips													
Monterey Regional Airport Study	0	13	0	0	0	0	0	2	0	0	0	0	15
Cumulative Conditions	0	464	0	0	0	0	0	434	0	0	0	0	898
Cumulative w/ Project	0	535	0	42	0	0	15	434	0	0	0	0	1026

Corral de Tierra Gas Station TIA

Intersection Number: 3
 Traffix Node Number: 3
 Intersection Name: Corral de Tierra Roa & Highway 68
 Peak Hour: PM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station

Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	0	0	1	1	833	180	121	0	66	54	955	0	2211
Approved Project Trips													
Monterey Regional Airport Study	0	0	0	0	13	110	104	0	141	107	-1	0	474
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	0	0	1	1	846	290	225	0	207	161	954	0	2685
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	-25	42	0	0	42	29	-12	0	76
<i>Net Project Trips</i>	0	0	0	0	-25	42	0	0	42	29	-12	0	76
Existing + Project	0	0	1	1	808	222	121	0	108	83	943	0	2287
Background + Project	0	0	1	1	821	332	225	0	249	190	942	0	2761
Cumulative Project Trips													
Monterey Regional Airport Study	0	0	0	0	131	2	0	0	2	11	399	0	545
Cumulative Conditions	0	0	1	1	977	292	225	0	209	172	1353	0	3230
Cumulative w/ Project	0	0	1	1	952	334	225	0	251	201	1341	0	3306

Intersection Number: 4
 Traffix Node Number: 4
 Intersection Name: San Benancio Road & Highway 68
 Peak Hour: PM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station

Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	0	0	0	2	947	115	106	0	73	64	1022	0	2329
Approved Project Trips													
Monterey Regional Airport Study	1	0	1	1	65	-3	-14	0	27	31	83	0	192
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	1	0	1	3	1012	112	92	0	100	95	1105	0	2521
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	5	0	0	0	12	12	5	0	34
<i>Net Project Trips</i>	0	0	0	0	5	0	0	0	12	12	5	0	34
Existing + Project	0	0	0	2	952	115	106	0	85	76	1027	0	2363
Background + Project	1	0	1	3	1017	112	92	0	112	107	1110	0	2555
Cumulative Project Trips													
Monterey Regional Airport Study	1	0	0	0	130	14	3	0	2	12	303	0	465
Cumulative Conditions	2	0	1	3	1142	126	95	0	102	107	1408	0	2986
Cumulative w/ Project	2	0	1	3	1147	126	95	0	114	119	1413	0	3020

Corral de Tierra Gas Station TIA

Intersection Number: **5**
 Trafix Node Number: 5
 Intersection Name: Laureles Grade & Highway 68
 Peak Hour: PM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station
 Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	0	0	0	0	751	153	403	0	220	99	632	0	2258
Approved Project Trips													
Monterey Regional Airport Study	0	0	0	0	70	51	41	0	-10	-10	82	0	224
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	0	0	0	0	821	204	444	0	210	89	714	0	2482
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	5	12	12	0	0	0	5	0	34
<i>Net Project Trips</i>	0	0	0	0	5	12	12	0	0	0	5	0	34
Existing + Project	0	0	0	0	756	165	415	0	220	99	637	0	2292
Background + Project	0	0	0	0	826	216	456	0	210	89	719	0	2516
Cumulative Project Trips													
Monterey Regional Airport Study	0	0	0	0	117	18	14	0	15	30	411	0	605
Cumulative Conditions	0	0	0	0	938	222	458	0	225	119	1125	0	3087
Cumulative w/ Project	0	0	0	0	943	234	470	0	225	119	1130	0	3121

Intersection Number: **6**
 Trafix Node Number: 6
 Intersection Name: Pasadera Drive/Boot & Highway 68
 Peak Hour: PM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station
 Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	40	0	29	21	964	19	7	2	30	33	721	39	1905
Approved Project Trips													
Monterey Regional Airport Study	-3	0	9	15	42	3	1	1	3	0	61	7	139
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	37	0	38	36	1006	22	8	3	33	33	782	46	2044
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	2	3	3	0	0	0	2	0	10
<i>Net Project Trips</i>	0	0	0	0	2	3	3	0	0	0	2	0	10
Existing + Project	40	0	29	21	966	22	10	2	30	33	723	39	1915
Background + Project	37	0	38	36	1008	25	11	3	33	33	784	46	2054
Cumulative Project Trips													
Monterey Regional Airport Study	5	0	1	6	123	3	0	0	3	0	440	24	605
Cumulative Conditions	42	0	39	42	1129	25	8	3	36	33	1222	70	2649
Cumulative w/ Project	42	0	39	42	1131	28	11	3	36	33	1224	70	2659

Corral de Tierra Gas Station TIA

Intersection Number: **7**
 Trafix Node Number: 7
 Intersection Name: York Road & Highway 68
 Peak Hour: PM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station
 Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	92	0	190	115	922	0	0	0	0	0	642	44	2005
Approved Project Trips													
Monterey Regional Airport Study	0	0	13	5	28	0	0	0	0	0	26	-1	71
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	92	0	203	120	950	0	0	0	0	0	668	43	2076
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	2	0	0	0	0	0	2	0	4
Net Project Trips	0	0	0	0	2	0	0	0	0	0	2	0	4
Existing + Project	92	0	190	115	924	0	0	0	0	0	644	44	2009
Background + Project	92	0	203	120	952	0	0	0	0	0	670	43	2080
Cumulative Project Trips													
Monterey Regional Airport Study	6	0	4	0	123	0	0	0	0	0	431	13	577
Cumulative Conditions	98	0	207	120	1073	0	0	0	0	0	1099	56	2653
Cumulative w/ Project	98	0	207	120	1075	0	0	0	0	0	1101	56	2657

Intersection Number: **8**
 Trafix Node Number: 8
 Intersection Name: Project Driveway & Highway 68
 Peak Hour: PM
 Count Date: 05/23/23
 Scenario: Corral Del Tierra Gas Station
 Date of Analysis: 09/17/24

Scenario:	Movements												Total
	Southbound			Westbound			Northbound			Eastbound			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Conditions	0	0	0	0	1014	0	0	0	0	0	1077	0	2091
Approved Project Trips													
Monterey Regional Airport Study	0	0	0	0	123	0	30	0	0	30	103	0	286
Las Palmas	0	0	0	0	0	0	0	0	0	0	0	0	0
Operations and Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0	0
Background Conditions	0	0	0	0	1137	0	30	0	0	30	1150	0	2377
Project Trips Under Existing and Background Conditions													
Project Trips	0	0	0	0	17	0	54	0	0	25	-37	0	59
<i>Net Project Trips</i>	0	0	0	0	17	0	54	0	0	25	-37	0	59
Existing + Project	0	0	0	0	1031	0	54	0	0	25	1040	0	2150
Background + Project	0	0	0	0	1154	0	84	0	0	55	1113	0	2406
Cumulative Project Trips													
Monterey Regional Airport Study	0	0	0	0	133	0	0	0	0	0	429	0	562
Cumulative Conditions	0	0	0	0	1270	0	30	0	0	30	1549	0	2879
Cumulative w/ Project	0	0	0	0	1287	0	84	0	0	55	1512	0	2938

Appendix C

Intersection Level of Service Calculations

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	370	0	0	226
Future Vol, veh/h	0	0	370	0	0	226
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	402	0	0	246

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	648	402	0	0	402	0
Stage 1	402	-	-	-	-	-
Stage 2	246	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	435	648	-	-	1156	-
Stage 1	675	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	435	648	-	-	1156	-
Mov Cap-2 Maneuver	435	-	-	-	-	-
Stage 1	675	-	-	-	-	-
Stage 2	795	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	1156
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s/veh)	-	-	0	0
HCM Lane LOS	-	-	A	A
HCM 95th %tile Q(veh)	-	-	-	0

HCM 7th TWSC
2: Corral Del Tierra Rd & Prj N Drwy

Existing AM
09/26/2024

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	370	0	0	226
Future Vol, veh/h	0	0	370	0	0	226
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	370	0	0	226

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	370	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	676	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	676	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s/veh)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

HCM 7th Signalized Intersection Summary

3: Corral Del Tierra Rd & Hwy 68

Existing AM
09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	832	65	161	974	1	111	0	259	0	0	1
Future Volume (veh/h)	1	832	65	161	974	1	111	0	259	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	832	65	161	974	1	111	0	259	0	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	961	815	200	1072	1	327	0	290	0	3	2
Arrive On Green	0.05	0.51	0.51	0.11	0.57	0.57	0.18	0.00	0.18	0.00	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1868	2	1781	0	1581	0	1870	1585
Grp Volume(v), veh/h	1	832	65	161	0	975	111	0	259	0	0	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1870	1781	0	1581	0	1870	1585
Q Serve(g_s), s	0.1	37.1	2.0	8.4	0.0	44.2	5.2	0.0	15.2	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.1	37.1	2.0	8.4	0.0	44.2	5.2	0.0	15.2	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	94	961	815	200	0	1073	327	0	290	0	3	2
V/C Ratio(X)	0.01	0.87	0.08	0.81	0.00	0.91	0.34	0.00	0.89	0.00	0.00	0.46
Avail Cap(c_a), veh/h	337	2043	1732	402	0	2112	346	0	307	0	354	300
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	42.8	20.2	11.7	41.3	0.0	18.1	33.9	0.0	38.0	0.0	0.0	47.5
Incr Delay (d2), s/veh	0.0	2.5	0.0	7.5	0.0	3.3	0.6	0.0	25.6	0.0	0.0	106.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.9	0.6	3.9	0.0	15.8	2.3	0.0	7.8	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.8	22.7	11.8	48.7	0.0	21.4	34.5	0.0	63.6	0.0	0.0	153.7
LnGrp LOS	D	C	B	D		C	C		E			F
Approach Vol, veh/h	898			1136			370			1		
Approach Delay, s/veh	22.0			25.3			54.8			153.7		
Approach LOS	C			C			D			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.2	53.4		22.0	9.5	59.1		4.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	21.5	104.0		18.5	18.0	107.5		18.0				
Max Q Clear Time (g_c+I1), s	10.4	39.1		17.2	2.1	46.2		2.1				
Green Ext Time (p_c), s	0.3	6.4		0.2	0.0	8.4		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	28.6											
HCM 7th LOS	C											

HCM 7th Signalized Intersection Summary

4: San Benancio Road & Hwy 68

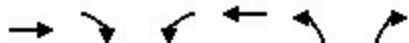
Existing AM
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1000	104	131	1000	1	142	1	208	2	0	1
Future Volume (veh/h)	1	1000	104	131	1000	1	142	1	208	2	0	1
Initial Q (Qb), veh	0	0	0	0	70	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1477	1870	1870	1870	1870	1870	1870	984	1870	1870	1870
Adj Flow Rate, veh/h	1	1000	104	131	1000	1	142	1	208	2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1008	1082	144	1351	1	241	2	148	7	0	6
Arrive On Green	0.00	0.68	0.68	0.04	0.72	0.72	0.14	0.14	0.14	0.00	0.00	0.00
Sat Flow, veh/h	1781	1477	1585	3456	1868	2	1769	12	834	1781	0	1585
Grp Volume(v), veh/h	1	1000	104	131	0	1001	143	0	208	2	0	1
Grp Sat Flow(s),veh/h/ln	1781	1477	1585	1728	0	1870	1782	0	834	1781	0	1585
Q Serve(g_s), s	0.1	88.2	3.0	5.0	0.0	42.3	10.0	0.0	18.0	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.1	88.2	3.0	5.0	0.0	42.3	10.0	0.0	18.0	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	1008	1082	144	0	1352	242	0	148	7	0	6
V/C Ratio(X)	0.41	0.99	0.10	0.91	0.00	0.74	0.59	0.00	1.40	0.28	0.00	0.16
Avail Cap(c_a), veh/h	67	1009	1083	144	0	1352	242	0	148	242	0	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	66.1	20.7	7.1	63.2	0.0	16.9	53.7	0.0	54.5	65.8	0.0	65.7
Incr Delay (d2), s/veh	84.8	26.3	0.0	49.9	0.0	2.2	3.8	0.0	217.6	20.7	0.0	11.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	74.4	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	31.2	0.9	3.1	0.0	55.7	4.7	0.0	13.9	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	150.9	47.0	7.2	113.1	0.0	93.5	57.5	0.0	272.0	86.4	0.0	77.2
LnGrp LOS	F	D	A	F		F	E		F	F		E
Approach Vol, veh/h	1105			1132			351			3		
Approach Delay, s/veh	43.3			95.7			184.6			83.4		
Approach LOS	D			F			F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	100.2		22.5	10.0	94.9		5.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	91.0		18.0	5.5	90.5		18.0				
Max Q Clear Time (g_c+I1), s	44.3			20.0	7.0	90.2		2.1				
Green Ext Time (p_c), s	0.0	8.7		0.0	0.0	0.2		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	85.4											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Existing AM
09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖↗	↑	↖	↗
Traffic Volume (veh/h)	740	135	223	891	149	180
Future Volume (veh/h)	740	135	223	891	149	180
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1575	1870	1870
Adj Flow Rate, veh/h	740	135	223	891	149	180
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	905	767	357	1063	265	400
Arrive On Green	0.48	0.48	0.10	0.68	0.15	0.15
Sat Flow, veh/h	1870	1585	3456	1575	1781	1585
Grp Volume(v), veh/h	740	135	223	891	149	180
Grp Sat Flow(s), veh/h/ln	1870	1585	1728	1575	1781	1585
Q Serve(g_s), s	17.3	2.5	3.2	21.6	4.0	4.9
Cycle Q Clear(g_c), s	17.3	2.5	3.2	21.6	4.0	4.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	905	767	357	1063	265	400
V/C Ratio(X)	0.82	0.18	0.62	0.84	0.56	0.45
Avail Cap(c_a), veh/h	2081	1764	784	2248	627	722
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.3	7.5	22.0	6.2	20.2	16.1
Incr Delay (d2), s/veh	1.9	0.1	1.8	1.8	1.9	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.5	1.1	1.8	1.6	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	13.2	7.6	23.8	8.1	22.1	16.9
LnGrp LOS	B	A	C	A	C	B
Approach Vol, veh/h	875			1114	329	
Approach Delay, s/veh	12.3			11.2	19.2	
Approach LOS	B			B	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		39.0		12.1	9.8	29.2
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		73.0		18.0	11.6	56.9
Max Q Clear Time (g_c+l1), s		23.6		6.9	5.2	19.3
Green Ext Time (p_c), s		6.9		0.8	0.4	5.4
Intersection Summary						
HCM 7th Control Delay, s/veh			12.8			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary 6: Boots Road/Pasadera Drive & Hwy 68

Existing AM
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	850	17	9	989	16	42	1	19	33	0	43
Future Volume (veh/h)	46	850	17	9	989	16	42	1	19	33	0	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	850	17	9	989	16	42	1	19	33	0	43
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	1139	966	141	1139	966	201	8	147	234	0	154
Arrive On Green	0.08	0.61	0.61	0.08	0.61	0.61	0.10	0.10	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1364	80	1517	1228	0	1585
Grp Volume(v), veh/h	46	850	17	9	989	16	42	0	20	33	0	43
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1364	0	1597	1228	0	1585
Q Serve(g_s), s	1.5	20.5	0.3	0.3	27.6	0.3	1.9	0.0	0.7	1.4	0.0	1.6
Cycle Q Clear(g_c), s	1.5	20.5	0.3	0.3	27.6	0.3	4.0	0.0	0.7	2.1	0.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.95	1.00		1.00
Lane Grp Cap(c), veh/h	141	1139	966	141	1139	966	201	0	155	234	0	154
V/C Ratio(X)	0.33	0.75	0.02	0.06	0.87	0.02	0.21	0.00	0.13	0.14	0.00	0.28
Avail Cap(c_a), veh/h	509	2983	2528	509	2983	2528	458	0	456	496	0	453
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.4	8.8	4.9	26.8	10.2	4.9	28.5	0.0	26.0	27.0	0.0	26.4
Incr Delay (d2), s/veh	1.3	1.0	0.0	0.2	2.2	0.0	0.5	0.0	0.4	0.3	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.7	0.1	0.1	6.6	0.0	0.6	0.0	0.3	0.5	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.7	9.8	4.9	27.0	12.4	4.9	29.0	0.0	26.4	27.3	0.0	27.4
LnGrp LOS	C	A	A	C	B	A	C		C	C		C
Approach Vol, veh/h	913			1014			62			76		
Approach Delay, s/veh	10.7			12.4			28.2			27.3		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	42.9		10.6	9.5	42.9		10.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	100.5	100.5		18.0	18.0	100.5		18.0				
Max Q Clear Time (g_c+I), s	13.5	29.6		6.0	2.3	22.5		4.1				
Green Ext Time (p_c), s	0.1	8.8		0.1	0.0	6.5		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	12.7											
HCM 7th LOS	B											

HCM 7th Signalized Intersection Summary

7: Hwy 68 & York Road

Existing AM
09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	117	819	780	295	77	46
Future Volume (veh/h)	117	819	780	295	77	46
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	117	819	780	295	77	46
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	194	1361	981	832	150	133
Arrive On Green	0.11	0.73	0.52	0.52	0.08	0.08
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	117	819	780	295	77	46
Grp Sat Flow(s), veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	3.0	10.1	16.3	5.2	2.0	1.3
Cycle Q Clear(g_c), s	3.0	10.1	16.3	5.2	2.0	1.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	194	1361	981	832	150	133
V/C Ratio(X)	0.60	0.60	0.79	0.35	0.51	0.34
Avail Cap(c_a), veh/h	763	4751	3773	3198	726	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	3.2	9.3	6.6	21.0	20.7
Incr Delay (d2), s/veh	3.0	0.4	1.5	0.3	2.7	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.2	3.5	0.9	0.9	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	23.3	3.6	10.8	6.9	23.7	22.2
LnGrp LOS	C	A	B	A	C	C
Approach Vol, veh/h		936	1075		123	
Approach Delay, s/veh		6.1	9.7		23.1	
Approach LOS		A	A		C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.7	29.6		8.5		39.3
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	20.5	96.5		19.5		121.5
Max Q Clear Time (g_c+I), s	15.0	18.3		4.0		12.1
Green Ext Time (p_c), s	0.2	6.8		0.3		6.0
Intersection Summary						
HCM 7th Control Delay, s/veh			8.9			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	0					
Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	187	0	0	234	0	0
Future Vol, veh/h	187	0	0	234	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	203	0	0	254	0	0
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	203	0	458	203
Stage 1	-	-	-	-	203	-
Stage 2	-	-	-	-	254	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1368	-	561	837
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	788	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1368	-	561	837
Mov Cap-2 Maneuver	-	-	-	-	561	-
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	788	-
Approach	NB	SB		NW		
HCM Control Delay, s/v	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	NWLn1	NWLn2	SBL	SBT
Capacity (veh/h)	-	-	-	-	1368	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s/veh)	-	-	0	0	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	-	-	0	-

HCM 7th TWSC
2: Corral Del Tierra Rd & Prj N Drwy

Existing PM
09/26/2024

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	187	0	0	234
Future Vol, veh/h	0	0	187	0	0	234
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	187	0	0	234

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	187	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	855	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	855	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s/veh)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

HCM 7th Signalized Intersection Summary

3: Corral Del Tierra Rd & Hwy 68

Existing PM
09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	955	54	180	833	1	66	0	121	1	0	0
Future Volume (veh/h)	0	955	54	180	833	1	66	0	121	1	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1378	1870	1575	1477	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	955	54	180	833	1	66	0	121	1	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	911	1047	188	1204	1	161	0	144	2	0	2
Arrive On Green	0.00	0.66	0.66	0.13	0.82	0.82	0.09	0.00	0.09	0.00	0.00	0.00
Sat Flow, veh/h	1781	1378	1585	1500	1475	2	1781	0	1585	1781	0	1585
Grp Volume(v), veh/h	0	955	54	180	0	834	66	0	121	1	0	0
Grp Sat Flow(s),veh/h/ln	1781	1378	1585	1500	0	1476	1781	0	1585	1781	0	1585
Q Serve(g_s), s	0.0	97.5	1.8	17.6	0.0	35.2	5.2	0.0	11.1	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	97.5	1.8	17.6	0.0	35.2	5.2	0.0	11.1	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	911	1047	188	0	1205	161	0	144	2	0	2
V/C Ratio(X)	0.00	1.05	0.05	0.96	0.00	0.69	0.41	0.00	0.84	0.41	0.00	0.00
Avail Cap(c_a), veh/h	217	911	1047	188	0	1205	217	0	193	217	0	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	25.0	8.8	64.1	0.0	5.7	63.4	0.0	66.1	73.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	43.5	0.0	53.1	0.0	1.7	1.7	0.0	21.3	85.2	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	37.6	0.6	9.3	0.0	7.3	2.4	0.0	5.4	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	68.5	8.8	117.3	0.0	7.4	65.0	0.0	87.3	158.8	0.0	0.0
LnGrp LOS		F	A	F		A	E		F	F		
Approach Vol, veh/h	1009			1014			187			1		
Approach Delay, s/veh	65.3			26.9			79.5			158.8		
Approach LOS	E			C			E			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	102.0		17.9	0.0	125.0		4.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.5	97.5		18.0	18.0	98.0		18.0				
Max Q Clear Time (g_c+I1), s	19.6	99.5		13.1	0.0	37.2		2.1				
Green Ext Time (p_c), s	0.0	0.0		0.3	0.0	6.2		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	48.9											
HCM 7th LOS	D											

HCM 7th Signalized Intersection Summary

4: San Benancio Road & Hwy 68

Existing PM
09/26/2024

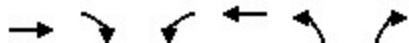


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1022	64	115	947	2	73	0	106	0	0	0
Future Volume (veh/h)	0	1022	64	115	947	2	73	0	106	0	0	0
Initial Q (Qb), veh	0	20	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1575	1870	1870	1870	1575	1870	1870	1870
Adj Flow Rate, veh/h	0	1022	64	115	947	2	73	0	106	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1220	1030	217	1216	2	183	0	221	0	3	2
Arrive On Green	0.00	0.63	0.63	0.07	0.76	0.76	0.11	0.00	0.11	0.00	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	3456	1571	3	1781	0	1335	0	1870	1585
Grp Volume(v), veh/h	0	1022	64	115	0	949	73	0	106	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	0	1574	1781	0	1335	0	1870	1585
Q Serve(g_s), s	0.0	30.0	1.0	2.1	0.0	24.3	2.5	0.0	4.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	30.0	1.0	2.1	0.0	24.3	2.5	0.0	4.8	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	2	1220	1030	217	0	1216	183	0	221	0	3	2
V/C Ratio(X)	0.00	0.84	0.06	0.53	0.00	0.78	0.40	0.00	0.48	0.00	0.00	0.00
Avail Cap(c_a), veh/h	134	2765	2343	400	0	2392	482	0	450	0	506	429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	11.4	4.7	35.6	0.0	5.7	32.9	0.0	29.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	2.0	0.0	1.1	1.4	0.0	1.6	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	11.9	0.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.5	0.2	1.0	0.0	5.4	1.3	0.0	1.9	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	24.9	4.7	37.6	0.0	11.9	34.3	0.0	31.4	0.0	0.0	0.0
LnGrp LOS		C	A	D		B	C		C			
Approach Vol, veh/h	1086			1064			179			0		
Approach Delay, s/veh	23.7			14.6			32.6			0.0		
Approach LOS	C			B			C					
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	55.0		11.5	8.9	46.1		0.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	101.0		18.0	7.7	98.3		18.0				
Max Q Clear Time (g_c+I1), s	10.0	26.3		6.8	4.1	32.0		0.0				
Green Ext Time (p_c), s	0.0	8.0		0.5	0.1	9.6		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	20.3											
HCM 7th LOS	C											

HCM 7th Signalized Intersection Summary

5: Laureles Grade & Hwy 68

Existing PM
09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖	↗
Traffic Volume (veh/h)	632	99	153	751	220	403
Future Volume (veh/h)	632	99	153	751	220	403
Initial Q (Qb), veh	17	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1575	1870	1870	1870	1280	1870
Adj Flow Rate, veh/h	632	99	153	751	220	403
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	760	762	293	1162	328	562
Arrive On Green	0.46	0.46	0.07	0.59	0.28	0.28
Sat Flow, veh/h	1575	1585	3456	1870	1219	1585
Grp Volume(v), veh/h	632	99	153	751	220	403
Grp Sat Flow(s), veh/h/ln	1575	1585	1728	1870	1219	1585
Q Serve(g_s), s	25.6	2.5	3.0	19.2	11.1	15.5
Cycle Q Clear(g_c), s	25.6	2.5	3.0	19.2	11.1	15.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	760	762	293	1162	328	562
V/C Ratio(X)	0.83	0.13	0.52	0.65	0.67	0.72
Avail Cap(c_a), veh/h	1787	1798	863	2709	687	1008
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.0	12.4	39.9	10.1	30.2	25.3
Incr Delay (d2), s/veh	2.5	0.1	1.4	0.6	2.4	1.7
Initial Q Delay(d3), s/veh	21.4	0.0	50.8	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.0	0.9	4.9	6.6	4.4	9.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	45.9	12.5	92.2	10.7	32.6	27.1
LnGrp LOS	D	B	F	B	C	C
Approach Vol, veh/h	731			904	623	
Approach Delay, s/veh	41.4			24.5	29.0	
Approach LOS	D			C	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		46.0		24.1	9.6	36.4
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		101.5		39.5	17.5	79.5
Max Q Clear Time (g_c+l1), s		21.2		17.5	5.0	27.6
Green Ext Time (p_c), s		5.2		2.1	0.3	4.3
Intersection Summary						
HCM 7th Control Delay, s/veh			31.2			
HCM 7th LOS			C			

HCM 7th Signalized Intersection Summary

6: Boots Road/Pasadera Drive & Hwy 68

Existing PM
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	721	33	19	964	21	30	2	7	29	0	40
Future Volume (veh/h)	39	721	33	19	964	21	30	2	7	29	0	40
Initial Q (Qb), veh	0	15	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1575	1870	1870	1575	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	721	33	19	964	21	30	2	7	29	0	40
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	124	1044	1060	124	1062	1060	168	27	95	198	0	118
Arrive On Green	0.07	0.66	0.66	0.07	0.66	0.66	0.08	0.08	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1781	1575	1585	1781	1575	1585	1367	365	1276	1311	0	1585
Grp Volume(v), veh/h	39	721	33	19	964	21	30	0	9	29	0	40
Grp Sat Flow(s),veh/h/ln	1781	1575	1585	1781	1575	1585	1367	0	1641	1311	0	1585
Q Serve(g_s), s	1.4	20.0	0.5	0.7	37.4	0.3	1.5	0.0	0.4	1.4	0.0	1.7
Cycle Q Clear(g_c), s	1.4	20.0	0.5	0.7	37.4	0.3	3.2	0.0	0.4	1.7	0.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		1.00
Lane Grp Cap(c), veh/h	124	1044	1060	124	1062	1060	168	0	122	198	0	118
V/C Ratio(X)	0.32	0.69	0.03	0.15	0.91	0.02	0.18	0.00	0.07	0.15	0.00	0.34
Avail Cap(c_a), veh/h	464	1264	1273	464	1264	1273	426	0	427	463	0	413
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.1	8.3	4.0	31.7	11.2	4.0	33.4	0.0	31.2	32.0	0.0	31.8
Incr Delay (d2), s/veh	1.4	1.2	0.0	0.6	8.6	0.0	0.5	0.0	0.3	0.3	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	4.8	0.0	0.0	15.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	6.2	0.1	0.3	15.1	0.1	0.5	0.0	0.2	0.5	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.5	14.3	4.1	32.3	35.4	4.0	33.9	0.0	31.4	32.3	0.0	33.5
LnGrp LOS	C	B	A	C	D	A	C		C	C		C
Approach Vol, veh/h	793			1004			39			69		
Approach Delay, s/veh	14.8			34.6			33.3			33.0		
Approach LOS	B			C			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	49.9		9.7	9.5	49.9		9.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	55.5		18.0	18.0	55.5		18.0				
Max Q Clear Time (g_c+I), s	13.4	39.4		5.2	2.7	22.0		3.7				
Green Ext Time (p_c), s	0.0	6.0		0.1	0.0	4.8		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	26.3											
HCM 7th LOS	C											

HCM 7th Signalized Intersection Summary

7: Hwy 68 & York Road

Existing PM
09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	44	642	922	115	190	92
Future Volume (veh/h)	44	642	922	115	190	92
Initial Q (Qb), veh	0	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1477	1870	1870	1870
Adj Flow Rate, veh/h	44	642	922	115	190	92
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	91	1456	1006	1080	230	204
Arrive On Green	0.06	0.77	0.66	0.66	0.13	0.13
Sat Flow, veh/h	1781	1870	1477	1585	1781	1585
Grp Volume(v), veh/h	44	642	922	115	190	92
Grp Sat Flow(s), veh/h/ln	1781	1870	1477	1585	1781	1585
Q Serve(g_s), s	2.1	10.8	50.1	2.4	9.2	4.7
Cycle Q Clear(g_c), s	2.1	10.8	50.1	2.4	9.2	4.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	91	1456	1006	1080	230	204
V/C Ratio(X)	0.48	0.44	0.92	0.11	0.83	0.45
Avail Cap(c_a), veh/h	362	1966	1176	1263	362	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	3.6	15.1	5.3	41.6	39.4
Incr Delay (d2), s/veh	3.9	0.2	10.2	0.0	8.6	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	24.7	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.0	23.9	0.6	5.0	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	49.1	3.8	50.0	5.4	50.2	41.0
LnGrp LOS	D	A	D	A	D	D
Approach Vol, veh/h		686	1037		282	
Approach Delay, s/veh		6.7	45.0		47.2	
Approach LOS		A	D		D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.5	62.8		16.1		72.3
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	10.0	70.5		18.0		93.0
Max Q Clear Time (g_c+I1), s	14.1	52.1		11.2		12.8
Green Ext Time (p_c), s	0.0	6.2		0.5		4.1
Intersection Summary						
HCM 7th Control Delay, s/veh			32.2			
HCM 7th LOS			C			

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	27	377	10	45	247
Future Vol, veh/h	8	27	377	10	45	247
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	29	410	11	49	268
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	782	415	0	0	421	0
Stage 1	415	-	-	-	-	-
Stage 2	366	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	363	637	-	-	1138	-
Stage 1	666	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	348	637	-	-	1138	-
Mov Cap-2 Maneuver	348	-	-	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v	12	0	1.28			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 348 637 1138		-		
HCM Lane V/C Ratio	-	- 0.025 0.046 0.043		-		
HCM Control Delay (s/veh)	-	- 15.6 10.9 8.3		-		
HCM Lane LOS	-	- C B A		-		
HCM 95th %tile Q(veh)	-	- 0.1 0.1 0.1		-		

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	404	0	0	292
Future Vol, veh/h	0	0	404	0	0	292
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	404	0	0	292
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	404	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	647	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	647	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	-		-		
HCM Lane V/C Ratio	-	-		-		
HCM Control Delay (s/veh)	-	0		-		
HCM Lane LOS	-	A		-		
HCM 95th %tile Q(veh)	-	-		-		

HCM 7th Signalized Intersection Summary

3: Corral Del Tierra Rd & Hwy 68

Background AM

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	910	98	194	1182	6	131	0	273	0	0	1
Future Volume (veh/h)	2	910	98	194	1182	6	131	0	273	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	910	98	194	1182	6	131	0	273	0	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	1102	934	222	1254	6	257	0	228	0	3	2
Arrive On Green	0.04	0.59	0.59	0.12	0.67	0.67	0.14	0.00	0.14	0.00	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1859	9	1781	0	1580	0	1870	1585
Grp Volume(v), veh/h	2	910	98	194	0	1188	131	0	273	0	0	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1869	1781	0	1580	0	1870	1585
Q Serve(g_s), s	0.1	49.9	3.5	13.7	0.0	72.7	8.7	0.0	18.5	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.1	49.9	3.5	13.7	0.0	72.7	8.7	0.0	18.5	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	70	1102	934	222	0	1261	257	0	228	0	3	2
V/C Ratio(X)	0.03	0.83	0.10	0.88	0.00	0.94	0.51	0.00	1.20	0.00	0.00	0.46
Avail Cap(c_a), veh/h	250	1518	1287	299	0	1568	257	0	228	0	263	223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	59.2	21.0	11.5	55.1	0.0	18.6	50.6	0.0	54.8	0.0	0.0	63.9
Incr Delay (d2), s/veh	0.2	2.8	0.0	19.1	0.0	10.3	1.7	0.0	123.2	0.0	0.0	107.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	19.7	1.1	7.1	0.0	28.3	4.0	0.0	15.1	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.4	23.8	11.6	74.2	0.0	28.9	52.3	0.0	178.0	0.0	0.0	171.1
LnGrp LOS	E	C	B	E		C	D		F			F
Approach Vol, veh/h	1010			1382			404			1		
Approach Delay, s/veh	22.7			35.3			137.2			171.1		
Approach LOS	C			D			F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.4	80.0		23.0	9.5	91.0		4.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	21.5	104.0		18.5	18.0	107.5		18.0				
Max Q Clear Time (g_c+I1), s	15.7	51.9		20.5	2.1	74.7		2.1				
Green Ext Time (p_c), s	0.2	7.7		0.0	0.0	11.7		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh				45.5								
HCM 7th LOS				D								

