DRAFT

TRAFFIC IMPACT ANALYSIS

FOR THE PROPOSED

TROPICA WAREHOUSE PROJECT

COLTON

PREPARED FOR

LDC DEVELOPMENT SERVICES
&
CITY OF COLTON

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TRAFFIC IMPACT ANALYSIS
FOR
TROPICA WAREHOUSE
COLTON, CALIFORNIA

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INTRODUCTION

This document presents the results of a traffic impact analysis that was conducted for three warehouse buildings that are proposed for development on the west side of La Cadena Drive at Tropica Rancho Road in the City of Colton.

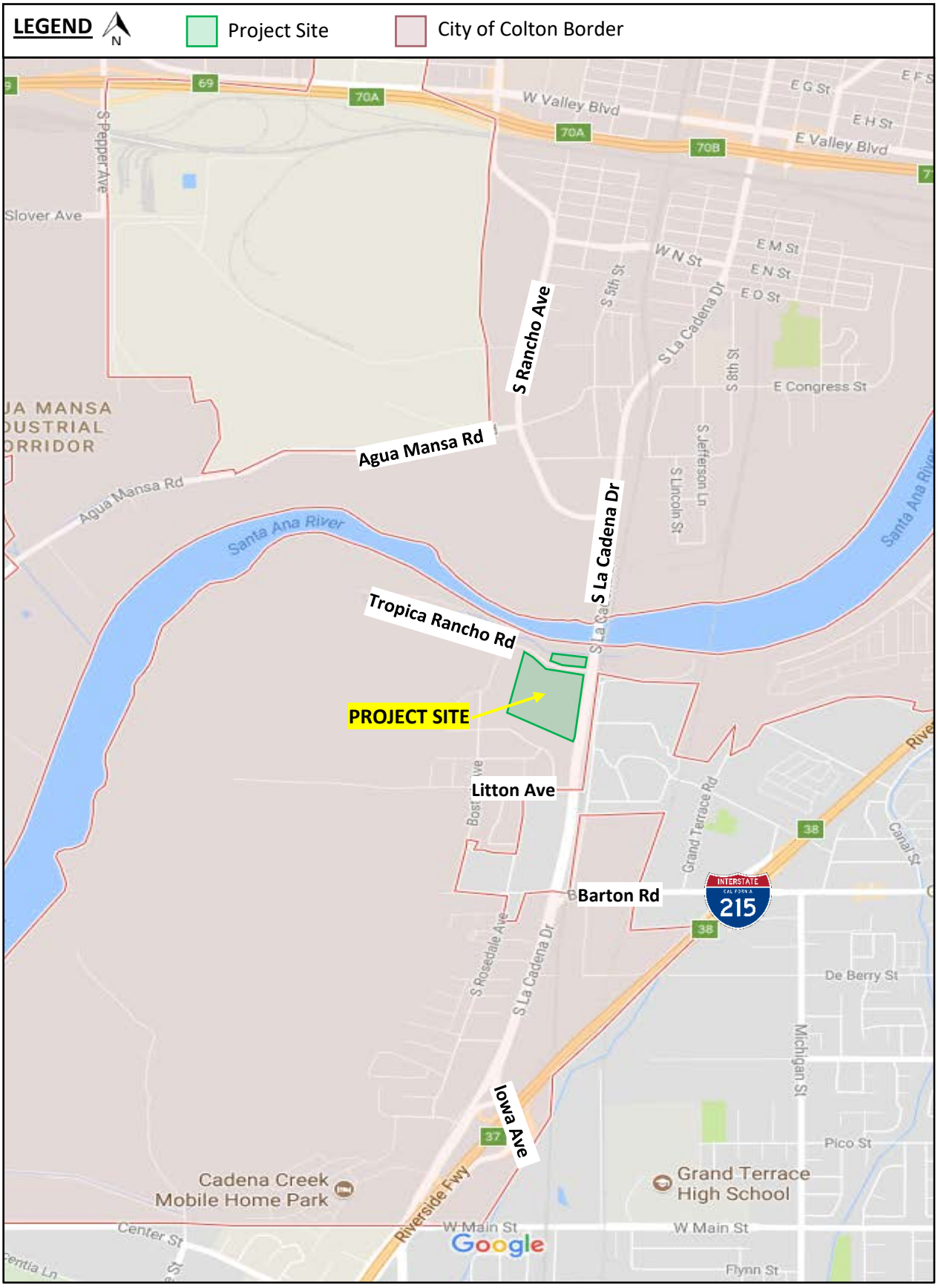
The objective of the traffic impact analysis is to quantify the impacts of the proposed warehouse operations on the roadways and intersections in the vicinity of the project site. The methodology for the traffic study, in general, was to l) establish the existing traffic conditions, 2) identify the projected future baseline conditions without the project by considering the cumulative effects of regional growth and traffic generated by other development projects in the study vicinity, 3) estimate the levels of traffic that would be generated by the proposed project, 4) conduct a comparative analysis of traffic conditions with and without the project, and 5) identify potential mitigation measures/roadway improvements. The analysis is based on the weekday morning and afternoon peak hour traffic volumes on the streets and intersections in the project vicinity.

The analysis addresses the traffic conditions at the nine intersections shown in **Table 1** on page 4. The table lists the study area intersections and shows the type of traffic control that is currently in use at each intersection and the public agency that has jurisdiction over the intersection. These study area intersections are consistent with the intersections that are listed in the "Scoping Agreement for Traffic Impact Study," which is a Memorandum of Understanding (MOU) between the traffic study consultant and the City of Colton.

PROJECT DESCRIPTION

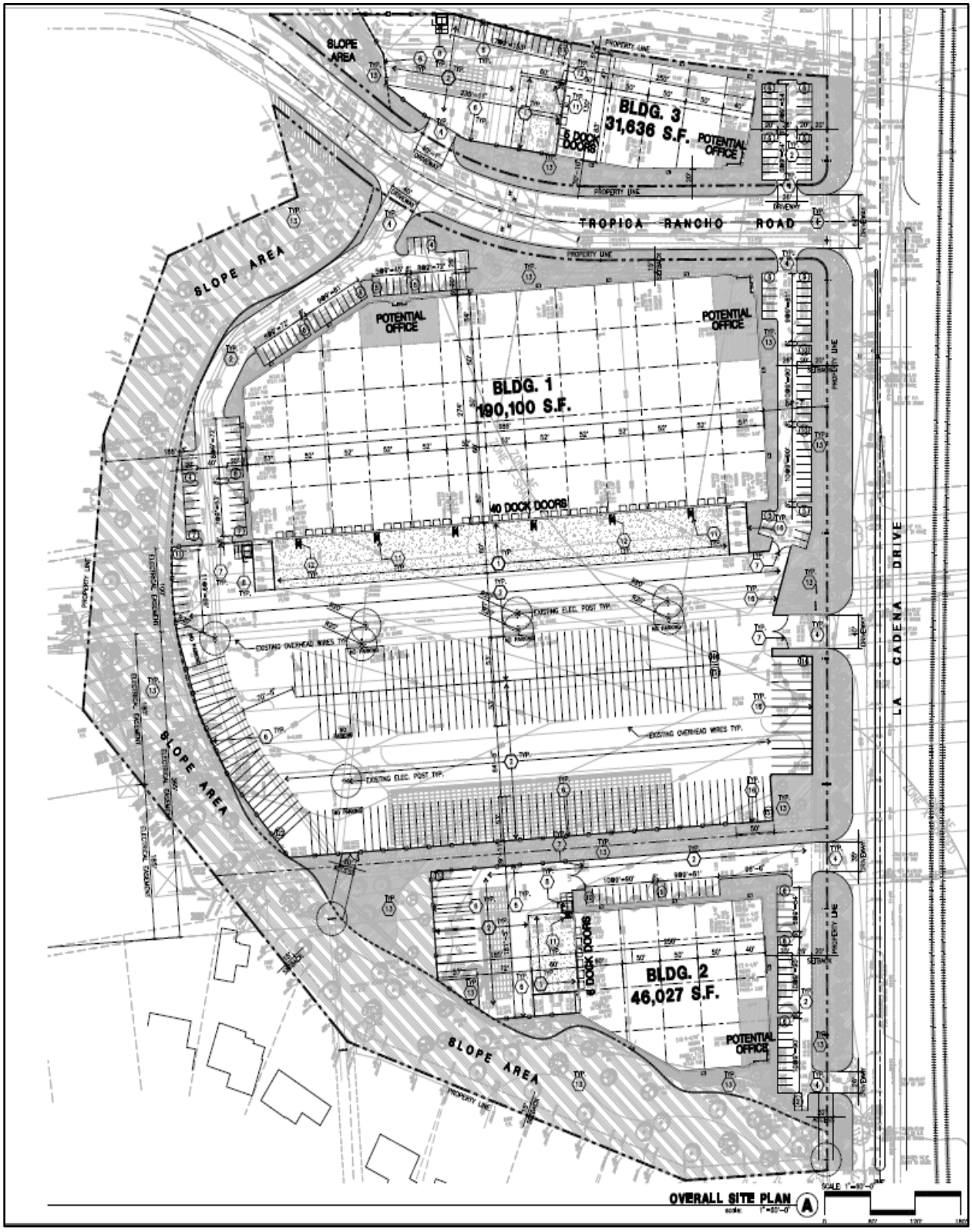
Two warehouse buildings would be located on the south side of Tropica Rancho Road (Buildings 1 and 2) and one warehouse would be located on the north side of Tropica Rancho Road (Building 3). ***Figure 1*** is a vicinity map showing the project location and the study area roadway network and ***Figure 2*** is a site plan for the proposed warehouse development.

Vehicular access to the warehouse buildings will be provided by two driveways on La Cadena Drive and two driveways on Tropica Rancho Road. Building 1 vehicular access will be provided by the two driveways on the south side of Tropica Rancho Road and one driveway on the west side of La Cadena Drive, south of Tropica Rancho Road. Building 2 vehicular access will be provided by two driveways on the west side of La Cadena Drive. Vehicular access to Building 3 would be provided by two driveways on the north side of Tropica Rancho Road. As currently proposed, the driveways on La Cadena Drive would only accommodate right turns into and out of the project site as a median on La Cadena Drive would prevent left turn movements. Passenger parking lots should be signed "No Truck Access".



Tropica Rancho Warehouse Project

Figure 1
VICINITY MAP



Tropica Rancho Warehouse Project

Figure 2
SITE PLAN

STUDY METHODOLOGY

The format of this report follows the guidelines of the City of Colton and SANBAG CMP's Traffic Impact Study Guidelines. The study area chosen for this project is consistent with the guidelines. Based on the approved scoping document and study requirements the following intersections listed in **Table 1** were analyzed in this study:

TABLE 1:
STUDY AREA INTERSECTIONS

Intersection	Traffic Control	Jurisdiction
La Cadena Drive at 7th Street/Maple Street	Traffic Signal	City of Colton
La Cadena Drive at Rancho Avenue	Traffic Signal	City of Colton
La Cadena Drive at Tropica Rancho Road & Vivienda Avenue	Stop Signs on Tropica Rancho Road & Vivienda Avenue	City of Colton
La Cadena Drive at Litton Ave	Traffic Signal	City of Colton
La Cadena Drive at Barton Road	Traffic Signal	City of Colton
La Cadena Drive at Iowa Avenue	Traffic Signal	City of Colton
Iowa Avenue at I-215 Southbound Off-Ramp	Traffic Signal	Caltrans
Iowa Ave at I-215 Northbound On/Off Ramps	Traffic Signal	Caltrans
Rancho Avenue at Agua Mansa Road	Traffic Signal	City of Colton

The following analysis years were considered in this report:

- Existing Conditions (2017)
- Existing Conditions with Project
- 2019 Project Completion Year without Project Conditions
- 2019 Project Completion Year with Project Conditions
- 2040 Horizon Year without Project
- 2040 Horizon Year with Project
- Comparison of Various Scenarios with and without Mitigation

LEVEL OF SERVICE DEFINITIONS

The City of Colton City's Traffic Impact Analysis Preparation Guidelines require the use of the High Capacity Manual (HCM) operational delay method in conducting intersection LOS calculations. The HCM defines level of service as a qualitative measure, which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience and safety. The criteria used to evaluate Level of Service (LOS) conditions vary based on the type of roadway and whether the intersection in terms of delay time for the various intersection approaches. The HCM uses different procedures depending on the type of the intersection control. A brief description of the level of service from A to F is provided.