HCM 7th Signalized Intersection Summary

4: San Benancio Road & Hwy 68

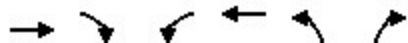
Background AM
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1082	111	124	1198	1	174	1	205	3	0	1
Future Volume (veh/h)	1	1082	111	124	1198	1	174	1	205	3	0	1
Initial Q (Qb), veh	0	0	0	0	70	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1477	1870	1870	1870	1870	1870	1870	984	1870	1870	1870
Adj Flow Rate, veh/h	1	1082	111	124	1198	1	174	1	205	3	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1007	1081	143	1350	1	240	1	148	9	0	8
Arrive On Green	0.00	0.68	0.68	0.04	0.72	0.72	0.14	0.14	0.14	0.01	0.00	0.01
Sat Flow, veh/h	1781	1477	1585	3456	1869	2	1772	10	834	1781	0	1585
Grp Volume(v), veh/h	1	1082	111	124	0	1199	175	0	205	3	0	1
Grp Sat Flow(s),veh/h/ln	1781	1477	1585	1728	0	1870	1782	0	834	1781	0	1585
Q Serve(g_s), s	0.1	90.5	3.2	4.7	0.0	65.9	12.5	0.0	18.0	0.2	0.0	0.1
Cycle Q Clear(g_c), s	0.1	90.5	3.2	4.7	0.0	65.9	12.5	0.0	18.0	0.2	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	1007	1081	143	0	1351	242	0	148	9	0	8
V/C Ratio(X)	0.41	1.07	0.10	0.87	0.00	0.89	0.72	0.00	1.39	0.33	0.00	0.12
Avail Cap(c_a), veh/h	67	1007	1081	143	0	1350	242	0	148	242	0	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	66.2	21.1	7.2	63.2	0.0	18.4	55.0	0.0	54.6	65.8	0.0	65.7
Incr Delay (d2), s/veh	84.8	50.5	0.0	38.9	0.0	7.6	10.2	0.0	210.5	19.2	0.0	6.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	136.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	38.6	0.9	2.8	0.0	84.2	6.3	0.0	13.6	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	151.0	71.6	7.3	102.1	0.0	162.1	65.2	0.0	265.1	85.0	0.0	72.2
LnGrp LOS	F	F	A	F		F	E		F	F		E
Approach Vol, veh/h	1194			1323			380			4		
Approach Delay, s/veh	65.7			156.5			173.0			81.8		
Approach LOS	E			F			F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	100.3		22.5	10.0	95.0		5.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	91.0		18.0	5.5	90.5		18.0				
Max Q Clear Time (g_c+I), s	12.5	67.9		20.0	6.7	92.5		2.2				
Green Ext Time (p_c), s	0.0	10.3		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	121.2											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Background AM
09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖↗	↑	↖	↗
Traffic Volume (veh/h)	798	175	249	980	156	214
Future Volume (veh/h)	798	175	249	980	156	214
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	798	175	249	980	156	214
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	945	801	370	1286	287	426
Arrive On Green	0.51	0.51	0.11	0.69	0.16	0.16
Sat Flow, veh/h	1870	1585	3456	1870	1781	1585
Grp Volume(v), veh/h	798	175	249	980	156	214
Grp Sat Flow(s), veh/h/ln	1870	1585	1728	1870	1781	1585
Q Serve(g_s), s	22.0	3.7	4.1	20.5	4.8	6.8
Cycle Q Clear(g_c), s	22.0	3.7	4.1	20.5	4.8	6.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	945	801	370	1286	287	426
V/C Ratio(X)	0.84	0.22	0.67	0.76	0.54	0.50
Avail Cap(c_a), veh/h	1787	1515	666	2289	537	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.7	8.2	25.6	6.1	23.0	18.4
Incr Delay (d2), s/veh	2.2	0.1	2.1	1.0	1.6	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.9	1.6	2.8	2.0	6.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	14.9	8.3	27.7	7.1	24.6	19.4
LnGrp LOS	B	A	C	A	C	B
Approach Vol, veh/h	973			1229	370	
Approach Delay, s/veh	13.7			11.3	21.6	
Approach LOS	B			B	C	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	45.5			14.1	10.9	34.6
Change Period (Y+Rc), s	4.5			4.5	4.5	4.5
Max Green Setting (Gmax), s	73.0			18.0	11.5	57.0
Max Q Clear Time (g_c+l1), s	22.5			8.8	6.1	24.0
Green Ext Time (p_c), s	8.4			0.8	0.4	6.2
Intersection Summary						
HCM 7th Control Delay, s/veh			13.7			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary

6: Boots Road/Pasadera Drive & Hwy 68

Background AM
09/26/2024

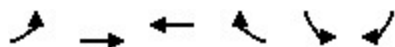


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	942	17	14	1076	21	45	3	21	38	0	42
Future Volume (veh/h)	43	942	17	14	1076	21	45	3	21	38	0	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	942	17	14	1076	21	45	3	21	38	0	42
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	1212	1027	121	1212	1027	181	20	142	218	0	159
Arrive On Green	0.07	0.65	0.65	0.07	0.65	0.65	0.10	0.10	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1365	202	1414	1199	0	1585
Grp Volume(v), veh/h	43	942	17	14	1076	21	45	0	24	38	0	42
Grp Sat Flow(s), veh/h/ln	1781	1870	1585	1781	1870	1585	1365	0	1616	1199	0	1585
Q Serve(g_s), s	1.7	26.3	0.3	0.5	35.1	0.3	2.4	0.0	1.0	1.9	0.0	1.8
Cycle Q Clear(g_c), s	1.7	26.3	0.3	0.5	35.1	0.3	5.3	0.0	1.0	2.9	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.88	1.00		1.00
Lane Grp Cap(c), veh/h	121	1212	1027	121	1212	1027	181	0	162	218	0	159
V/C Ratio(X)	0.35	0.78	0.02	0.12	0.89	0.02	0.25	0.00	0.15	0.17	0.00	0.26
Avail Cap(c_a), veh/h	436	2557	2167	436	2557	2167	378	0	396	419	0	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.7	9.2	4.6	32.2	10.7	4.6	33.5	0.0	30.2	31.5	0.0	30.6
Incr Delay (d2), s/veh	1.8	1.1	0.0	0.4	2.4	0.0	0.7	0.0	0.4	0.4	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.4	0.1	0.2	8.9	0.1	0.8	0.0	0.4	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.5	10.3	4.6	32.6	13.1	4.6	34.2	0.0	30.6	31.9	0.0	31.4
LnGrp LOS	C	B	A	C	B	A	C		C	C		C
Approach Vol, veh/h	1002			1111			69			80		
Approach Delay, s/veh	11.2			13.2			33.0			31.7		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	52.1		11.9	9.5	52.1		11.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	100.5	100.5		18.0	18.0	100.5		18.0				
Max Q Clear Time (g_c+I), s	37.1	37.1		7.3	2.5	28.3		4.9				
Green Ext Time (p_c), s	0.0	10.6		0.1	0.0	7.9		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	13.6											
HCM 7th LOS	B											

HCM 7th Signalized Intersection Summary

7: Hwy 68 & York Road

Background AM
09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	131	898	848	297	83	49
Future Volume (veh/h)	131	898	848	297	83	49
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	898	848	297	83	49
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	201	1404	1036	878	143	128
Arrive On Green	0.11	0.75	0.55	0.55	0.08	0.08
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	131	898	848	297	83	49
Grp Sat Flow(s), veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	3.8	12.3	19.7	5.5	2.4	1.6
Cycle Q Clear(g_c), s	3.8	12.3	19.7	5.5	2.4	1.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	201	1404	1036	878	143	128
V/C Ratio(X)	0.65	0.64	0.82	0.34	0.58	0.38
Avail Cap(c_a), veh/h	718	4295	3383	2867	618	550
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	3.2	9.7	6.5	23.7	23.3
Incr Delay (d2), s/veh	3.6	0.5	1.7	0.2	3.7	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.2	4.5	1.0	1.1	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	26.2	3.7	11.4	6.8	27.3	25.2
LnGrp LOS	C	A	B	A	C	C
Approach Vol, veh/h		1029	1145		132	
Approach Delay, s/veh		6.5	10.2		26.5	
Approach LOS		A	B		C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.5	34.0		8.8		44.6
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	21.5	96.5		18.5		122.5
Max Q Clear Time (g_c+I), s	15.8	21.7		4.4		14.3
Green Ext Time (p_c), s	0.3	7.8		0.3		7.2
Intersection Summary						
HCM 7th Control Delay, s/veh			9.5			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1173	10	0	1382	0	4
Future Vol, veh/h	1173	10	0	1382	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1275	11	0	1502	0	4

Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	0	0	-	- 1280
Stage 1	-	-	-	- -
Stage 2	-	-	-	- -
Critical Hdwy	-	-	-	- 6.22
Critical Hdwy Stg 1	-	-	-	- -
Critical Hdwy Stg 2	-	-	-	- -
Follow-up Hdwy	-	-	-	- 3.318
Pot Cap-1 Maneuver	-	-	0	- 0 202
Stage 1	-	-	0	- 0 -
Stage 2	-	-	0	- 0 -
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	- 202
Mov Cap-2 Maneuver	-	-	-	- -
Stage 1	-	-	-	- -
Stage 2	-	-	-	- -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	23.19
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	202	-	-	-
HCM Lane V/C Ratio	0.021	-	-	-
HCM Control Delay (s/veh)	23.2	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection

Int Delay, s/veh 3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	160	272	18	150	301
Future Vol, veh/h	25	160	272	18	150	301
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	174	296	20	163	327

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	959	305	0
Stage 1	305	-	-
Stage 2	653	-	-
Critical Hdwy	6.42	6.22	-
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	-
Pot Cap-1 Maneuver	285	734	-
Stage 1	747	-	-
Stage 2	518	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	248	734	-
Mov Cap-2 Maneuver	248	-	-
Stage 1	747	-	-
Stage 2	450	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v12.75		0	2.77
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- 248 734 1245	-	-
HCM Lane V/C Ratio	-	- 0.11 0.237 0.131	-	-
HCM Control Delay (s/veh)	-	- 21.3 11.4 8.3	-	-
HCM Lane LOS	-	- C B A	-	-
HCM 95th %tile Q(veh)	-	- 0.4 0.9 0.5	-	-

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	432	0	0	451
Future Vol, veh/h	0	0	432	0	0	451
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	432	0	0	451

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	432	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	624	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	624	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s/veh)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

HCM 7th Signalized Intersection Summary

3: Corral Del Tierra Rd & Hwy 68

Background PM

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	954	161	290	846	1	207	0	225	1	0	0
Future Volume (veh/h)	0	954	161	290	846	1	207	0	225	1	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1378	1870	1575	1477	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	954	161	290	846	1	207	0	225	1	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	797	916	271	1163	1	217	0	193	2	0	2
Arrive On Green	0.00	0.58	0.58	0.18	0.79	0.79	0.12	0.00	0.12	0.00	0.00	0.00
Sat Flow, veh/h	1781	1378	1585	1500	1475	2	1781	0	1585	1781	0	1585
Grp Volume(v), veh/h	0	954	161	290	0	847	207	0	225	1	0	0
Grp Sat Flow(s),veh/h/ln	1781	1378	1585	1500	0	1476	1781	0	1585	1781	0	1585
Q Serve(g_s), s	0.0	88.0	7.3	27.5	0.0	43.3	17.6	0.0	18.5	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	88.0	7.3	27.5	0.0	43.3	17.6	0.0	18.5	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	797	916	271	0	1164	217	0	193	2	0	2
V/C Ratio(X)	0.00	1.20	0.18	1.07	0.00	0.73	0.96	0.00	1.17	0.41	0.00	0.00
Avail Cap(c_a), veh/h	211	797	916	271	0	1164	217	0	193	211	0	187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	32.1	15.1	62.4	0.0	8.0	66.4	0.0	66.9	75.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	100.9	0.1	74.5	0.0	2.3	48.7	0.0	117.4	85.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	48.5	2.5	15.7	0.0	10.6	11.0	0.0	13.8	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	133.0	15.2	136.8	0.0	10.3	115.1	0.0	184.2	161.3	0.0	0.0
LnGrp LOS		F	B	F		B	F		F	F		
Approach Vol, veh/h	1115			1137			432			1		
Approach Delay, s/veh	115.9			42.6			151.1			161.3		
Approach LOS	F			D			F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.0	92.5		23.0	0.0	124.5		4.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	27.5	88.0		18.5	18.0	97.5		18.0				
Max Q Clear Time (g_c+I1), s	29.5	90.0		20.5	0.0	45.3		2.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	6.3		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	90.6											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary 4: San Benancio Road & Hwy 68

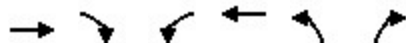
Background PM
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1105	95	112	1012	3	100	0	92	1	0	1
Future Volume (veh/h)	0	1105	95	112	1012	3	100	0	92	1	0	1
Initial Q (Qb), veh	0	20	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1575	1870	1870	1870	1575	1870	1870	1870
Adj Flow Rate, veh/h	0	1105	95	112	1012	3	100	0	92	1	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1266	1068	176	1210	3	158	0	187	5	0	4
Arrive On Green	0.00	0.65	0.65	0.05	0.76	0.76	0.09	0.00	0.09	0.00	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	3456	1570	5	1781	0	1335	1781	0	1585
Grp Volume(v), veh/h	0	1105	95	112	0	1015	100	0	92	1	0	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	0	1574	1781	0	1335	1781	0	1585
Q Serve(g_s), s	0.0	44.9	2.0	2.8	0.0	39.7	4.8	0.0	5.7	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.0	44.9	2.0	2.8	0.0	39.7	4.8	0.0	5.7	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	1266	1068	176	0	1210	158	0	187	5	0	4
V/C Ratio(X)	0.00	0.87	0.09	0.64	0.00	0.84	0.63	0.00	0.49	0.21	0.00	0.23
Avail Cap(c_a), veh/h	100	2069	1753	274	0	1778	359	0	339	359	0	319
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.6	5.6	47.2	0.0	8.7	44.6	0.0	40.3	50.4	0.0	50.4
Incr Delay (d2), s/veh	0.0	2.5	0.0	3.8	0.0	2.5	4.1	0.0	2.0	20.1	0.0	25.8
Initial Q Delay(d3), s/veh	0.0	14.1	0.0	0.0	0.0	6.9	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	23.7	0.5	1.4	0.0	12.3	2.6	0.0	2.2	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	31.2	5.6	51.0	0.0	18.0	48.7	0.0	42.4	70.4	0.0	76.1
LnGrp LOS		C	A	D		B	D		D	E		E
Approach Vol, veh/h	1200			1127			192			2		
Approach Delay, s/veh	29.2			21.3			45.6			73.3		
Approach LOS	C			C			D			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	72.0		12.6	9.2	62.8		4.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	101.0		18.0	7.1	98.9		18.0				
Max Q Clear Time (g_c+I), s	10.0	41.7		7.7	4.8	46.9		2.1				
Green Ext Time (p_c), s	0.0	9.1		0.5	0.1	11.5		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	26.9											
HCM 7th LOS	C											

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Background PM
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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖↗	↑	↖	↗
Traffic Volume (veh/h)	714	89	204	821	210	444
Future Volume (veh/h)	714	89	204	821	210	444
Initial Q (Qb), veh	17	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1575	1870	1870	1870	1280	1870
Adj Flow Rate, veh/h	714	89	204	821	210	444
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	810	809	325	1210	335	590
Arrive On Green	0.49	0.49	0.08	0.62	0.29	0.29
Sat Flow, veh/h	1575	1585	3456	1870	1219	1585
Grp Volume(v), veh/h	714	89	204	821	210	444
Grp Sat Flow(s), veh/h/ln	1575	1585	1728	1870	1219	1585
Q Serve(g_s), s	41.0	2.9	5.6	28.9	14.5	23.9
Cycle Q Clear(g_c), s	41.0	2.9	5.6	28.9	14.5	23.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	810	809	325	1210	335	590
V/C Ratio(X)	0.88	0.11	0.63	0.68	0.63	0.75
Avail Cap(c_a), veh/h	1285	1293	621	1948	494	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	15.0	51.1	12.9	38.5	32.8
Incr Delay (d2), s/veh	4.6	0.1	2.0	0.7	1.9	3.0
Initial Q Delay(d3), s/veh	26.6	0.0	53.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.8	1.2	6.5	11.3	5.6	13.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	60.6	15.1	106.1	13.6	40.4	35.8
LnGrp LOS	E	B	F	B	D	D
Approach Vol, veh/h	803			1025	654	
Approach Delay, s/veh	55.5			32.0	37.3	
Approach LOS	E			C	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		65.0		32.4	12.5	52.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		101.5		39.5	17.5	79.5
Max Q Clear Time (g_c+l1), s		30.9		25.9	7.6	43.0
Green Ext Time (p_c), s		6.1		2.0	0.4	5.0
Intersection Summary						
HCM 7th Control Delay, s/veh			41.0			
HCM 7th LOS			D			

HCM 7th Signalized Intersection Summary

6: Boots Road/Pasadera Drive & Hwy 68

Background PM

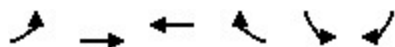
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	782	33	22	1006	36	33	3	8	38	0	37
Future Volume (veh/h)	46	782	33	22	1006	36	33	3	8	38	0	37
Initial Q (Qb), veh	0	15	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1575	1870	1870	1575	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	782	33	22	1006	36	33	3	8	38	0	37
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	1063	1077	115	1079	1077	161	37	99	199	0	130
Arrive On Green	0.07	0.67	0.67	0.07	0.67	0.67	0.08	0.08	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1781	1575	1585	1781	1575	1585	1371	451	1203	1300	0	1585
Grp Volume(v), veh/h	46	782	33	22	1006	36	33	0	11	38	0	37
Grp Sat Flow(s),veh/h/ln	1781	1575	1585	1781	1575	1585	1371	0	1654	1300	0	1585
Q Serve(g_s), s	1.9	24.4	0.5	0.9	43.7	0.6	1.8	0.0	0.5	1.9	0.0	1.6
Cycle Q Clear(g_c), s	1.9	24.4	0.5	0.9	43.7	0.6	4.2	0.0	0.5	2.4	0.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	1.00		1.00
Lane Grp Cap(c), veh/h	115	1063	1077	115	1079	1077	161	0	136	199	0	130
V/C Ratio(X)	0.40	0.74	0.03	0.19	0.93	0.03	0.20	0.00	0.08	0.19	0.00	0.28
Avail Cap(c_a), veh/h	426	1163	1170	426	1163	1170	380	0	396	423	0	379
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.9	9.0	4.1	34.5	12.2	4.1	35.9	0.0	33.0	34.1	0.0	33.5
Incr Delay (d2), s/veh	2.3	2.3	0.0	0.8	12.8	0.0	0.6	0.0	0.3	0.5	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	5.4	0.0	0.0	20.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	7.9	0.1	0.4	19.8	0.1	0.6	0.0	0.2	0.7	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.2	16.6	4.1	35.3	45.7	4.1	36.6	0.0	33.2	34.6	0.0	34.7
LnGrp LOS	D	B	A	D	D	A	D		C	C		C
Approach Vol, veh/h	861			1064			44			75		
Approach Delay, s/veh	17.3			44.1			35.7			34.7		
Approach LOS	B			D			D			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	55.0		10.7	9.5	55.0		10.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	55.5		18.0	18.0	55.5		18.0				
Max Q Clear Time (g_c+I), s	13.9	45.7		6.2	2.9	26.4		4.4				
Green Ext Time (p_c), s	0.1	4.7		0.1	0.0	5.3		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	32.3											
HCM 7th LOS	C											

HCM 7th Signalized Intersection Summary7: Hwy 68 & York Road

Background PM
09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	43	668	950	120	203	92
Future Volume (veh/h)	43	668	950	120	203	92
Initial Q (Qb), veh	0	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1477	1870	1870	1870
Adj Flow Rate, veh/h	43	668	950	120	203	92
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	87	1455	1012	1087	240	213
Arrive On Green	0.05	0.77	0.67	0.67	0.14	0.14
Sat Flow, veh/h	1781	1870	1477	1585	1781	1585
Grp Volume(v), veh/h	43	668	950	120	203	92
Grp Sat Flow(s), veh/h/ln	1781	1870	1477	1585	1781	1585
Q Serve(g_s), s	2.2	12.2	56.9	2.6	10.6	5.1
Cycle Q Clear(g_c), s	2.2	12.2	56.9	2.6	10.6	5.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	87	1455	1012	1087	240	213
V/C Ratio(X)	0.50	0.46	0.94	0.11	0.85	0.43
Avail Cap(c_a), veh/h	336	1820	1089	1169	336	299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	3.9	16.2	5.5	43.5	40.9
Incr Delay (d2), s/veh	4.3	0.2	14.3	0.0	13.3	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	32.7	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.5	29.3	0.7	5.9	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	52.0	4.2	63.2	5.5	56.8	42.3
LnGrp LOS	D	A	E	A	E	D
Approach Vol, veh/h		711	1070		295	
Approach Delay, s/veh		7.1	56.7		52.3	
Approach LOS		A	E		D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.5	68.5		17.5		78.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	18.0	70.5		18.0		93.0
Max Q Clear Time (g_c+I), s	14.2	58.9		12.6		14.2
Green Ext Time (p_c), s	0.0	5.1		0.4		4.3
Intersection Summary						
HCM 7th Control Delay, s/veh			39.1			
HCM 7th LOS			D			

Intersection						
Int Delay, s/veh	0.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1150	30	0	1137	0	30
Future Vol, veh/h	1150	30	0	1137	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1250	33	0	1236	0	33
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	1266
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	206
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	206
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Control Delay, s/v	0	0		25.71		
HCM LOS	D					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	206	-	-	-		
HCM Lane V/C Ratio	0.158	-	-	-		
HCM Control Delay (s/veh)	25.7	-	-	-		
HCM Lane LOS	D	-	-	-		
HCM 95th %tile Q(veh)	0.5	-	-	-		

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	11	0	381	0	70	226
Future Vol, veh/h	11	0	381	0	70	226
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	0	414	0	76	246
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	812	414	0	0	414	0
Stage 1	414	-	-	-	-	-
Stage 2	398	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	348	638	-	-	1145	-
Stage 1	667	-	-	-	-	-
Stage 2	679	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	325	638	-	-	1145	-
Mov Cap-2 Maneuver	325	-	-	-	-	-
Stage 1	667	-	-	-	-	-
Stage 2	633	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v16.49		0	1.98			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 325	-	1145	-	
HCM Lane V/C Ratio	-	- 0.037	-	0.066	-	
HCM Control Delay (s/veh)	-	- 16.5	0	8.4	-	
HCM Lane LOS	-	- C	A	A	-	
HCM 95th %tile Q(veh)	-	- 0.1	-	0.2	-	

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	48	370	11	0	296
Future Vol, veh/h	0	48	370	11	0	296
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	48	370	11	0	296
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	376	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	671	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	671	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v10.78		0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	-	671	-		
HCM Lane V/C Ratio	-	-	0.072	-		
HCM Control Delay (s/veh)	-	-	10.8	-		
HCM Lane LOS	-	-	B	-		
HCM 95th %tile Q(veh)	-	-	0.2	-		

HCM 7th Signalized Intersection Summary

3: Corral Del Tierra Rd & Hwy 68

Existing + Project AM

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	824	86	210	938	1	159	0	259	0	0	1
Future Volume (veh/h)	1	824	86	210	938	1	159	0	259	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	824	86	210	938	1	159	0	259	0	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	915	776	248	1077	1	326	0	290	0	3	2
Arrive On Green	0.05	0.49	0.49	0.14	0.58	0.58	0.18	0.00	0.18	0.00	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1868	2	1781	0	1581	0	1870	1585
Grp Volume(v), veh/h	1	824	86	210	0	939	159	0	259	0	0	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1870	1781	0	1581	0	1870	1585
Q Serve(g_s), s	0.1	38.8	2.8	11.1	0.0	41.1	7.7	0.0	15.4	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.1	38.8	2.8	11.1	0.0	41.1	7.7	0.0	15.4	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	92	915	776	248	0	1079	326	0	290	0	3	2
V/C Ratio(X)	0.01	0.90	0.11	0.85	0.00	0.87	0.49	0.00	0.89	0.00	0.00	0.46
Avail Cap(c_a), veh/h	333	2018	1710	397	0	2086	342	0	303	0	349	296
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	43.3	22.5	13.3	40.5	0.0	17.3	35.3	0.0	38.4	0.0	0.0	48.1
Incr Delay (d2), s/veh	0.0	3.6	0.1	9.2	0.0	2.3	1.1	0.0	26.2	0.0	0.0	106.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.1	0.9	5.2	0.0	14.5	3.4	0.0	8.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.4	26.0	13.3	49.7	0.0	19.7	36.4	0.0	64.6	0.0	0.0	154.3
LnGrp LOS	D	C	B	D		B	D		E			F
Approach Vol, veh/h	911			1149			418			1		
Approach Delay, s/veh	24.8			25.2			53.9			154.3		
Approach LOS	C			C			D			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.9	51.7		22.2	9.5	60.1		4.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	21.5	104.0		18.5	18.0	107.5		18.0				
Max Q Clear Time (g_c+I1), s	13.1	40.8		17.4	2.1	43.1		2.1				
Green Ext Time (p_c), s	0.3	6.4		0.2	0.0	7.8		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	29.9											
HCM 7th LOS	C											

HCM 7th Signalized Intersection Summary 4: San Benancio Road & Hwy 68

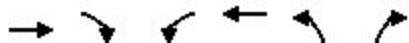
Existing + Project AM
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1004	113	131	1004	1	151	1	208	2	0	1
Future Volume (veh/h)	1	1004	113	131	1004	1	151	1	208	2	0	1
Initial Q (Qb), veh	0	0	0	0	70	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1477	1870	1870	1870	1870	1870	1870	984	1870	1870	1870
Adj Flow Rate, veh/h	1	1004	113	131	1004	1	151	1	208	2	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1008	1082	143	1351	1	240	2	148	7	0	6
Arrive On Green	0.00	0.68	0.68	0.04	0.72	0.72	0.14	0.14	0.14	0.00	0.00	0.00
Sat Flow, veh/h	1781	1477	1585	3456	1868	2	1770	12	834	1781	0	1585
Grp Volume(v), veh/h	1	1004	113	131	0	1005	152	0	208	2	0	1
Grp Sat Flow(s),veh/h/ln	1781	1477	1585	1728	0	1870	1782	0	834	1781	0	1585
Q Serve(g_s), s	0.1	89.3	3.2	5.0	0.0	42.6	10.7	0.0	18.0	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.1	89.3	3.2	5.0	0.0	42.6	10.7	0.0	18.0	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	1008	1082	143	0	1352	242	0	148	7	0	6
V/C Ratio(X)	0.41	1.00	0.10	0.91	0.00	0.74	0.63	0.00	1.41	0.28	0.00	0.16
Avail Cap(c_a), veh/h	67	1008	1082	143	0	1352	242	0	148	242	0	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	66.1	20.8	7.2	63.3	0.0	16.9	54.1	0.0	54.5	65.8	0.0	65.8
Incr Delay (d2), s/veh	84.8	27.2	0.0	50.1	0.0	2.3	5.1	0.0	218.0	20.7	0.0	11.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	75.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	31.7	0.9	3.1	0.0	56.1	5.2	0.0	13.9	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	151.0	48.0	7.2	113.3	0.0	94.3	59.2	0.0	272.5	86.5	0.0	77.3
LnGrp LOS	F	D	A	F		F	E		F	F		E
Approach Vol, veh/h	1118			1136			360			3		
Approach Delay, s/veh	44.0			96.5			182.5			83.4		
Approach LOS	D			F			F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	100.3		22.5	10.0	95.0		5.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	91.0		18.0	5.5	90.5		18.0				
Max Q Clear Time (g_c+I1), s	4.6	44.6		20.0	7.0	91.3		2.1				
Green Ext Time (p_c), s	0.0	8.8		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	85.9											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Existing + Project AM
09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖↗	↑	↖	↗
Traffic Volume (veh/h)	744	135	232	894	149	189
Future Volume (veh/h)	744	135	232	894	149	189
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1575	1870	1870
Adj Flow Rate, veh/h	744	135	232	894	149	189
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	905	767	366	1064	272	410
Arrive On Green	0.48	0.48	0.11	0.68	0.15	0.15
Sat Flow, veh/h	1870	1585	3456	1575	1781	1585
Grp Volume(v), veh/h	744	135	232	894	149	189
Grp Sat Flow(s), veh/h/ln	1870	1585	1728	1575	1781	1585
Q Serve(g_s), s	17.9	2.5	3.4	22.3	4.1	5.3
Cycle Q Clear(g_c), s	17.9	2.5	3.4	22.3	4.1	5.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	905	767	366	1064	272	410
V/C Ratio(X)	0.82	0.18	0.63	0.84	0.55	0.46
Avail Cap(c_a), veh/h	2031	1721	765	2194	612	712
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.6	7.6	22.5	6.4	20.5	16.4
Incr Delay (d2), s/veh	1.9	0.1	1.8	1.9	1.7	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.5	1.2	2.1	1.7	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	13.5	7.7	24.3	8.3	22.2	17.2
LnGrp LOS	B	A	C	A	C	B
Approach Vol, veh/h	879			1126	338	
Approach Delay, s/veh	12.6			11.6	19.4	
Approach LOS	B			B	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		39.9		12.5	10.0	29.9
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		73.0		18.0	11.6	56.9
Max Q Clear Time (g_c+l1), s		24.3		7.3	5.4	19.9
Green Ext Time (p_c), s		7.0		0.8	0.4	5.5
Intersection Summary						
HCM 7th Control Delay, s/veh			13.1			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary

6: Boots Road/Pasadera Drive & Hwy 68

Existing + Project AM

09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	852	17	11	990	16	42	1	21	33	0	43
Future Volume (veh/h)	46	852	17	11	990	16	42	1	21	33	0	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	852	17	11	990	16	42	1	21	33	0	43
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	1140	966	141	1140	966	200	7	150	233	0	156
Arrive On Green	0.08	0.61	0.61	0.08	0.61	0.61	0.10	0.10	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1364	73	1524	1211	0	1585
Grp Volume(v), veh/h	46	852	17	11	990	16	42	0	22	33	0	43
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1364	0	1596	1211	0	1585
Q Serve(g_s), s	1.5	20.7	0.3	0.4	27.8	0.3	1.9	0.0	0.8	1.4	0.0	1.6
Cycle Q Clear(g_c), s	1.5	20.7	0.3	0.4	27.8	0.3	4.1	0.0	0.8	2.2	0.0	1.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.95	1.00		1.00
Lane Grp Cap(c), veh/h	141	1140	966	141	1140	966	200	0	157	233	0	156
V/C Ratio(X)	0.33	0.75	0.02	0.08	0.87	0.02	0.21	0.00	0.14	0.14	0.00	0.28
Avail Cap(c_a), veh/h	507	2970	2517	507	2970	2517	454	0	454	491	0	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.6	8.9	4.9	27.0	10.3	4.9	28.7	0.0	26.1	27.1	0.0	26.5
Incr Delay (d2), s/veh	1.3	1.0	0.0	0.2	2.2	0.0	0.5	0.0	0.4	0.3	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.8	0.1	0.1	6.7	0.0	0.6	0.0	0.3	0.5	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	28.9	9.9	4.9	27.2	12.4	4.9	29.2	0.0	26.5	27.4	0.0	27.4
LnGrp LOS	C	A	A	C	B	A	C		C	C		C
Approach Vol, veh/h	915			1017			64			76		
Approach Delay, s/veh	10.7			12.5			28.2			27.4		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	43.1		10.7	9.5	43.1		10.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	100.5	100.5		18.0	18.0	100.5		18.0				
Max Q Clear Time (g_c+I), s	29.8	29.8		6.1	2.4	22.7		4.2				
Green Ext Time (p_c), s	0.1	8.8		0.1	0.0	6.5		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	12.7											
HCM 7th LOS	B											