- ***LOS A*** *describes operations with very low delay, up to 10 seconds per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths my also contribute to low delay.*
- ***LOS B*** *describes operations with very low delay greater than 10 and up to 20 seconds per vehicle for signalized intersections. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of average delay.*
- ***LOS C*** *describes operations with greater delay than 20 and up to 35 seconds per vehicle. The higher delays may result from fair progressions, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.*
- ***LOS D*** *describes operations with delay greater than 35 and up to 55 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping, declines. Individual cycle failures are noticeable.*
- ***LOS E*** *describes operations with delay greater than 55 and up to 80 seconds per vehicle. This level is considered by many agencies to be the limit of acceptable delay. These high delay volumes generally indicate poor progression, long cycle lengths and high V/C ratios. Individual cycle failures are frequent occurrences.*
- ***LOS F*** *describes operations with delay in excess of 80 seconds per vehicle. This level, considered to be unacceptable to most drivers, often occurs with over saturation, when arrival flow rates exceed the capacity of the intersection. It may also occur with high V/C ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also be major to contributing causes to such delay levels.*

Level of service is measured from LOS A (excellent conditions) to LOS F (extreme congestion), with LOS A through D considered to be acceptable according to the City of Colton General Plan Mobility Element. For intersections operated by the State of California (Caltrans), LOS A through D is considered to be acceptable if the average vehicle delay is determined to be 45 seconds or less. The relationship between delay values and levels of service is shown in **Table 2**.

TABLE 2:
RELATIONSHIP BETWEEN DELAY VALUES AND LEVELS OF SERVICE

LEVEL OF SERVICE	Delay Value (Seconds) Signalized Intersections	Delay Value (Seconds) Unsignalized Intersections
A	0.0 to 10.0	0.0 to 10.0
B	> 10.0 to 20.0	> 10.0 to 15.0
C	> 20.0 to 35.0	> 15.0 to 25.0
D	> 35.0 to 55.0	> 25.0 to 35.0
E	> 55.0 to 80.0	> 35.0 to 50.0
F	> 80.0	> 50.0

SIGNIFICANCE CRITERIA

According to the San Bernardino County Congestion Management Program (San Bernardino County Transportation Authority, formerly San Bernardino Associated Governments, 2016 Update), a transportation impact is deemed to be significant and mitigation is required "if the traffic level of service (LOS) at an intersection or on a segment drops below the adopted LOS standard (LOS E), or if the current LOS is F and the quantitative measure of LOS increases by 10 percent or more." For this traffic impact analysis, the quantitative measure of LOS is the average vehicle delay at an intersection. So, the project would result in a significant impact if an intersection is projected to operate at LOS F and if the project would result in a 10 percent or greater increase in vehicle delay at the intersection. An intersection would not be significantly impacted if the intersection's level of service would remain at LOS E or better.

As the City of Colton's standard for an acceptable level of service is LOS D, a transportation impact is deemed to be significant and mitigation is required if the traffic level of service (LOS) at an intersection drops below the adopted LOS standard (LOS D), or if the current LOS is E or F and the quantitative measure of LOS increases by 10 percent or more. An intersection would not be significantly impacted if the intersection's level of service would remain at LOS D or better.

According to Caltrans guidelines ("Guide for the Preparation of Traffic Impact Studies"), Caltrans endeavors to maintain a target level of service at the mid-range of LOS D on State highway facilities; i.e., at an average delay of less than 45 seconds at a signalized intersection. Caltrans does not, however, quantify the level of increase in delay that would constitute a significant impact at an intersection that operates at an unacceptable level.

FAIR SHARE CALCULATIONS

The projects fair share contributions have been calculated for the Year 2040. The ratio of traffic generated by the proposed development to the total New traffic including project traffic generated between existing conditions and the year 2040 was computed for each intersection estimated to operate at a deficient LOS and needing improvements. The purpose is to identify the proportion of volume increase that can be attributed to the proposed project and not intended to represent legal responsibility for mitigation.

EXISTING TRAFFIC CONDITIONS

The following paragraphs provide a brief description of the characteristics of the existing roadways that comprise the circulation network of the study area. These facilities provide the majority of both regional and local access to the project.

STREET NETWORK

The streets that provide access to the project vicinity include La Cadena Drive, Tropica Rancho Road, Rancho Avenue, Barton Road, Iowa Avenue, and the Riverside Freeway (Interstate 215). The study area roadways, types of traffic control at the intersections, and lane configurations at the intersections are shown on ***Figure 3***.

La Cadena Drive is a four lane north-south street that abuts the east side of the project site. The functional street classification of La Cadena Drive, as designated by the City of Colton General Plan Mobility Element, is Major Arterial. It is also designated as a truck route. The speed limit on La Cadena Drive is 50 miles per hour (mph) through most of the study area and 45 mph north of the Maple Street/7th Street intersection.



Tropica Rancho Road is a two-lane east-west street that abuts the north side of the Building 1 site and the south side of the Building 3 site. While it is unclassified in the General Plan Mobility Element, which indicates that it is designated as a Local Street, the alignment of Tropica Rancho Road coincides with the planned future extension of Washington Street as a Major Arterial roadway. There is no posted speed limit on Tropica Rancho Road.





Rancho Avenue is a four lane north-south street located approximately one-half mile north of the project site. It intersects with La Cadena Drive in the east-west direction then curves to the north to become a north-south roadway. Rancho Avenue is classified as a Major Arterial and a truck route and the speed limit is 45 mph.***Barton Road*** is a two lane east-west street located approximately one-half mile south of the project site. It is classified as a Major Arterial and provides a link between La Cadena Drive and the Riverside Freeway (I-215). The speed limit on Barton Road is 35 mph north.



Barton Road is a two lane east-west street located approximately one-half mile south of the project site. It is classified as a Major Arterial and provides a link between La Cadena Drive and the Riverside Freeway (I-215). The speed limit on Barton Road is 35 mph north.



Iowa Avenue is a two lane north-south street that has a "Y" intersection with La Cadena Drive approximately one mile south of the project site. It has an interchange with the I-215 freeway southeast of its intersection with La Cadena Drive then extends southerly along the east side of the I-215 freeway. It is classified as a Secondary Arterial. There is no posted speed limit on Iowa Avenue.



The *Riverside Freeway (I-215)* is an eight-lane north-south freeway located approximately three-quarters of a mile east of the project site. It has three standard lanes and a carpool lane in each direction. Interchanges along the I-215 freeway that provide access to the project area are located at Barton Road and Iowa Avenue.

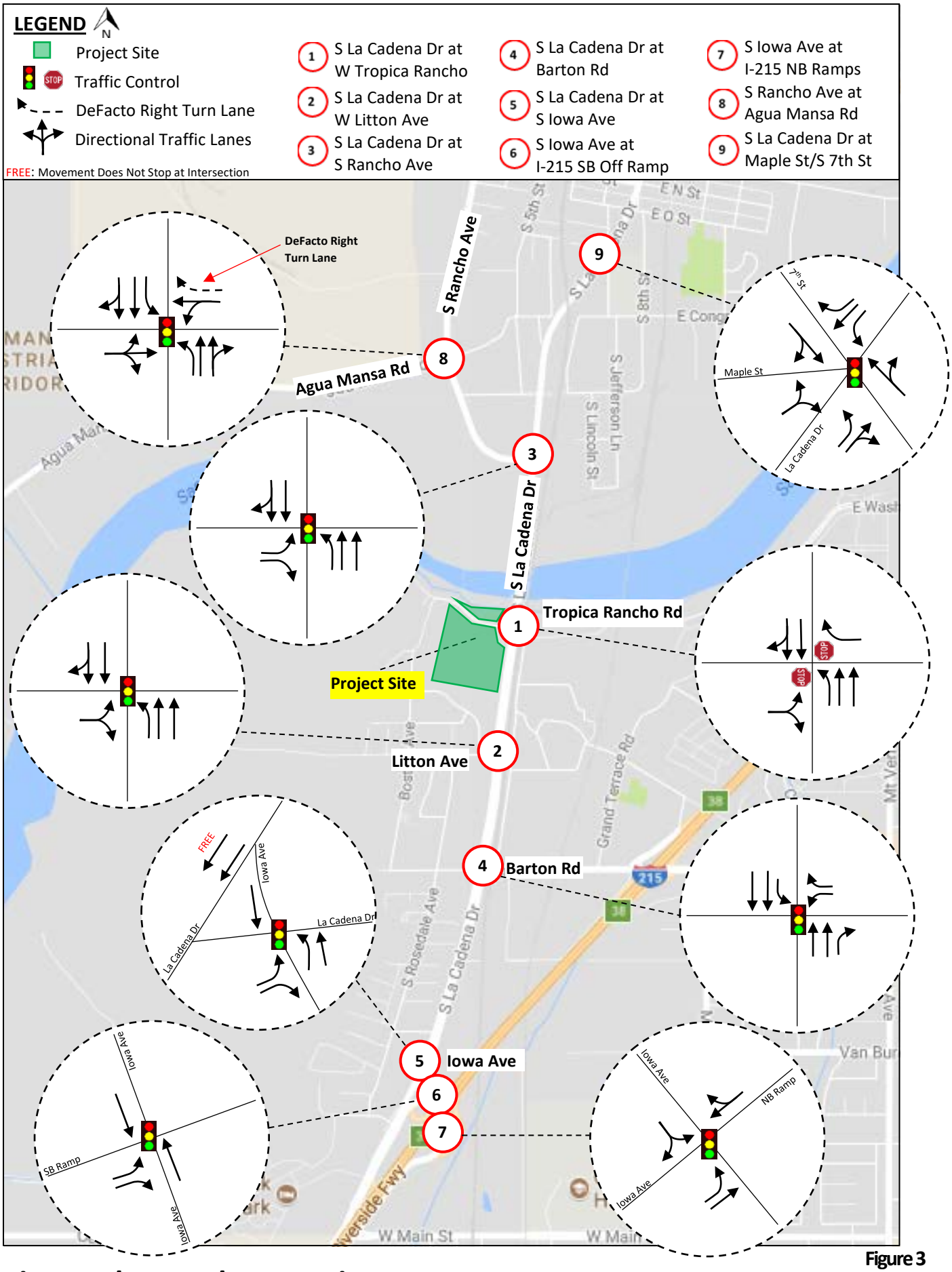


Figure 3

EXISTING GEOMETRIC CONDITIONS

Tropica Rancho Warehouse Project

EXISTING BASELINE TRAFFIC VOLUMES

Manual traffic counts were taken at the nine study area intersections on Tuesday, Wednesday, and Thursday, May 9, 10, and 11, 2017, during the weekday morning and afternoon peak periods. The traffic count technicians classified the vehicles passing through the intersections as passenger cars, 3-axle trucks, and 4 or more-axle trucks. The reason for classifying the vehicles is that trucks occupy more space and capacity than automobiles/light-duty vehicles and are, therefore, converted to "passenger car equivalents" (PCEs) for purposes of calculating intersection levels of service. For this traffic analysis, the 3-axle trucks were converted to PCEs by using a factor of 2.0 (i.e., one 3-axle truck is equivalent to two passenger cars) and the 4 or more-axle trucks were converted to PCEs by using a factor of 3.0.

The results of the traffic count program for the nine intersections are provided on ***Figure 4*** for the morning and afternoon peak hours. The exhibit shows the existing peak hour traffic volumes and turning movements at each intersection. Although the weekday traffic counts were taken from 7:00 to 9:00 a.m. and from 4:00 to 6:00 p.m., the traffic volumes shown on the exhibit represent the peak one-hour interval of traffic flow at each intersection; e.g., 7:00 to 8:00 a.m. and 4:30 to 5:30 p.m.

INTERSECTION LEVELS OF SERVICE

To quantify the existing baseline traffic conditions, the nine study area intersections were analyzed to determine their operating conditions during the weekday morning and afternoon peak hours. Based on the peak hour traffic volumes, the turning movement counts, and the existing number of lanes at each intersection, the average vehicle delay values (seconds of delay per vehicle) and levels of service (LOS) have been determined at each intersection, as summarized in **Table 3**. The delay values and levels of service were determined by using the Highway Capacity Software (HCS). The calculation sheets are provided in the Appendix.

TABLE 3:
EXISTING INTERSECTION LEVELS OF SERVICE

Intersection	Delay Value (seconds) & Level of Service	
	AM Peak Hour	PM Peak Hour
La Cadena Drive at 7th Street/Maple Street	14.5 – B	13.0 – B
La Cadena Drive at Rancho Avenue	42.4 – D	42.5 – D
La Cadena Drive at Tropica Rancho Road*	12.7 – B	12.2 – B
La Cadena Drive at Litton Ave	6.1 – A	6.8 – A
La Cadena Drive at Barton Road	11.0 – B	13.3 – B
La Cadena Drive at Iowa Avenue	8.0 – A	10.2 – B
Iowa Avenue at I-215 Southbound Off-Ramp	10.7 – B	12.6 – B
Iowa Ave at I-215 Northbound On/Off Ramps	73.1 – E	169.1 – F
Rancho Avenue at Agua Mansa Road	14.5 – B	56.8 – E

* The La Cadena Drive/Tropica Rancho Road intersection is unsignalized. All other intersections are signalized.

As shown in **Table 3**, eight of the nine study area intersections currently operate at acceptable levels of service during the morning peak hour (LOS A through D), while the intersection of Iowa Avenue at the northbound I-215 on/off ramps operates at an unacceptable LOS E. During the afternoon peak hour, seven intersections currently operate at acceptable levels of service, while the intersection of Iowa Avenue at the northbound I-215 on/off ramps operates at an unacceptable LOS F and the intersection of Rancho Avenue at Agua Mansa Road operates at an unacceptable LOS E.

The delay and LOS values that are shown in **Table 3** for the signalized intersections represent the average values for the entire intersection as a whole. The delay and LOS values for the unsignalized intersection (La Cadena Drive at Tropica Rancho Road) represent the conditions on the approach with the highest level of delay for the stopped vehicles.

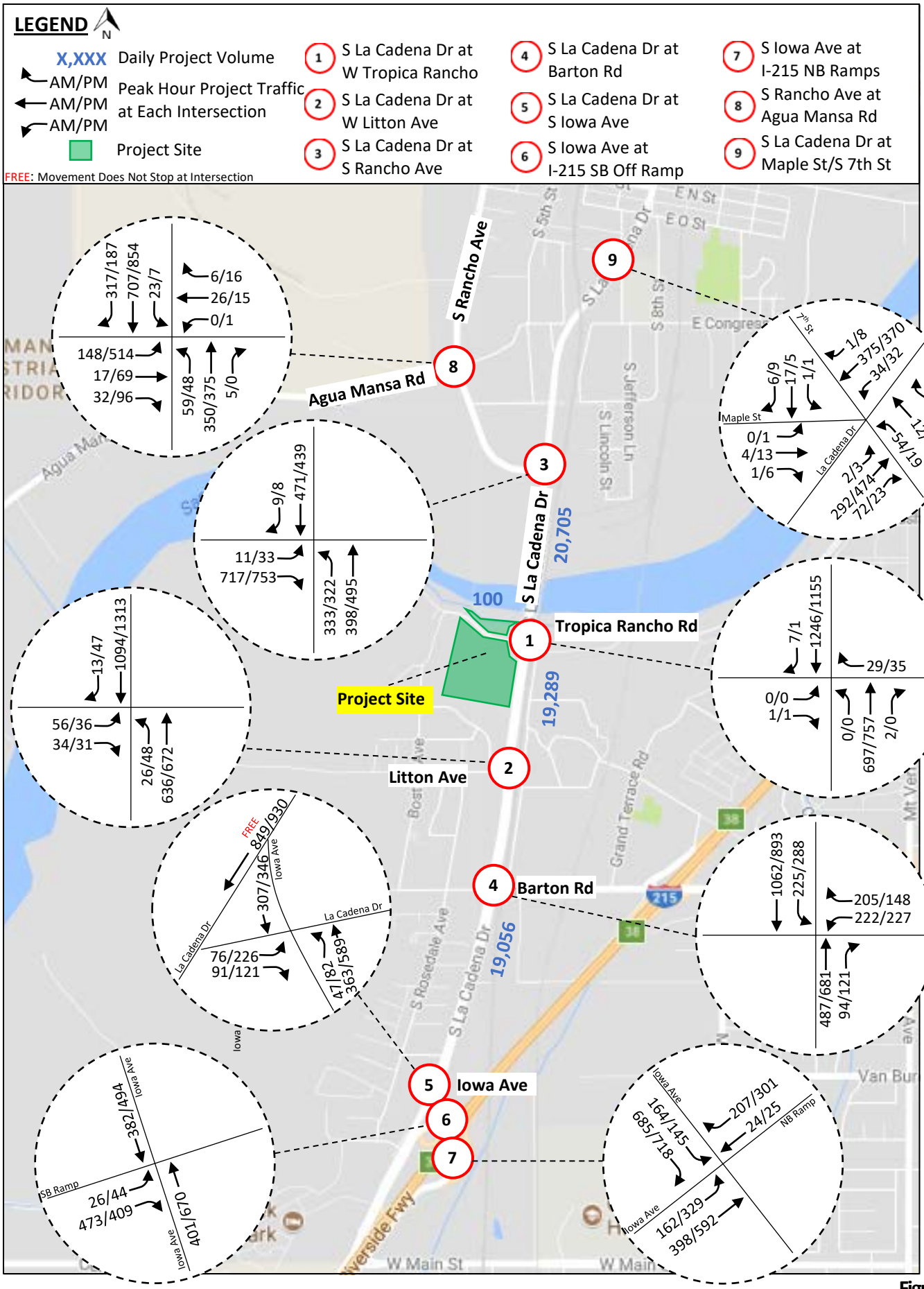


Figure 4

Tropica Rancho Warehouse Project

TRAFFIC VOLUMES – EXISTING CONDITIONS

FUTURE BASELINE TRAFFIC CONDITIONS

The future baseline traffic conditions without the project were established for the target year of completion for the proposed warehouse buildings (year 2019) and for the long-range future horizon year (year 2040). The two baseline analysis scenarios are presented below.

YEAR 2019 – TARGET YEAR OF PROJECT COMPLETION

The baseline traffic conditions for the year 2019 were estimated by considering the effects of general ambient regional growth and the cumulative increase in traffic volumes that would be generated by other development projects proposed in the vicinity of the project site. The first step in estimating the future baseline traffic volumes was to expand the existing traffic volumes by a factor of four percent, which represents a growth rate of two percent per year for two years. This growth factor accounts for the traffic increases associated with general regional growth and development projects not in the immediate vicinity of the project site.

The second step in estimating the future baseline traffic volumes was to estimate the increased levels of traffic that would occur at the study area roadways and intersections as a result of the traffic that would be generated by other proposed development projects; i.e., those that are within a two-mile radius of the project site. Traffic that would be generated by projects that are located farther than two miles from the project site is included in the regional ambient growth factor discussed above. The list of development projects was obtained from the City of Colton and the City of Grand Terrace. The development projects that were included in the cumulative traffic analysis are presented in **Table 4**. As shown, there are thirteen other development projects proposed in the vicinity of the project site.

TABLE 4:
DEVELOPMENT PROJECTS FOR CUMULATIVE ANALYSIS

Project	Proposed Use/Description
CITY OF COLTON	
1. Roquet Ranch Specific Plan	Single Family Dwelling Units, Condos, Active Adult, Shopping Center, Coffee Shop, Fast
2. Southwest Regional Operations Center	Office Building, Fuel Island, Truck Wash Service Facility, & Parking Lot
3. Agua Mansa Commerce Center	Warehouse Distribution Center
4. Wildrose Village	85 Residential Dwelling Unit Increase
5. 300 W Litton Ave - Litton Housing	89 Lots for Detached Single Unit Residential Development

CITY OF GRAND TERACE	
6. Grand Terrace Town Square	Shopping Center, Units 3 & 4, Gas Station (Phase II)
7. 22394 and 22040 Van Buren Street	17 Two-Story Residential Homes
8. 12569 Michigan Street	Two, One-Story Residential Homes and Subdivision of a 0.50-acre Parcel into Two Single Family Lots
9. 11832 and 11834 Burns Avenue	Single Family Residence and Secondary Dwelling Unit on a 0.36-acre Lot
10. 22805 Barton Road	Medical Office/Outpatient Surgery Center, Residence, Take-out Coffee Shop
11. 22085 Commerce Way	Animal Clinic, Commercial Units
12. 11838 Burns Avenue	Re-establishment of a Two-story Single-family Residence with Attached Three Car Garage and RV Garage
13. 22881 Barton Road	Coffee Shop with Drive-thru Commercial Units

The estimated volumes of traffic that would be generated by the 13 proposed development projects are shown in **Table 5**. The table shows the daily volumes of traffic that each project would generate and the traffic volumes that would be generated during the peak hours on a typical weekday. For the projects that had a traffic analysis prepared, the traffic volumes were obtained from the traffic report. For the other projects, the traffic volumes were calculated using trip generation rates from the Institute of Transportation Engineers *Trip Generation Manual* (9th Edition, 2012).

TABLE 5:
TRAFFIC GENERATED BY OTHER PROPOSED DEVELOPMENT PROJECTS

Project/ Land Use	Daily Traffic	AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out
1. Roquet Ranch*	10,020	819	238	581	991	617	374
2. System Transport*	1,130	97	33	64	63	47	16
3. Agua Mansa Ctr*	990	65	46	19	70	24	46
4. Wildrose Village*	830	64	16	48	85	53	32
5. Litton Housing	850	67	17	50	89	56	33
6. Town Square*	2,160	151	83	68	222	107	115
7. Van Buren Street	160	13	3	10	17	11	6
8. Michigan Street	20	2	0	2	2	1	1
9. Burns Avenue	10	1	0	1	1	1	0
10. Barton Road	440	41	22	19	23	11	12
11. Commerce Way	350	30	22	8	35	14	21
12. Burns Avenue	10	1	0	1	1	1	0
13. Barton Road	1,750	203	104	99	96	48	48
TOTAL	18,720	1,554	584	970	1,695	991	704

* Traffic volumes for these developments were taken from the project's traffic study.

Table 5 indicates that the projects, in total, would generate an estimated 1,554 vehicle trips during the morning peak hour (584 inbound and 970 outbound), 1,695 trips during the afternoon peak hour (991 inbound and 704 outbound), and 18,720 vehicle trips per day.

The traffic generated by the other proposed development projects was geographically distributed onto the study area roadway network to quantify the cumulative impacts at each study area intersection. ***Figure 5*** shows the estimated cumulative increases in traffic that would occur at each intersection as a result of the other proposed development projects for the morning and afternoon peak hours.

The projected future baseline traffic volumes for the year 2019 without the proposed project, which accounts for general area-wide growth and the cumulative volumes of traffic that would be generated by the other proposed development projects, are shown on ***Figure 6*** for the morning and afternoon peak hours. The target year for the short-range future baseline scenario is 2019 because that is the anticipated year that the proposed facilities would be complete and operational.

Based on the peak hour traffic volumes, the turning movement counts, and the lane configuration at each intersection, the future (year 2019) baseline delay values and levels of service were calculated for the nine study area intersections for each peak period, as summarized in **Table 6**. As shown, seven of the study area intersections are projected to operate at acceptable levels of service (LOS A, B, C, or D) during the weekday morning peak hour and six intersections are projected to operate at acceptable levels of service during the afternoon peak hour for the year 2019 scenario without the proposed project. The La Cadena Drive/Rancho Avenue intersection is projected to operate at an unacceptable LOS E during both peak hours, the Iowa Avenue intersection at the I-215 northbound on/off ramps is projected to operate at an unacceptable LOS F during both peak hours, and the Rancho Avenue/Agua Mansa Road intersection is projected to operate at an unacceptable LOS F during the afternoon peak hour.

TABLE 6:
YEAR 2019 BASELINE INTERSECTION LEVELS OF SERVICE WITHOUT PROJECT

Intersection	Delay Value (Seconds) & Level of Service	
	AM Peak Hour	PM Peak Hour
La Cadena Drive at 7th Street/Maple Street	15.0 – B	13.3 – B
La Cadena Drive at Rancho Avenue	68.8 – E	75.9 – E
La Cadena Drive at Tropica Rancho Road*	13.5 – B	13.3 – B
La Cadena Drive at Litton Ave	8.7 – A	10.9 – B
La Cadena Drive at Barton Road	14.8 – B	22.2 – C
La Cadena Drive at Iowa Avenue	11.8 – B	15.4 – B
Iowa Avenue at I-215 Southbound Off-Ramp	12.3 – B	15.8 – B
Iowa Ave at I-215 Northbound On/Off Ramps	238.2 – F	256.6 – F
Rancho Avenue at Agua Mansa Road	17.2 – B	105.6 – F

*The La Cadena Drive/Tropica Rancho Road intersection is unsignalized. All other intersections are signalized.