HCM 7th Signalized Intersection Summary

7: Hwy 68 & York Road

Existing + Project AM

09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	117	821	781	295	77	46
Future Volume (veh/h)	117	821	781	295	77	46
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	117	821	781	295	77	46
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	194	1362	982	832	150	133
Arrive On Green	0.11	0.73	0.53	0.53	0.08	0.08
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	117	821	781	295	77	46
Grp Sat Flow(s), veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	3.0	10.2	16.3	5.2	2.0	1.3
Cycle Q Clear(g_c), s	3.0	10.2	16.3	5.2	2.0	1.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	194	1362	982	832	150	133
V/C Ratio(X)	0.60	0.60	0.80	0.35	0.51	0.35
Avail Cap(c_a), veh/h	762	4745	3769	3194	725	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	3.2	9.3	6.6	21.0	20.7
Incr Delay (d2), s/veh	3.0	0.4	1.5	0.3	2.7	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.2	3.5	0.9	0.9	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	23.3	3.6	10.8	6.9	23.7	22.2
LnGrp LOS	C	A	B	A	C	C
Approach Vol, veh/h		938	1076		123	
Approach Delay, s/veh		6.1	9.7		23.2	
Approach LOS		A	A		C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.7	29.7		8.5		39.4
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	20.5	96.5		19.5		121.5
Max Q Clear Time (g_c+I), s	15.0	18.3		4.0		12.2
Green Ext Time (p_c), s	0.2	6.8		0.3		6.1
Intersection Summary						
HCM 7th Control Delay, s/veh			8.9			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1067	16	0	1148	0	37
Future Vol, veh/h	1067	16	0	1148	0	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1160	17	0	1248	0	40
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1168
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	235
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	235
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0		23.42	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	235	-	-	-		
HCM Lane V/C Ratio	0.171	-	-	-		
HCM Control Delay (s/veh)	23.4	-	-	-		
HCM Lane LOS	C	-	-	-		
HCM 95th %tile Q(veh)	0.6	-	-	-		

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	0	202	0	71	234
Future Vol, veh/h	14	0	202	0	71	234
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	0	220	0	77	254
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	628	220	0	0	220	0
Stage 1	220	-	-	-	-	-
Stage 2	409	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	447	820	-	-	1350	-
Stage 1	817	-	-	-	-	-
Stage 2	671	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	421	820	-	-	1350	-
Mov Cap-2 Maneuver	421	-	-	-	-	-
Stage 1	817	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v13.87		0	1.82			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 421	- 1350	-		
HCM Lane V/C Ratio	-	- 0.036	- 0.057	-		
HCM Control Delay (s/veh)	-	- 13.9	0 7.8	-		
HCM Lane LOS	-	- B	A A	-		
HCM 95th %tile Q(veh)	-	- 0.1	- 0.2	-		

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	42	187	15	0	305
Future Vol, veh/h	0	42	187	15	0	305
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	42	187	15	0	305
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	195	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	847	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	847	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v	9.47	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	847		-		
HCM Lane V/C Ratio	-	0.05		-		
HCM Control Delay (s/veh)	-	9.5		-		
HCM Lane LOS	-	A		-		
HCM 95th %tile Q(veh)	-	0.2		-		

HCM 7th Signalized Intersection Summary

3: Corral Del Tierra Rd & Hwy 68

Existing + Project PM

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	943	83	222	808	1	108	0	121	1	0	0
Future Volume (veh/h)	0	943	83	222	808	1	108	0	121	1	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1378	1870	1575	1477	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	943	83	222	808	1	108	0	121	1	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	891	1025	208	1203	1	163	0	145	2	0	2
Arrive On Green	0.00	0.65	0.65	0.14	0.82	0.82	0.09	0.00	0.09	0.00	0.00	0.00
Sat Flow, veh/h	1781	1378	1585	1500	1474	2	1781	0	1585	1781	0	1585
Grp Volume(v), veh/h	0	943	83	222	0	809	108	0	121	1	0	0
Grp Sat Flow(s),veh/h/ln	1781	1378	1585	1500	0	1476	1781	0	1585	1781	0	1585
Q Serve(g_s), s	0.0	95.5	2.9	20.5	0.0	33.0	8.7	0.0	11.1	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	95.5	2.9	20.5	0.0	33.0	8.7	0.0	11.1	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	891	1025	208	0	1204	163	0	145	2	0	2
V/C Ratio(X)	0.00	1.06	0.08	1.07	0.00	0.67	0.66	0.00	0.84	0.41	0.00	0.00
Avail Cap(c_a), veh/h	217	891	1025	208	0	1204	217	0	193	217	0	193
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	26.1	9.7	63.6	0.0	5.5	64.9	0.0	66.0	73.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	46.8	0.0	81.0	0.0	1.5	4.6	0.0	20.5	85.2	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	38.0	0.9	12.3	0.0	6.8	4.2	0.0	5.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	72.9	9.8	144.6	0.0	7.0	69.5	0.0	86.5	158.9	0.0	0.0
LnGrp LOS		F	A	F		A	E		F	F		
Approach Vol, veh/h	1026			1031			229			1		
Approach Delay, s/veh	67.8			36.6			78.5			158.9		
Approach LOS	E			D			E			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.0	100.0		18.0	0.0	125.0		4.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	20.5	95.5		18.0	18.0	98.0		18.0				
Max Q Clear Time (g_c+I1), s	22.5	97.5		13.1	0.0	35.0		2.1				
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	5.9		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	54.8											
HCM 7th LOS	D											

HCM 7th Signalized Intersection Summary

4: San Benancio Road & Hwy 68

Existing + Project PM

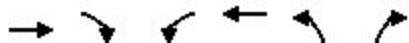
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1027	76	115	952	2	85	0	106	0	0	0
Future Volume (veh/h)	0	1027	76	115	952	2	85	0	106	0	0	0
Initial Q (Qb), veh	0	20	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1575	1870	1870	1870	1575	1870	1870	1870
Adj Flow Rate, veh/h	0	1027	76	115	952	2	85	0	106	0	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1224	1033	215	1217	2	185	0	221	0	3	2
Arrive On Green	0.00	0.63	0.63	0.07	0.76	0.76	0.11	0.00	0.11	0.00	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	3456	1571	3	1781	0	1335	0	1870	1585
Grp Volume(v), veh/h	0	1027	76	115	0	954	85	0	106	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	0	1574	1781	0	1335	0	1870	1585
Q Serve(g_s), s	0.0	30.5	1.3	2.2	0.0	24.8	3.0	0.0	4.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	30.5	1.3	2.2	0.0	24.8	3.0	0.0	4.8	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	2	1224	1033	215	0	1217	185	0	221	0	3	2
V/C Ratio(X)	0.00	0.84	0.07	0.53	0.00	0.78	0.46	0.00	0.48	0.00	0.00	0.00
Avail Cap(c_a), veh/h	132	2728	2312	395	0	2359	476	0	444	0	499	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	11.5	4.7	36.1	0.0	5.8	33.5	0.0	30.1	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	2.1	0.0	1.1	1.8	0.0	1.6	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	11.9	0.0	0.0	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.7	0.3	1.0	0.0	5.6	1.6	0.0	1.9	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	25.1	4.8	38.2	0.0	12.0	35.2	0.0	31.7	0.0	0.0	0.0
LnGrp LOS		C	A	D		B	D		C			
Approach Vol, veh/h	1103			1069			191			0		
Approach Delay, s/veh	23.7			14.8			33.3			0.0		
Approach LOS	C			B			C					
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	55.7		11.7	8.9	46.8		0.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	101.0		18.0	7.7	98.3		18.0				
Max Q Clear Time (g_c+I1), s	10.0	26.8		6.8	4.2	32.5		0.0				
Green Ext Time (p_c), s	0.0	8.1		0.6	0.1	9.8		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	20.4											
HCM 7th LOS	C											

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Existing + Project PM
09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑↑	↑	↑	↑
Traffic Volume (veh/h)	637	99	165	756	220	415
Future Volume (veh/h)	637	99	165	756	220	415
Initial Q (Qb), veh	17	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1575	1870	1870	1870	1280	1870
Adj Flow Rate, veh/h	637	99	165	756	220	415
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	761	763	303	1164	332	573
Arrive On Green	0.46	0.46	0.08	0.59	0.28	0.28
Sat Flow, veh/h	1575	1585	3456	1870	1219	1585
Grp Volume(v), veh/h	637	99	165	756	220	415
Grp Sat Flow(s), veh/h/ln	1575	1585	1728	1870	1219	1585
Q Serve(g_s), s	27.1	2.7	3.4	20.2	11.6	16.6
Cycle Q Clear(g_c), s	27.1	2.7	3.4	20.2	11.6	16.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	761	763	303	1164	332	573
V/C Ratio(X)	0.84	0.13	0.54	0.65	0.66	0.72
Avail Cap(c_a), veh/h	1708	1719	825	2590	657	974
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	13.0	41.6	10.6	31.1	26.1
Incr Delay (d2), s/veh	2.5	0.1	1.5	0.6	2.3	1.8
Initial Q Delay(d3), s/veh	22.1	0.0	49.6	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.9	1.0	5.1	7.2	4.6	10.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	47.6	13.0	92.7	11.2	33.4	27.9
LnGrp LOS	D	B	F	B	C	C
Approach Vol, veh/h	736			921	635	
Approach Delay, s/veh	42.9			25.8	29.8	
Approach LOS	D			C	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		48.0		25.3	10.1	37.9
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		101.5		39.5	17.5	79.5
Max Q Clear Time (g_c+l1), s		22.2		18.6	5.4	29.1
Green Ext Time (p_c), s		5.3		2.2	0.4	4.4
Intersection Summary						
HCM 7th Control Delay, s/veh			32.4			
HCM 7th LOS			C			

HCM 7th Signalized Intersection Summary 6: Boots Road/Pasadera Drive & Hwy 68

Existing + Project PM
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	723	33	22	966	21	30	2	10	29	0	40
Future Volume (veh/h)	39	723	33	22	966	21	30	2	10	29	0	40
Initial Q (Qb), veh	0	15	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1575	1870	1870	1575	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	723	33	22	966	21	30	2	10	29	0	40
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	1044	1060	123	1063	1060	167	21	103	197	0	121
Arrive On Green	0.07	0.66	0.66	0.07	0.66	0.66	0.08	0.08	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1781	1575	1585	1781	1575	1585	1367	271	1355	1277	0	1585
Grp Volume(v), veh/h	39	723	33	22	966	21	30	0	12	29	0	40
Grp Sat Flow(s),veh/h/ln	1781	1575	1585	1781	1575	1585	1367	0	1626	1277	0	1585
Q Serve(g_s), s	1.4	20.3	0.5	0.8	37.9	0.3	1.5	0.0	0.5	1.4	0.0	1.7
Cycle Q Clear(g_c), s	1.4	20.3	0.5	0.8	37.9	0.3	3.3	0.0	0.5	1.8	0.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.83	1.00		1.00
Lane Grp Cap(c), veh/h	123	1044	1060	123	1063	1060	167	0	124	197	0	121
V/C Ratio(X)	0.32	0.69	0.03	0.18	0.91	0.02	0.18	0.00	0.10	0.15	0.00	0.33
Avail Cap(c_a), veh/h	460	1254	1262	460	1254	1262	420	0	420	456	0	409
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.3	8.3	4.1	32.0	11.3	4.0	33.7	0.0	31.3	32.2	0.0	31.9
Incr Delay (d2), s/veh	1.5	1.3	0.0	0.7	8.9	0.0	0.5	0.0	0.3	0.3	0.0	1.6
Initial Q Delay(d3), s/veh	0.0	4.8	0.0	0.0	15.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	6.3	0.1	0.4	15.4	0.1	0.5	0.0	0.2	0.5	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.8	14.4	4.1	32.7	36.0	4.0	34.2	0.0	31.7	32.6	0.0	33.5
LnGrp LOS	C	B	A	C	D	A	C		C	C		C
Approach Vol, veh/h	795			1009			42			69		
Approach Delay, s/veh	15.0			35.3			33.5			33.1		
Approach LOS	B			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	50.3		9.9	9.5	50.3		9.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	55.5		18.0	18.0	55.5		18.0				
Max Q Clear Time (g_c+I), s	13.4	39.9		5.3	2.8	22.3		3.8				
Green Ext Time (p_c), s	0.0	5.9		0.1	0.0	4.8		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	26.7											
HCM 7th LOS	C											

HCM 7th Signalized Intersection Summary

7: Hwy 68 & York Road

Existing + Project PM

09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	44	644	924	115	190	92
Future Volume (veh/h)	44	644	924	115	190	92
Initial Q (Qb), veh	0	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1477	1870	1870	1870
Adj Flow Rate, veh/h	44	644	924	115	190	92
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	91	1457	1007	1081	229	204
Arrive On Green	0.06	0.77	0.66	0.66	0.13	0.13
Sat Flow, veh/h	1781	1870	1477	1585	1781	1585
Grp Volume(v), veh/h	44	644	924	115	190	92
Grp Sat Flow(s), veh/h/ln	1781	1870	1477	1585	1781	1585
Q Serve(g_s), s	2.1	10.9	50.5	2.4	9.2	4.8
Cycle Q Clear(g_c), s	2.1	10.9	50.5	2.4	9.2	4.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	91	1457	1007	1081	229	204
V/C Ratio(X)	0.48	0.44	0.92	0.11	0.83	0.45
Avail Cap(c_a), veh/h	361	1958	1172	1258	361	321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.3	3.6	15.2	5.3	41.7	39.6
Incr Delay (d2), s/veh	3.9	0.2	10.4	0.0	8.7	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	24.9	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.1	24.2	0.6	5.0	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	49.2	3.9	50.5	5.4	50.4	41.1
LnGrp LOS	D	A	D	A	D	D
Approach Vol, veh/h		688	1039		282	
Approach Delay, s/veh		6.8	45.5		47.4	
Approach LOS		A	D		D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.5	63.2		16.2		72.7
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	10.0	70.5		18.0		93.0
Max Q Clear Time (g_c+I1), s	14.1	52.5		11.2		12.9
Green Ext Time (p_c), s	0.0	6.2		0.5		4.1
Intersection Summary						
HCM 7th Control Delay, s/veh			32.5			
HCM 7th LOS			C			

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱		↱
Traffic Vol, veh/h	1040	25	0	1031	0	54
Future Vol, veh/h	1040	25	0	1031	0	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1130	27	0	1121	0	59

Major/Minor	Major1	Major2	Minor1	
Conflicting Flow All	0	0	-	- 1144
Stage 1	-	-	-	- -
Stage 2	-	-	-	- -
Critical Hdwy	-	-	-	- 6.22
Critical Hdwy Stg 1	-	-	-	- -
Critical Hdwy Stg 2	-	-	-	- -
Follow-up Hdwy	-	-	-	- 3.318
Pot Cap-1 Maneuver	-	-	0	- 0 243
Stage 1	-	-	0	- 0 -
Stage 2	-	-	0	- 0 -
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	- 243
Mov Cap-2 Maneuver	-	-	-	- -
Stage 1	-	-	-	- -
Stage 2	-	-	-	- -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	24.45
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	243	-	-	-
HCM Lane V/C Ratio	0.241	-	-	-
HCM Control Delay (s/veh)	24.4	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.9	-	-	-

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	27	388	10	115	247
Future Vol, veh/h	19	27	388	10	115	247
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	29	422	11	125	268
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	946	427	0	0	433	0
Stage 1	427	-	-	-	-	-
Stage 2	518	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	290	627	-	-	1127	-
Stage 1	658	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	258	627	-	-	1127	-
Mov Cap-2 Maneuver	258	-	-	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	531	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v14.79		0	2.73			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 258 627 1127	-	-		
HCM Lane V/C Ratio	-	- 0.08 0.047 0.111	-	-		
HCM Control Delay (s/veh)	-	- 20.2 11 8.6	-	-		
HCM Lane LOS	-	- C B A	-	-		
HCM 95th %tile Q(veh)	-	- 0.3 0.1 0.4	-	-		

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	48	404	11	0	362
Future Vol, veh/h	0	48	404	11	0	362
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	48	404	11	0	362
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	410	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	642	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	642	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v11.06		0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	642		-		
HCM Lane V/C Ratio	-	0.075		-		
HCM Control Delay (s/veh)	-	11.1		-		
HCM Lane LOS	-	B		-		
HCM 95th %tile Q(veh)	-	0.2		-		

HCM 7th Signalized Intersection Summary

3: Corral Del Tierra Rd & Hwy 68

Background + Project AM

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	902	119	243	1146	6	179	0	273	0	0	1
Future Volume (veh/h)	2	902	119	243	1146	6	179	0	273	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	902	119	243	1146	6	179	0	273	0	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	1025	868	271	1225	6	270	0	239	0	3	2
Arrive On Green	0.04	0.55	0.55	0.15	0.66	0.66	0.15	0.00	0.15	0.00	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1859	10	1781	0	1580	0	1870	1585
Grp Volume(v), veh/h	2	902	119	243	0	1152	179	0	273	0	0	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1869	1781	0	1580	0	1870	1585
Q Serve(g_s), s	0.1	51.4	4.5	16.4	0.0	67.0	11.6	0.0	18.5	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.1	51.4	4.5	16.4	0.0	67.0	11.6	0.0	18.5	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	73	1025	868	271	0	1231	270	0	239	0	3	2
V/C Ratio(X)	0.03	0.88	0.14	0.90	0.00	0.94	0.66	0.00	1.14	0.00	0.00	0.46
Avail Cap(c_a), veh/h	263	1593	1350	314	0	1645	270	0	239	0	276	234
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	56.2	24.1	13.5	50.9	0.0	18.5	48.9	0.0	51.8	0.0	0.0	60.9
Incr Delay (d2), s/veh	0.2	3.9	0.1	24.6	0.0	8.7	6.0	0.0	101.4	0.0	0.0	107.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	20.8	1.5	8.8	0.0	25.7	5.6	0.0	14.0	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	56.4	28.0	13.6	75.5	0.0	27.2	54.8	0.0	153.2	0.0	0.0	167.9
LnGrp LOS	E	C	B	E		C	D		F			F
Approach Vol, veh/h	1023			1395			452			1		
Approach Delay, s/veh	26.4			35.6			114.3			167.9		
Approach LOS	C			D			F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.1	71.4		23.0	9.5	85.0		4.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	21.5	104.0		18.5	18.0	107.5		18.0				
Max Q Clear Time (g_c+I1), s	18.4	53.4		20.5	2.1	69.0		2.1				
Green Ext Time (p_c), s	0.2	7.6		0.0	0.0	11.5		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh				44.7								
HCM 7th LOS				D								

HCM 7th Signalized Intersection Summary

4: San Benancio Road & Hwy 68

Background + Project AM

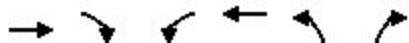
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1086	120	124	1202	1	183	1	205	3	0	1
Future Volume (veh/h)	1	1086	120	124	1202	1	183	1	205	3	0	1
Initial Q (Qb), veh	0	0	0	0	70	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1477	1870	1870	1870	1870	1870	1870	984	1870	1870	1870
Adj Flow Rate, veh/h	1	1086	120	124	1202	1	183	1	205	3	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1007	1081	143	1350	1	240	1	148	9	0	8
Arrive On Green	0.00	0.68	0.68	0.04	0.72	0.72	0.14	0.14	0.14	0.01	0.00	0.01
Sat Flow, veh/h	1781	1477	1585	3456	1869	2	1772	10	834	1781	0	1585
Grp Volume(v), veh/h	1	1086	120	124	0	1203	184	0	205	3	0	1
Grp Sat Flow(s),veh/h/ln	1781	1477	1585	1728	0	1870	1782	0	834	1781	0	1585
Q Serve(g_s), s	0.1	90.5	3.5	4.7	0.0	66.5	13.2	0.0	18.0	0.2	0.0	0.1
Cycle Q Clear(g_c), s	0.1	90.5	3.5	4.7	0.0	66.5	13.2	0.0	18.0	0.2	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	1007	1081	143	0	1351	242	0	148	9	0	8
V/C Ratio(X)	0.41	1.08	0.11	0.87	0.00	0.89	0.76	0.00	1.39	0.33	0.00	0.12
Avail Cap(c_a), veh/h	67	1007	1081	143	0	1350	242	0	148	242	0	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	66.2	21.1	7.3	63.2	0.0	18.4	55.3	0.0	54.6	65.8	0.0	65.7
Incr Delay (d2), s/veh	84.8	51.9	0.0	38.9	0.0	7.8	13.2	0.0	210.5	19.2	0.0	6.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	137.4	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	39.0	1.0	2.8	0.0	84.8	6.8	0.0	13.6	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	151.0	73.0	7.3	102.1	0.0	163.6	68.5	0.0	265.1	85.0	0.0	72.2
LnGrp LOS	F	F	A	F		F	E		F	F		E
Approach Vol, veh/h	1207			1327			389			4		
Approach Delay, s/veh	66.6			157.9			172.1			81.8		
Approach LOS	E			F			F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	100.3		22.5	10.0	95.0		5.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	91.0		18.0	5.5	90.5		18.0				
Max Q Clear Time (g_c+I1), s	12.5	68.5		20.0	6.7	92.5		2.2				
Green Ext Time (p_c), s	0.0	10.2		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	122.0											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary5: Laureles Grade & Hwy 68

Background + Project AM
09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖↗	↑	↖	↗
Traffic Volume (veh/h)	802	175	258	983	156	223
Future Volume (veh/h)	802	175	258	983	156	223
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	802	175	258	983	156	223
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	945	801	377	1287	294	435
Arrive On Green	0.51	0.51	0.11	0.69	0.16	0.16
Sat Flow, veh/h	1870	1585	3456	1870	1781	1585
Grp Volume(v), veh/h	802	175	258	983	156	223
Grp Sat Flow(s), veh/h/ln	1870	1585	1728	1870	1781	1585
Q Serve(g_s), s	22.7	3.8	4.4	21.2	4.9	7.3
Cycle Q Clear(g_c), s	22.7	3.8	4.4	21.2	4.9	7.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	945	801	377	1287	294	435
V/C Ratio(X)	0.85	0.22	0.68	0.76	0.53	0.51
Avail Cap(c_a), veh/h	1742	1476	649	2231	524	639
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	8.4	26.2	6.3	23.4	18.8
Incr Delay (d2), s/veh	2.2	0.1	2.2	1.0	1.5	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.9	1.7	3.0	2.1	6.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	15.3	8.6	28.4	7.2	24.9	19.7
LnGrp LOS	B	A	C	A	C	B
Approach Vol, veh/h	977			1241	379	
Approach Delay, s/veh	14.1			11.7	21.8	
Approach LOS	B			B	C	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	46.6			14.6	11.2	35.4
Change Period (Y+Rc), s	4.5			4.5	4.5	4.5
Max Green Setting (Gmax), s	73.0			18.0	11.5	57.0
Max Q Clear Time (g_c+l1), s	23.2			9.3	6.4	24.7
Green Ext Time (p_c), s	8.4			0.8	0.4	6.2
Intersection Summary						
HCM 7th Control Delay, s/veh			14.1			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary

6: Boots Road/Pasadera Drive & Hwy 68

Background + Project AM

09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	944	17	16	1077	21	45	3	23	38	0	42
Future Volume (veh/h)	43	944	17	16	1077	21	45	3	23	38	0	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	944	17	16	1077	21	45	3	23	38	0	42
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	1212	1027	121	1212	1027	180	19	145	218	0	161
Arrive On Green	0.07	0.65	0.65	0.07	0.65	0.65	0.10	0.10	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1365	186	1427	1183	0	1585
Grp Volume(v), veh/h	43	944	17	16	1077	21	45	0	26	38	0	42
Grp Sat Flow(s), veh/h/ln	1781	1870	1585	1781	1870	1585	1365	0	1613	1183	0	1585
Q Serve(g_s), s	1.7	26.5	0.3	0.6	35.3	0.3	2.4	0.0	1.1	1.9	0.0	1.8
Cycle Q Clear(g_c), s	1.7	26.5	0.3	0.6	35.3	0.3	5.4	0.0	1.1	3.0	0.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.88	1.00		1.00
Lane Grp Cap(c), veh/h	121	1212	1027	121	1212	1027	180	0	164	218	0	161
V/C Ratio(X)	0.36	0.78	0.02	0.13	0.89	0.02	0.25	0.00	0.16	0.17	0.00	0.26
Avail Cap(c_a), veh/h	434	2544	2156	434	2544	2156	374	0	393	414	0	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.9	9.2	4.6	32.4	10.8	4.6	33.7	0.0	30.3	31.7	0.0	30.6
Incr Delay (d2), s/veh	1.8	1.1	0.0	0.5	2.4	0.0	0.7	0.0	0.4	0.4	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	6.5	0.1	0.3	9.0	0.1	0.8	0.0	0.4	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.7	10.4	4.6	32.9	13.2	4.6	34.4	0.0	30.8	32.1	0.0	31.5
LnGrp LOS	C	B	A	C	B	A	C		C	C		C
Approach Vol, veh/h	1004			1114			71			80		
Approach Delay, s/veh	11.3			13.3			33.1			31.8		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	52.4		12.0	9.5	52.4		12.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	100.5	100.5		18.0	18.0	100.5		18.0				
Max Q Clear Time (g_c+I), s	37.3	37.3		7.4	2.6	28.5		5.0				
Green Ext Time (p_c), s	0.0	10.6		0.1	0.0	8.0		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	13.7											
HCM 7th LOS	B											

HCM 7th Signalized Intersection Summary

7: Hwy 68 & York Road

Background + Project AM

09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	131	900	849	297	83	49
Future Volume (veh/h)	131	900	849	297	83	49
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	900	849	297	83	49
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	201	1405	1037	879	143	127
Arrive On Green	0.11	0.75	0.55	0.55	0.08	0.08
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	131	900	849	297	83	49
Grp Sat Flow(s), veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	3.8	12.3	19.8	5.5	2.4	1.6
Cycle Q Clear(g_c), s	3.8	12.3	19.8	5.5	2.4	1.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	201	1405	1037	879	143	127
V/C Ratio(X)	0.65	0.64	0.82	0.34	0.58	0.38
Avail Cap(c_a), veh/h	717	4289	3379	2864	617	549
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	3.2	9.7	6.5	23.7	23.3
Incr Delay (d2), s/veh	3.6	0.5	1.7	0.2	3.7	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.2	4.5	1.0	1.1	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	26.3	3.7	11.4	6.8	27.4	25.2
LnGrp LOS	C	A	B	A	C	C
Approach Vol, veh/h		1031	1146		132	
Approach Delay, s/veh		6.6	10.2		26.6	
Approach LOS		A	B		C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.5	34.1		8.8		44.6
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	21.5	96.5		18.5		122.5
Max Q Clear Time (g_c+I), s	15.8	21.8		4.4		14.3
Green Ext Time (p_c), s	0.3	7.8		0.3		7.2
Intersection Summary						
HCM 7th Control Delay, s/veh			9.5			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1149	26	0	1395	0	41
Future Vol, veh/h	1149	26	0	1395	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1249	28	0	1516	0	45
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1263
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	207
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	207
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0		27.08	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	207	-	-	-		
HCM Lane V/C Ratio	0.215	-	-	-		
HCM Control Delay (s/veh)	27.1	-	-	-		
HCM Lane LOS	D	-	-	-		
HCM 95th %tile Q(veh)	0.8	-	-	-		

Intersection						
Int Delay, s/veh	4.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	160	287	18	221	301
Future Vol, veh/h	39	160	287	18	221	301
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	174	312	20	240	327
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1129	322	0	0	332	0
Stage 1	322	-	-	-	-	-
Stage 2	808	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	226	719	-	-	1228	-
Stage 1	735	-	-	-	-	-
Stage 2	439	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	181	719	-	-	1228	-
Mov Cap-2 Maneuver	181	-	-	-	-	-
Stage 1	735	-	-	-	-	-
Stage 2	353	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v15.36		0	3.66			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 181 719 1228	-			
HCM Lane V/C Ratio	-	- 0.234 0.242 0.196	-			
HCM Control Delay (s/veh)	-	- 30.8 11.6 8.6	-			
HCM Lane LOS	-	- D B A	-			
HCM 95th %tile Q(veh)	-	- 0.9 0.9 0.7	-			

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	42	432	15	0	522
Future Vol, veh/h	0	42	432	15	0	522
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	42	432	15	0	522
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	440	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	617	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	617	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v11.26		0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	-		617	-	
HCM Lane V/C Ratio	-	-		0.068	-	
HCM Control Delay (s/veh)	-	-		11.3	-	
HCM Lane LOS	-	-		B	-	
HCM 95th %tile Q(veh)	-	-		0.2	-	

HCM 7th Signalized Intersection Summary

3: Corral Del Tierra Rd & Hwy 68

Background + Project PM

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	942	190	332	821	1	249	0	225	1	0	0
Future Volume (veh/h)	0	942	190	332	821	1	249	0	225	1	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1378	1870	1575	1477	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	942	190	332	821	1	249	0	225	1	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	792	911	271	1158	1	222	0	198	2	0	2
Arrive On Green	0.00	0.57	0.57	0.18	0.79	0.79	0.12	0.00	0.12	0.00	0.00	0.00
Sat Flow, veh/h	1781	1378	1585	1500	1474	2	1781	0	1585	1781	0	1585
Grp Volume(v), veh/h	0	942	190	332	0	822	249	0	225	1	0	0
Grp Sat Flow(s),veh/h/ln	1781	1378	1585	1500	0	1476	1781	0	1585	1781	0	1585
Q Serve(g_s), s	0.0	87.5	8.8	27.5	0.0	41.1	19.0	0.0	19.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	87.5	8.8	27.5	0.0	41.1	19.0	0.0	19.0	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	792	911	271	0	1159	222	0	198	2	0	2
V/C Ratio(X)	0.00	1.19	0.21	1.23	0.00	0.71	1.12	0.00	1.14	0.41	0.00	0.00
Avail Cap(c_a), veh/h	211	792	911	271	0	1159	222	0	198	211	0	187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	32.4	15.6	62.4	0.0	7.9	66.6	0.0	66.6	75.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	97.5	0.1	129.5	0.0	2.0	96.3	0.0	105.7	85.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	47.5	3.0	19.9	0.0	10.1	14.6	0.0	13.5	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	129.9	15.7	191.9	0.0	10.0	162.9	0.0	172.3	161.3	0.0	0.0
LnGrp LOS		F	B	F		A	F		F	F		
Approach Vol, veh/h	1132			1154			474			1		
Approach Delay, s/veh	110.7			62.3			167.4			161.3		
Approach LOS	F			E			F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	32.0	92.0		23.5	0.0	124.0		4.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	27.5	87.5		19.0	18.0	97.0		18.0				
Max Q Clear Time (g_c+I1), s	29.5	89.5		21.0	0.0	43.1		2.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	6.0		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	100.2											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary