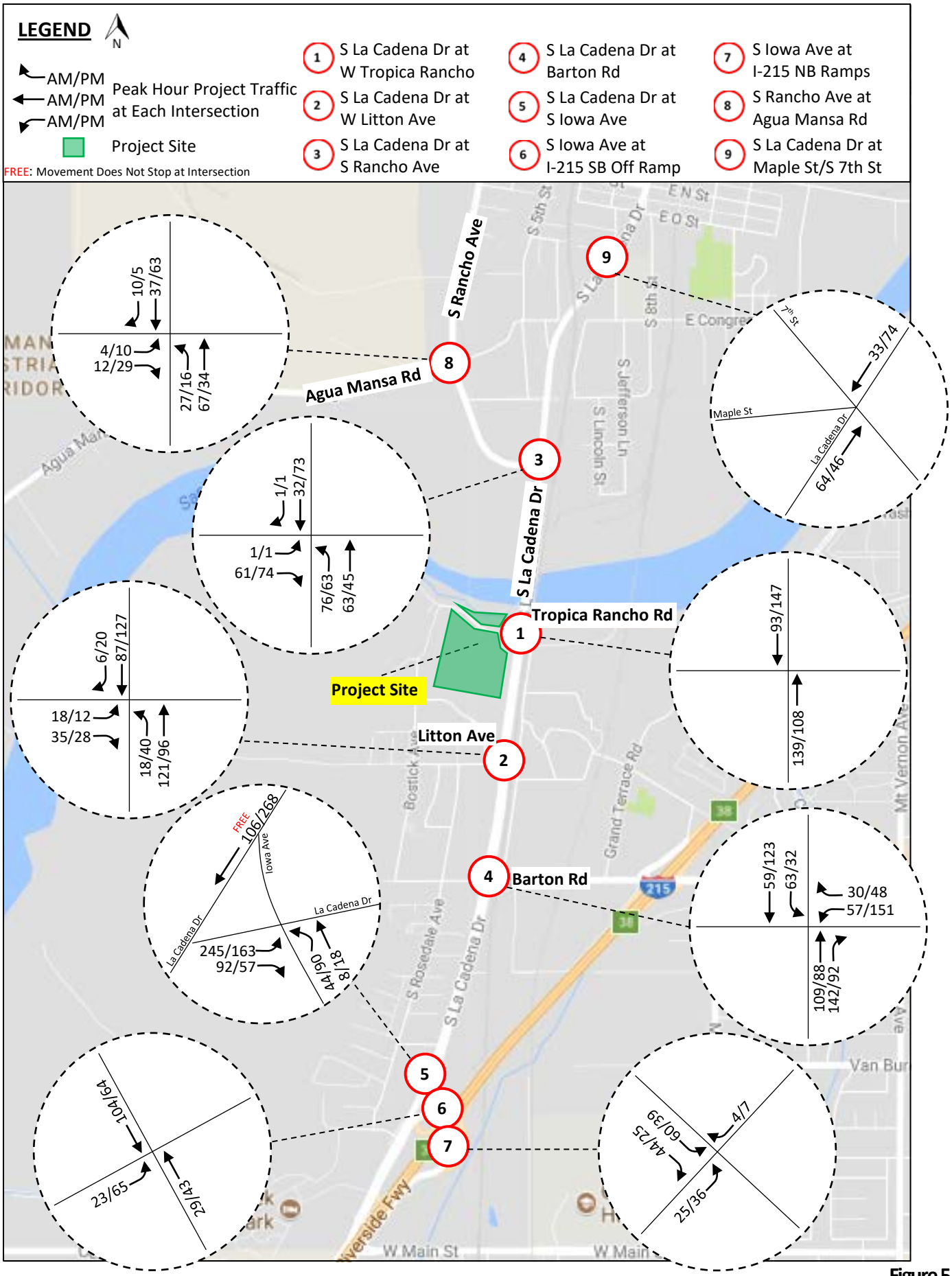


Figure 5

Tropica Rancho Warehouse Project

TRAFFIC VOLUMES – CUMULATIVE TRAFFIC

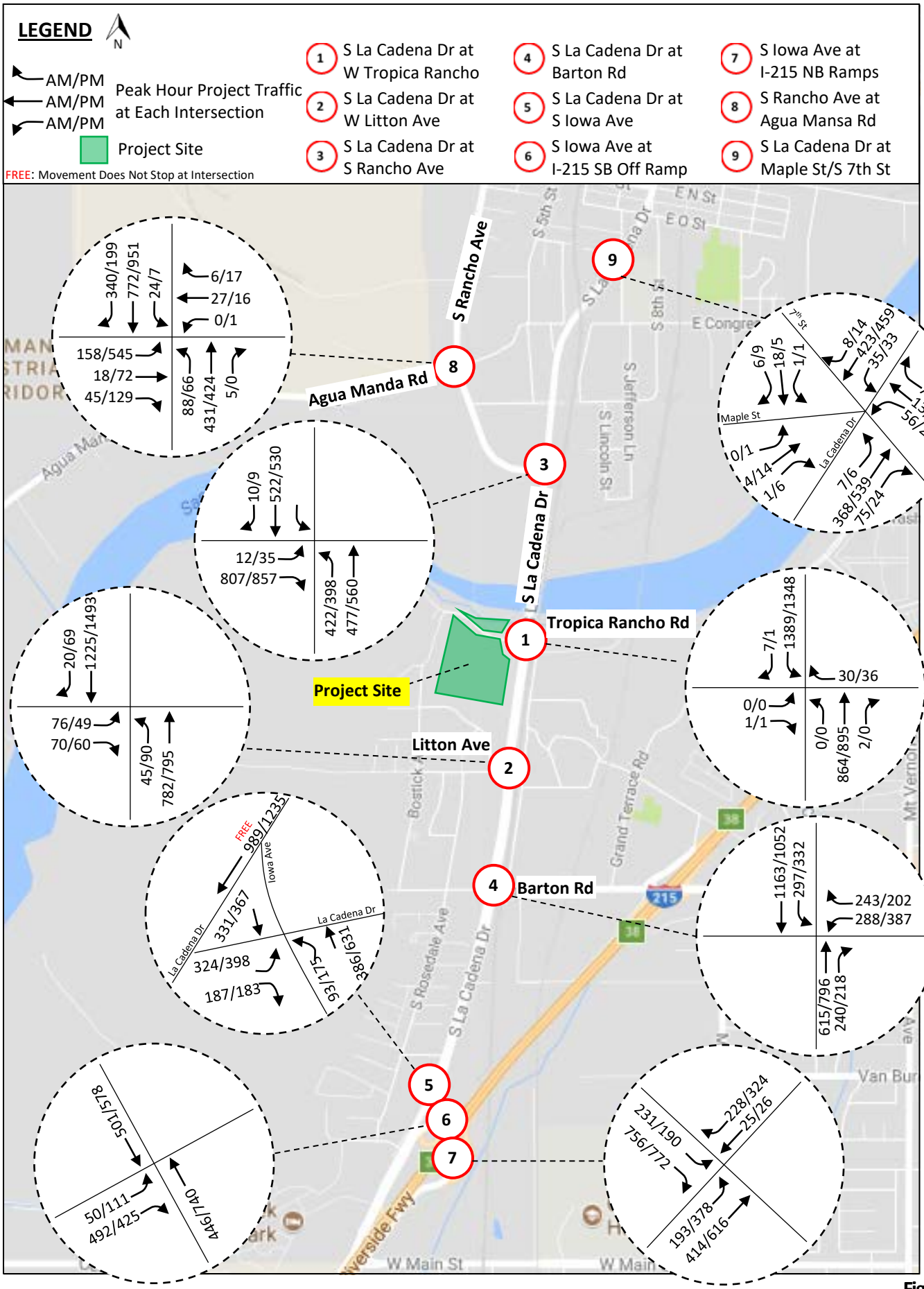


Figure 6

Tropica Rancho Warehouse Project

2019 TRAFFIC VOLUME– WITHOUT PROJECT

YEAR 2040 – LONG-RANGE FUTURE HORIZON YEAR

The baseline traffic conditions for the future horizon year of 2040 were projected by using traffic forecasts provided by staff at the San Bernardino County Transportation Authority using their SBTAM traffic forecasting model. The model output provided turning movement data for most of the study area intersections for the AM and PM peak periods. For the intersections that were not included in the model forecasts, the 2040 traffic volumes were estimated by interpolating the data from the modeled intersections upstream and downstream of each intersection approach and using the existing traffic counts to estimate the turning movement values. The output data was adjusted at several locations to rectify inconsistent traffic flows between adjacent intersections.

The projected future baseline traffic volumes for the year 2040 without the proposed project are shown on ***Figure 7*** for the morning and afternoon peak hours. These traffic forecasts were developed from a model that uses the anticipated future land uses and transportation network to forecast the future traffic volumes at each intersection and roadway link.

Based on the peak hour traffic volume forecasts, the turning movement counts, and the lane configuration at each intersection, the long-range future (year 2040) baseline delay values and levels of service were calculated for the nine study area intersections for each peak period, as summarized in **Table 7**. As shown, seven of the study area intersections are projected to operate at acceptable levels of service (LOS A, B, C, or D) during the weekday morning peak hour and five intersections are projected to operate at acceptable levels of service during the afternoon peak hour for the year 2040 scenario without the proposed project. The La Cadena Drive/Rancho Avenue intersection and the Iowa Avenue intersection at the I-215 northbound on/off ramps are projected to operate at an unacceptable LOS F during both peak hours. The La Cadena Drive/Iowa Avenue and the Rancho Avenue/Agua Mansa Road intersections are projected to operate at an unacceptable LOS F during the afternoon peak hour.

TABLE 7:
YEAR 2040 BASELINE INTERSECTION LEVELS OF SERVICE WITHOUT PROJECT

Intersection	Delay Value (seconds) & Level of Service	
	AM Peak Hour	PM Peak Hour
La Cadena Drive at 7th Street/Maple Street	16.8 – B	25.8 – C
La Cadena Drive at Rancho Avenue	177.7 – F	449.0 – F
La Cadena Drive at Tropica Rancho Road*	13.7 – B	16.9 – C
La Cadena Drive at Litton Ave	7.3 – A	13.3 – B
La Cadena Drive at Barton Road	12.9 – B	53.0 – D
La Cadena Drive at Iowa Avenue	9.2 – A	339.9 – F
Iowa Avenue at I-215 Southbound Off-Ramp	33.6 – C	37.3 – D
Iowa Ave at I-215 Northbound On/Off Ramps	522.8 – F	542.9 – F
Rancho Avenue at Agua Mansa Road	15.2 – B	143.3 – F

It should be pointed out that the level of service values shown in **Table 7** were calculated using the assumption that the lane configuration and the operation of the traffic signals at all of the study area intersections would be unchanged from the existing conditions. As the traffic forecasts that were used as input to calculate these level of service values represents a scenario that is 23 years into the future (year 2040), it is very likely that roadway improvements will be implemented to increase the capacity at the deficient intersection locations. For example, the roadways could be widened to provide an additional left turn or right turn lane to accommodate heavy turning movement volumes at intersections that are projected to operate at deficient levels of service. For the traffic impact analysis, it has been assumed that the lane configurations would remain unchanged for the year 2040 scenario because there is no guarantee that intersection improvements will be implemented. This results in a conservative (worst-case) impact analysis scenario.