4: San Benancio Road & Hwy 68

Background + Project PM

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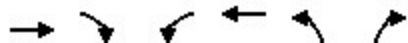
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1110	107	112	1017	3	112	0	92	1	0	1
Future Volume (veh/h)	0	1110	107	112	1017	3	112	0	92	1	0	1
Initial Q (Qb), veh	0	20	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No		No				No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1575	1870	1870	1870	1575	1870	1870	1870
Adj Flow Rate, veh/h	0	1110	107	112	1017	3	112	0	92	1	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1270	1071	174	1212	3	159	0	186	5	0	4
Arrive On Green	0.00	0.65	0.65	0.05	0.76	0.76	0.09	0.00	0.09	0.00	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	3456	1570	5	1781	0	1335	1781	0	1585
Grp Volume(v), veh/h	0	1110	107	112	0	1020	112	0	92	1	0	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	0	1574	1781	0	1335	1781	0	1585
Q Serve(g_s), s	0.0	45.6	2.3	2.9	0.0	40.5	5.5	0.0	5.7	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.0	45.6	2.3	2.9	0.0	40.5	5.5	0.0	5.7	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	1270	1071	174	0	1212	159	0	186	5	0	4
V/C Ratio(X)	0.00	0.87	0.10	0.64	0.00	0.84	0.70	0.00	0.49	0.21	0.00	0.23
Avail Cap(c_a), veh/h	98	2045	1733	271	0	1758	354	0	335	354	0	315
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.7	5.6	47.7	0.0	8.7	45.3	0.0	40.7	50.9	0.0	50.9
Incr Delay (d2), s/veh	0.0	2.7	0.0	3.9	0.0	2.6	5.6	0.0	2.0	20.1	0.0	25.8
Initial Q Delay(d3), s/veh	0.0	14.2	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	24.2	0.6	1.4	0.0	12.6	3.0	0.0	2.2	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	31.5	5.6	51.6	0.0	18.3	50.9	0.0	42.8	70.9	0.0	76.6
LnGrp LOS		C	A	D		B	D		D	E		E
Approach Vol, veh/h	1217				1132		204				2	
Approach Delay, s/veh	29.2				21.6		47.2				73.8	
Approach LOS	C				C		D				E	
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	0.0	72.9	12.8		9.2	63.7	4.7					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	5.0	101.0	18.0		7.1	98.9	18.0					
Max Q Clear Time (g_c+I1), s	42.5	42.5	7.7		4.9	47.6	2.1					
Green Ext Time (p_c), s	0.0	9.2	0.6		0.1	11.6	0.0					

Intersection Summary

HCM 7th Control Delay, s/veh	27.3
HCM 7th LOS	C

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Background + Project PM
09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖	↗
Traffic Volume (veh/h)	719	89	216	826	210	456
Future Volume (veh/h)	719	89	216	826	210	456
Initial Q (Qb), veh	17	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1575	1870	1870	1870	1280	1870
Adj Flow Rate, veh/h	719	89	216	826	210	456
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	811	810	332	1212	338	598
Arrive On Green	0.49	0.49	0.08	0.62	0.29	0.29
Sat Flow, veh/h	1575	1585	3456	1870	1219	1585
Grp Volume(v), veh/h	719	89	216	826	210	456
Grp Sat Flow(s), veh/h/ln	1575	1585	1728	1870	1219	1585
Q Serve(g_s), s	43.7	3.1	6.3	30.8	15.2	25.9
Cycle Q Clear(g_c), s	43.7	3.1	6.3	30.8	15.2	25.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	811	810	332	1212	338	598
V/C Ratio(X)	0.89	0.11	0.65	0.68	0.62	0.76
Avail Cap(c_a), veh/h	1218	1225	588	1846	468	743
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	15.7	53.3	13.6	39.8	34.0
Incr Delay (d2), s/veh	5.6	0.1	2.1	0.7	1.9	3.7
Initial Q Delay(d3), s/veh	27.9	0.0	53.7	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.5	1.2	6.9	12.1	5.8	15.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	64.2	15.7	109.2	14.3	41.6	37.7
LnGrp LOS	E	B	F	B	D	D
Approach Vol, veh/h	808			1042	666	
Approach Delay, s/veh	58.8			34.0	38.9	
Approach LOS	E			C	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		68.4		34.4	13.2	55.2
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		101.5		39.5	17.5	79.5
Max Q Clear Time (g_c+l1), s		32.8		27.9	8.3	45.7
Green Ext Time (p_c), s		6.1		1.9	0.4	5.0
Intersection Summary						
HCM 7th Control Delay, s/veh			43.3			
HCM 7th LOS			D			

HCM 7th Signalized Intersection Summary

6: Boots Road/Pasadera Drive & Hwy 68

Background + Project PM

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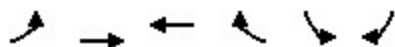
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	784	33	25	1008	36	33	3	11	38	0	37
Future Volume (veh/h)	46	784	33	25	1008	36	33	3	11	38	0	37
Initial Q (Qb), veh	0	15	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1575	1870	1870	1575	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	784	33	25	1008	36	33	3	11	38	0	37
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	1062	1077	114	1078	1077	161	29	108	198	0	133
Arrive On Green	0.07	0.67	0.67	0.07	0.67	0.67	0.08	0.08	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1781	1575	1585	1781	1575	1585	1371	351	1287	1269	0	1585
Grp Volume(v), veh/h	46	784	33	25	1008	36	33	0	14	38	0	37
Grp Sat Flow(s),veh/h/ln	1781	1575	1585	1781	1575	1585	1371	0	1639	1269	0	1585
Q Serve(g_s), s	1.9	24.7	0.5	1.0	44.3	0.6	1.8	0.0	0.6	2.0	0.0	1.7
Cycle Q Clear(g_c), s	1.9	24.7	0.5	1.0	44.3	0.6	4.3	0.0	0.6	2.5	0.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		1.00
Lane Grp Cap(c), veh/h	114	1062	1077	114	1078	1077	161	0	137	198	0	133
V/C Ratio(X)	0.40	0.74	0.03	0.22	0.94	0.03	0.21	0.00	0.10	0.19	0.00	0.28
Avail Cap(c_a), veh/h	423	1154	1161	423	1154	1161	375	0	389	417	0	377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.2	9.0	4.1	34.8	12.3	4.1	36.2	0.0	33.1	34.3	0.0	33.6
Incr Delay (d2), s/veh	2.3	2.3	0.0	1.0	13.3	0.0	0.6	0.0	0.3	0.5	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	5.5	0.0	0.0	21.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	8.0	0.1	0.4	20.3	0.1	0.6	0.0	0.3	0.7	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	37.5	16.8	4.1	35.7	47.1	4.1	36.8	0.0	33.4	34.8	0.0	34.7
LnGrp LOS	D	B	A	D	D	A	D		C	C		C
Approach Vol, veh/h	863			1069			47			75		
Approach Delay, s/veh	17.5			45.4			35.8			34.8		
Approach LOS	B			D			D			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	55.3		10.9	9.5	55.3		10.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	55.5		18.0	18.0	55.5		18.0				
Max Q Clear Time (g_c+I), s	13.9	46.3		6.3	3.0	26.7		4.5				
Green Ext Time (p_c), s	0.1	4.6		0.1	0.0	5.3		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	33.0											
HCM 7th LOS	C											

HCM 7th Signalized Intersection Summary

7: Hwy 68 & York Road

Background + Project PM

09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	43	670	952	120	203	92
Future Volume (veh/h)	43	670	952	120	203	92
Initial Q (Qb), veh	0	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1477	1870	1870	1870
Adj Flow Rate, veh/h	43	670	952	120	203	92
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	87	1455	1012	1087	240	213
Arrive On Green	0.05	0.77	0.67	0.67	0.14	0.14
Sat Flow, veh/h	1781	1870	1477	1585	1781	1585
Grp Volume(v), veh/h	43	670	952	120	203	92
Grp Sat Flow(s), veh/h/ln	1781	1870	1477	1585	1781	1585
Q Serve(g_s), s	2.2	12.3	57.3	2.6	10.7	5.1
Cycle Q Clear(g_c), s	2.2	12.3	57.3	2.6	10.7	5.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	87	1455	1012	1087	240	213
V/C Ratio(X)	0.50	0.46	0.94	0.11	0.85	0.43
Avail Cap(c_a), veh/h	334	1814	1086	1165	334	298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	3.9	16.2	5.5	43.5	40.9
Incr Delay (d2), s/veh	4.3	0.2	14.6	0.0	13.4	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	33.6	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.5	29.6	0.7	5.9	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	52.0	4.2	64.4	5.5	56.9	42.3
LnGrp LOS	D	A	E	A	E	D
Approach Vol, veh/h		713	1072		295	
Approach Delay, s/veh		7.1	57.8		52.3	
Approach LOS		A	E		D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.5	68.8		17.6		78.3
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	10.0	70.5		18.0		93.0
Max Q Clear Time (g_c+I), s	14.2	59.3		12.7		14.3
Green Ext Time (p_c), s	0.0	5.0		0.4		4.4
Intersection Summary						
HCM 7th Control Delay, s/veh			39.6			
HCM 7th LOS			D			

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1113	55	0	1154	0	84
Future Vol, veh/h	1113	55	0	1154	0	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1210	60	0	1254	0	91

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 1240
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.22
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.318
Pot Cap-1 Maneuver	-	-	0 - 0 214
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 214
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	33.84
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	214	-	-	-
HCM Lane V/C Ratio	0.427	-	-	-
HCM Control Delay (s/veh)	33.8	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	2	-	-	-

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	27	388	10	45	250
Future Vol, veh/h	8	27	388	10	45	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	29	422	11	49	272
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	797	427	0	0	433	0
Stage 1	427	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	356	627	-	-	1127	-
Stage 1	658	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	340	627	-	-	1127	-
Mov Cap-2 Maneuver	340	-	-	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v12.12		0	1.27			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 340 627 1127	-	-		
HCM Lane V/C Ratio	-	- 0.026 0.047 0.043	-	-		
HCM Control Delay (s/veh)	-	- 15.9 11 8.3	-	-		
HCM Lane LOS	-	- C B A	-	-		
HCM 95th %tile Q(veh)	-	- 0.1 0.1 0.1	-	-		

HCM 7th TWSC
2: Corral Del Tierra Rd & Prj N Drwy

Cumulative AM with Existing Lane Configuration

09/26/2024

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	415	0	0	295
Future Vol, veh/h	0	0	415	0	0	295
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	415	0	0	295

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	415	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	637	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	637	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

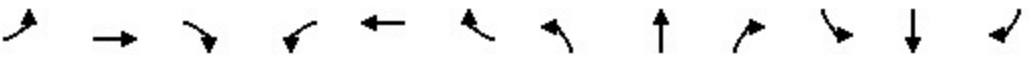
Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s/veh)	-	-	0
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	-

HCM 7th Signalized Intersection Summary 3: Corral Del Tierra Rd & Hwy 68

Cumulative AM with Existing Lane Configuration

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1049	100	194	1764	6	142	0	273	0	1	1
Future Volume (veh/h)	2	1049	100	194	1764	6	142	0	273	0	1	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	1049	100	194	1764	6	142	0	273	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	82	1004	851	226	1151	4	297	0	263	0	5	4
Arrive On Green	0.05	0.54	0.54	0.13	0.62	0.62	0.17	0.00	0.17	0.00	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1863	6	1781	0	1580	0	1870	1585
Grp Volume(v), veh/h	2	1049	100	194	0	1770	142	0	273	0	1	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1869	1781	0	1580	0	1870	1585
Q Serve(g_s), s	0.1	58.0	3.4	11.5	0.0	66.7	7.8	0.0	18.0	0.0	0.1	0.1
Cycle Q Clear(g_c), s	0.1	58.0	3.4	11.5	0.0	66.7	7.8	0.0	18.0	0.0	0.1	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	82	1004	851	226	0	1155	297	0	263	0	5	4
V/C Ratio(X)	0.02	1.04	0.12	0.86	0.00	1.53	0.48	0.00	1.04	0.00	0.20	0.23
Avail Cap(c_a), veh/h	297	1004	851	297	0	1155	297	0	263	0	312	264
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	49.2	25.0	12.4	46.2	0.0	20.6	40.8	0.0	45.0	0.0	53.7	53.7
Incr Delay (d2), s/veh	0.1	40.7	0.1	17.3	0.0	244.2	1.2	0.0	65.3	0.0	18.2	25.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	32.8	1.1	5.9	0.0	100.9	3.5	0.0	11.8	0.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.3	65.7	12.4	63.4	0.0	264.9	41.9	0.0	110.3	0.0	71.9	79.6
LnGrp LOS	D	F	B	E		F	D		F		E	E
Approach Vol, veh/h	1151				1964				415			
Approach Delay, s/veh	61.0				245.0				86.9			
Approach LOS	E				F				F			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.2	62.5		22.5	9.5	71.2		4.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	58.0		18.0	18.0	58.0		18.0				
Max Q Clear Time (g_c+I1), s	13.5	60.0		20.0	2.1	68.7		2.1				
Green Ext Time (p_c), s	0.2	0.0		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	166.4											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary 4: San Benancio Road & Hwy 68

Cumulative AM with Existing Lane Configuration

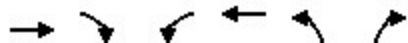
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1222	113	125	1744	1	202	1	208	3	0	1
Future Volume (veh/h)	1	1222	113	125	1744	1	202	1	208	3	0	1
Initial Q (Qb), veh	0	0	0	0	70	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1477	1870	1870	1870	1870	1870	1870	984	1870	1870	1870
Adj Flow Rate, veh/h	1	1222	113	125	1744	1	202	1	208	3	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	871	935	185	1200	1	311	2	191	9	0	8
Arrive On Green	0.00	0.59	0.59	0.05	0.64	0.64	0.18	0.18	0.18	0.01	0.00	0.01
Sat Flow, veh/h	1781	1477	1585	3456	1869	1	1773	9	834	1781	0	1585
Grp Volume(v), veh/h	1	1222	113	125	0	1745	203	0	208	3	0	1
Grp Sat Flow(s),veh/h/ln	1781	1477	1585	1728	0	1870	1782	0	834	1781	0	1585
Q Serve(g_s), s	0.1	60.5	3.2	3.6	0.0	65.8	10.9	0.0	18.0	0.2	0.0	0.1
Cycle Q Clear(g_c), s	0.1	60.5	3.2	3.6	0.0	65.8	10.9	0.0	18.0	0.2	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	871	935	185	0	1201	313	0	191	9	0	8
V/C Ratio(X)	0.41	1.40	0.12	0.68	0.00	1.45	0.65	0.00	1.09	0.32	0.00	0.12
Avail Cap(c_a), veh/h	87	871	935	185	0	1201	313	0	191	313	0	278
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.1	21.0	9.3	47.6	0.0	18.3	39.3	0.0	39.5	50.8	0.0	50.8
Incr Delay (d2), s/veh	84.1	188.0	0.1	9.4	0.0	208.5	4.6	0.0	90.7	18.5	0.0	6.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	209.8	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	61.8	0.9	1.7	0.0	160.3	5.1	0.0	9.5	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	135.3	209.0	9.3	57.0	0.0	436.6	44.0	0.0	130.2	69.3	0.0	57.0
LnGrp LOS	F	F	A	E		F	D		F	E		E
Approach Vol, veh/h	1336			1870			411			4		
Approach Delay, s/veh	192.1			411.3			87.6			66.2		
Approach LOS	F			F			F			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.6	70.3		22.5	10.0	65.0		5.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.5	60.5		18.0				
Max Q Clear Time (g_c+I1), s	12.5	67.8		20.0	5.6	62.5		2.2				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	293.3											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Cumulative AM with Existing Lane Configuration
09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑↑	↑	↑	↑
Traffic Volume (veh/h)	902	228	268	1442	193	228
Future Volume (veh/h)	902	228	268	1442	193	228
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1575	1870	1870
Adj Flow Rate, veh/h	902	228	268	1442	193	228
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1221	1035	304	1226	261	371
Arrive On Green	0.65	0.65	0.09	0.78	0.15	0.15
Sat Flow, veh/h	1870	1585	3456	1575	1781	1585
Grp Volume(v), veh/h	902	228	268	1442	193	228
Grp Sat Flow(s), veh/h/ln	1870	1585	1728	1575	1781	1585
Q Serve(g_s), s	38.6	7.0	9.2	93.0	12.4	15.4
Cycle Q Clear(g_c), s	38.6	7.0	9.2	93.0	12.4	15.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1221	1035	304	1226	261	371
V/C Ratio(X)	0.74	0.22	0.88	1.18	0.74	0.61
Avail Cap(c_a), veh/h	1221	1035	304	1226	268	378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	8.4	53.9	13.2	48.8	40.9
Incr Delay (d2), s/veh	2.4	0.1	24.7	88.1	10.1	2.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	2.0	4.9	48.5	6.2	13.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.3	8.5	78.6	101.4	59.0	43.8
LnGrp LOS	B	A	E	F	E	D
Approach Vol, veh/h	1130			1710	421	
Approach Delay, s/veh	14.7			97.8	50.8	
Approach LOS	B			F	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		97.5		22.0	15.0	82.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		93.0		18.0	10.5	78.0
Max Q Clear Time (g_c+l1), s		95.0		17.4	11.2	40.6
Green Ext Time (p_c), s		0.0		0.1	0.0	7.9
Intersection Summary						
HCM 7th Control Delay, s/veh			62.9			
HCM 7th LOS			E			

HCM 7th Signalized Intersection Summary 6: Boots Road/Pasadera Drive & Hwy 68

Cumulative AM with Existing Lane Configuration

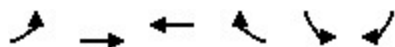
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1097	17	18	1568	23	47	4	23	38	0	54
Future Volume (veh/h)	45	1097	17	18	1568	23	47	4	23	38	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	1097	17	18	1568	23	47	4	23	38	0	54
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	1393	1181	78	1393	1181	134	23	130	172	0	149
Arrive On Green	0.04	0.74	0.74	0.04	0.74	0.74	0.09	0.09	0.09	0.09	0.00	0.09
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1350	240	1381	1159	0	1585
Grp Volume(v), veh/h	45	1097	17	18	1568	23	47	0	27	38	0	54
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1350	0	1622	1159	0	1585
Q Serve(g_s), s	2.8	41.5	0.3	1.1	85.5	0.4	3.9	0.0	1.8	3.0	0.0	3.7
Cycle Q Clear(g_c), s	2.8	41.5	0.3	1.1	85.5	0.4	8.6	0.0	1.8	4.7	0.0	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.85	1.00		1.00
Lane Grp Cap(c), veh/h	78	1393	1181	78	1393	1181	134	0	152	172	0	149
V/C Ratio(X)	0.58	0.79	0.01	0.23	1.13	0.02	0.35	0.00	0.18	0.22	0.00	0.36
Avail Cap(c_a), veh/h	279	1393	1181	279	1393	1181	219	0	254	259	0	249
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.9	9.0	3.8	53.0	14.6	3.8	53.4	0.0	47.9	50.1	0.0	48.8
Incr Delay (d2), s/veh	6.7	3.1	0.0	1.5	66.3	0.0	1.6	0.0	0.5	0.6	0.0	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	12.1	0.1	0.5	48.2	0.1	1.4	0.0	0.7	1.1	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.5	12.1	3.8	54.5	80.9	3.8	54.9	0.0	48.5	50.7	0.0	50.3
LnGrp LOS	E	B	A	D	F	A	D		D	D		D
Approach Vol, veh/h	1159			1609			74			92		
Approach Delay, s/veh	13.9			79.6			52.6			50.5		
Approach LOS	B			E			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	90.0			15.3	9.5	90.0		15.3				
Change Period (Y+Rc), s	4.5			4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	85.5		18.0	18.0	85.5		18.0				
Max Q Clear Time (g_c+I), s	14.8	87.5		10.6	3.1	43.5		6.7				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	10.5		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	52.0											
HCM 7th LOS	D											

HCM 7th Signalized Intersection Summary 7: Hwy 68 & York Road

Cumulative AM with Existing Lane Configuration
09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	149	1051	1336	297	84	64
Future Volume (veh/h)	149	1051	1336	297	84	64
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	1051	1336	297	84	64
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	187	1566	1282	1086	122	109
Arrive On Green	0.10	0.84	0.69	0.69	0.07	0.07
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	149	1051	1336	297	84	64
Grp Sat Flow(s), veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	7.8	20.0	65.5	6.9	4.4	3.7
Cycle Q Clear(g_c), s	7.8	20.0	65.5	6.9	4.4	3.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	187	1566	1282	1086	122	109
V/C Ratio(X)	0.80	0.67	1.04	0.27	0.69	0.59
Avail Cap(c_a), veh/h	335	1722	1282	1086	335	299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	2.9	15.0	5.8	43.5	43.2
Incr Delay (d2), s/veh	7.6	0.9	36.9	0.1	6.7	5.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	1.2	30.8	1.6	2.2	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	49.4	3.8	51.9	6.0	50.2	48.2
LnGrp LOS	D	A	F	A	D	D
Approach Vol, veh/h		1200	1633		148	
Approach Delay, s/veh		9.5	43.6		49.3	
Approach LOS		A	D		D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	4.5	70.0		11.1		84.5
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	18.0	65.5		18.0		88.0
Max Q Clear Time (g_c+I), s	19.8	67.5		6.4		22.0
Green Ext Time (p_c), s	0.2	0.0		0.3		9.9
Intersection Summary						
HCM 7th Control Delay, s/veh			30.1			
HCM 7th LOS			C			

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	1
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	1083
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	1083
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0		0	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	-	-	-	-		
HCM Lane V/C Ratio	-	-	-	-		
HCM Control Delay (s/veh)	0	-	-	-		
HCM Lane LOS	A	-	-	-		
HCM 95th %tile Q(veh)	-	-	-	-		

Intersection						
Int Delay, s/veh	3.9					
Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Traffic Vol, veh/h	274	18	150	314	25	160
Future Vol, veh/h	274	18	150	314	25	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	298	20	163	341	27	174
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	317	0	975	308
Stage 1	-	-	-	-	308	-
Stage 2	-	-	-	-	667	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1243	-	279	732
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	510	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1243	-	242	732
Mov Cap-2 Maneuver	-	-	-	-	242	-
Stage 1	-	-	-	-	746	-
Stage 2	-	-	-	-	443	-
Approach	NB	SB		NW		
HCM Control Delay, s/v	0	2.69		12.83		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	NWLn1	NWLn2	SBL	SBT
Capacity (veh/h)	-	-	242	732	1243	-
HCM Lane V/C Ratio	-	-	0.112	0.237	0.131	-
HCM Control Delay (s/veh)	-	-	21.7	11.4	8.3	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.4	0.9	0.5	-

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	434	0	0	464
Future Vol, veh/h	0	0	434	0	0	464
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	434	0	0	464

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	434	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	622	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	622	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

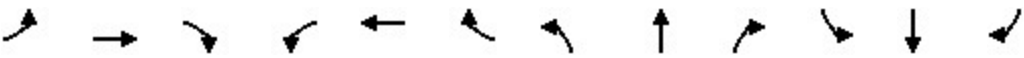
Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s/veh)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

HCM 7th Signalized Intersection Summary 3: Corral Del Tierra Rd & Hwy 68

Cumulative PM with Existing Lane Configuration

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1353	172	292	977	1	209	0	225	1	0	0
Future Volume (veh/h)	0	1353	172	292	977	1	209	0	225	1	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1870	1378	1870	1575	1477	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1353	172	292	977	1	209	0	225	1	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	883	1015	182	1168	1	211	0	187	2	0	2
Arrive On Green	0.00	0.64	0.64	0.12	0.79	0.79	0.12	0.00	0.12	0.00	0.00	0.00
Sat Flow, veh/h	1781	1378	1585	1500	1475	2	1781	0	1585	1781	0	1585
Grp Volume(v), veh/h	0	1353	172	292	0	978	209	0	225	1	0	0
Grp Sat Flow(s),veh/h/ln	1781	1378	1585	1500	0	1476	1781	0	1585	1781	0	1585
Q Serve(g_s), s	0.0	97.5	6.7	18.5	0.0	62.2	17.8	0.0	18.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	97.5	6.7	18.5	0.0	62.2	17.8	0.0	18.0	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	883	1015	182	0	1169	211	0	187	2	0	2
V/C Ratio(X)	0.00	1.53	0.17	1.60	0.00	0.84	0.99	0.00	1.20	0.41	0.00	0.00
Avail Cap(c_a), veh/h	211	883	1015	182	0	1169	211	0	187	211	0	187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	27.4	11.0	66.9	0.0	9.8	67.0	0.0	67.1	75.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	245.4	0.1	294.8	0.0	5.5	59.6	0.0	130.0	85.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	87.7	2.2	21.8	0.0	15.7	11.6	0.0	14.1	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	272.8	11.1	361.7	0.0	15.3	126.7	0.0	197.1	161.3	0.0	0.0
LnGrp LOS		F	B	F		B	F		F	F		
Approach Vol, veh/h	1525				1270				434			
Approach Delay, s/veh	243.2				94.9				163.2			
Approach LOS	F				F				F			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	102.0		22.5	0.0	125.0		4.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.5	97.5		18.0	18.0	98.0		18.0				
Max Q Clear Time (g_c+I1), s	20.5	99.5		20.0	0.0	64.2		2.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	7.9		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	174.1											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary 4: San Benancio Road & Hwy 68

Cumulative PM with Existing Lane Configuration

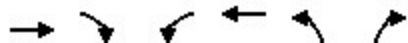
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1408	107	126	1142	3	102	0	95	1	0	2
Future Volume (veh/h)	0	1408	107	126	1142	3	102	0	95	1	0	2
Initial Q (Qb), veh	0	20	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1575	1870	1870	1870	1575	1870	1870	1870
Adj Flow Rate, veh/h	0	1408	107	126	1142	3	102	0	95	1	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	1362	1154	174	1276	3	150	0	180	7	0	6
Arrive On Green	0.00	0.73	0.73	0.05	0.81	0.81	0.08	0.00	0.08	0.00	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	3456	1570	4	1781	0	1335	1781	0	1585
Grp Volume(v), veh/h	0	1408	107	126	0	1145	102	0	95	1	0	2
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	0	1574	1781	0	1335	1781	0	1585
Q Serve(g_s), s	0.0	98.3	2.7	4.9	0.0	67.8	7.5	0.0	9.0	0.1	0.0	0.2
Cycle Q Clear(g_c), s	0.0	98.3	2.7	4.9	0.0	67.8	7.5	0.0	9.0	0.1	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	1362	1154	174	0	1278	150	0	180	7	0	6
V/C Ratio(X)	0.00	1.03	0.09	0.72	0.00	0.90	0.68	0.00	0.53	0.14	0.00	0.32
Avail Cap(c_a), veh/h	66	1362	1154	197	0	1278	237	0	245	237	0	211
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.4	5.4	63.2	0.0	10.5	60.1	0.0	54.4	67.0	0.0	67.1
Incr Delay (d2), s/veh	0.0	33.6	0.0	10.7	0.0	8.6	5.3	0.0	2.4	9.0	0.0	26.9
Initial Q Delay(d3), s/veh	0.0	52.9	0.0	0.0	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	63.8	0.7	2.3	0.0	22.9	3.6	0.0	3.1	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	104.9	5.4	73.9	0.0	28.6	65.3	0.0	56.8	76.0	0.0	94.0
LnGrp LOS		F	A	E		C	E		E	E		F
Approach Vol, veh/h	1515			1271			197			3		
Approach Delay, s/veh	97.9			33.1			61.2			88.0		
Approach LOS	F			C			E			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	114.1		15.9	11.3	102.8		5.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	101.0		18.0	7.7	98.3		18.0				
Max Q Clear Time (g_c+I), s	10.0	69.8		11.0	6.9	100.3		2.2				
Green Ext Time (p_c), s	0.0	10.6		0.4	0.0	0.0		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	67.9											
HCM 7th LOS	E											

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Cumulative PM with Existing Lane Configuration
09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑↑	↑	↑	↑
Traffic Volume (veh/h)	1125	119	222	938	225	458
Future Volume (veh/h)	1125	119	222	938	225	458
Initial Q (Qb), veh	17	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1575	1870	1870	1870	1280	1870
Adj Flow Rate, veh/h	1125	119	222	938	225	458
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	835	851	323	1258	325	589
Arrive On Green	0.55	0.55	0.08	0.66	0.27	0.27
Sat Flow, veh/h	1575	1585	3456	1870	1219	1585
Grp Volume(v), veh/h	1125	119	222	938	225	458
Grp Sat Flow(s), veh/h/ln	1575	1585	1728	1870	1219	1585
Q Serve(g_s), s	79.5	5.2	9.1	48.8	23.6	37.8
Cycle Q Clear(g_c), s	79.5	5.2	9.1	48.8	23.6	37.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	835	851	323	1258	325	589
V/C Ratio(X)	1.35	0.14	0.69	0.75	0.69	0.78
Avail Cap(c_a), veh/h	870	875	420	1319	334	561
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	17.2	65.6	15.9	48.8	41.1
Incr Delay (d2), s/veh	164.4	0.1	3.1	2.3	5.8	7.1
Initial Q Delay(d3), s/veh	73.3	0.0	63.8	0.0	0.0	0.0
%ile BackOfQ(50%),veh	82.8	2.0	8.2	18.6	8.1	22.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	273.0	17.3	132.5	18.2	54.7	48.2
LnGrp LOS	F	B	F	B	D	D
Approach Vol, veh/h	1244			1160	683	
Approach Delay, s/veh	248.5			40.1	50.3	
Approach LOS	F			D	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		99.9		44.0	15.9	84.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		101.5		39.5	17.5	79.5
Max Q Clear Time (g_c+l1), s		50.8		39.8	11.1	81.5
Green Ext Time (p_c), s		7.7		0.0	0.4	0.0
Intersection Summary						
HCM 7th Control Delay, s/veh			126.3			
HCM 7th LOS			F			

HCM 7th Signalized Intersection Summary 6: Boots Road/Pasadera Drive & Hwy 68

Cumulative PM with Existing Lane Configuration

09/26/2024

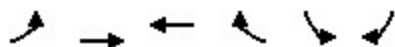


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1222	33	25	1129	42	36	3	8	39	0	42
Future Volume (veh/h)	70	1222	33	25	1129	42	36	3	8	39	0	42
Initial Q (Qb), veh	0	15	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1575	1870	1870	1575	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	1222	33	25	1129	42	36	3	8	39	0	42
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	1083	1090	110	1079	1086	159	38	101	198	0	133
Arrive On Green	0.06	0.69	0.69	0.06	0.69	0.69	0.08	0.08	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1781	1575	1585	1781	1575	1585	1365	451	1203	1302	0	1585
Grp Volume(v), veh/h	70	1222	33	25	1129	42	36	0	11	39	0	42
Grp Sat Flow(s),veh/h/ln	1781	1575	1585	1781	1575	1585	1365	0	1654	1302	0	1585
Q Serve(g_s), s	3.1	55.7	0.5	1.1	55.5	0.7	2.1	0.0	0.5	2.1	0.0	2.0
Cycle Q Clear(g_c), s	3.1	55.7	0.5	1.1	55.5	0.7	4.7	0.0	0.5	2.6	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.73	1.00		1.00
Lane Grp Cap(c), veh/h	114	1083	1090	110	1079	1086	159	0	139	198	0	133
V/C Ratio(X)	0.61	1.13	0.03	0.23	1.05	0.04	0.23	0.00	0.08	0.20	0.00	0.32
Avail Cap(c_a), veh/h	396	1083	1090	396	1079	1086	348	0	368	392	0	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.9	12.6	4.0	36.2	12.7	4.1	37.4	0.0	34.2	35.4	0.0	34.9
Incr Delay (d2), s/veh	5.2	69.7	0.0	1.0	40.2	0.0	0.7	0.0	0.2	0.5	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	49.9	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	46.5	0.1	0.5	37.6	0.1	0.7	0.0	0.2	0.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.1	132.2	4.0	37.2	103.0	4.1	38.1	0.0	34.5	35.9	0.0	36.3
LnGrp LOS	D	F	A	D	F	A	D		C	D		D
Approach Vol, veh/h	1325			1196			47			81		
Approach Delay, s/veh	124.3			98.1			37.3			36.1		
Approach LOS	F			F			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	60.0		11.3	9.5	60.2		11.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	55.5		18.0	18.0	55.5		18.0				
Max Q Clear Time (g_c+I), s	15.1	57.5		6.7	3.1	57.7		4.6				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	0.0		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	108.2											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary 7: Hwy 68 & York Road