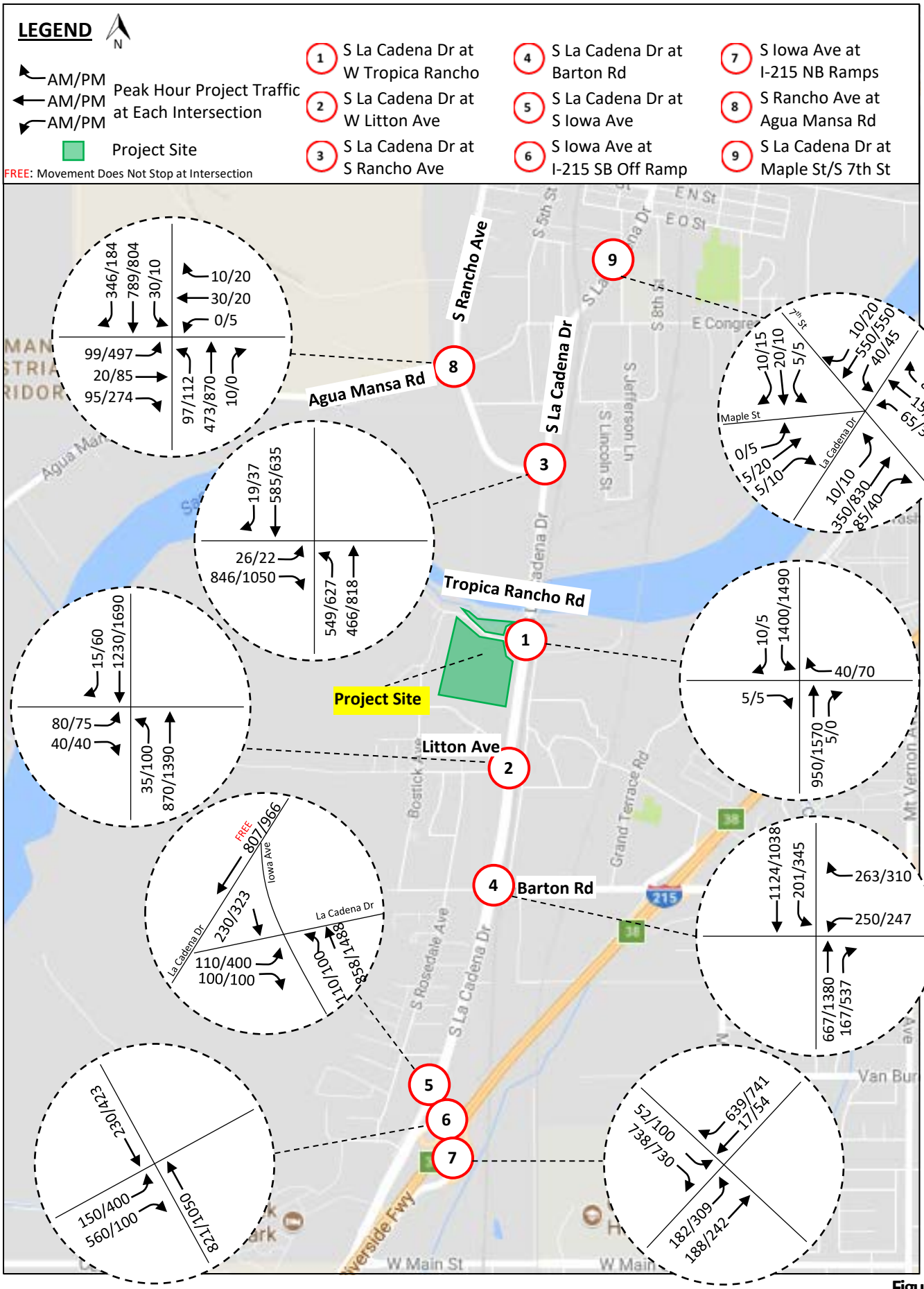


Figure 7

Tropica Rancho Warehouse Project

2040 TRAFFIC VOLUMES – WITHOUT PROJECT

TRAFFIC IMPACT ANALYSIS

The following sections summarize the analysis of the project's impacts on study area traffic conditions. First is a discussion of project generated traffic volumes. This is followed by an analysis of the impacts of the proposed project on traffic volumes and intersection levels of service.

PROJECT GENERATED TRAFFIC

The volumes of traffic that would be generated by the proposed project were determined in order to estimate the impacts of the project on the study area roadways and intersections. **Table 8** shows the trip generation rates that were used to estimate the volumes of traffic that would be generated by the proposed warehouse buildings. These trip rates are from the Institute of Transportation Engineers *Trip Generation Manual* (9th Edition, 2012) and from the City of Fontana "Truck Trip Generation Study" (2003).

TABLE 8:
TRIP GENERATION RATE SUMMARY

Land Use	Size	ITE Code	Daily Trips	AM PEAK HOUR			PM PEAK HOUR		
				TOTAL	IN	OUT	TOTAL	IN	OUT
RATES									
1. High Cube Warehouse/ DistributionCenter[1]	Per 1,000 sqf	152	1.440	0.09	66%	34%	0.10	33%	67%
PassengerCars-79.5%[3]	1.0	PCE[4]	1.145	0.072	66%	34%	0.080	33%	67%
3 Axle Trucks-8.10%	2.0	PCE[4]	0.117	0.007	67%	33%	0.008	40%	60%
Total PCE									
4-6 Axle Trucks-12.33%	3.0	PCE[4]	0.178	0.011	67%	33%	0.012	33%	67%
Total PCE									
2. Warehouse[2]	Per 1,000 sqf	150	3.560	0.30	79%	21%	0.32	25%	75%
PassengerCars-62%[3]	1.0	PCE[4]	2.210	0.186	79%	21%	0.198	25%	75%
2-3 Axle Trucks-17%	2.0	PCE[4]	0.605	0.051	75%	25%	0.054	20%	80%
Total PCE									
4-6 Axle Trucks-21%	3.0	PCE[4]	0.748	0.063	75%	25%	0.067	20%	80%
Total PCE									

1. Source: High Cube Warehouse/Distribution Center ITE code (152) Trip Generation, 9th Edition, City of Fontana Truck Trip Generation Study, 2003.

2. Source: Warehousing ITE code (150) Trip Generation, 9th Edition, ITE /Trip Generation Handbook, 2nd Edition, Appendix A, Tables A.4,A.5andA.6.

3. Vehicle Mix Source and Entering/Exiting %: The City of Fontana Truck Trip Generation Study for Warehouse Use, August 2003.

4. All Vehicles Have Been Converted into Passenger Car Equivalents (PCE) Using Values From San Bernardino CMP

Table 9 shows the projected volumes of project generated traffic for an average weekday and for the morning and afternoon peak hours for the proposed warehouse buildings. The passenger car equivalent (PCE) volumes shown on the table were used for the traffic impact analysis. As shown, the project would generate an estimated 794 trips per day, 59 trips during the AM peak hour (43 inbound and 16 outbound), and 64 trips during the PM peak hour (17 inbound and 47 outbound).

TABLE 9:
PROJECT GENERATED TRAFFIC

Land Use	Size	ITE Code		AM PEAK HOUR			PM PEAK HOUR		
				TOTAL	IN	OUT	TOTAL	IN	OUT
VOLUME									
1. Blding 1: High Cube Warehouse[1]	190.100	152							
PassengerCars-79.5%[3]	1.0	PCE[4]	218	14	9	5	15	5	10
3 Axle Trucks-8.10%	2.0	PCE[4]	22	1			2		
Total PCE			44	3	2	1	3	1	2
4-6 Axle Trucks-12.33%	3.0	PCE[4]	34	2			2		
Total PCE			102	6	4	2	7	2	5
Total PCE Trips for Blding 1			364	23	15	8	25	9	17
2. Blding 2: Warehouse[2]	45.160	150							
PassengerCars-62%[3]	1.0	PCE[4]	100	8	7	2	9	2	7
2-3 Axle Trucks-17%	2.0	PCE[4]	27	2			2		
Total PCE			55	5	3	1	5	1	4
4-6 Axle Trucks-21%	3.0	PCE[4]	34	3			3		
Total PCE			101	9	6	2	9	2	7
Total PCE Trips for Blding 2			256	22	16	5	23	5	18
3. Blding 3: Warehouse[2]	30.770	150							
PassengerCars-62%[3]	1.0	PCE[4]	68	6	5	1	6	2	5
2-3 Axle Trucks-17%	2.0	PCE[4]	19	2			2		
Total PCE			37	3	2	1	3	1	3
4-6 Axle Trucks-21%	3.0	PCE[4]	23	2			2		
Total PCE			69	6	4	1	6	1	5
Total PCE Trips for Blding 3			174	15	11	3	16	3	12
TOTAL NEW TRIPS FOR PROJECT			**794**	**59**	**43**	**16**	**64**	**17**	**47**

All numbers were rounded either up or down so some columns may not total.

To quantify the increases in traffic that would occur at each intersection as a result of the proposed project, the project generated traffic was geographically distributed onto the roadway network using the directional percentages shown in the "Scoping Agreement for Traffic Impact Study." The distribution assumptions for trucks and passenger cars are based on the layout of the existing roadway network and the existing travel patterns observed during the peak periods. The volumes of project traffic on each access roadway and at each study area intersection were determined by using the assumed geographical distribution percentages and the generated traffic volumes shown in **Table 9**. The volumes of project generated traffic that would be added to each intersection are shown on ***Figure 8*** for passenger cars/light-duty vehicles and on ***Figure 9*** for trucks for the morning and afternoon peak hours.

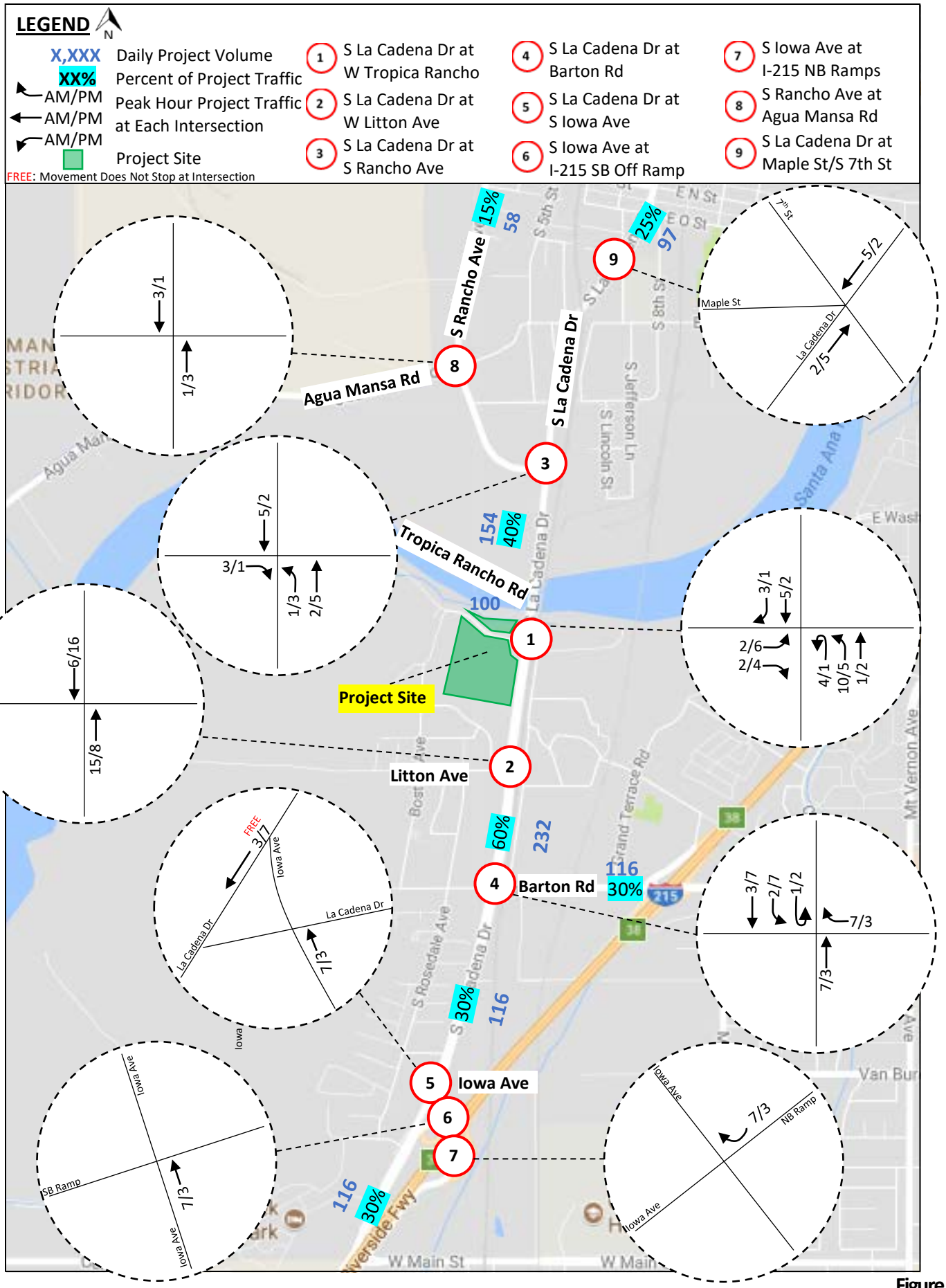
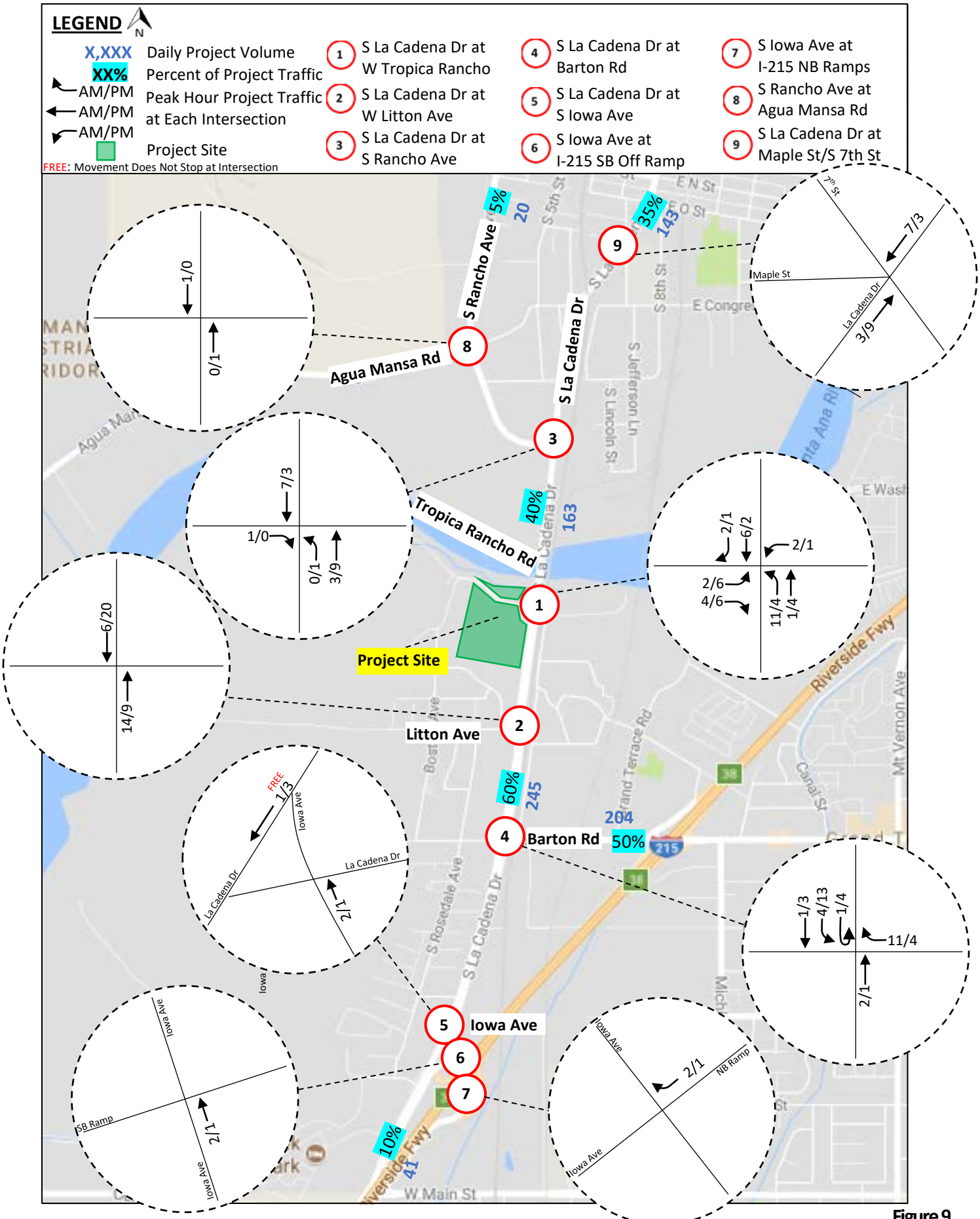