Cumulative PM with Existing Lane Configuration

09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	56	1099	1073	120	207	98
Future Volume (veh/h)	56	1099	1073	120	207	98
Initial Q (Qb), veh	0	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1477	1870	1870	1870
Adj Flow Rate, veh/h	56	1099	1073	120	207	98
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	90	1452	1007	1081	243	216
Arrive On Green	0.05	0.78	0.68	0.68	0.14	0.14
Sat Flow, veh/h	1781	1870	1477	1585	1781	1585
Grp Volume(v), veh/h	56	1099	1073	120	207	98
Grp Sat Flow(s), veh/h/ln	1781	1870	1477	1585	1781	1585
Q Serve(g_s), s	3.2	32.9	70.5	2.7	11.7	5.9
Cycle Q Clear(g_c), s	3.2	32.9	70.5	2.7	11.7	5.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	90	1452	1007	1081	243	216
V/C Ratio(X)	0.62	0.76	1.07	0.11	0.85	0.45
Avail Cap(c_a), veh/h	310	1683	1007	1081	310	276
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	6.3	16.4	5.7	43.6	41.1
Incr Delay (d2), s/veh	6.7	1.7	47.5	0.0	16.3	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	60.8	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	7.2	46.5	0.7	6.2	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	54.8	8.0	124.7	5.7	59.9	42.5
LnGrp LOS	D	A	F	A	E	D
Approach Vol, veh/h		1155	1193		305	
Approach Delay, s/veh		10.3	112.7		54.3	
Approach LOS		B	F		D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.8	75.0		18.6		84.8
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	10.0	70.5		18.0		93.0
Max Q Clear Time (g_c+I), s	15.2	72.5		13.7		34.9
Green Ext Time (p_c), s	0.1	0.0		0.4		11.0
Intersection Summary						
HCM 7th Control Delay, s/veh			61.4			
HCM 7th LOS			E			

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1549	30	0	1270	0	30
Future Vol, veh/h	1549	30	0	1270	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1684	33	0	1380	0	33

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 1700
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.22
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.318
Pot Cap-1 Maneuver	-	-	0 - 0 114
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 114
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	48.83
HCM LOS	E		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	114	-	-	-
HCM Lane V/C Ratio	0.286	-	-	-
HCM Control Delay (s/veh)	48.8	-	-	-
HCM Lane LOS	E	-	-	-
HCM 95th %tile Q(veh)	1.1	-	-	-

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	27	388	10	45	250
Future Vol, veh/h	8	27	388	10	45	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	29	422	11	49	272

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	797	427	0	0	433
Stage 1	427	-	-	-	-
Stage 2	370	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	356	627	-	-	1127
Stage 1	658	-	-	-	-
Stage 2	699	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	340	627	-	-	1127
Mov Cap-2 Maneuver	340	-	-	-	-
Stage 1	658	-	-	-	-
Stage 2	669	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v12.12		0	1.27
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- 340 627 1127	-	-
HCM Lane V/C Ratio	-	- 0.026 0.047 0.043	-	-
HCM Control Delay (s/veh)	-	- 15.9 11 8.3	-	-
HCM Lane LOS	-	- C B A	-	-
HCM 95th %tile Q(veh)	-	- 0.1 0.1 0.1	-	-

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	415	0	0	295
Future Vol, veh/h	0	0	415	0	0	295
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	415	0	0	295

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	415	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	637	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	637	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s/veh)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

Intersection				
Intersection Delay, s/veh	205.6			
Intersection LOS	F			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	1151	1964	415	2
Demand Flow Rate, veh/h	1174	2003	423	2
Vehicles Circulating, veh/h	199	147	1072	2142
Vehicles Exiting, veh/h	1945	1348	301	8
Ped Vol Crossing Leg, #/h	0	1	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	58.0	324.5	53.6	23.8
Approach LOS	F	F	F	C
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	1174	2003	423	2
Cap Entry Lane, veh/h	1126	1188	462	155
Entry HV Adj Factor	0.980	0.980	0.981	0.990
Flow Entry, veh/h	1151	1964	415	2
Cap Entry, veh/h	1104	1164	454	154
V/C Ratio	1.042	1.687	0.915	0.013
Control Delay, s/veh	58.0	324.5	53.6	23.8
LOS	F	F	F	C
95th %tile Queue, veh	24	107	10	0

Intersection				
Intersection Delay, s/veh 16.7				
Intersection LOS F				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	1336	1870	411	4
Demand Flow Rate, veh/h	1362	1908	419	4
Vehicles Circulating, veh/h	131	208	1250	2113
Vehicles Exiting, veh/h	1986	1461	243	3
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	85.6	335.3	104.9	23.2
Approach LOS	F	F	F	C
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	1362	1908	419	4
Cap Entry Lane, veh/h	1207	1116	386	160
Entry HV Adj Factor	0.981	0.980	0.981	1.000
Flow Entry, veh/h	1336	1870	411	4
Cap Entry, veh/h	1184	1094	378	160
V/C Ratio	1.128	1.710	1.087	0.025
Control Delay, s/veh	85.6	335.3	104.9	23.2
LOS	F	F	F	C
95th %tile Queue, veh	34	104	15	0

Intersection				
Intersection Delay, s/veh 167.0				
Intersection LOS F				
Approach	EB	WB	NB	
Entry Lanes	1	1	1	
Conflicting Circle Lanes	1	1	1	
Adj Approach Flow, veh/h	1130	1710	421	
Demand Flow Rate, veh/h	1153	1744	430	
Vehicles Circulating, veh/h	273	197	920	
Vehicles Exiting, veh/h	1668	920	506	
Ped Vol Crossing Leg, #/h	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	
Approach Delay, s/veh	79.8	262.5	13.3	
Approach LOS	F	F	B	
Lane	Left	Left	Left	Bypass
Designated Moves	TR	LT	L	R
Assumed Moves	TR	LT	L	
RT Channelized				Yield
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	1153	1744	197	233
Cap Entry Lane, veh/h	1045	1129	540	540
Entry HV Adj Factor	0.980	0.981	0.980	0.980
Flow Entry, veh/h	1130	1710	193	228
Cap Entry, veh/h	1024	1107	529	529
V/C Ratio	1.104	1.545	0.365	0.431
Control Delay, s/veh	79.8	262.5	12.5	14.0
LOS	F	F	B	B
95th %tile Queue, veh	28	83	2	2

Intersection				
Intersection Delay, s/veh99.5				
Intersection LOS F				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	1159	1609	74	92
Demand Flow Rate, veh/h	1182	1640	75	94
Vehicles Circulating, veh/h	57	98	1204	1665
Vehicles Exiting, veh/h	1702	1181	35	73
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	26.4	160.4	12.0	24.8
Approach LOS	D	F	B	C
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	1182	1640	75	94
Cap Entry Lane, veh/h	1302	1249	404	253
Entry HV Adj Factor	0.981	0.981	0.986	0.979
Flow Entry, veh/h	1159	1609	74	92
Cap Entry, veh/h	1277	1225	398	247
V/C Ratio	0.908	1.313	0.186	0.372
Control Delay, s/veh	26.4	160.4	12.0	24.8
LOS	D	F	B	C
95th %tile Queue, veh	15	58	1	2

Intersection				
Intersection Delay, s/veh 126.6				
Intersection LOS F				
Approach	EB	WB	SB	
Entry Lanes	1	1	1	
Conflicting Circle Lanes	1	1	1	
Adj Approach Flow, veh/h	1200	1633	148	
Demand Flow Rate, veh/h	1224	1666	151	
Vehicles Circulating, veh/h	86	152	1363	
Vehicles Exiting, veh/h	1363	1158	455	
Ped Vol Crossing Leg, #/h	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	
Approach Delay, s/veh	36.9	202.7	14.9	
Approach LOS	E	F	B	
Lane	Left	Left	Left	Bypass
Designated Moves	LT	TR	L	R
Assumed Moves	LT	TR	L	
RT Channelized				Yield
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	1224	1666	86	65
Cap Entry Lane, veh/h	1264	1182	344	344
Entry HV Adj Factor	0.980	0.980	0.977	0.980
Flow Entry, veh/h	1200	1633	84	64
Cap Entry, veh/h	1239	1158	336	337
V/C Ratio	0.968	1.410	0.250	0.190
Control Delay, s/veh	36.9	202.7	15.5	14.1
LOS	E	F	C	B
95th %tile Queue, veh	19	68	1	1

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1312	10	0	1964	0	4
Future Vol, veh/h	1312	10	0	1964	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1426	11	0	2135	0	4
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	-	-	-	1432
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	165
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	165
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		NB		
HCM Control Delay, s/v	0	0		27.45		
HCM LOS	D					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	165	-	-	-		
HCM Lane V/C Ratio	0.026	-	-	-		
HCM Control Delay (s/veh)	27.4	-	-	-		
HCM Lane LOS	D	-	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	-		

Intersection						
Int Delay, s/veh	3.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	160	274	18	150	314
Future Vol, veh/h	25	160	274	18	150	314
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	174	298	20	163	341

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	975	308	0	0	317	0
Stage 1	308	-	-	-	-	-
Stage 2	667	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	279	732	-	-	1243	-
Stage 1	746	-	-	-	-	-
Stage 2	510	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	242	732	-	-	1243	-
Mov Cap-2 Maneuver	242	-	-	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	443	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v12.83		0	2.69
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- 242 732 1243	-	-
HCM Lane V/C Ratio	-	- 0.112 0.237 0.131	-	-
HCM Control Delay (s/veh)	-	- 21.7 11.4 8.3	-	-
HCM Lane LOS	-	- C B A	-	-
HCM 95th %tile Q(veh)	-	- 0.4 0.9 0.5	-	-

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			↗
Traffic Vol, veh/h	0	0	434	0	0	464
Future Vol, veh/h	0	0	434	0	0	464
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	434	0	0	464

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	434	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	622	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	622	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s/veh)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

Intersection				
Intersection Delay, s/veh	135.8			
Intersection LOS	F			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1525	1270	434	1
Demand Flow Rate, veh/h	1555	1296	443	1
Vehicles Circulating, veh/h	299	213	1381	1508
Vehicles Exiting, veh/h	1210	1611	473	1
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	204.5	73.6	77.1	9.2
Approach LOS	F	F	F	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.535	2.535
Critical Headway, s	4.328	4.328	4.328	4.328
A (Intercept)	1420	1420	1420	1420
B (Slope)	8.501e-4	8.501e-4	8.501e-4	8.501e-4
Entry Flow, veh/h	1555	1296	443	1
Cap Entry Lane, veh/h	1101	1185	439	394
Entry HV Adj Factor	0.981	0.980	0.980	1.000
Flow Entry, veh/h	1525	1270	434	1
Cap Entry, veh/h	1080	1162	430	394
V/C Ratio	1.412	1.094	1.009	0.003
Control Delay, s/veh	204.5	73.6	77.1	9.2
LOS	F	F	F	A
95th %tile Queue, veh	64	30	13	0

HCM 7th Roundabout
4: San Benancio Road & Hwy 68

Cumulative PM Caltrans Build Alt 1

09/26/2024

Intersection				
Intersection Delay, s/veh 79.9				
Intersection LOS F				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1515	1271	197	3
Demand Flow Rate, veh/h	1545	1297	201	3
Vehicles Circulating, veh/h	130	104	1437	1398
Vehicles Exiting, veh/h	1271	1534	238	3
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	118.9	42.9	19.0	8.4
Approach LOS	F	E	C	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.535	2.535
Critical Headway, s	4.328	4.328	4.328	4.328
A (Intercept)	1420	1420	1420	1420
B (Slope)	8.501e-4	8.501e-4	8.501e-4	8.501e-4
Entry Flow, veh/h	1545	1297	201	3
Cap Entry Lane, veh/h	1272	1300	419	433
Entry HV Adj Factor	0.980	0.980	0.980	1.000
Flow Entry, veh/h	1515	1271	197	3
Cap Entry, veh/h	1247	1274	410	433
V/C Ratio	1.215	0.998	0.480	0.007
Control Delay, s/veh	118.9	42.9	19.0	8.4
LOS	F	E	C	A
95th %tile Queue, veh	46	22	3	0

Intersection				
Intersection Delay, s/veh62.9				
Intersection LOS F				
Approach	EB	WB	NB	
Entry Lanes	1	1	1	
Conflicting Circle Lanes	2	2	2	
Adj Approach Flow, veh/h	1244	1160	683	
Demand Flow Rate, veh/h	1269	1183	697	
Vehicles Circulating, veh/h	226	230	1148	
Vehicles Exiting, veh/h	1187	1148	347	
Ped Vol Crossing Leg, #/h	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	
Approach Delay, s/veh	70.1	49.0	73.3	
Approach LOS	F	E	F	
Lane	Left	Left	Left	Bypass
Designated Moves	TR	LT	L	R
Assumed Moves	TR	LT	L	
RT Channelized				Yield
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.535	2.535	2.535	2.609
Critical Headway, s	4.328	4.328	4.328	4.976
A (Intercept)	1420	1420	1420	1380
B (Slope)	8.501e-4	8.501e-4	8.501e-4	1.02e-3
Entry Flow, veh/h	1269	1183	230	467
Cap Entry Lane, veh/h	1172	1168	535	428
Entry HV Adj Factor	0.981	0.981	0.978	0.980
Flow Entry, veh/h	1244	1160	225	458
Cap Entry, veh/h	1149	1145	524	420
V/C Ratio	1.083	1.013	0.430	1.092
Control Delay, s/veh	70.1	49.0	14.1	102.3
LOS	F	F	B	F
95th %tile Queue, veh	28	22	2	16

Intersection				
Intersection Delay, s/veh37.1				
Intersection LOS E				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1325	1196	47	81
Demand Flow Rate, veh/h	1351	1221	48	83
Vehicles Circulating, veh/h	66	111	1357	1215
Vehicles Exiting, veh/h	1232	1294	60	117
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	44.4	32.1	9.7	9.5
Approach LOS	E	D	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.535	2.535
Critical Headway, s	4.328	4.328	4.328	4.328
A (Intercept)	1420	1420	1420	1420
B (Slope)	8.501e-4	8.501e-4	8.501e-4	8.501e-4
Entry Flow, veh/h	1351	1221	48	83
Cap Entry Lane, veh/h	1343	1292	448	506
Entry HV Adj Factor	0.980	0.980	0.978	0.976
Flow Entry, veh/h	1325	1196	47	81
Cap Entry, veh/h	1316	1266	438	493
V/C Ratio	1.006	0.945	0.107	0.164
Control Delay, s/veh	44.4	32.1	9.7	9.5
LOS	F	D	A	A
95th %tile Queue, veh	23	17	0	1

Intersection				
Intersection Delay, s/veh31.4				
Intersection LOS D				
Approach	EB	WB	SB	
Entry Lanes	1	1	1	
Conflicting Circle Lanes	2	2	2	
Adj Approach Flow, veh/h	1155	1193	305	
Demand Flow Rate, veh/h	1178	1216	311	
Vehicles Circulating, veh/h	211	57	1094	
Vehicles Exiting, veh/h	1094	1332	179	
Ped Vol Crossing Leg, #/h	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	
Approach Delay, s/veh	43.6	24.6	12.1	
Approach LOS	E	C	B	
Lane	Left	Left	Left	Bypass
Designated Moves	LT	TR	L	R
Assumed Moves	LT	TR	L	
RT Channelized				Yield
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.535	2.535	2.535	2.609
Critical Headway, s	4.328	4.328	4.328	4.976
A (Intercept)	1420	1420	1420	1380
B (Slope)	8.501e-4	8.501e-4	8.501e-4	1.02e-3
Entry Flow, veh/h	1178	1216	211	100
Cap Entry Lane, veh/h	1187	1353	560	452
Entry HV Adj Factor	0.980	0.981	0.981	0.980
Flow Entry, veh/h	1155	1193	207	98
Cap Entry, veh/h	1164	1327	550	443
V/C Ratio	0.992	0.899	0.377	0.221
Control Delay, s/veh	43.6	24.6	12.3	11.5
LOS	E	C	B	B
95th %tile Queue, veh	20	14	2	1

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	1549	30	0	1270	0	30
Future Vol, veh/h	1549	30	0	1270	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1684	33	0	1380	0	33

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 1700
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.22
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.318
Pot Cap-1 Maneuver	-	-	0 - 0 114
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 114
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	48.83
HCM LOS	E		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	114	-	-	-
HCM Lane V/C Ratio	0.286	-	-	-
HCM Control Delay (s/veh)	48.8	-	-	-
HCM Lane LOS	E	-	-	-
HCM 95th %tile Q(veh)	1.1	-	-	-

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	27	388	10	45	250
Future Vol, veh/h	8	27	388	10	45	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	29	422	11	49	272
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	797	427	0	0	433	0
Stage 1	427	-	-	-	-	-
Stage 2	370	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	356	627	-	-	1127	-
Stage 1	658	-	-	-	-	-
Stage 2	699	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	340	627	-	-	1127	-
Mov Cap-2 Maneuver	340	-	-	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v12.12		0	1.27			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 340 627 1127	-	-		
HCM Lane V/C Ratio	-	- 0.026 0.047 0.043	-	-		
HCM Control Delay (s/veh)	-	- 15.9 11 8.3	-	-		
HCM Lane LOS	-	- C B A	-	-		
HCM 95th %tile Q(veh)	-	- 0.1 0.1 0.1	-	-		

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	415	0	0	295
Future Vol, veh/h	0	0	415	0	0	295
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	415	0	0	295

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	415	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	637	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	637	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s/veh)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

HCM 7th Signalized Intersection Summary

3: Corral Del Tierra Rd & Hwy 68

Cumulative AM Build Alt 2

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1049	100	194	1764	6	142	0	273	0	1	1
Future Volume (veh/h)	2	1049	100	194	1764	6	142	0	273	0	1	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	1049	100	194	1764	6	142	0	273	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	1641	156	232	2107	7	326	0	290	5	2	2
Arrive On Green	0.05	0.50	0.50	0.13	0.58	0.58	0.18	0.00	0.18	0.00	0.00	0.00
Sat Flow, veh/h	1781	3279	312	1781	3633	12	1781	0	1582	1781	858	858
Grp Volume(v), veh/h	2	568	581	194	862	908	142	0	273	0	0	2
Grp Sat Flow(s),veh/h/ln	1781	1777	1814	1781	1777	1868	1781	0	1582	1781	0	1716
Q Serve(g_s), s	0.1	23.1	23.1	10.4	38.9	39.0	7.0	0.0	16.7	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.1	23.1	23.1	10.4	38.9	39.0	7.0	0.0	16.7	0.0	0.0	0.1
Prop In Lane	1.00		0.17	1.00		0.01	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	91	890	908	232	1030	1083	326	0	290	5	0	5
V/C Ratio(X)	0.02	0.64	0.64	0.84	0.84	0.84	0.44	0.00	0.94	0.00	0.00	0.43
Avail Cap(c_a), veh/h	326	1319	1346	419	1411	1483	326	0	290	326	0	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	44.3	18.0	18.0	41.7	16.8	16.9	35.6	0.0	39.6	0.0	0.0	48.9
Incr Delay (d2), s/veh	0.1	0.8	0.8	7.8	3.4	3.2	0.9	0.0	37.5	0.0	0.0	52.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.2	8.4	4.8	13.4	14.1	3.1	0.0	9.4	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.4	18.8	18.8	49.5	20.2	20.1	36.5	0.0	77.1	0.0	0.0	101.6
LnGrp LOS	D	B	B	D	C	C	D		E			F
Approach Vol, veh/h	1151			1964			415			2		
Approach Delay, s/veh	18.8			23.0			63.2			101.6		
Approach LOS	B			C			E			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.3	53.7		22.5	9.5	61.5		4.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	23.1	72.9		18.0	18.0	78.0		18.0				
Max Q Clear Time (g_c+I1), s	12.4	25.1		18.7	2.1	41.0		2.1				
Green Ext Time (p_c), s	0.3	8.0		0.0	0.0	16.0		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh				26.4								
HCM 7th LOS				C								

HCM 7th Signalized Intersection Summary 4: San Benancio Road & Hwy 68

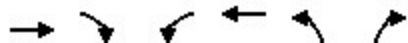
Cumulative AM Build Alt 2
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1222	113	125	1744	1	202	1	208	3	0	1
Future Volume (veh/h)	1	1222	113	125	1744	1	202	1	208	3	0	1
Initial Q (Qb), veh	0	0	0	0	70	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	1222	113	125	1744	1	202	1	208	3	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	2175	970	77	2341	1	269	1	238	9	0	8
Arrive On Green	0.00	0.54	0.54	0.07	0.61	0.61	0.16	0.16	0.16	0.01	0.00	0.01
Sat Flow, veh/h	1781	3554	1585	1781	3645	2	1781	8	1579	1781	0	1585
Grp Volume(v), veh/h	1	1222	113	125	850	895	202	0	209	3	0	1
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1870	1781	0	1586	1781	0	1585
Q Serve(g_s), s	0.0	19.5	2.9	5.5	29.1	29.1	8.6	0.0	10.3	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.0	19.5	2.9	5.5	29.1	29.1	8.6	0.0	10.3	0.1	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	2175	970	77	1141	1198	269	0	240	9	0	8
V/C Ratio(X)	0.41	0.56	0.12	1.63	0.75	0.75	0.75	0.00	0.87	0.32	0.00	0.12
Avail Cap(c_a), veh/h	110	3981	1776	121	2002	2107	397	0	353	397	0	353
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.3	11.7	8.3	61.2	14.2	14.0	43.7	0.0	44.6	52.9	0.0	52.9
Incr Delay (d2), s/veh	84.2	0.2	0.1	335.4	1.0	1.0	4.5	0.0	14.7	18.6	0.0	6.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	26.6	24.3	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.7	0.9	9.5	23.2	23.3	5.4	0.0	6.4	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	137.5	11.9	8.3	396.5	41.7	39.3	48.1	0.0	59.3	71.5	0.0	59.2
LnGrp LOS	F	B	A	F	D	D	D		E	E		E
Approach Vol, veh/h	1336			1870			411			4		
Approach Delay, s/veh	11.7			64.3			53.8			68.4		
Approach LOS	B			E			D			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.6	53.5		17.7	10.0	48.1		4.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	91.0		18.0	5.5	90.5		18.0				
Max Q Clear Time (g_c+I1), s	12.0	31.1		12.3	7.5	21.5		2.1				
Green Ext Time (p_c), s	0.0	17.9		1.0	0.0	10.9		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	43.7											
HCM 7th LOS	D											

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Cumulative AM Build Alt 2
09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑↑	↑↑	↑	↑
Traffic Volume (veh/h)	902	228	268	1442	193	228
Future Volume (veh/h)	902	228	268	1442	193	228
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	902	228	268	1442	193	228
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1442	643	430	2226	322	484
Arrive On Green	0.41	0.41	0.12	0.63	0.18	0.18
Sat Flow, veh/h	3647	1585	3456	3647	1781	1585
Grp Volume(v), veh/h	902	228	268	1442	193	228
Grp Sat Flow(s), veh/h/ln	1777	1585	1728	1777	1781	1585
Q Serve(g_s), s	9.5	4.7	3.4	11.9	4.7	5.5
Cycle Q Clear(g_c), s	9.5	4.7	3.4	11.9	4.7	5.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1442	643	430	2226	322	484
V/C Ratio(X)	0.63	0.35	0.62	0.65	0.60	0.47
Avail Cap(c_a), veh/h	7904	3526	1072	9348	686	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.1	9.6	19.4	5.5	17.6	13.2
Incr Delay (d2), s/veh	0.4	0.3	1.5	0.3	1.8	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.0	1.2	1.1	1.8	5.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	11.5	10.0	20.9	5.8	19.4	13.9
LnGrp LOS	B	A	C	A	B	B
Approach Vol, veh/h	1130			1710	421	
Approach Delay, s/veh	11.2			8.2	16.4	
Approach LOS	B			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		33.8		13.0	10.3	23.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		123.0		18.0	14.5	104.0
Max Q Clear Time (g_c+l1), s		13.9		7.5	5.4	11.5
Green Ext Time (p_c), s		14.1		1.0	0.6	7.5
Intersection Summary						
HCM 7th Control Delay, s/veh			10.3			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary 6: Boots Road/Pasadera Drive & Hwy 68

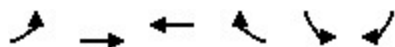
Cumulative AM Build Alt 2
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1097	17	18	1568	23	47	4	23	38	0	54
Future Volume (veh/h)	45	1097	17	18	1568	23	47	4	23	38	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	1097	17	18	1568	23	47	4	23	38	0	54
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	2162	34	139	2145	957	203	26	149	241	0	171
Arrive On Green	0.08	0.60	0.60	0.08	0.60	0.60	0.11	0.11	0.11	0.11	0.00	0.11
Sat Flow, veh/h	1781	3582	56	1781	3554	1585	1350	240	1381	1190	0	1585
Grp Volume(v), veh/h	45	544	570	18	1568	23	47	0	27	38	0	54
Grp Sat Flow(s),veh/h/ln	1781	1777	1860	1781	1777	1585	1350	0	1622	1190	0	1585
Q Serve(g_s), s	1.5	11.2	11.2	0.6	20.1	0.4	2.2	0.0	1.0	1.6	0.0	2.0
Cycle Q Clear(g_c), s	1.5	11.2	11.2	0.6	20.1	0.4	4.8	0.0	1.0	2.6	0.0	2.0
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.85	1.00		1.00
Lane Grp Cap(c), veh/h	139	1073	1123	139	2145	957	203	0	175	241	0	171
V/C Ratio(X)	0.32	0.51	0.51	0.13	0.73	0.02	0.23	0.00	0.15	0.16	0.00	0.32
Avail Cap(c_a), veh/h	500	2783	2913	500	5565	2482	436	0	455	479	0	445
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.0	7.3	7.3	27.6	9.0	5.1	28.9	0.0	26.0	27.1	0.0	26.4
Incr Delay (d2), s/veh	1.3	0.4	0.4	0.4	0.5	0.0	0.6	0.0	0.4	0.3	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.5	2.6	0.2	4.4	0.1	0.7	0.0	0.4	0.5	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.3	7.6	7.6	28.0	9.5	5.1	29.5	0.0	26.4	27.4	0.0	27.5
LnGrp LOS	C	A	A	C	A	A	C		C	C		C
Approach Vol, veh/h	1159			1609			74			92		
Approach Delay, s/veh	8.5			9.7			28.4			27.5		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	43.2		11.4	9.5	43.2		11.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	100.5	100.5		18.0	18.0	100.5		18.0				
Max Q Clear Time (g_c+I), s	13.5	22.1		6.8	2.6	13.2		4.6				
Green Ext Time (p_c), s	0.1	16.7		0.1	0.0	7.6		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	10.2											
HCM 7th LOS	B											

HCM 7th Signalized Intersection Summary 7: Hwy 68 & York Road

Cumulative AM Build Alt 2
09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	149	1051	1336	297	84	64
Future Volume (veh/h)	149	1051	1336	297	84	64
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	1051	1336	297	84	64
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	215	2697	1983	884	143	127
Arrive On Green	0.12	0.76	0.56	0.56	0.08	0.08
Sat Flow, veh/h	1781	3647	3647	1585	1781	1585
Grp Volume(v), veh/h	149	1051	1336	297	84	64
Grp Sat Flow(s), veh/h/ln	1781	1777	1777	1585	1781	1585
Q Serve(g_s), s	4.5	5.7	14.9	5.7	2.5	2.2
Cycle Q Clear(g_c), s	4.5	5.7	14.9	5.7	2.5	2.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	215	2697	1983	884	143	127
V/C Ratio(X)	0.69	0.39	0.67	0.34	0.59	0.50
Avail Cap(c_a), veh/h	573	7808	6380	2846	573	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	2.3	8.8	6.7	24.8	24.7
Incr Delay (d2), s/veh	4.0	0.1	0.4	0.2	3.8	3.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	3.2	1.1	1.2	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	27.6	2.4	9.2	7.0	28.6	27.7
LnGrp LOS	C	A	A	A	C	C
Approach Vol, veh/h		1200	1633		148	
Approach Delay, s/veh		5.5	8.8		28.2	
Approach LOS		A	A		C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.2	35.7		9.0		47.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	100.5	100.5		18.0		123.0
Max Q Clear Time (g_c+I), s	16.9	16.9		4.5		7.7
Green Ext Time (p_c), s	0.3	14.3		0.3		8.1
Intersection Summary						
HCM 7th Control Delay, s/veh			8.4			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	0					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1312	10	0	1964	0	4
Future Vol, veh/h	1312	10	0	1964	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1426	11	0	2135	0	4

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 718
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.32
Pot Cap-1 Maneuver	-	- 0	- 0 371
Stage 1	-	- 0	- 0 -
Stage 2	-	- 0	- 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 371
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	14.81
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	371	-	-	-
HCM Lane V/C Ratio	0.012	-	-	-
HCM Control Delay (s/veh)	14.8	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection						
Int Delay, s/veh	3.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	160	274	18	150	314
Future Vol, veh/h	25	160	274	18	150	314
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	174	298	20	163	341
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	975	308	0	0	317	0
Stage 1	308	-	-	-	-	-
Stage 2	667	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	279	732	-	-	1243	-
Stage 1	746	-	-	-	-	-
Stage 2	510	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	242	732	-	-	1243	-
Mov Cap-2 Maneuver	242	-	-	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	443	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v12.83		0	2.69			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 242 732 1243	-			
HCM Lane V/C Ratio	-	- 0.112 0.237 0.131	-			
HCM Control Delay (s/veh)	-	- 21.7 11.4 8.3	-			
HCM Lane LOS	-	- C B A	-			
HCM 95th %tile Q(veh)	-	- 0.4 0.9 0.5	-			

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	434	0	0	464
Future Vol, veh/h	0	0	434	0	0	464
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	434	0	0	464

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	434	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	622	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	622	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s/veh)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

HCM 7th Signalized Intersection Summary

3: Corral Del Tierra Rd & Hwy 68

Cumulative PM Build Alt 2

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1353	172	292	977	1	209	0	225	1	0	0
Future Volume (veh/h)	0	1353	172	292	977	1	209	0	225	1	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1353	172	292	977	1	209	0	225	1	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1603	202	297	2600	3	285	0	253	2	3	0
Arrive On Green	0.00	0.50	0.50	0.17	0.71	0.71	0.16	0.00	0.16	0.00	0.00	0.00
Sat Flow, veh/h	1781	3174	401	1781	3643	4	1781	0	1585	1781	1870	0
Grp Volume(v), veh/h	0	753	772	292	477	501	209	0	225	1	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1798	1781	1777	1870	1781	0	1585	1781	1870	0
Q Serve(g_s), s	0.0	39.3	40.1	17.6	11.3	11.3	12.0	0.0	15.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	39.3	40.1	17.6	11.3	11.3	12.0	0.0	15.0	0.1	0.0	0.0
Prop In Lane	1.00		0.22	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	2	897	908	297	1268	1334	285	0	253	2	3	0
V/C Ratio(X)	0.00	0.84	0.85	0.98	0.38	0.38	0.73	0.00	0.89	0.41	0.00	0.00
Avail Cap(c_a), veh/h	297	1286	1301	297	1286	1353	297	0	265	297	312	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	22.9	23.1	44.7	6.0	6.0	43.1	0.0	44.3	53.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.5	3.9	47.0	0.2	0.2	8.7	0.0	27.9	84.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.0	15.6	11.2	3.0	3.2	6.0	0.0	7.8	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	26.4	27.0	91.7	6.2	6.2	51.8	0.0	72.2	138.0	0.0	0.0
LnGrp LOS		C	C	F	A	A	D		E	F		
Approach Vol, veh/h	1525			1270			434			1		
Approach Delay, s/veh	26.7			25.9			62.4			138.0		
Approach LOS	C			C			E			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.5	58.9		21.7	0.0	81.4		4.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	78.0		18.0	18.0	78.0		18.0				
Max Q Clear Time (g_c+I1), s	19.6	42.1		17.0	0.0	13.3		2.1				
Green Ext Time (p_c), s	0.0	12.3		0.2	0.0	6.2		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh				31.2								
HCM 7th LOS				C								

HCM 7th Signalized Intersection Summary 4: San Benancio Road & Hwy 68

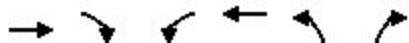
Cumulative PM Build Alt 2
09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1408	107	126	1142	3	102	0	95	1	0	2
Future Volume (veh/h)	0	1408	107	126	1142	3	102	0	95	1	0	2
Initial Q (Qb), veh	0	20	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1408	107	126	1142	3	102	0	95	1	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1971	946	86	2556	7	159	0	142	7	0	6
Arrive On Green	0.00	0.54	0.54	0.09	0.70	0.70	0.09	0.00	0.09	0.00	0.00	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3636	10	1781	0	1585	1781	0	1585
Grp Volume(v), veh/h	0	1408	107	126	558	587	102	0	95	1	0	2
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1869	1781	0	1585	1781	0	1585
Q Serve(g_s), s	0.0	20.0	2.2	4.6	9.2	9.2	3.7	0.0	3.8	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	20.0	2.2	4.6	9.2	9.2	3.7	0.0	3.8	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	1971	946	86	1249	1313	159	0	142	7	0	6
V/C Ratio(X)	0.00	0.71	0.11	1.47	0.45	0.45	0.64	0.00	0.67	0.14	0.00	0.31
Avail Cap(c_a), veh/h	134	5308	2367	174	2694	2833	481	0	428	481	0	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.0	6.8	64.2	4.7	4.7	38.0	0.0	38.1	42.7	0.0	42.7
Incr Delay (d2), s/veh	0.0	0.5	0.1	243.2	0.3	0.2	4.2	0.0	5.4	8.6	0.0	25.7
Initial Q Delay(d3), s/veh	0.0	2.6	0.0	0.0	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.6	0.6	8.6	2.2	2.3	2.2	0.0	2.1	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	15.1	6.8	307.4	5.4	5.3	42.2	0.0	43.5	51.3	0.0	68.4
LnGrp LOS		B	A	F	A	A	D		D	D		E
Approach Vol, veh/h	1515			1271			197			3		
Approach Delay, s/veh	14.5			35.3			42.8			62.7		
Approach LOS	B			D			D			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	51.1		10.8	10.5	40.6		4.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	101.0		18.0	6.5	99.5		18.0				
Max Q Clear Time (g_c+I), s	11.2	11.2		5.8	6.6	22.0		2.1				
Green Ext Time (p_c), s	0.0	7.9		0.6	0.0	14.1		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	25.3											
HCM 7th LOS	C											

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Cumulative PM Build Alt 2
09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑↑	↑↑	↑	↑
Traffic Volume (veh/h)	1125	119	222	938	225	458
Future Volume (veh/h)	1125	119	222	938	225	458
Initial Q (Qb), veh	17	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1125	119	222	938	225	458
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1511	673	392	2123	515	642
Arrive On Green	0.42	0.42	0.10	0.58	0.30	0.30
Sat Flow, veh/h	3647	1585	3456	3647	1781	1585
Grp Volume(v), veh/h	1125	119	222	938	225	458
Grp Sat Flow(s), veh/h/ln	1777	1585	1728	1777	1781	1585
Q Serve(g_s), s	19.9	3.5	4.6	11.2	7.5	18.2
Cycle Q Clear(g_c), s	19.9	3.5	4.6	11.2	7.5	18.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1511	673	392	2123	515	642
V/C Ratio(X)	0.74	0.18	0.57	0.44	0.44	0.71
Avail Cap(c_a), veh/h	3234	1443	1701	5199	781	849
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	14.8	35.0	8.8	24.9	20.5
Incr Delay (d2), s/veh	0.7	0.1	1.3	0.1	0.6	1.9
Initial Q Delay(d3), s/veh	3.6	0.0	31.3	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	1.2	5.0	3.2	3.7	17.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	25.8	15.0	67.5	8.9	25.4	22.4
LnGrp LOS	C	B	E	A	C	C
Approach Vol, veh/h	1244			1160	683	
Approach Delay, s/veh	24.8			20.1	23.4	
Approach LOS	C			C	C	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	47.4			26.7	11.7	35.7
Change Period (Y+Rc), s	4.5			4.5	4.5	4.5
Max Green Setting (Gmax), s	108.5			32.5	36.5	67.5
Max Q Clear Time (g_c+l1), s	13.2			20.2	6.6	21.9
Green Ext Time (p_c), s		6.8		2.0	0.7	9.3
Intersection Summary						
HCM 7th Control Delay, s/veh			22.7			
HCM 7th LOS			C			

HCM 7th Signalized Intersection Summary

6: Boots Road/Pasadera Drive & Hwy 68

Cumulative PM Build Alt 2

09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1222	33	25	1129	42	36	3	8	39	0	42
Future Volume (veh/h)	70	1222	33	25	1129	42	36	3	8	39	0	42
Initial Q (Qb), veh	0	15	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	1222	33	25	1129	42	36	3	8	39	0	42
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	1817	47	184	1821	812	248	47	126	287	0	166
Arrive On Green	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.00	0.11
Sat Flow, veh/h	1781	3535	95	1781	3554	1585	1365	451	1203	1324	0	1585
Grp Volume(v), veh/h	70	614	641	25	1129	42	36	0	11	39	0	42
Grp Sat Flow(s),veh/h/ln	1781	1777	1853	1781	1777	1585	1365	0	1654	1324	0	1585
Q Serve(g_s), s	1.7	12.4	12.4	0.6	10.9	0.6	1.2	0.0	0.3	1.2	0.0	1.1
Cycle Q Clear(g_c), s	1.7	12.4	12.4	0.6	10.9	0.6	2.7	0.0	0.3	1.5	0.0	1.1
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.73	1.00		1.00
Lane Grp Cap(c), veh/h	185	912	951	184	1821	812	248	0	173	287	0	166
V/C Ratio(X)	0.38	0.67	0.67	0.14	0.62	0.05	0.15	0.00	0.06	0.14	0.00	0.25
Avail Cap(c_a), veh/h	679	3780	3942	679	7560	3372	629	0	630	679	0	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	9.1	9.1	20.7	8.8	5.9	22.3	0.0	20.4	21.1	0.0	20.8
Incr Delay (d2), s/veh	1.3	0.9	0.8	0.3	0.3	0.0	0.3	0.0	0.2	0.2	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	1.5	1.4	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.8	3.9	0.2	3.4	0.1	0.4	0.0	0.1	0.4	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.5	11.5	11.3	21.1	10.4	5.9	22.6	0.0	20.6	21.4	0.0	21.6
LnGrp LOS	C	B	B	C	B	A	C		C	C		C
Approach Vol, veh/h	1325			1196			47			81		
Approach Delay, s/veh	12.0			10.5			22.1			21.5		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	28.2		9.5	9.5	28.2		9.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	100.5	100.5		18.0	18.0	100.5		18.0				
Max Q Clear Time (g_c+I), s	12.9	12.9		4.7	2.6	14.4		3.5				
Green Ext Time (p_c), s	0.1	9.3		0.1	0.0	9.3		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	11.8											
HCM 7th LOS	B											

HCM 7th Signalized Intersection Summary 7: Hwy 68 & York Road

Cumulative PM Build Alt 2
09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	56	1099	1073	120	207	98
Future Volume (veh/h)	56	1099	1073	120	207	98
Initial Q (Qb), veh	0	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	1099	1073	120	207	98
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	178	2345	1673	746	287	255
Arrive On Green	0.10	0.65	0.46	0.46	0.16	0.16
Sat Flow, veh/h	1781	3647	3647	1585	1781	1585
Grp Volume(v), veh/h	56	1099	1073	120	207	98
Grp Sat Flow(s), veh/h/ln	1781	1777	1777	1585	1781	1585
Q Serve(g_s), s	1.4	7.6	11.4	2.2	5.4	2.7
Cycle Q Clear(g_c), s	1.4	7.6	11.4	2.2	5.4	2.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	178	2345	1673	746	287	255
V/C Ratio(X)	0.31	0.47	0.64	0.16	0.72	0.38
Avail Cap(c_a), veh/h	657	8951	7314	3262	657	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	4.2	10.6	7.6	21.2	19.9
Incr Delay (d2), s/veh	1.0	0.1	0.4	0.1	3.4	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	2.1	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	4.4	0.5	2.5	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	23.3	4.4	13.1	7.7	24.6	20.9
LnGrp LOS	C	A	B	A	C	C
Approach Vol, veh/h		1155	1193		305	
Approach Delay, s/veh		5.3	12.6		23.4	
Approach LOS		A	B		C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.5	26.9		12.4		36.4
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	100.5	100.5		18.0		123.0
Max Q Clear Time (g_c+I), s	13.4	13.4		7.4		9.6
Green Ext Time (p_c), s	0.1	9.0		0.7		8.7
Intersection Summary						
HCM 7th Control Delay, s/veh			10.7			
HCM 7th LOS			B			

Intersection

Int Delay, s/veh 0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1549	30	0	1270	0	30
Future Vol, veh/h	1549	30	0	1270	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1684	33	0	1380	0	33

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 858
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.32
Pot Cap-1 Maneuver	-	-	0 - 0 300
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 300
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	18.45
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	300	-	-	-
HCM Lane V/C Ratio	0.109	-	-	-
HCM Control Delay (s/veh)	18.5	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	27	399	10	115	250
Future Vol, veh/h	19	27	399	10	115	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	29	434	11	125	272
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	961	439	0	0	445	0
Stage 1	439	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	284	618	-	-	1116	-
Stage 1	650	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	253	618	-	-	1116	-
Mov Cap-2 Maneuver	253	-	-	-	-	-
Stage 1	650	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v	15	0	2.72			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 253 618	1116	-		
HCM Lane V/C Ratio	-	- 0.082 0.048	0.112	-		
HCM Control Delay (s/veh)	-	- 20.5 11.1	8.6	-		
HCM Lane LOS	-	- C B	A	-		
HCM 95th %tile Q(veh)	-	- 0.3 0.1	0.4	-		

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↖			↑
Traffic Vol, veh/h	0	48	415	11	0	365
Future Vol, veh/h	0	48	415	11	0	365
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	48	415	11	0	365

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	421	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	633	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	633	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v11.15		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	633	-
HCM Lane V/C Ratio	-	0.076	-
HCM Control Delay (s/veh)	-	11.2	-
HCM Lane LOS	-	B	-
HCM 95th %tile Q(veh)	-	0.2	-

HCM 7th Signalized Intersection Summary

3: Corral Del Tierra Rd & Hwy 68

Cumul+Proj AM with Existing Lane Configuration

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1041	121	243	1728	6	190	0	273	0	1	1
Future Volume (veh/h)	2	1041	121	243	1728	6	190	0	273	0	1	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	1041	121	243	1728	6	190	0	273	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	975	826	272	1171	4	288	0	256	0	5	4
Arrive On Green	0.04	0.52	0.52	0.15	0.63	0.63	0.16	0.00	0.16	0.00	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	1781	1863	6	1781	0	1580	0	1870	1585
Grp Volume(v), veh/h	2	1041	121	243	0	1734	190	0	273	0	1	1
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	0	1869	1781	0	1580	0	1870	1585
Q Serve(g_s), s	0.1	58.0	4.4	14.9	0.0	70.0	11.1	0.0	18.0	0.0	0.1	0.1
Cycle Q Clear(g_c), s	0.1	58.0	4.4	14.9	0.0	70.0	11.1	0.0	18.0	0.0	0.1	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	80	975	826	272	0	1175	288	0	256	0	5	4
V/C Ratio(X)	0.02	1.07	0.15	0.89	0.00	1.48	0.66	0.00	1.07	0.00	0.20	0.23
Avail Cap(c_a), veh/h	288	975	826	288	0	1175	288	0	256	0	303	256
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	26.6	13.8	46.3	0.0	20.6	43.8	0.0	46.6	0.0	55.4	55.4
Incr Delay (d2), s/veh	0.1	48.7	0.1	27.0	0.0	218.5	5.4	0.0	75.5	0.0	18.2	25.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	35.2	1.4	8.3	0.0	94.9	5.3	0.0	12.4	0.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	50.9	75.4	13.9	73.2	0.0	239.1	49.2	0.0	122.1	0.0	73.6	81.3
LnGrp LOS	D	F	B	E		F	D		F		E	F
Approach Vol, veh/h	1164			1977			463			2		
Approach Delay, s/veh	68.9			218.8			92.2			77.4		
Approach LOS	E			F			F			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.5	62.5		22.5	9.5	74.5		4.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	58.0		18.0	18.0	58.0		18.0				
Max Q Clear Time (g_c+I1), s	16.9	60.0		20.0	2.1	72.0		2.1				
Green Ext Time (p_c), s	0.1	0.0		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	154.1											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary 4: San Benancio Road & Hwy 68

Cumul+Proj AM with Existing Lane Configuration

09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1226	122	125	1748	1	211	1	208	3	0	1
Future Volume (veh/h)	1	1226	122	125	1748	1	211	1	208	3	0	1
Initial Q (Qb), veh	0	0	0	0	70	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1477	1870	1870	1870	1870	1870	1870	984	1870	1870	1870
Adj Flow Rate, veh/h	1	1226	122	125	1748	1	211	1	208	3	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	871	935	185	1200	1	311	1	191	9	0	8
Arrive On Green	0.00	0.59	0.59	0.05	0.64	0.64	0.18	0.18	0.18	0.01	0.00	0.01
Sat Flow, veh/h	1781	1477	1585	3456	1869	1	1773	8	834	1781	0	1585
Grp Volume(v), veh/h	1	1226	122	125	0	1749	212	0	208	3	0	1
Grp Sat Flow(s),veh/h/ln	1781	1477	1585	1728	0	1870	1782	0	834	1781	0	1585
Q Serve(g_s), s	0.1	60.5	3.5	3.6	0.0	65.8	11.4	0.0	18.0	0.2	0.0	0.1
Cycle Q Clear(g_c), s	0.1	60.5	3.5	3.6	0.0	65.8	11.4	0.0	18.0	0.2	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	871	935	185	0	1201	313	0	191	9	0	8
V/C Ratio(X)	0.41	1.41	0.13	0.68	0.00	1.46	0.68	0.00	1.09	0.32	0.00	0.12
Avail Cap(c_a), veh/h	87	871	935	185	0	1201	313	0	191	313	0	278
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	51.1	21.0	9.3	47.6	0.0	18.3	39.5	0.0	39.5	50.8	0.0	50.8
Incr Delay (d2), s/veh	84.1	190.0	0.1	9.4	0.0	210.0	5.8	0.0	90.7	18.5	0.0	6.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	209.8	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	62.3	1.0	1.7	0.0	160.8	5.5	0.0	9.5	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	135.3	211.0	9.4	57.0	0.0	438.1	45.3	0.0	130.2	69.3	0.0	57.0
LnGrp LOS	F	F	A	E		F	D		F	E		E
Approach Vol, veh/h	1349			1874			420			4		
Approach Delay, s/veh	192.7			412.7			87.4			66.2		
Approach LOS	F			F			F			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.6	70.3		22.5	10.0	65.0		5.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	61.0		18.0	5.5	60.5		18.0				
Max Q Clear Time (g_c+I1), s	12.5	67.8		20.0	5.6	62.5		2.2				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				

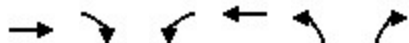
Intersection Summary

HCM 7th Control Delay, s/veh	293.5
HCM 7th LOS	F

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Cumul+Proj AM with Existing Lane Configuration

09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑↑	↑	↑	↑
Traffic Volume (veh/h)	906	228	277	1445	193	237
Future Volume (veh/h)	906	228	277	1445	193	237
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1575	1870	1870
Adj Flow Rate, veh/h	906	228	277	1445	193	237
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1216	1030	302	1221	267	376
Arrive On Green	0.65	0.65	0.09	0.77	0.15	0.15
Sat Flow, veh/h	1870	1585	3456	1575	1781	1585
Grp Volume(v), veh/h	906	228	277	1445	193	237
Grp Sat Flow(s), veh/h/ln	1870	1585	1728	1575	1781	1585
Q Serve(g_s), s	39.5	7.1	9.5	93.0	12.4	16.1
Cycle Q Clear(g_c), s	39.5	7.1	9.5	93.0	12.4	16.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1216	1030	302	1221	267	376
V/C Ratio(X)	0.75	0.22	0.92	1.18	0.72	0.63
Avail Cap(c_a), veh/h	1216	1030	302	1221	267	376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	8.6	54.3	13.5	48.6	41.0
Incr Delay (d2), s/veh	2.5	0.1	31.0	91.3	9.2	3.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.3	2.1	5.3	49.9	6.2	14.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	16.8	8.7	85.3	104.8	57.8	44.4
LnGrp LOS	B	A	F	F	E	D
Approach Vol, veh/h	1134			1722	430	
Approach Delay, s/veh	15.2			101.7	50.4	
Approach LOS	B			F	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		97.5		22.5	15.0	82.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		93.0		18.0	10.5	78.0
Max Q Clear Time (g_c+l1), s		95.0		18.1	11.5	41.5
Green Ext Time (p_c), s		0.0		0.0	0.0	7.9
Intersection Summary						
HCM 7th Control Delay, s/veh			65.1			
HCM 7th LOS			E			

HCM 7th Signalized Intersection Summary 6: Boots Road/Pasadera Drive & Hwy 68

Cumul+Proj AM with Existing Lane Configuration

09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1099	17	20	1569	23	47	4	25	38	0	54
Future Volume (veh/h)	45	1099	17	20	1569	23	47	4	25	38	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	1099	17	20	1569	23	47	4	25	38	0	54
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	77	1391	1179	77	1391	1179	134	21	133	171	0	151
Arrive On Green	0.04	0.74	0.74	0.04	0.74	0.74	0.10	0.10	0.10	0.10	0.00	0.10
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1350	223	1396	1143	0	1585
Grp Volume(v), veh/h	45	1099	17	20	1569	23	47	0	29	38	0	54
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1350	0	1619	1143	0	1585
Q Serve(g_s), s	2.8	41.9	0.3	1.2	85.5	0.4	3.9	0.0	1.9	3.0	0.0	3.7
Cycle Q Clear(g_c), s	2.8	41.9	0.3	1.2	85.5	0.4	8.8	0.0	1.9	4.9	0.0	3.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	77	1391	1179	77	1391	1179	134	0	154	171	0	151
V/C Ratio(X)	0.58	0.79	0.01	0.26	1.13	0.02	0.35	0.00	0.19	0.22	0.00	0.36
Avail Cap(c_a), veh/h	279	1391	1179	279	1391	1179	217	0	254	256	0	248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.9	9.1	3.8	53.2	14.7	3.8	53.4	0.0	47.9	50.2	0.0	48.7
Incr Delay (d2), s/veh	6.7	3.2	0.0	1.7	67.2	0.0	1.6	0.0	0.6	0.6	0.0	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	12.4	0.1	0.6	48.7	0.1	1.4	0.0	0.8	1.1	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.6	12.3	3.8	54.9	81.9	3.8	55.0	0.0	48.5	50.8	0.0	50.1
LnGrp LOS	E	B	A	D	F	A	D		D	D		D
Approach Vol, veh/h	1161			1612			76			92		
Approach Delay, s/veh	14.0			80.5			52.5			50.4		
Approach LOS	B			F			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	90.0			15.4	9.5	90.0		15.4				
Change Period (Y+Rc), s	4.5			4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	85.5		18.0	18.0	85.5		18.0				
Max Q Clear Time (g_c+I), s	14.8	87.5		10.8	3.2	43.9		6.9				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	10.5		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	52.6											
HCM 7th LOS	D											

HCM 7th Signalized Intersection Summary 7: Hwy 68 & York Road

Cumul+Proj AM with Existing Lane Configuration

09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	149	1053	1337	297	84	64
Future Volume (veh/h)	149	1053	1337	297	84	64
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	1053	1337	297	84	64
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	187	1566	1282	1086	122	109
Arrive On Green	0.10	0.84	0.69	0.69	0.07	0.07
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	149	1053	1337	297	84	64
Grp Sat Flow(s), veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	7.8	20.0	65.5	6.9	4.4	3.7
Cycle Q Clear(g_c), s	7.8	20.0	65.5	6.9	4.4	3.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	187	1566	1282	1086	122	109
V/C Ratio(X)	0.80	0.67	1.04	0.27	0.69	0.59
Avail Cap(c_a), veh/h	335	1722	1282	1086	335	299
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.8	2.9	15.0	5.8	43.5	43.2
Incr Delay (d2), s/veh	7.6	0.9	37.1	0.1	6.7	5.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	1.2	30.9	1.6	2.2	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	49.4	3.8	52.2	6.0	50.2	48.2
LnGrp LOS	D	A	F	A	D	D
Approach Vol, veh/h		1202	1634		148	
Approach Delay, s/veh		9.5	43.8		49.3	
Approach LOS		A	D		D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	4.5	70.0		11.1		84.5
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	18.0	65.5		18.0		88.0
Max Q Clear Time (g_c+I), s	19.8	67.5		6.4		22.0
Green Ext Time (p_c), s	0.2	0.0		0.3		10.0
Intersection Summary						
HCM 7th Control Delay, s/veh			30.2			
HCM 7th LOS			C			

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱		↱
Traffic Vol, veh/h	1288	26	0	1977	0	41
Future Vol, veh/h	1288	26	0	1977	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1400	28	0	2149	0	45

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 1414
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.22
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.318
Pot Cap-1 Maneuver	-	-	0 - 0 169
Stage 1	-	-	0 - 0
Stage 2	-	-	0 - 0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 169
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	33.84
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	169	-	-	-
HCM Lane V/C Ratio	0.264	-	-	-
HCM Control Delay (s/veh)	33.8	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	1	-	-	-

Intersection						
Int Delay, s/veh	4.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	160	289	18	221	314
Future Vol, veh/h	39	160	289	18	221	314
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	174	314	20	240	341
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1146	324	0	0	334	0
Stage 1	324	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	220	717	-	-	1226	-
Stage 1	733	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	177	717	-	-	1226	-
Mov Cap-2 Maneuver	177	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	347	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v15.53		0	3.57			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 177 717	1226	-		
HCM Lane V/C Ratio	-	- 0.239 0.243	0.196	-		
HCM Control Delay (s/veh)	-	- 31.6 11.6	8.7	-		
HCM Lane LOS	-	- D B	A	-		
HCM 95th %tile Q(veh)	-	- 0.9 0.9	0.7	-		

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	42	434	15	0	535
Future Vol, veh/h	0	42	434	15	0	535
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	42	434	15	0	535

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	442	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	616	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	-	616	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v11.27		0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	- 616	-
HCM Lane V/C Ratio	-	- 0.068	-
HCM Control Delay (s/veh)	-	- 11.3	-
HCM Lane LOS	-	- B	-
HCM 95th %tile Q(veh)	-	- 0.2	-

HCM 7th Signalized Intersection Summary 3: Corral Del Tierra Rd & Hwy 68

Cumul+Proj PM with Existing Lane Configuration

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1341	201	334	952	1	251	0	225	1	0	0
Future Volume (veh/h)	0	1341	201	334	952	1	251	0	225	1	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1378	1870	1575	1477	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1341	201	334	952	1	251	0	225	1	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	883	1015	182	1168	1	211	0	187	2	0	2
Arrive On Green	0.00	0.64	0.64	0.12	0.79	0.79	0.12	0.00	0.12	0.00	0.00	0.00
Sat Flow, veh/h	1781	1378	1585	1500	1475	2	1781	0	1585	1781	0	1585
Grp Volume(v), veh/h	0	1341	201	334	0	953	251	0	225	1	0	0
Grp Sat Flow(s),veh/h/ln	1781	1378	1585	1500	0	1476	1781	0	1585	1781	0	1585
Q Serve(g_s), s	0.0	97.5	7.9	18.5	0.0	57.7	18.0	0.0	18.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	97.5	7.9	18.5	0.0	57.7	18.0	0.0	18.0	0.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	883	1015	182	0	1169	211	0	187	2	0	2
V/C Ratio(X)	0.00	1.52	0.20	1.83	0.00	0.82	1.19	0.00	1.20	0.41	0.00	0.00
Avail Cap(c_a), veh/h	211	883	1015	182	0	1169	211	0	187	211	0	187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	27.4	11.3	66.9	0.0	9.3	67.1	0.0	67.1	75.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	239.4	0.1	395.0	0.0	4.6	123.3	0.0	130.0	85.3	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	86.2	2.6	26.9	0.0	14.4	15.4	0.0	14.1	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	266.7	11.4	461.8	0.0	13.9	190.4	0.0	197.1	161.3	0.0	0.0
LnGrp LOS		F	B	F		B	F		F	F		
Approach Vol, veh/h	1542			1287			476			1		
Approach Delay, s/veh	233.4			130.1			193.6			161.3		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	23.0	102.0		22.5	0.0	125.0		4.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.5	97.5		18.0	18.0	98.0		18.0				
Max Q Clear Time (g_c+I1), s	20.5	99.5		20.0	0.0	59.7		2.1				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	7.7		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	187.5											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary 4: San Benancio Road & Hwy 68

Cumul+Proj PM with Existing Lane Configuration

09/26/2024

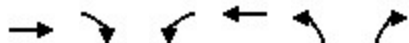


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1413	119	126	1147	3	114	0	95	1	0	2
Future Volume (veh/h)	0	1413	119	126	1147	3	114	0	95	1	0	2
Initial Q (Qb), veh	0	20	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1575	1870	1870	1870	1575	1870	1870	1870
Adj Flow Rate, veh/h	0	1413	119	126	1147	3	114	0	95	1	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	1361	1153	174	1275	3	151	0	180	7	0	6
Arrive On Green	0.00	0.73	0.73	0.05	0.81	0.81	0.08	0.00	0.08	0.00	0.00	0.00
Sat Flow, veh/h	1781	1870	1585	3456	1570	4	1781	0	1335	1781	0	1585
Grp Volume(v), veh/h	0	1413	119	126	0	1150	114	0	95	1	0	2
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1728	0	1574	1781	0	1335	1781	0	1585
Q Serve(g_s), s	0.0	98.3	3.0	4.9	0.0	69.0	8.5	0.0	9.0	0.1	0.0	0.2
Cycle Q Clear(g_c), s	0.0	98.3	3.0	4.9	0.0	69.0	8.5	0.0	9.0	0.1	0.0	0.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1	1361	1153	174	0	1278	151	0	180	7	0	6
V/C Ratio(X)	0.00	1.04	0.10	0.72	0.00	0.90	0.76	0.00	0.53	0.14	0.00	0.32
Avail Cap(c_a), veh/h	66	1361	1153	197	0	1278	237	0	245	237	0	211
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.4	5.4	63.2	0.0	10.7	60.5	0.0	54.4	67.0	0.0	67.1
Incr Delay (d2), s/veh	0.0	34.9	0.0	10.8	0.0	8.9	7.5	0.0	2.4	9.0	0.0	27.0
Initial Q Delay(d3), s/veh	0.0	52.9	0.0	0.0	0.0	9.9	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	64.2	0.8	2.3	0.0	23.4	4.1	0.0	3.1	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	106.2	5.5	74.0	0.0	29.6	68.0	0.0	56.8	76.0	0.0	94.0
LnGrp LOS		F	A	E		C	E		E	E		F
Approach Vol, veh/h	1532			1276			209			3		
Approach Delay, s/veh	98.3			33.9			62.9			88.0		
Approach LOS	F			C			E			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	114.1		15.9	11.3	102.8		5.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	101.0		18.0	7.7	98.3		18.0				
Max Q Clear Time (g_c+I), s	10.0	71.0		11.0	6.9	100.3		2.2				
Green Ext Time (p_c), s	0.0	10.6		0.5	0.0	0.0		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	68.7											
HCM 7th LOS	E											

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Cumul+Proj PM with Existing Lane Configuration

09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑↑	↑	↑	↑
Traffic Volume (veh/h)	1130	119	234	943	225	470
Future Volume (veh/h)	1130	119	234	943	225	470
Initial Q (Qb), veh	17	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1575	1870	1870	1870	1280	1870
Adj Flow Rate, veh/h	1130	119	234	943	225	470
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	835	850	333	1259	325	591
Arrive On Green	0.55	0.55	0.08	0.66	0.27	0.27
Sat Flow, veh/h	1575	1585	3456	1870	1219	1585
Grp Volume(v), veh/h	1130	119	234	943	225	470
Grp Sat Flow(s), veh/h/ln	1575	1585	1728	1870	1219	1585
Q Serve(g_s), s	79.5	5.3	9.6	49.3	23.8	39.2
Cycle Q Clear(g_c), s	79.5	5.3	9.6	49.3	23.8	39.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	835	850	333	1259	325	591
V/C Ratio(X)	1.35	0.14	0.70	0.75	0.69	0.80
Avail Cap(c_a), veh/h	867	872	419	1314	333	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	17.3	65.6	16.0	49.0	41.5
Incr Delay (d2), s/veh	167.0	0.1	3.8	2.3	5.9	8.0
Initial Q Delay(d3), s/veh	73.3	0.0	62.8	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	88.4	2.0	8.5	18.8	8.1	32.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	275.6	17.4	132.2	18.3	54.9	49.5
LnGrp LOS	F	B	F	B	D	D
Approach Vol, veh/h	1249			1177	695	
Approach Delay, s/veh	251.0			41.0	51.2	
Approach LOS	F			D	D	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		100.5		44.0	16.5	84.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		101.5		39.5	17.5	79.5
Max Q Clear Time (g_c+l1), s		51.3		41.2	11.6	81.5
Green Ext Time (p_c), s		7.8		0.0	0.4	0.0
Intersection Summary						
HCM 7th Control Delay, s/veh			127.3			
HCM 7th LOS			F			

HCM 7th Signalized Intersection Summary 6: Boots Road/Pasadera Drive & Hwy 68

Cumul+Proj PM with Existing Lane Configuration

09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1224	33	28	1131	42	36	3	11	39	0	42
Future Volume (veh/h)	70	1224	33	28	1131	42	36	3	11	39	0	42
Initial Q (Qb), veh	0	15	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1575	1870	1870	1575	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	1224	33	28	1131	42	36	3	11	39	0	42
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	1081	1088	110	1077	1084	159	30	110	198	0	136
Arrive On Green	0.06	0.69	0.69	0.06	0.68	0.68	0.09	0.09	0.09	0.09	0.00	0.09
Sat Flow, veh/h	1781	1575	1585	1781	1575	1585	1365	351	1287	1273	0	1585
Grp Volume(v), veh/h	70	1224	33	28	1131	42	36	0	14	39	0	42
Grp Sat Flow(s), veh/h/ln	1781	1575	1585	1781	1575	1585	1365	0	1639	1273	0	1585
Q Serve(g_s), s	3.1	55.7	0.5	1.2	55.5	0.7	2.1	0.0	0.6	2.1	0.0	2.0
Cycle Q Clear(g_c), s	3.1	55.7	0.5	1.2	55.5	0.7	4.9	0.0	0.6	2.8	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		1.00
Lane Grp Cap(c), veh/h	114	1081	1088	110	1077	1084	159	0	140	198	0	136
V/C Ratio(X)	0.61	1.13	0.03	0.26	1.05	0.04	0.23	0.00	0.10	0.20	0.00	0.31
Avail Cap(c_a), veh/h	395	1081	1088	395	1077	1084	345	0	363	388	0	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.0	12.7	4.1	36.3	12.8	4.2	37.5	0.0	34.2	35.5	0.0	34.8
Incr Delay (d2), s/veh	5.2	71.4	0.0	1.2	41.5	0.0	0.7	0.0	0.3	0.5	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	50.0	0.0	0.0	50.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4	47.0	0.1	0.5	38.1	0.1	0.7	0.0	0.3	0.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.2	134.1	4.1	37.5	104.5	4.2	38.2	0.0	34.5	36.0	0.0	36.1
LnGrp LOS	D	F	A	D	F	A	D		C	D		D
Approach Vol, veh/h	1327			1201			50			81		
Approach Delay, s/veh	126.0			99.4			37.2			36.1		
Approach LOS	F			F			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	60.0		11.4	9.5	60.2		11.4				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	55.5		18.0	18.0	55.5		18.0				
Max Q Clear Time (g_c+I), s	15.1	57.5		6.9	3.2	57.7		4.8				
Green Ext Time (p_c), s	0.1	0.0		0.1	0.0	0.0		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	109.6											
HCM 7th LOS	F											

HCM 7th Signalized Intersection Summary

7: Hwy 68 & York Road

Cumul+Proj PM with Existing Lane Configuration

09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	56	1101	1075	120	207	98
Future Volume (veh/h)	56	1101	1075	120	207	98
Initial Q (Qb), veh	0	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1477	1870	1870	1870
Adj Flow Rate, veh/h	56	1101	1075	120	207	98
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	90	1452	1007	1081	243	216
Arrive On Green	0.05	0.78	0.68	0.68	0.14	0.14
Sat Flow, veh/h	1781	1870	1477	1585	1781	1585
Grp Volume(v), veh/h	56	1101	1075	120	207	98
Grp Sat Flow(s), veh/h/ln	1781	1870	1477	1585	1781	1585
Q Serve(g_s), s	3.2	33.1	70.5	2.7	11.7	5.9
Cycle Q Clear(g_c), s	3.2	33.1	70.5	2.7	11.7	5.9
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	90	1452	1007	1081	243	216
V/C Ratio(X)	0.62	0.76	1.07	0.11	0.85	0.45
Avail Cap(c_a), veh/h	310	1683	1007	1081	310	276
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	6.3	16.4	5.7	43.6	41.1
Incr Delay (d2), s/veh	6.7	1.8	48.2	0.0	16.3	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	60.8	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	7.2	46.7	0.7	6.2	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	54.8	8.0	125.4	5.7	59.9	42.5
LnGrp LOS	D	A	F	A	E	D
Approach Vol, veh/h		1157	1195		305	
Approach Delay, s/veh		10.3	113.4		54.3	
Approach LOS		B	F		D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.8	75.0		18.6		84.8
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	10.0	70.5		18.0		93.0
Max Q Clear Time (g_c+I), s	15.2	72.5		13.7		35.1
Green Ext Time (p_c), s	0.1	0.0		0.4		11.0
Intersection Summary						
HCM 7th Control Delay, s/veh			61.7			
HCM 7th LOS			E			