Figure 8

Tropica Rancho Warehouse Project

PROJECT GENERATED TRAFFIC – PASSENGER CARS



Tropica Rancho Warehouse Project

Figure 9

PROJECT GENERATED TRAFFIC – TRUCKS (PCE's)

PROJECTED TRAFFIC VOLUMES

The total volumes of traffic projected for the analysis of traffic conditions with the proposed project were determined by adding the traffic that would be generated by the warehouse buildings to the existing and future baseline traffic volume scenarios. Three "with project" scenarios were analyzed: the "Existing plus Project Traffic" scenario, the "Year 2019 with Project Traffic" scenario, and the "Year 2040 with Project Traffic" scenario. The traffic volumes for the "Existing plus Project Traffic" scenario are shown on ***Figure 10***, the projected year 2019 traffic volumes for the "with project" scenario are shown on ***Figure 11***, and the projected 2040 traffic volumes for the "with project" scenario are shown on ***Figure 12***.

INTERSECTION IMPACT ANALYSIS

An analysis of traffic impacts was conducted by quantifying the before-and-after traffic volumes, then determining the delay values and levels of service at the study area intersections for the "without project" and "with project" scenarios. Three scenarios were used as the baseline conditions for the intersection impact analysis: existing year 2017 conditions, the year 2019 conditions with ambient growth and the cumulative traffic that would be generated by other development projects, and the long-range horizon year of 2040. The impact analysis, therefore, addresses the following six scenarios.

- Existing Traffic Conditions
- Existing plus Project Traffic Conditions
- Year 2019 without Project
- Year 2019 with Project
- Year 2040 without Project
- Year 2040 with Project.

The before-and-after delay values and levels of service at each of the study area intersections are summarized in **Table 10** for the existing conditions scenario. The table shows the existing traffic conditions without the project, the traffic conditions with the addition of the project generated traffic, and the change in delay values associated with the project. The numbers in parenthesis show the percentage increase in delay caused by project traffic at the intersections that currently operate at LOS E or F. The last column in **Table 10**, indicates if the intersection would be significantly impacted by the project traffic. As shown, the proposed project would have a significant impact at the intersection of La Cadena Drive at Tropica Rancho Road because the LOS drops from LOS B to LOS E at the stop sign during the AM and PM peak hours. The project does not directly cause the LOS to deteriorate from an acceptable LOS A thru D to LOS E or F at any of the other intersections, so there are no other significant project impacts.

TABLE 10:
PROJECT IMPACT ON INTERSECTION LEVELS OF SERVICE
EXISTING CONDITIONS AS BASELINE

Intersection	Delay Values and Levels of Service			
	Existing Conditions	Existing Plus Project	Change in Delay Value	Significant Impact?
AM PEAK HOUR				
La Cadena Dr at 7th St/Maple St	14.5 – B	14.6 – B	+0.1	No
La Cadena Dr at Rancho Ave	42.4 – D	44.2 – D	+1.8	No
La Cadena Dr at Tropica Rancho Rd*	12.7 – B	38.3 – E	+25.6	Yes
La Cadena Dr at Litton Ave	6.1 – A	6.1 – A	0.0	No
La Cadena Dr at Barton Rd	11.0 – B	11.4 – B	+0.4	No
La Cadena Dr at Iowa Ave	8.0 – A	8.0 – A	0.0	No
Iowa Ave at I-215 SB Off-Ramp	10.7 – B	10.8 – B	+0.1	No
Iowa Ave at I-215 NB On/Off Ramps	73.1 – E	78.0 – E	+4.9 (6.7%)	No
Rancho Ave at Agua Mansa Rd	14.5 – B	14.5 – B	0.0	No
PM PEAK HOUR				
La Cadena Dr at 7th St/Maple St	13.0 – B	13.0 – B	0.0	No
La Cadena Dr at Rancho Ave	42.5 – D	43.4 – D	+0.9	No
La Cadena Dr at Tropica Rancho Rd*	12.2 – B	47.8 – E	+35.6	Yes
La Cadena Dr at Litton Ave	6.8 – A	6.9 – A	+0.1	No
La Cadena Dr at Barton Rd	13.3 – B	13.9 – B	+0.6	No
La Cadena Dr at Iowa Ave	10.2 – B	10.3 – B	+0.1	No
Iowa Ave at I-215 SB Off-Ramp	12.6 – B	12.7 – B	+0.1	No
Iowa Ave at I-215 NB On/Off Ramps	169.1 – F	172.3 – F	+3.2 (1.9%)	No
Rancho Ave at Agua Mansa Rd	56.8 – E	56.9 – E	+0.1 (0.2%)	No

* La Cadena/Tropica Rancho intersection is unsignalized.

Table 10 indicates that the intersection of La Cadena Drive at 7th Street/Maple Street, for example, would operate with an average delay value of 14.5 seconds and LOS B for existing conditions during the AM peak hour and at a delay value of 14.6 seconds and LOS B for the existing plus project scenario, which represents an increase in the delay value of 0.1 seconds. **Table 10** indicates that one of the study area intersections would be significantly impacted by the project according to the significance criteria cited above; i.e., the intersection of La Cadena Drive at Tropica Rancho Road.

The before-and-after delay values and levels of service at each of the study area intersections are summarized in **Table 11** for the year 2019 scenario. As shown, the proposed project would have a significant impact at the intersection of La Cadena Drive at Tropica Rancho Road because the delays at the stop sign drops the LOS B to a LOS F during the AM and PM peak hours.

TABLE 11:
PROJECT IMPACT ON INTERSECTON LEVELS OF SERVICE
YEAR 2019 AS BASELINE

Intersection	Delay Values and Levels of Service			
	2019 Without Project	2019 With Project	Change in Delay Value	Significant Impact?
AM PEAK HOUR				
La Cadena Dr at 7th St/Maple St	15.0 – B	15.0 – B	0.0	No
La Cadena Dr at Rancho Ave	68.8 – E	72.4 – E	+3.6 (5.2%)	No
La Cadena Dr at Tropica Rancho Rd*	13.5 – B	55.7 – F	+42.2	Yes
La Cadena Dr at Litton Ave	8.7 – A	8.7 – A	0.0	No
La Cadena Dr at Barton Rd	14.8 – B	15.2 – B	+0.4	No
La Cadena Dr at Iowa Ave	11.8 – B	11.8 – B	0.0	No
Iowa Ave at I-215 SB Off-Ramp	12.3 – B	12.3 – B	0.0	No
Iowa Ave at I-215 NB On/Off Ramps	238.2 – F	247.7 – F	+9.5 (4.0%)	No
Rancho Ave at Agua Mansa Rd	17.2 – B	17.3 – B	+0.1	No
PM PEAK HOUR				
La Cadena Dr at 7th St/Maple St	13.3 – B	13.3 – B	0.0	No
La Cadena Dr at Rancho Ave	75.9 – E	78.5 – E	+2.6 (3.4%)	No
La Cadena Dr at Tropica Rancho Rd*	13.3 – B	82.7 – F	+69.4	Yes
La Cadena Dr at Litton Ave	10.9 – B	11.3 – B	+0.4	No
La Cadena Dr at Barton Rd	22.2 – C	23.9 – C	+1.7	No
La Cadena Dr at Iowa Ave	15.4 – B	15.5 – B	+0.1	No
Iowa Ave at I-215 SB Off-Ramp	15.8 – B	16.0 – B	+0.2	No
Iowa Ave at I-215 NB On/Off Ramps	256.6 – F	260.5 – F	+3.9 (1.5%)	No
Rancho Ave at Agua Mansa Rd	105.6 – F	105.7 – F	+0.1 (0.1%)	No

* La Cadena/Tropica Rancho intersection is unsignalized.

The before-and-after delay values and levels of service at each of the study area intersections are summarized in **Table 12** for the year 2040 scenario. As shown, the proposed project would continue to have a significant impact at the intersection of La Cadena Drive at Tropica Rancho Road because the delays at the stop signs would result in a deterioration of the LOS to LOS F during the AM and PM peak hours.

TABLE 12:
PROJECT IMPACT ON INTERSECTION LEVELS OF SERVICE
YEAR 2040 AS BASELINE

Intersection	Delay Values and Levels of Service			
	2040 Without Project	2040 With Project	Change in Delay Value	Significant Impact?
AM PEAK HOUR				
La Cadena Dr at 7th St/Maple St	16.8 – B	16.9 – B	+0.1	No
La Cadena Dr at Rancho Ave	177.7 – F	185.9 – F	+8.2 (4.6%)	No
La Cadena Dr at Tropica Rancho Rd*	13.7 – B	50.5 - F	+36.8	Yes
La Cadena Dr at Litton Ave	7.3 – A	7.3 – A	0.0	No
La Cadena Dr at Barton Rd	12.9 – B	13.5 – B	+0.6	No
La Cadena Dr at Iowa Ave	9.2 – A	9.2 – A	0.0	No
Iowa Ave at I-215 SB Off-Ramp	33.6 – C	35.5 – D	+1.9	No
Iowa Ave at I-215 NB On/Off Ramps	522.8 – F	531.5 – F	+8.7 (1.7%)	No
Rancho Ave at Agua Mansa Rd	15.2 – B	15.3 – B	+0.1	No
PM PEAK HOUR				
La Cadena Dr at 7th St/Maple St	25.8 – C	27.1 – C	+1.3	No
La Cadena Dr at Rancho Ave	449.0 – F	452.6 – F	+3.6 (0.8%)	No
La Cadena Dr at Tropica Rancho Rd*	16.9 - C	574.9 - F	+558.0	Yes
La Cadena Dr at Litton Ave	13.3 – B	14.3 – B	+1.0	No
La Cadena Dr at Barton Rd	53.0 – D	54.8 – E	+1.8	No
La Cadena Dr at Iowa Ave	339.9 – F	343.7 – F	+3.8 (1.1%)	No
Iowa Ave at I-215 SB Off-Ramp	37.3 – D	38.2 – D	+0.9 (2.9%)	No
Iowa Ave at I-215 NB On/Off Ramps	542.9 – F	547.3 – F	+4.4 (0.8%)	No
Rancho Ave at Agua Mansa Rd	143.3 – F	143.5 – F	+0.2 (0.1%)	No

*La Cadena/Tropica Rancho intersection is unsignalized.