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1512	55	0	1287	0	84
Future Vol, veh/h	1512	55	0	1287	0	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1643	60	0	1399	0	91

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- 1673
Stage 1	-	-	- -
Stage 2	-	-	- -
Critical Hdwy	-	-	- 6.22
Critical Hdwy Stg 1	-	-	- -
Critical Hdwy Stg 2	-	-	- -
Follow-up Hdwy	-	-	- 3.318
Pot Cap-1 Maneuver	-	0	0 118
Stage 1	-	0	0 -
Stage 2	-	0	0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- 118
Mov Cap-2 Maneuver	-	-	- -
Stage 1	-	-	- -
Stage 2	-	-	- -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	99.26
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	118	-	-	-
HCM Lane V/C Ratio	0.773	-	-	-
HCM Control Delay (s/veh)	99.3	-	-	-
HCM Lane LOS	F	-	-	-
HCM 95th %tile Q(veh)	4.4	-	-	-

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	27	399	10	115	250
Future Vol, veh/h	19	27	399	10	115	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	29	434	11	125	272
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	961	439	0	0	445	0
Stage 1	439	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	284	618	-	-	1116	-
Stage 1	650	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	253	618	-	-	1116	-
Mov Cap-2 Maneuver	253	-	-	-	-	-
Stage 1	650	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v	15	0	2.72			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 253 618	1116	-		
HCM Lane V/C Ratio	-	- 0.082 0.048	0.112	-		
HCM Control Delay (s/veh)	-	- 20.5 11.1	8.6	-		
HCM Lane LOS	-	- C B	A	-		
HCM 95th %tile Q(veh)	-	- 0.3 0.1	0.4	-		

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	48	415	11	0	365
Future Vol, veh/h	0	48	415	11	0	365
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	48	415	11	0	365
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	421	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	633	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	633	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v11.15		0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	633		-		
HCM Lane V/C Ratio	-	0.076		-		
HCM Control Delay (s/veh)	-	11.2		-		
HCM Lane LOS	-	B		-		
HCM 95th %tile Q(veh)	-	0.2		-		

Intersection				
Intersection Delay, s/veh	238.2			
Intersection LOS	F			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	1164	1977	463	2
Demand Flow Rate, veh/h	1187	2017	472	2
Vehicles Circulating, veh/h	249	196	1064	2205
Vehicles Exiting, veh/h	1958	1340	372	8
Ped Vol Crossing Leg, #/h	0	1	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	81.0	368.9	75.6	25.4
Approach LOS	F	F	F	D
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	1187	2017	472	2
Cap Entry Lane, veh/h	1070	1130	466	146
Entry HV Adj Factor	0.981	0.980	0.981	0.990
Flow Entry, veh/h	1164	1977	463	2
Cap Entry, veh/h	1050	1108	457	144
V/C Ratio	1.109	1.785	1.012	0.014
Control Delay, s/veh	81.0	368.9	75.6	25.4
LOS	F	F	F	D
95th %tile Queue, veh	29	115	14	0

Intersection				
Intersection Delay, s/veh 23.3				
Intersection LOS F				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	1349	1874	420	4
Demand Flow Rate, veh/h	1376	1912	428	4
Vehicles Circulating, veh/h	131	217	1255	2126
Vehicles Exiting, veh/h	1999	1466	252	3
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	90.0	344.0	114.6	23.5
Approach LOS	F	F	F	C
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	1376	1912	428	4
Cap Entry Lane, veh/h	1207	1106	384	158
Entry HV Adj Factor	0.981	0.980	0.981	1.000
Flow Entry, veh/h	1349	1874	420	4
Cap Entry, veh/h	1184	1084	376	158
V/C Ratio	1.140	1.729	1.116	0.025
Control Delay, s/veh	90.0	344.0	114.6	23.5
LOS	F	F	F	C
95th %tile Queue, veh	35	105	16	0

Intersection					
Intersection Delay, s/veh 49.9					
Intersection LOS F					
Approach	EB		WB		NB
Entry Lanes	1		1		1
Conflicting Circle Lanes	1		1		1
Adj Approach Flow, veh/h	1134		1722		430
Demand Flow Rate, veh/h	1157		1757		439
Vehicles Circulating, veh/h	283		197		924
Vehicles Exiting, veh/h	1671		924		283
Ped Vol Crossing Leg, #/h	0		0		0
Ped Cap Adj	1.000		1.000		1.000
Approach Delay, s/veh	23.0		267.6		13.6
Approach LOS	C		F		B
Lane	Left	Bypass	Left	Left	Bypass
Designated Moves	T	R	LT	L	R
Assumed Moves	T		LT	L	
RT Channelized		Free			Yield
Lane Util	1.000		1.000	1.000	
Follow-Up Headway, s	2.609		2.609	2.609	2.609
Critical Headway, s	4.976		4.976	4.976	4.976
A (Intercept)	1380		1380	1380	1380
B (Slope)	1.02e-3		1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	924	233	1757	197	242
Cap Entry Lane, veh/h	1034	1938	1129	538	538
Entry HV Adj Factor	0.980	0.980	0.980	0.980	0.980
Flow Entry, veh/h	906	228	1722	193	237
Cap Entry, veh/h	1014	1900	1106	527	527
V/C Ratio	0.894	0.120	1.557	0.366	0.450
Control Delay, s/veh	28.8	0.0	267.6	12.6	14.5
LOS	D	A	F	B	B
95th %tile Queue, veh	13	0	85	2	2

Intersection				
Intersection Delay, s/veh100.2				
Intersection LOS F				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	1161	1612	76	92
Demand Flow Rate, veh/h	1184	1643	78	94
Vehicles Circulating, veh/h	59	98	1206	1668
Vehicles Exiting, veh/h	1703	1186	37	73
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	26.9	161.4	12.3	24.9
Approach LOS	D	F	B	C
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	1184	1643	78	94
Cap Entry Lane, veh/h	1299	1249	403	252
Entry HV Adj Factor	0.981	0.981	0.973	0.979
Flow Entry, veh/h	1161	1612	76	92
Cap Entry, veh/h	1274	1225	393	246
V/C Ratio	0.911	1.316	0.193	0.373
Control Delay, s/veh	26.9	161.4	12.3	24.9
LOS	D	F	B	C
95th %tile Queue, veh	15	59	1	2

Intersection				
Intersection Delay, s/veh 126.9				
Intersection LOS F				
Approach	EB	WB	SB	
Entry Lanes	1	1	1	
Conflicting Circle Lanes	1	1	1	
Adj Approach Flow, veh/h	1202	1634	148	
Demand Flow Rate, veh/h	1226	1667	151	
Vehicles Circulating, veh/h	86	152	1364	
Vehicles Exiting, veh/h	1364	1160	455	
Ped Vol Crossing Leg, #/h	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	
Approach Delay, s/veh	37.2	203.0	14.9	
Approach LOS	E	F	B	
Lane	Left	Left	Left	Bypass
Designated Moves	LT	TR	L	R
Assumed Moves	LT	TR	L	
RT Channelized				Yield
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	1226	1667	86	65
Cap Entry Lane, veh/h	1264	1182	343	343
Entry HV Adj Factor	0.980	0.980	0.977	0.980
Flow Entry, veh/h	1202	1634	84	64
Cap Entry, veh/h	1239	1158	335	337
V/C Ratio	0.970	1.411	0.251	0.190
Control Delay, s/veh	37.2	203.0	15.5	14.1
LOS	E	F	C	B
95th %tile Queue, veh	19	68	1	1

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑		↑
Traffic Vol, veh/h	1288	26	0	1977	0	41
Future Vol, veh/h	1288	26	0	1977	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1400	28	0	2149	0	45

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 1414
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.22
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.318
Pot Cap-1 Maneuver	-	-	0 - 0 169
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 169
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	33.84
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	169	-	-	-
HCM Lane V/C Ratio	0.264	-	-	-
HCM Control Delay (s/veh)	33.8	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	1	-	-	-

Intersection						
Int Delay, s/veh	4.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	160	289	18	221	314
Future Vol, veh/h	39	160	289	18	221	314
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	174	314	20	240	341
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1146	324	0	0	334	0
Stage 1	324	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	220	717	-	-	1226	-
Stage 1	733	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	177	717	-	-	1226	-
Mov Cap-2 Maneuver	177	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	347	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v15.53		0	3.57			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 177 717 1226	-	-		
HCM Lane V/C Ratio	-	- 0.239 0.243 0.196	-	-		
HCM Control Delay (s/veh)	-	- 31.6 11.6 8.7	-	-		
HCM Lane LOS	-	- D B A	-	-		
HCM 95th %tile Q(veh)	-	- 0.9 0.9 0.7	-	-		

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	42	434	15	0	535
Future Vol, veh/h	0	42	434	15	0	535
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	42	434	15	0	535
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	442	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	616	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	616	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v11.27		0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	- 616		-		
HCM Lane V/C Ratio	-	- 0.068		-		
HCM Control Delay (s/veh)	-	- 11.3		-		
HCM Lane LOS	-	- B		-		
HCM 95th %tile Q(veh)	-	- 0.2		-		

Intersection				
Intersection Delay, s/veh	161.3			
Intersection LOS	F			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1542	1287	476	1
Demand Flow Rate, veh/h	1573	1313	486	1
Vehicles Circulating, veh/h	342	256	1369	1568
Vehicles Exiting, veh/h	1227	1599	546	1
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	235.3	94.7	102.3	9.7
Approach LOS	F	F	F	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.535	2.535
Critical Headway, s	4.328	4.328	4.328	4.328
A (Intercept)	1420	1420	1420	1420
B (Slope)	8.501e-4	8.501e-4	8.501e-4	8.501e-4
Entry Flow, veh/h	1573	1313	486	1
Cap Entry Lane, veh/h	1062	1142	443	374
Entry HV Adj Factor	0.980	0.980	0.979	1.000
Flow Entry, veh/h	1542	1287	476	1
Cap Entry, veh/h	1041	1120	434	374
V/C Ratio	1.481	1.149	1.096	0.003
Control Delay, s/veh	235.3	94.7	102.3	9.7
LOS	F	F	F	A
95th %tile Queue, veh	71	35	16	0

Intersection				
Intersection Delay, s/veh84.2				
Intersection LOS F				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1532	1276	209	3
Demand Flow Rate, veh/h	1562	1302	213	3
Vehicles Circulating, veh/h	130	116	1442	1415
Vehicles Exiting, veh/h	1288	1539	250	3
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	124.4	46.7	20.2	8.5
Approach LOS	F	E	C	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.535	2.535
Critical Headway, s	4.328	4.328	4.328	4.328
A (Intercept)	1420	1420	1420	1420
B (Slope)	8.501e-4	8.501e-4	8.501e-4	8.501e-4
Entry Flow, veh/h	1562	1302	213	3
Cap Entry Lane, veh/h	1272	1287	417	426
Entry HV Adj Factor	0.981	0.980	0.981	1.000
Flow Entry, veh/h	1532	1276	209	3
Cap Entry, veh/h	1247	1261	409	426
V/C Ratio	1.228	1.012	0.511	0.007
Control Delay, s/veh	124.4	46.7	20.2	8.5
LOS	F	F	C	A
95th %tile Queue, veh	48	23	3	0

Intersection				
Intersection Delay, s/veh68.6				
Intersection LOS F				
Approach	EB	WB	NB	
Entry Lanes	1	1	1	
Conflicting Circle Lanes	2	2	2	
Adj Approach Flow, veh/h	1249	1177	695	
Demand Flow Rate, veh/h	1274	1201	709	
Vehicles Circulating, veh/h	239	230	1153	
Vehicles Exiting, veh/h	1192	1153	360	
Ped Vol Crossing Leg, #/h	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	
Approach Delay, s/veh	75.9	53.2	81.6	
Approach LOS	F	F	F	
Lane	Left	Left	Left	Bypass
Designated Moves	TR	LT	L	R
Assumed Moves	TR	LT	L	
RT Channelized				Yield
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.535	2.535	2.535	2.609
Critical Headway, s	4.328	4.328	4.328	4.976
A (Intercept)	1420	1420	1420	1380
B (Slope)	8.501e-4	8.501e-4	8.501e-4	1.02e-3
Entry Flow, veh/h	1274	1201	230	479
Cap Entry Lane, veh/h	1159	1168	533	426
Entry HV Adj Factor	0.981	0.980	0.978	0.980
Flow Entry, veh/h	1249	1177	225	470
Cap Entry, veh/h	1137	1145	521	417
V/C Ratio	1.099	1.028	0.432	1.126
Control Delay, s/veh	75.9	53.2	14.2	113.9
LOS	F	F	B	F
95th %tile Queue, veh	30	23	2	17

Intersection				
Intersection Delay, s/veh37.9				
Intersection LOS E				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	2	2	2	2
Adj Approach Flow, veh/h	1327	1201	50	81
Demand Flow Rate, veh/h	1353	1226	51	83
Vehicles Circulating, veh/h	69	111	1359	1220
Vehicles Exiting, veh/h	1234	1299	63	117
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	45.4	32.8	9.8	9.6
Approach LOS	E	D	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.535	2.535	2.535	2.535
Critical Headway, s	4.328	4.328	4.328	4.328
A (Intercept)	1420	1420	1420	1420
B (Slope)	8.501e-4	8.501e-4	8.501e-4	8.501e-4
Entry Flow, veh/h	1353	1226	51	83
Cap Entry Lane, veh/h	1339	1292	447	503
Entry HV Adj Factor	0.980	0.980	0.979	0.976
Flow Entry, veh/h	1327	1201	50	81
Cap Entry, veh/h	1313	1266	438	491
V/C Ratio	1.010	0.949	0.114	0.165
Control Delay, s/veh	45.4	32.8	9.8	9.6
LOS	F	D	A	A
95th %tile Queue, veh	23	18	0	1

Intersection				
Intersection Delay, s/veh31.7				
Intersection LOS D				
Approach	EB	WB	SB	
Entry Lanes	1	1	1	
Conflicting Circle Lanes	2	2	2	
Adj Approach Flow, veh/h	1157	1195	305	
Demand Flow Rate, veh/h	1180	1219	311	
Vehicles Circulating, veh/h	211	57	1096	
Vehicles Exiting, veh/h	1097	1334	179	
Ped Vol Crossing Leg, #/h	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	
Approach Delay, s/veh	44.0	24.9	12.1	
Approach LOS	E	C	B	
Lane	Left	Left	Left	Bypass
Designated Moves	LT	TR	L	R
Assumed Moves	LT	TR	L	
RT Channelized				Yield
Lane Util	1.000	1.000	1.000	
Follow-Up Headway, s	2.535	2.535	2.535	2.609
Critical Headway, s	4.328	4.328	4.328	4.976
A (Intercept)	1420	1420	1420	1380
B (Slope)	8.501e-4	8.501e-4	8.501e-4	1.02e-3
Entry Flow, veh/h	1180	1219	211	100
Cap Entry Lane, veh/h	1187	1353	559	451
Entry HV Adj Factor	0.980	0.981	0.981	0.980
Flow Entry, veh/h	1157	1195	207	98
Cap Entry, veh/h	1164	1327	549	442
V/C Ratio	0.994	0.901	0.377	0.222
Control Delay, s/veh	44.0	24.9	12.4	11.6
LOS	E	C	B	B
95th %tile Queue, veh	20	14	2	1

Intersection						
Int Delay, s/veh	2.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱		↱
Traffic Vol, veh/h	1512	55	0	1287	0	84
Future Vol, veh/h	1512	55	0	1287	0	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1643	60	0	1399	0	91

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- 1673
Stage 1	-	-	- -
Stage 2	-	-	- -
Critical Hdwy	-	-	- 6.22
Critical Hdwy Stg 1	-	-	- -
Critical Hdwy Stg 2	-	-	- -
Follow-up Hdwy	-	-	- 3.318
Pot Cap-1 Maneuver	-	0	0 118
Stage 1	-	0	0 -
Stage 2	-	0	0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- 118
Mov Cap-2 Maneuver	-	-	- -
Stage 1	-	-	- -
Stage 2	-	-	- -

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	99.26
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	118	-	-	-
HCM Lane V/C Ratio	0.773	-	-	-
HCM Control Delay (s/veh)	99.3	-	-	-
HCM Lane LOS	F	-	-	-
HCM 95th %tile Q(veh)	4.4	-	-	-

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	27	399	10	115	250
Future Vol, veh/h	19	27	399	10	115	250
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	21	29	434	11	125	272
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	961	439	0	0	445	0
Stage 1	439	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	284	618	-	-	1116	-
Stage 1	650	-	-	-	-	-
Stage 2	596	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	253	618	-	-	1116	-
Mov Cap-2 Maneuver	253	-	-	-	-	-
Stage 1	650	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v	15	0	2.72			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 253 618	1116	-		
HCM Lane V/C Ratio	-	- 0.082 0.048	0.112	-		
HCM Control Delay (s/veh)	-	- 20.5 11.1	8.6	-		
HCM Lane LOS	-	- C B	A	-		
HCM 95th %tile Q(veh)	-	- 0.3 0.1	0.4	-		

Intersection						
Int Delay, s/veh	0.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	48	415	11	0	365
Future Vol, veh/h	0	48	415	11	0	365
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	48	415	11	0	365
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	421	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	633	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	633	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v11.15		0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	-		633	-	
HCM Lane V/C Ratio	-	-		0.076	-	
HCM Control Delay (s/veh)	-	-		11.2	-	
HCM Lane LOS	-	-		B	-	
HCM 95th %tile Q(veh)	-	-		0.2	-	

HCM 7th Signalized Intersection Summary

3: Corral Del Tierra Rd & Hwy 68

Cumulative + Project AM Build Alt 2

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1041	121	243	1728	6	190	0	273	0	1	1
Future Volume (veh/h)	2	1041	121	243	1728	6	190	0	273	0	1	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	2	1041	121	243	1728	6	190	0	273	0	1	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	92	1483	172	283	2069	7	340	0	302	5	2	2
Arrive On Green	0.05	0.46	0.46	0.16	0.57	0.57	0.19	0.00	0.19	0.00	0.00	0.00
Sat Flow, veh/h	1781	3208	373	1781	3632	13	1781	0	1583	1781	858	858
Grp Volume(v), veh/h	2	576	586	243	845	889	190	0	273	0	0	2
Grp Sat Flow(s),veh/h/ln	1781	1777	1803	1781	1777	1868	1781	0	1583	1781	0	1716
Q Serve(g_s), s	0.1	25.1	25.1	12.9	37.9	37.9	9.4	0.0	16.4	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.1	25.1	25.1	12.9	37.9	37.9	9.4	0.0	16.4	0.0	0.0	0.1
Prop In Lane	1.00		0.21	1.00		0.01	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	92	821	834	283	1012	1064	340	0	302	5	0	5
V/C Ratio(X)	0.02	0.70	0.70	0.86	0.83	0.84	0.56	0.00	0.90	0.00	0.00	0.43
Avail Cap(c_a), veh/h	332	1213	1231	526	1407	1479	347	0	308	332	0	320
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	43.7	20.8	20.8	39.8	17.1	17.2	35.6	0.0	38.4	0.0	0.0	48.3
Incr Delay (d2), s/veh	0.1	1.1	1.1	7.5	3.2	3.1	1.9	0.0	28.1	0.0	0.0	52.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.2	9.4	5.8	13.1	13.8	4.2	0.0	8.6	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.8	21.9	21.9	47.2	20.4	20.2	37.5	0.0	66.5	0.0	0.0	101.0
LnGrp LOS	D	C	C	D	C	C	D		E			F
Approach Vol, veh/h	1164			1977			463			2		
Approach Delay, s/veh	21.9			23.6			54.6			101.0		
Approach LOS	C			C			D			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.9	49.4		23.0	9.5	59.8		4.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	28.7	66.3		18.9	18.1	76.9		18.1				
Max Q Clear Time (g_c+I1), s	14.9	27.1		18.4	2.1	39.9		2.1				
Green Ext Time (p_c), s	0.5	8.0		0.1	0.0	15.4		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh				27.1								
HCM 7th LOS				C								

HCM 7th Signalized Intersection Summary

4: San Benancio Road & Hwy 68

Cumulative + Project AM Build Alt 2

09/26/2024

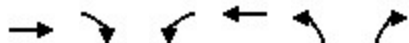


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	1226	122	125	1748	1	211	1	208	3	0	1
Future Volume (veh/h)	1	1226	122	125	1748	1	211	1	208	3	0	1
Initial Q (Qb), veh	0	0	0	0	70	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1	1226	122	125	1748	1	211	1	208	3	0	1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	2000	199	77	2344	1	269	1	238	9	0	8
Arrive On Green	0.00	0.54	0.54	0.07	0.61	0.61	0.16	0.16	0.16	0.01	0.00	0.01
Sat Flow, veh/h	1781	3265	324	1781	3645	2	1781	8	1579	1781	0	1585
Grp Volume(v), veh/h	1	666	682	125	852	897	211	0	209	3	0	1
Grp Sat Flow(s),veh/h/ln	1781	1777	1812	1781	1777	1870	1781	0	1586	1781	0	1585
Q Serve(g_s), s	0.0	22.3	22.5	5.5	29.3	29.3	9.1	0.0	10.3	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.0	22.3	22.5	5.5	29.3	29.3	9.1	0.0	10.3	0.1	0.0	0.1
Prop In Lane	1.00		0.18	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	1089	1110	77	1142	1199	269	0	240	9	0	8
V/C Ratio(X)	0.41	0.61	0.61	1.63	0.75	0.75	0.78	0.00	0.87	0.32	0.00	0.12
Avail Cap(c_a), veh/h	110	1983	2022	121	1994	2098	395	0	352	395	0	352
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.4	12.2	12.3	61.2	14.2	14.1	44.0	0.0	44.7	53.0	0.0	53.0
Incr Delay (d2), s/veh	84.2	0.6	0.6	335.4	1.0	1.0	6.1	0.0	14.8	18.6	0.0	6.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	26.6	24.3	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	7.7	7.9	9.5	23.3	23.4	5.8	0.0	6.4	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	137.6	12.8	12.8	396.5	41.8	39.4	50.1	0.0	59.5	71.6	0.0	59.3
LnGrp LOS	F	B	B	F	D	D	D		E	E		E
Approach Vol, veh/h	1349			1874			420			4		
Approach Delay, s/veh	12.9			64.3			54.8			68.5		
Approach LOS	B			E			D			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.6	53.8		17.8	10.0	48.4		4.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	91.0		18.0	5.5	90.5		18.0				
Max Q Clear Time (g_c+I), s	12.0	31.3		12.3	7.5	24.5		2.1				
Green Ext Time (p_c), s	0.0	17.9		1.0	0.0	10.7		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	44.2											
HCM 7th LOS	D											

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Cumulative + Project AM Build Alt 2

09/26/2024



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑↑	↑↑	↑	↑
Traffic Volume (veh/h)	906	228	277	1445	193	237
Future Volume (veh/h)	906	228	277	1445	193	237
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	906	228	277	1445	193	237
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1438	641	439	2225	329	494
Arrive On Green	0.40	0.40	0.13	0.63	0.18	0.18
Sat Flow, veh/h	3647	1585	3456	3647	1781	1585
Grp Volume(v), veh/h	906	228	277	1445	193	237
Grp Sat Flow(s), veh/h/ln	1777	1585	1728	1777	1781	1585
Q Serve(g_s), s	9.7	4.8	3.6	12.2	4.7	5.8
Cycle Q Clear(g_c), s	9.7	4.8	3.6	12.2	4.7	5.8
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1438	641	439	2225	329	494
V/C Ratio(X)	0.63	0.36	0.63	0.65	0.59	0.48
Avail Cap(c_a), veh/h	7766	3464	1053	9185	674	801
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.3	9.8	19.7	5.6	17.7	13.3
Incr Delay (d2), s/veh	0.5	0.3	1.5	0.3	1.7	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	1.1	1.2	1.2	1.9	5.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	11.8	10.2	21.2	5.9	19.4	14.0
LnGrp LOS	B	B	C	A	B	B
Approach Vol, veh/h	1134			1722	430	
Approach Delay, s/veh	11.5			8.4	16.4	
Approach LOS	B			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		34.3		13.3	10.5	23.8
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		123.0		18.0	14.5	104.0
Max Q Clear Time (g_c+l1), s		14.2		7.8	5.6	11.7
Green Ext Time (p_c), s		14.1		1.1	0.6	7.6
Intersection Summary						
HCM 7th Control Delay, s/veh			10.5			
HCM 7th LOS			B			

HCM 7th Signalized Intersection Summary 6: Boots Road/Pasadera Drive & Hwy 68

Cumulative + Project AM Build Alt 2

09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1099	17	20	1569	23	47	4	25	38	0	54
Future Volume (veh/h)	45	1099	17	20	1569	23	47	4	25	38	0	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	1099	17	20	1569	23	47	4	25	38	0	54
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	2145	957	138	2145	957	202	24	152	240	0	173
Arrive On Green	0.08	0.60	0.60	0.08	0.60	0.60	0.11	0.11	0.11	0.11	0.00	0.11
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1350	223	1396	1175	0	1585
Grp Volume(v), veh/h	45	1099	17	20	1569	23	47	0	29	38	0	54
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1350	0	1619	1175	0	1585
Q Serve(g_s), s	1.5	11.4	0.3	0.7	20.2	0.4	2.2	0.0	1.0	1.7	0.0	2.0
Cycle Q Clear(g_c), s	1.5	11.4	0.3	0.7	20.2	0.4	4.9	0.0	1.0	2.7	0.0	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	138	2145	957	138	2145	957	202	0	177	240	0	173
V/C Ratio(X)	0.33	0.51	0.02	0.14	0.73	0.02	0.23	0.00	0.16	0.16	0.00	0.31
Avail Cap(c_a), veh/h	498	5546	2474	498	5546	2474	432	0	453	475	0	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.1	7.3	5.1	27.7	9.1	5.1	29.0	0.0	26.0	27.2	0.0	26.4
Incr Delay (d2), s/veh	1.4	0.2	0.0	0.5	0.5	0.0	0.6	0.0	0.4	0.3	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.5	0.1	0.3	4.5	0.1	0.7	0.0	0.4	0.5	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	29.5	7.5	5.1	28.2	9.6	5.1	29.6	0.0	26.4	27.5	0.0	27.5
LnGrp LOS	C	A	A	C	A	A	C		C	C		C
Approach Vol, veh/h	1161			1612			76			92		
Approach Delay, s/veh	8.3			9.7			28.4			27.5		
Approach LOS	A			A			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	43.4		11.5	9.5	43.4		11.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	100.5	100.5		18.0	18.0	100.5		18.0				
Max Q Clear Time (g_c+I), s	22.2	22.2		6.9	2.7	13.4		4.7				
Green Ext Time (p_c), s	0.1	16.7		0.1	0.0	8.8		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	10.2											
HCM 7th LOS	B											

HCM 7th Signalized Intersection Summary

7: Hwy 68 & York Road

Cumulative + Project AM Build Alt 2

09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	149	1053	1337	297	84	64
Future Volume (veh/h)	149	1053	1337	297	84	64
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	1053	1337	297	84	64
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	215	2697	1984	885	143	127
Arrive On Green	0.12	0.76	0.56	0.56	0.08	0.08
Sat Flow, veh/h	1781	3647	3647	1585	1781	1585
Grp Volume(v), veh/h	149	1053	1337	297	84	64
Grp Sat Flow(s), veh/h/ln	1781	1777	1777	1585	1781	1585
Q Serve(g_s), s	4.5	5.7	14.9	5.7	2.5	2.2
Cycle Q Clear(g_c), s	4.5	5.7	14.9	5.7	2.5	2.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	215	2697	1984	885	143	127
V/C Ratio(X)	0.69	0.39	0.67	0.34	0.59	0.50
Avail Cap(c_a), veh/h	572	7802	6375	2843	572	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	2.3	8.8	6.7	24.9	24.7
Incr Delay (d2), s/veh	4.0	0.1	0.4	0.2	3.8	3.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	3.2	1.1	1.2	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	27.6	2.4	9.2	7.0	28.7	27.7
LnGrp LOS	C	A	A	A	C	C
Approach Vol, veh/h		1202	1634		148	
Approach Delay, s/veh		5.5	8.8		28.3	
Approach LOS		A	A		C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.3	35.8		9.0		47.0
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	100.5	100.5		18.0		123.0
Max Q Clear Time (g_c+I), s	16.9	16.9		4.5		7.7
Green Ext Time (p_c), s	0.3	14.3		0.3		8.1
Intersection Summary						
HCM 7th Control Delay, s/veh			8.4			
HCM 7th LOS			A			

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1288	26	0	1977	0	41
Future Vol, veh/h	1288	26	0	1977	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1400	28	0	2149	0	45
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	714
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	374
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	374
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s/v	0		0		15.94	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	374	-	-	-		
HCM Lane V/C Ratio	0.119	-	-	-		
HCM Control Delay (s/veh)	15.9	-	-	-		
HCM Lane LOS	C	-	-	-		
HCM 95th %tile Q(veh)	0.4	-	-	-		

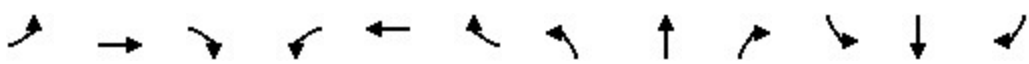
Intersection						
Int Delay, s/veh	4.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	160	289	18	221	314
Future Vol, veh/h	39	160	289	18	221	314
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	174	314	20	240	341
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1146	324	0	0	334	0
Stage 1	324	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	220	717	-	-	1226	-
Stage 1	733	-	-	-	-	-
Stage 2	432	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	177	717	-	-	1226	-
Mov Cap-2 Maneuver	177	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	347	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s/v15.53		0	3.57			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 177 717	1226	-		
HCM Lane V/C Ratio	-	- 0.239 0.243	0.196	-		
HCM Control Delay (s/veh)	-	- 31.6 11.6	8.7	-		
HCM Lane LOS	-	- D B	A	-		
HCM 95th %tile Q(veh)	-	- 0.9 0.9	0.7	-		

Intersection						
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	42	434	15	0	535
Future Vol, veh/h	0	42	434	15	0	535
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	42	434	15	0	535
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	442	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	616	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	616	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s/v11.27		0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	616		-		
HCM Lane V/C Ratio	-	0.068		-		
HCM Control Delay (s/veh)	-	11.3		-		
HCM Lane LOS	-	B		-		
HCM 95th %tile Q(veh)	-	0.2		-		

HCM 7th Signalized Intersection Summary 3: Corral Del Tierra Rd & Hwy 68

Cumulative + Project PM Build Alt 2

09/26/2024

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1341	201	334	952	1	251	0	225	1	0	0
Future Volume (veh/h)	0	1341	201	334	952	1	251	0	225	1	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1341	201	334	952	1	251	0	225	1	0	0
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1	1510	224	363	2652	3	281	0	250	2	3	0
Arrive On Green	0.00	0.49	0.49	0.20	0.73	0.73	0.16	0.00	0.16	0.00	0.00	0.00
Sat Flow, veh/h	1781	3103	461	1781	3643	4	1781	0	1585	1781	1870	0
Grp Volume(v), veh/h	0	763	779	334	464	489	251	0	225	1	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1787	1781	1777	1870	1781	0	1585	1781	1870	0
Q Serve(g_s), s	0.0	46.3	47.5	22.0	11.5	11.5	16.5	0.0	16.7	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.0	46.3	47.5	22.0	11.5	11.5	16.5	0.0	16.7	0.1	0.0	0.0
Prop In Lane	1.00		0.26	1.00		0.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1	865	870	363	1294	1361	281	0	250	2	3	0
V/C Ratio(X)	0.00	0.88	0.90	0.92	0.36	0.36	0.89	0.00	0.90	0.41	0.00	0.00
Avail Cap(c_a), veh/h	268	979	985	424	1294	1361	290	0	258	268	281	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	27.6	28.0	46.7	6.0	6.0	49.5	0.0	49.5	59.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	8.7	9.9	23.1	0.2	0.2	27.0	0.0	30.7	84.5	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	19.6	20.4	11.6	3.2	3.4	9.5	0.0	8.7	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	36.4	37.8	69.8	6.2	6.2	76.5	0.0	80.2	144.3	0.0	0.0
LnGrp LOS		D	D	E	A	A	E		F	F		
Approach Vol, veh/h	1542			1287			476			1		
Approach Delay, s/veh	37.1			22.7			78.3			144.3		
Approach LOS	D			C			E			F		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	28.9	62.8		23.4	0.0	91.7		4.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	28.5	66.0		19.5	18.0	76.5		18.0				
Max Q Clear Time (g_c+I1), s	24.0	49.5		18.7	0.0	13.5		2.1				
Green Ext Time (p_c), s	0.4	8.8		0.2	0.0	5.9		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh				37.5								
HCM 7th LOS				D								

HCM 7th Signalized Intersection Summary 4: San Benancio Road & Hwy 68

Cumulative + Project PM Build Alt 2

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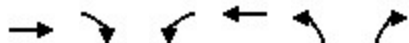


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1413	119	126	1147	3	114	0	95	1	0	2
Future Volume (veh/h)	0	1413	119	126	1147	3	114	0	95	1	0	2
Initial Q (Qb), veh	0	20	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	1413	119	126	1147	3	114	0	95	1	0	2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	2	1972	945	85	2553	7	167	0	148	7	0	6
Arrive On Green	0.00	0.54	0.54	0.09	0.70	0.70	0.10	0.00	0.10	0.00	0.00	0.00
Sat Flow, veh/h	1781	3554	1585	1781	3636	10	1781	0	1585	1781	0	1585
Grp Volume(v), veh/h	0	1413	119	126	561	589	114	0	95	1	0	2
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1869	1781	0	1585	1781	0	1585
Q Serve(g_s), s	0.0	20.5	2.5	4.7	9.4	9.4	4.2	0.0	3.9	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	20.5	2.5	4.7	9.4	9.4	4.2	0.0	3.9	0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	2	1972	945	85	1247	1311	167	0	148	7	0	6
V/C Ratio(X)	0.00	0.72	0.13	1.47	0.45	0.45	0.68	0.00	0.64	0.14	0.00	0.31
Avail Cap(c_a), veh/h	132	5221	2329	171	2650	2787	473	0	421	473	0	421
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.2	7.0	64.5	4.8	4.8	38.4	0.0	38.2	43.1	0.0	43.2
Incr Delay (d2), s/veh	0.0	0.5	0.1	246.9	0.3	0.2	4.9	0.0	4.5	8.6	0.0	25.8
Initial Q Delay(d3), s/veh	0.0	2.6	0.0	0.0	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.9	0.7	8.7	2.4	2.4	2.5	0.0	2.1	0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	0.0	15.3	7.0	311.4	5.5	5.4	43.3	0.0	42.8	51.8	0.0	68.9
LnGrp LOS		B	A	F	A	A	D		D	D		E
Approach Vol, veh/h	1532			1276			209			3		
Approach Delay, s/veh	14.7			35.7			43.0			63.2		
Approach LOS	B			D			D			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	51.8		11.2	10.6	41.2		4.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.0	101.0		18.0	6.5	99.5		18.0				
Max Q Clear Time (g_c+I1), s	11.4			6.2	6.7	22.5		2.1				
Green Ext Time (p_c), s	0.0	8.0		0.6	0.0	14.2		0.0				
Intersection Summary												
HCM 7th Control Delay, s/veh	25.6											
HCM 7th LOS	C											

HCM 7th Signalized Intersection Summary 5: Laureles Grade & Hwy 68

Cumulative + Project PM Build Alt 2

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Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑↑	↑↑	↑	↑
Traffic Volume (veh/h)	1130	119	234	943	225	470
Future Volume (veh/h)	1130	119	234	943	225	470
Initial Q (Qb), veh	17	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1130	119	234	943	225	470
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1506	671	402	2122	521	652
Arrive On Green	0.42	0.42	0.10	0.58	0.30	0.30
Sat Flow, veh/h	3647	1585	3456	3647	1781	1585
Grp Volume(v), veh/h	1130	119	234	943	225	470
Grp Sat Flow(s), veh/h/ln	1777	1585	1728	1777	1781	1585
Q Serve(g_s), s	20.7	3.6	5.0	11.6	7.7	19.2
Cycle Q Clear(g_c), s	20.7	3.6	5.0	11.6	7.7	19.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1506	671	402	2122	521	652
V/C Ratio(X)	0.75	0.18	0.58	0.44	0.43	0.72
Avail Cap(c_a), veh/h	3136	1399	1649	5040	757	833
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	15.3	35.8	9.1	25.3	20.8
Incr Delay (d2), s/veh	0.8	0.1	1.3	0.1	0.6	2.2
Initial Q Delay(d3), s/veh	3.7	0.0	30.7	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	1.3	5.2	3.4	3.7	18.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	26.6	15.4	67.9	9.2	25.8	23.0
LnGrp LOS	C	B	E	A	C	C
Approach Vol, veh/h	1249			1177	695	
Approach Delay, s/veh	25.5			20.9	23.9	
Approach LOS	C			C	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		48.8		27.7	12.2	36.6
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		108.5		32.5	36.5	67.5
Max Q Clear Time (g_c+l1), s		13.6		21.2	7.0	22.7
Green Ext Time (p_c), s		6.9		2.0	0.7	9.4
Intersection Summary						
HCM 7th Control Delay, s/veh			23.4			
HCM 7th LOS			C			

HCM 7th Signalized Intersection Summary 6: Boots Road/Pasadera Drive & Hwy 68

Cumulative + Project PM Build Alt 2

09/26/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1224	33	28	1131	42	36	3	11	39	0	42
Future Volume (veh/h)	70	1224	33	28	1131	42	36	3	11	39	0	42
Initial Q (Qb), veh	0	15	0	0	15	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	70	1224	33	28	1131	42	36	3	11	39	0	42
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	1819	47	184	1823	813	245	37	135	284	0	166
Arrive On Green	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.00	0.11
Sat Flow, veh/h	1781	3535	95	1781	3554	1585	1365	351	1287	1298	0	1585
Grp Volume(v), veh/h	70	615	642	28	1131	42	36	0	14	39	0	42
Grp Sat Flow(s),veh/h/ln	1781	1777	1853	1781	1777	1585	1365	0	1639	1298	0	1585
Q Serve(g_s), s	1.7	12.4	12.5	0.7	11.0	0.6	1.2	0.0	0.4	1.2	0.0	1.2
Cycle Q Clear(g_c), s	1.7	12.4	12.5	0.7	11.0	0.6	2.8	0.0	0.4	1.6	0.0	1.2
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.79	1.00		1.00
Lane Grp Cap(c), veh/h	185	913	952	184	1823	813	245	0	171	284	0	166
V/C Ratio(X)	0.38	0.67	0.67	0.15	0.62	0.05	0.15	0.00	0.08	0.14	0.00	0.25
Avail Cap(c_a), veh/h	678	3775	3938	678	7551	3368	626	0	624	674	0	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	9.1	9.1	20.8	8.8	5.9	22.5	0.0	20.5	21.3	0.0	20.9
Incr Delay (d2), s/veh	1.3	0.9	0.8	0.4	0.3	0.0	0.3	0.0	0.2	0.2	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	1.5	1.4	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.9	3.9	0.3	3.4	0.1	0.4	0.0	0.1	0.4	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.5	11.5	11.3	21.2	10.4	5.9	22.7	0.0	20.7	21.5	0.0	21.7
LnGrp LOS	C	B	B	C	B	A	C		C	C		C
Approach Vol, veh/h	1327			1201			50			81		
Approach Delay, s/veh	12.0			10.5			22.2			21.6		
Approach LOS	B			B			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	28.3		9.5	9.5	28.3		9.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	100.5	100.5		18.0	18.0	100.5		18.0				
Max Q Clear Time (g_c+I), s	13.0	13.0		4.8	2.7	14.5		3.6				
Green Ext Time (p_c), s	0.1	9.3		0.1	0.0	9.3		0.2				
Intersection Summary												
HCM 7th Control Delay, s/veh	11.8											
HCM 7th LOS	B											

HCM 7th Signalized Intersection Summary 7: Hwy 68 & York Road

Cumulative + Project PM Build Alt 2

09/26/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	56	1101	1075	120	207	98
Future Volume (veh/h)	56	1101	1075	120	207	98
Initial Q (Qb), veh	0	0	17	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	1101	1075	120	207	98
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	178	2347	1675	747	287	255
Arrive On Green	0.10	0.65	0.46	0.46	0.16	0.16
Sat Flow, veh/h	1781	3647	3647	1585	1781	1585
Grp Volume(v), veh/h	56	1101	1075	120	207	98
Grp Sat Flow(s), veh/h/ln	1781	1777	1777	1585	1781	1585
Q Serve(g_s), s	1.4	7.6	11.5	2.2	5.4	2.7
Cycle Q Clear(g_c), s	1.4	7.6	11.5	2.2	5.4	2.7
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	178	2347	1675	747	287	255
V/C Ratio(X)	0.32	0.47	0.64	0.16	0.72	0.38
Avail Cap(c_a), veh/h	656	8939	7304	3258	656	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	4.2	10.6	7.6	21.2	20.0
Incr Delay (d2), s/veh	1.0	0.1	0.4	0.1	3.4	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	2.1	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	4.4	0.5	2.5	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	23.4	4.4	13.1	7.7	24.6	20.9
LnGrp LOS	C	A	B	A	C	C
Approach Vol, veh/h		1157	1195		305	
Approach Delay, s/veh		5.3	12.6		23.4	
Approach LOS		A	B		C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	9.5	27.0		12.4		36.5
Change Period (Y+Rc), s	4.5	4.5		4.5		4.5
Max Green Setting (Gmax), s	100.5	100.5		18.0		123.0
Max Q Clear Time (g_c+I), s	13.4	13.5		7.4		9.6
Green Ext Time (p_c), s	0.1	9.0		0.7		8.7
Intersection Summary						
HCM 7th Control Delay, s/veh			10.7			
HCM 7th LOS			B			

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1512	55	0	1287	0	84
Future Vol, veh/h	1512	55	0	1287	0	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1643	60	0	1399	0	91

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	852
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	303
Stage 1	-	-	0	-	-
Stage 2	-	-	0	-	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	303
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

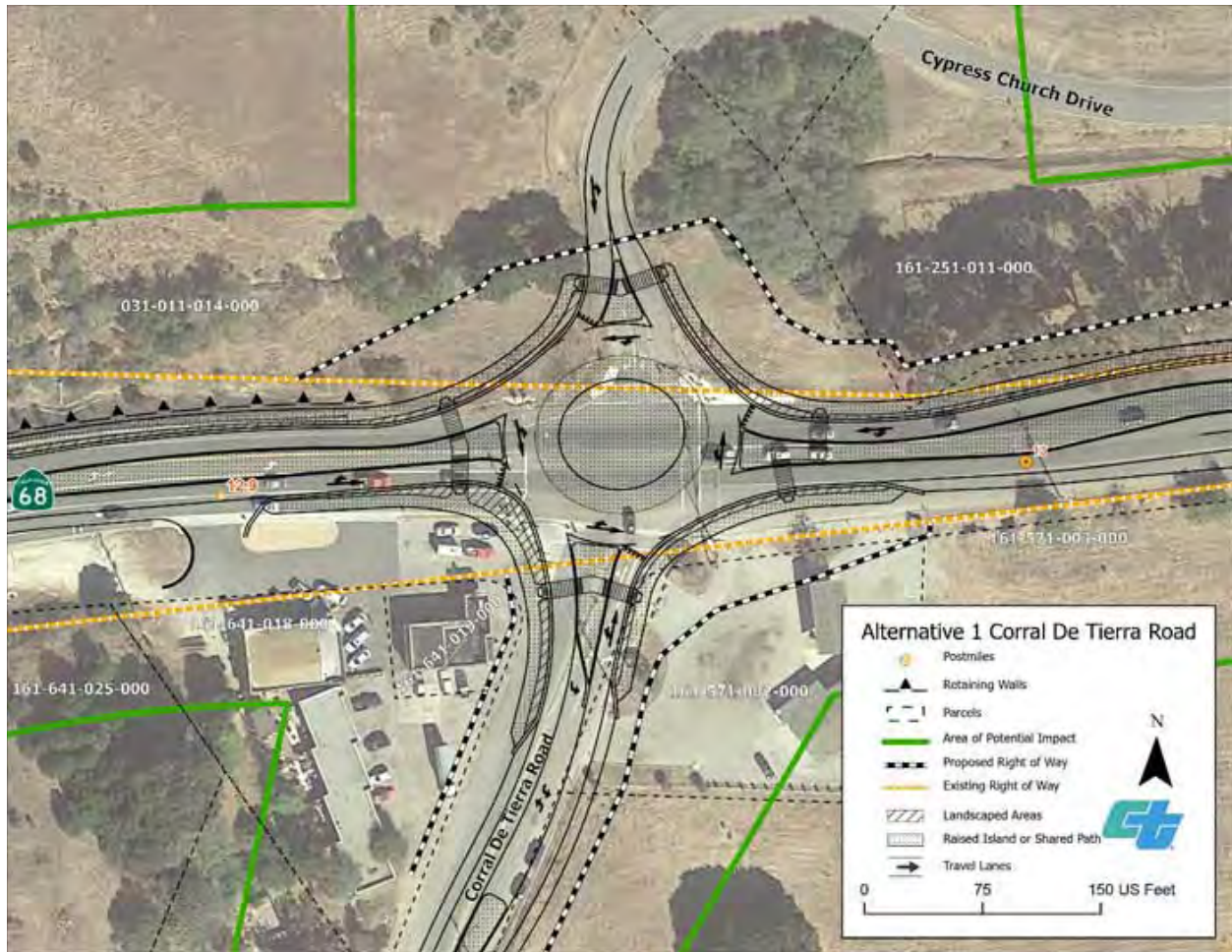
Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	21.92
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	303	-	-	-
HCM Lane V/C Ratio	0.301	-	-	-
HCM Control Delay (s/veh)	21.9	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	1.2	-	-	-

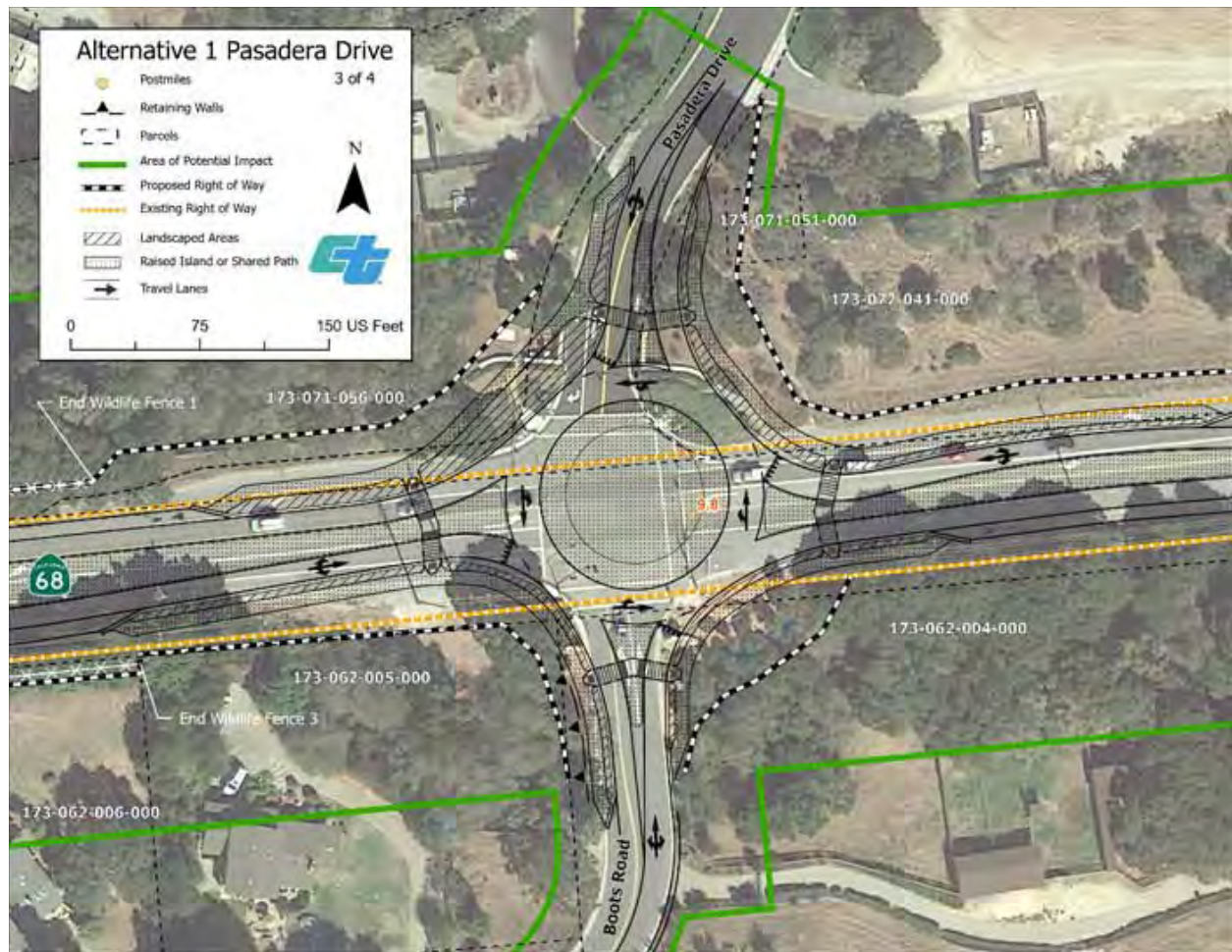
Appendix D

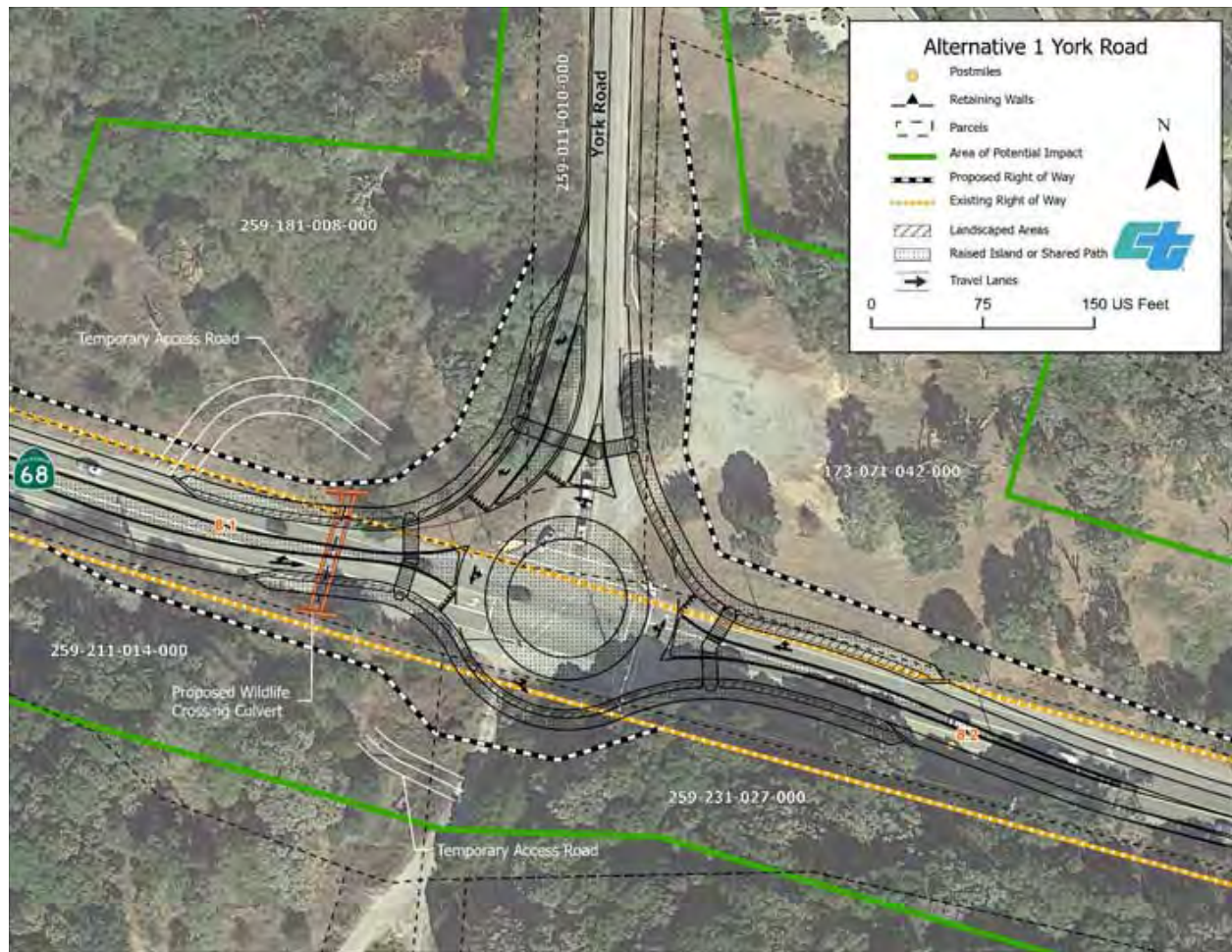
SR 68 Corridor Improvements

Build Alternative 1



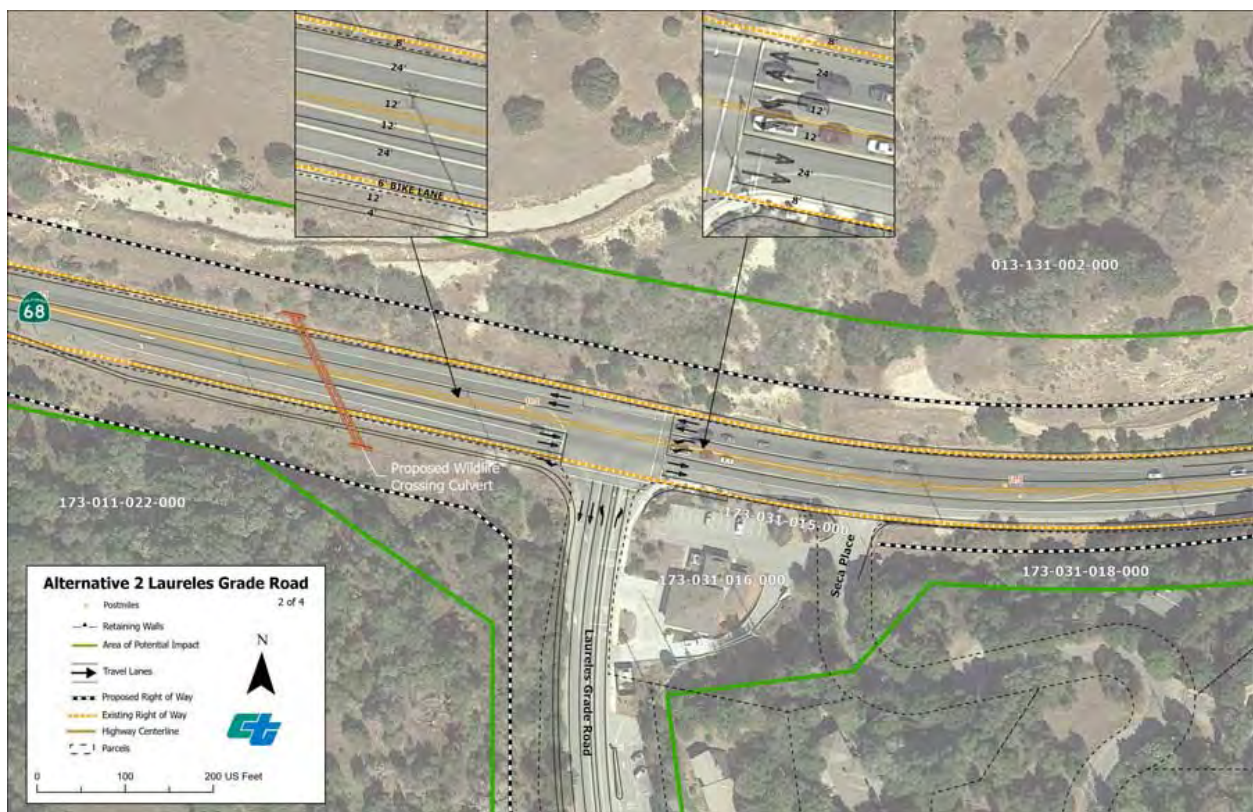


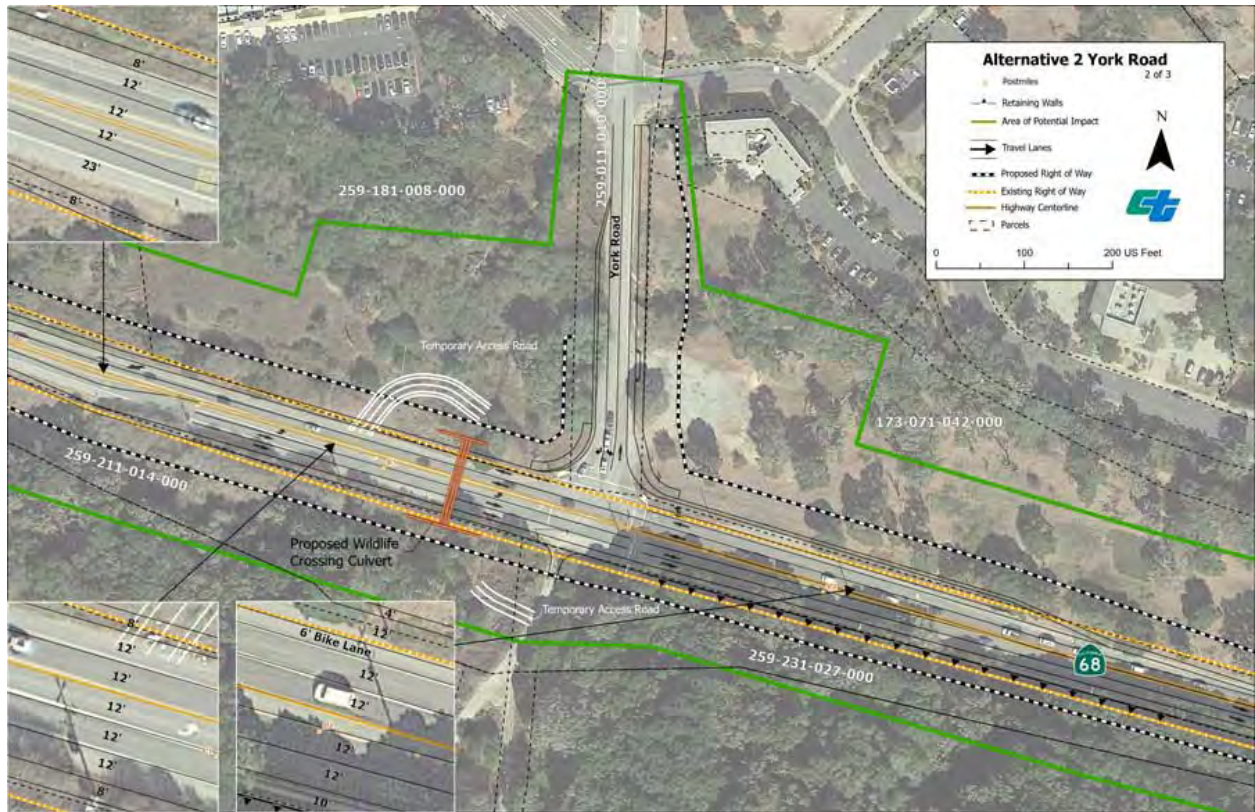






Build Alternative 2





Appendix E

ITE Pass-by Rates for Convenience Store/Gas Station

**Table E.36 Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 944—Gasoline/Service Station**

SIZE (1,000 SQ. FT. GFA)	VEHICLE FUELING POSITIONS	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
—	—	Chicago suburbs, IL	1987	48	3:00–7:00 p.m.	21	—	—	79	—	Kenig, O'Hara, Humes, Flock
—	—	Chicago suburbs, IL	1987	34	3:00–6:00 p.m.	25	—	—	75	—	Kenig, O'Hara, Humes, Flock
—	—	Chicago suburbs, IL	1987	42	3:00–6:00 p.m.	20	—	—	80	—	Kenig, O'Hara, Humes, Flock
2.3	6	Gaithersburg, MD	1992	55	4:00–6:00 p.m.	40	11	49	60	2,760	RBA
2.1	6	Bethesda, MD	1992	30	4:00–6:00 p.m.	53	20	27	47	1,060	RBA
1.7	6	Wheaton, MD	1992	18	4:00–6:00 p.m.	61	6	33	39	2,510	RBA
2.0	8	Gaithersburg, MD	1992	47	4:00–6:00 p.m.	62	23	15	38	2,635	RBA
1.2	6	Damascus, MD	1992	26	4:00–6:00 p.m.	58	11	31	42	1,020	RBA
0.3	12	Wheaton, MD	1992	52	4:00–6:00 p.m.	38	10	52	62	3,835	RBA

Average Pass-By Trip Percentage: 42

“—” means no data were provided

**Table E.37 Pass-By and Non-Pass-By Trips Weekday, AM Peak Period
Land Use Code 945—Gasoline/Service Station with Convenience Market**

SIZE (1,000 SQ. FT. GFA)	VEHICLE FUELING POSITIONS	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
0.8	8	Louisville area, KY	1993	61	7:00–9:00 a.m.	60	15	25	40	4,000	Barton- Aschman Assoc.
0.6	8	Louisville, KY	1993	48	7:00–9:00 a.m.	68	13	19	32	1,307	Barton- Aschman Assoc.
0.7	10	Louisville, KY	1993	47	7:00–9:00 a.m.	67	11	22	33	1,105	Barton- Aschman Assoc.
0.7	8	Louisville area, KY	1993	—	7:00–9:00 a.m.	56	22	22	44	1,211	Barton- Aschman Assoc.
0.7	10	Louisville area, KY	1993	—	7:00–9:00 a.m.	46	42	12	54	1,211	Barton- Aschman Assoc.
0.3	—	Louisville area, KY	1993	75	7:00–9:00 a.m.	72	15	13	28	—	Barton- Aschman Assoc.
0.8	8	Silver Spring, MD	1992	36	7:00–9:00 a.m.	47	14	39	53	3,095	RBA
0.4	8	Derwood, MD	1992	46	7:00–9:00 a.m.	75	0	25	25	3,770	RBA
2.2	8	Kensington, MD	1992	31	7:00–9:00 a.m.	47	34	19	53	1,785	RBA
1	8	Silver Spring, MD	1992	35	7:00–9:00 a.m.	78	9	13	22	7,080	RBA

Average Pass-By Trip Percentage: 62

“—” means no data were provided

**Table E.38 Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 945—Gasoline/Service Station with Convenience Market**

SIZE (1,000 SQ. FT. GFA)	VEHICLE FUELING POSITIONS	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
0.8	8	Louisville area, KY	1993	83	4:00–6:00 p.m.	52	8	40	48	4,965	Barton- Aschman Assoc.
0.6	8	Louisville, KY	1993	60	4:00–6:00 p.m.	53	20	27	47	1,491	Barton- Aschman Assoc.
0.7	10	Louisville, KY	1993	—	4:00–6:00 p.m.	57	19	24	43	1,812	Barton- Aschman Assoc.
0.7	8	Louisville area, KY	1993	—	4:00–6:00 p.m.	72	7	21	28	2,657	Barton- Aschman Assoc.
0.7	10	Louisville area, KY	1993	—	4:00–6:00 p.m.	55	16	29	45	2,657	Barton- Aschman Assoc.
0.8	8	Silver Spring, MD	1992	36	4:00–6:00 p.m.	67	14	19	33	3,095	RBA
0.4	8	Derwood, MD	1992	46	4:00–6:00 p.m.	46	11	43	54	3,770	RBA
2.1	8	Kensington, MD	1992	31	4:00–6:00 p.m.	52	13	35	48	1,785	RBA
1	8	Silver Spring, MD	1992	35	4:00–6:00 p.m.	54	3	43	46	7,080	RBA

Average Pass-By Trip Percentage: 56

“—” means no data were provided

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