While **Tables 10, 11,** and **12** indicate that the project would not result in a significant impact at any of the study area intersections other than the currently-unsignalized intersection of La Cadena Drive at Tropica Rancho Road (because the additional traffic that would be contributed by the project is negligible), the tables indicate that several of the intersections would operate at deficient levels of service; with or without the project, i.e., the intersections would operate at a LOS E or F. The project, while minor, contributes cumulatively to the deficient operation of these intersections so improvements would be required to bring these intersections back to pre-project levels of operation to be in compliance with the City of Colton and Caltrans

acceptability standards. The cumulative impacts at these intersections and the recommended mitigation measures for the cumulative impacts are presented in the “Cumulative Impacts” section.

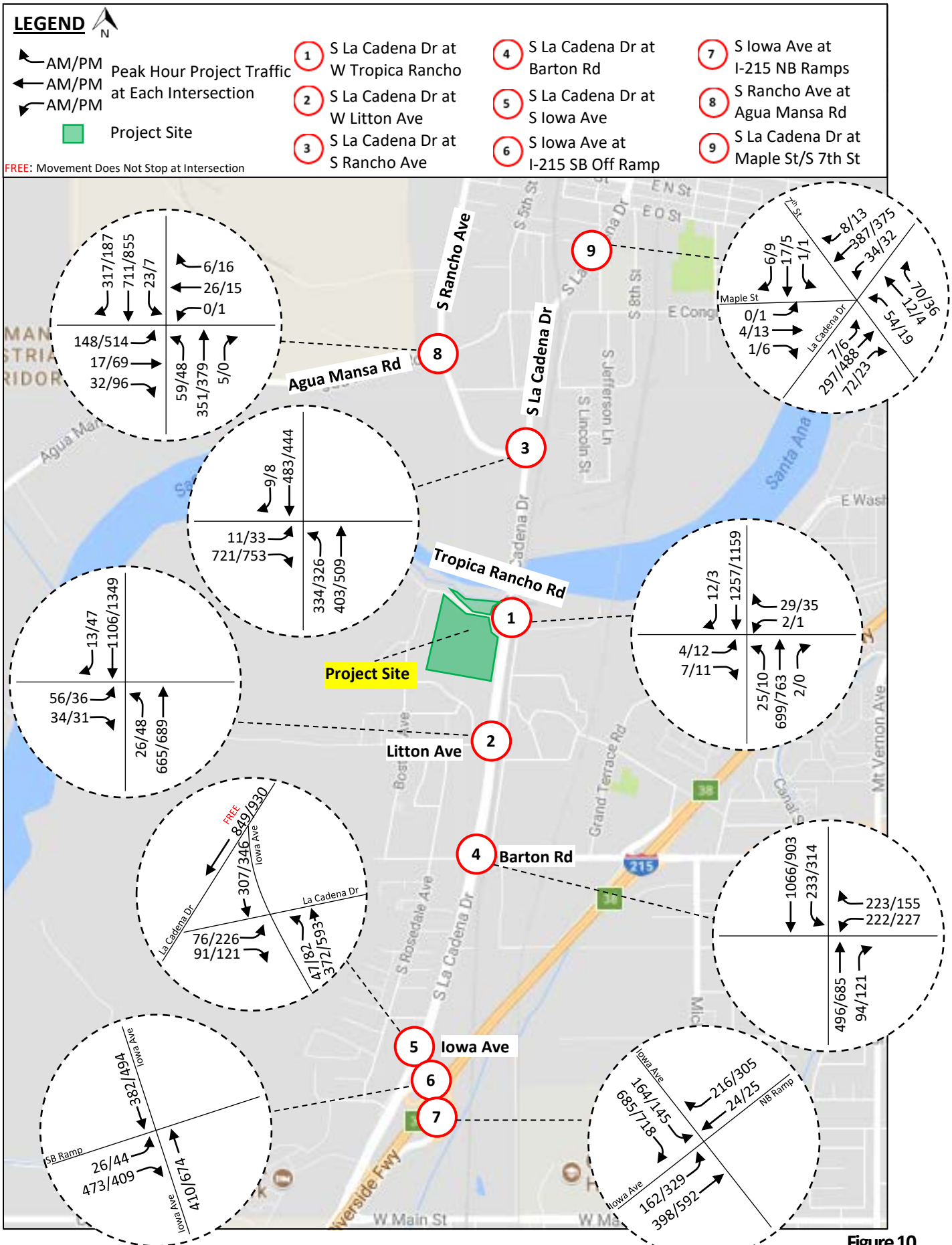


Figure 10

Tropica Rancho Warehouse Project

TRAFFIC VOLUMES – EXISTING CONDITIONS + PROJ

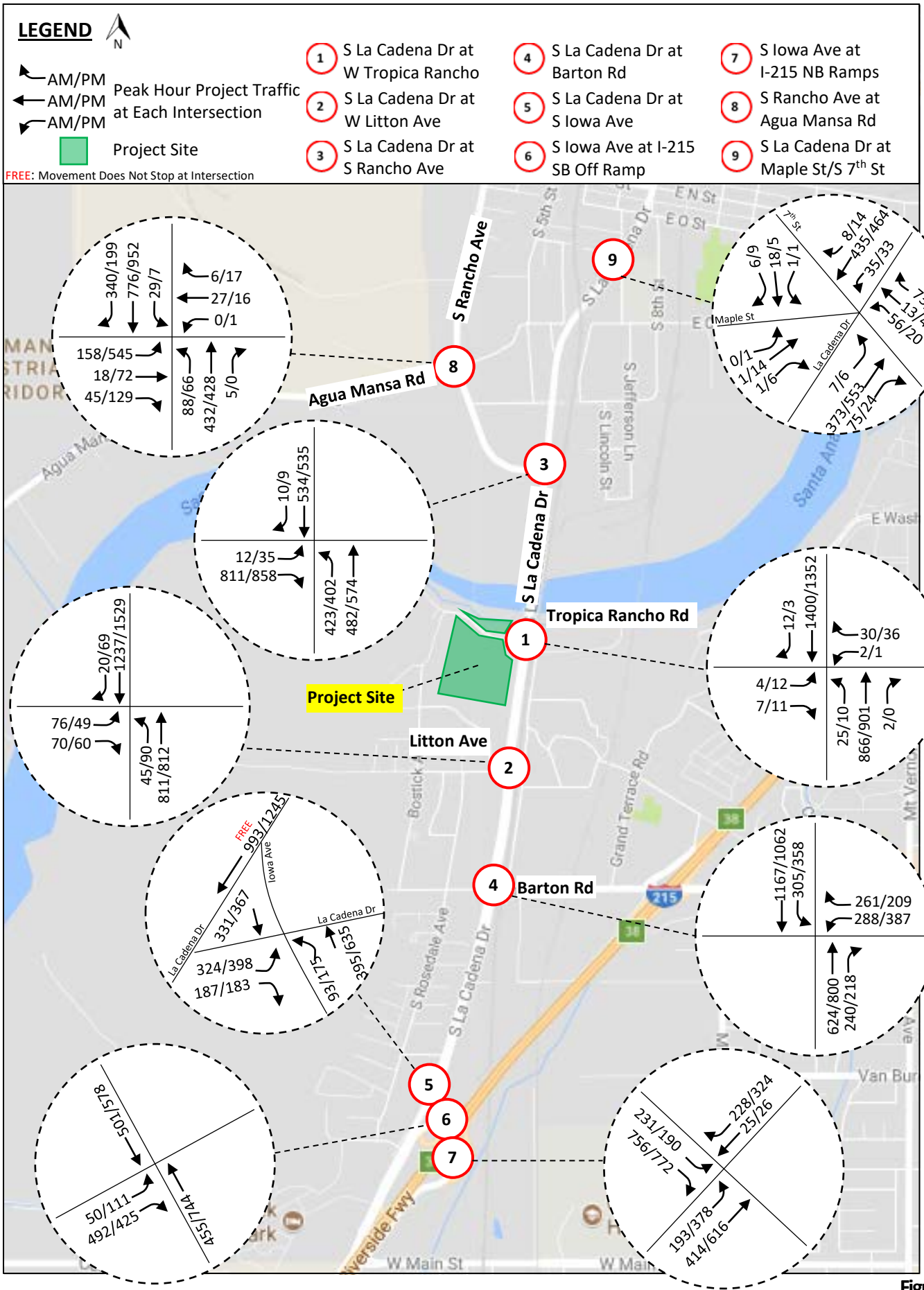


Figure 11

Tropica Rancho Warehouse Project

2019 TRAFFIC VOLUMES – WITH PROJECT

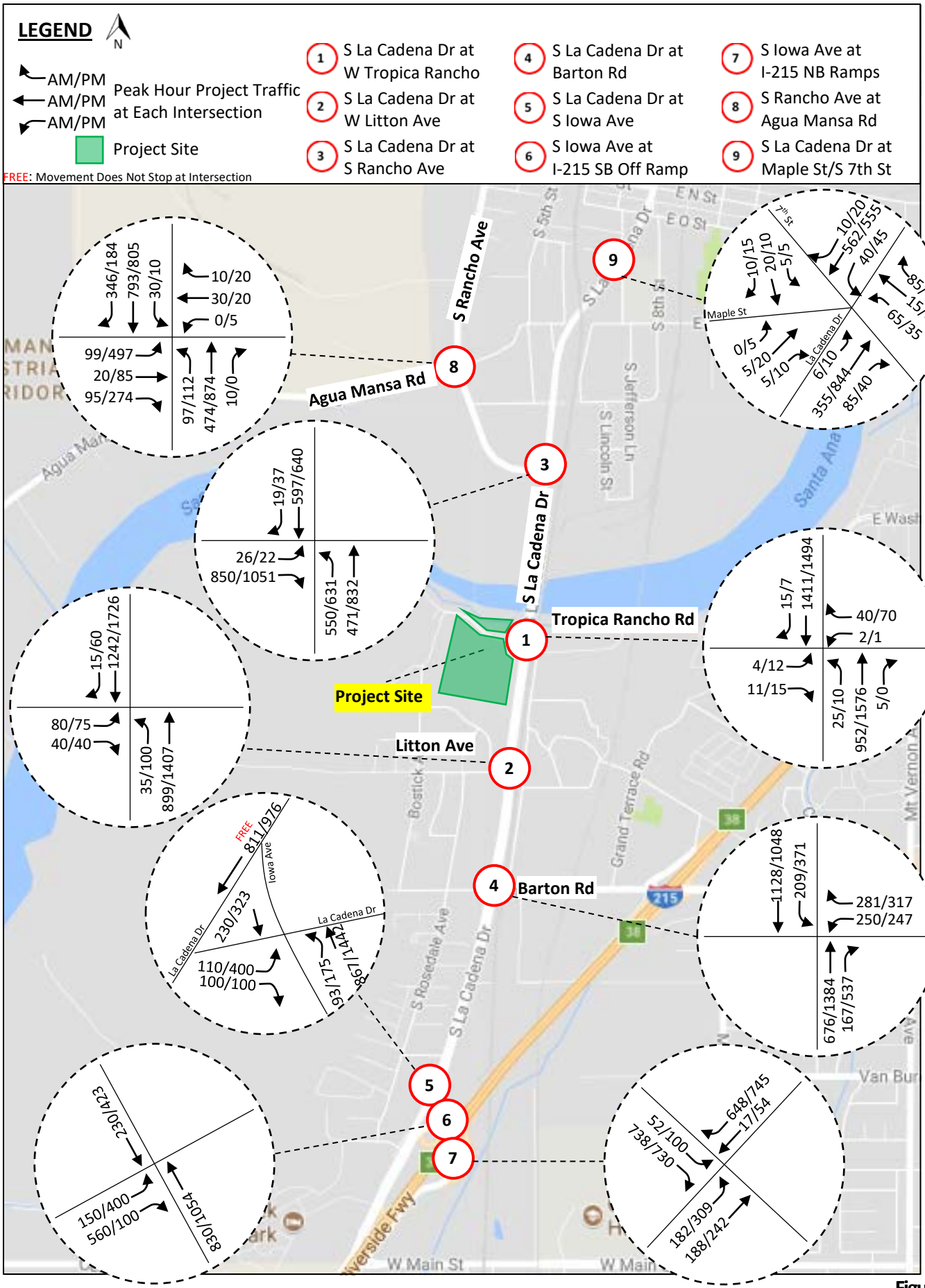
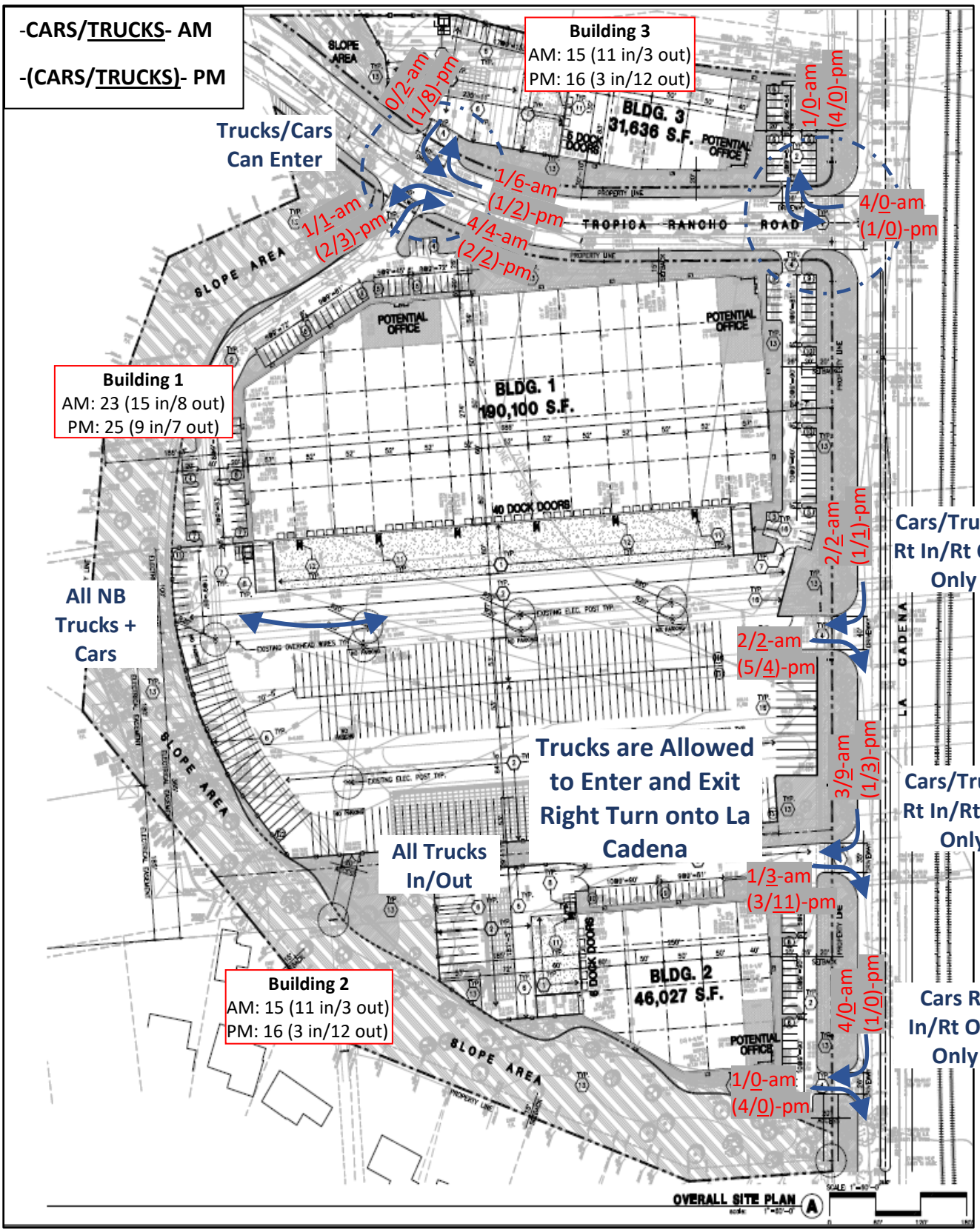


Figure 12

Tropica Rancho Warehouse Project

2040 TRAFFIC VOLUMES – WITH PROJECT



Tropica Rancho Warehouse Project

Figure 13
PROJECT DISTRIBUTION AND PROJECT VOLUME AT DRIVEWAYS: AM/(PM) PEAK 1 HOUR

CONGESTION MANAGEMENT PROGRAM

The San Bernardino County Congestion Management Program (CMP) guidelines states that a traffic study would be required if a proposed development project would generate 250 or more two-way vehicle trips per hour or if the project would generate 100 to 250 peak hour trips and would expect to add at least 50 peak hour trips to a State highway facility. As the proposed warehouse project is estimated to generate 59 vehicle trips (PCEs) during the AM peak hour and 64 vehicle trips during the PM peak hour, the level of project generated traffic is well below the designated CMP thresholds and a CMP traffic study is not required.

The proposed project would not exceed a level of service standard established by the county congestion management agency for designated roads or highways, and the project's impacts on the CMP roadways are less than significant. As shown in **Table 13**, the project will contribute 50 or more peak hour trips at only (1) of the studied intersections (La Cadena Drive at Tropica Rancho Road – 53 project trips). All other studied intersections will have less than the thresholds required for the inclusion in the traffic study. These locations were included at the request of the City during the scoping process.

TABLE 13:
PROJECT TRAFFIC AT EACH INTERSECTION

INTERSECTION	PEAK HOUR	PROJECT ONLY VOLUMES AT THE INTERSECTION
1. La Cadena Dr at Rancho Ave	AM	21
	PM	24
2. La Cadena Dr at Tropica Rancho Rd	AM	53
	PM	44
3. La Cadena Dr at Iowa Ave	AM	9
	PM	4
4. Iowa Ave at I-215 NB On/Off Ramp	AM	9
	PM	4
5. Rancho Ave at Agua Mansa Rd	AM	5
	PM	5

MITIGATION MEASURES FOR SIGNIFICANT PROJECT IMPACT

If any intersection is forecast to be impacted by project development, improvements need to be identified as mitigation measures to bring peak hour operations into conformance with CMP/City minimum level of service standards (LOS D or better).

The traffic analysis indicates that the intersection of La Cadena Drive and Tropica Rancho Road would be significantly impacted by the proposed project because the delays at the stop sign on Tropica Rancho Road would result in LOS E for the existing conditions baseline scenario and LOS F for the year 2019 and year 2040 analysis scenarios.

A potential mitigation measure for this impact would be to install a traffic signal at the intersection. However, the criteria for traffic signal installations in the "California Manual on Uniform Traffic Control Devices" (MUTCD) indicate that a traffic signal is not warranted at this intersection for any of the analysis scenarios based on the peak hour traffic volumes (Figure 4C-4, Warrant 3, Peak Hour, 70% Factor). The traffic volumes on the major street (La Cadena Drive) are above the levels shown on the Figure 4C-4 chart, but the traffic volumes on the minor street (Tropica Rancho Road) are under 75 vph for all scenarios. A traffic volume of 75 vph is the threshold for the minor street, below which a signal is not warranted. The Traffic Signal Warrants worksheets can be found in appendix, Attachment H.

The recommendation to install a traffic signal was developed with the objectives of 1) reducing delays for the vehicles waiting at the stop sign on Tropica Rancho Road, 2) improving the level of service at this intersection approach to an acceptable level, and 3) reducing the collision risks for vehicles (primarily trucks) turning into and out of Tropica Rancho Road. While a traffic signal would result in these safety and operational improvements, the fact remains that a traffic signal is not warranted based on the relatively low traffic volumes projected for Tropica Rancho Road. With a traffic signal the intersection will operate at LOS A under both AM and PM peak hours.

There are two options that could be considered regarding this issue:

- Recommending the installation of a traffic signal at this intersection as a mitigation measure for the significant impact even though a signal is not warranted based on the projected traffic volumes and the MUTCD guidelines.
- Prohibiting left turns by installing a "Right Turn Only" sign on Tropica Rancho Road at its intersection with La Cadena Drive. This would result in a circuitous routing of project traffic by requiring all exiting vehicles to travel south on La Cadena Drive, some of which would make U-turns at Barton Road.

These options should be considered and evaluated by the applicant, the environmental consultant, and City staff to determine the preferred approach for mitigating the project's significant impact at this intersection.

CUMULATIVE IMPACTS AND MITIGATION

Although the proposed project would have a significant impact at only one intersection, **Tables 11** and **12** indicate that significant cumulative impacts would occur at several intersections because the projected future traffic volumes would result in intersection conditions that are representative of LOS E or F, which represent unacceptable conditions according to the City of Colton and Caltrans criteria. The intersections that would have a significant cumulative impact are listed in **Table 14**, which shows the delay and LOS values for the "without project" and "with project" scenarios for the year 2019 and 2020 scenarios. **Table 14** also shows the delay and LOS values that would be achieved if mitigation measures were to be implemented at the intersections, and the proposed mitigation measures are briefly described in the last column of **Table 14**. The proposed mitigation measures would alleviate the cumulative impacts and result in operating conditions at each intersection that are an improvement over the "without project" scenario.

TABLE 14:
SUMMARY OF CUMULATIVE IMPACTS

Intersection	Delay Values and Levels of Service			Proposed Mitigation
	Without Project	With Project	With Mitigation	
YEAR 2019				
La Cadena Dr at Rancho Ave				Modify Signal to Provide Overlap Phases for NB Left & EB Right
AM Peak Hour	68.8 – E	72.4 – E	43.0 – D	
PM Peak Hour	75.9 – E	78.5 – E	45.9 – D	
La Cadena Dr at Tropica Rancho				Install Traffic Signal
AM Peak Hour	13.5 – B	55.7 – F	7.1 – A	
PM Peak Hour	13.3 – B	82.7 – F	7.7 – A	
Iowa Ave at I-215 NB Ramps				Add Eastbound Right-turn Lane & Overlap Phases for NB Left & EB Right
AM Peak Hour	238.2 – F	247.7 – F	22.9 – C	
PM Peak Hour	256.6 – F	260.5 – F	81.2 – F	
Rancho Ave at Agua Mansa Rd				Add Eastbound Right-turn Lane
PM Peak Hour	105.6 – F	105.7– F	51.7 – D	

YEAR 2040				
La Cadena Dr at Rancho Ave AM Peak Hour PM Peak Hour	 177.7 – F 449.0 – F	 185.9 – F 452.6 – F	 35.8 – D 107.6 – F	Modify Signal to Provide Overlap Phases for NB Left & EB Right
La Cadena Dr at Tropica Rancho AM Peak Hour PM Peak Hour	 13.7 – B 16.9 – C	 50.5 – F 574.9 – F	 7.7 – A 9.7 – A	Install Traffic Signal
La Cadena Dr at Iowa Ave PM Peak Hour	339.9 – F	343.7 – F	18.3 – B	Convert NB Left-turn Lane to Through-Left Lane
Iowa Ave at I-215 NB Ramps AM Peak Hour PM Peak Hour	522.8 – F 542.9 – F	531.5 – F 547.6 – F	131.5 – F 262.7 – F	Add Eastbound Right-turn Lane & Overlap Phases for NB Left & EB Right
Rancho Ave at Agua Mansa Rd PM Peak Hour	143.3 – F	143.5 – F	38.5 – D	Add Eastbound Right-turn Lane

PROJECT FAIR SHARE AND PROJECT CONTRIBUTION

The fair share responsibilities associated with the cumulative mitigation measures were calculated by determining the volumes of additional traffic that would be passing through each of the significantly impacted intersections and calculating the proportion of the traffic that would be attributed to the proposed warehouse project. The results of the fair share calculations are summarized in **Table 15** for each intersection. As shown, the proposed project's fair share contribution to the traffic increases at each intersection ranges from 1.1 percent to 8.1 percent.

TABLE 15:
PROJECT FAIR SHARE AND PROJECT CONTRIBUTION

Intersection	Peak Hour	(A) Existing	(B) 2040 With Project	(C) Project Only	(D) Total New Traffic (B-A)	Project % Of New Traffic (C/D x 100)	Average Project % Of New Traffic (C/D x 100)
1. La Cadena Dr at Rancho Ave	AM	1961	2513	21	552	3.8	3.0
	PM	2073	3213	24	1140	2.1	
2. La Cadena Dr at Tropica Rancho Rd	AM	2037	2465	53	428	12.4	8.1
	PM	1994	3185	44	1191	3.7	
3. La Cadena Dr at Iowa Ave	AM	893	1400	9	507	1.8	1.1
	PM	1368	2440	4	1072	0.4	
4. Iowa Ave at I-215 NB On/Off Ramp	AM	1649	1825	9	176	5.1	5.6
	PM	2114	2180	4	66	6.1	
5. Rancho Ave at Agua Mansa Rd	AM	1695	2004	5	309	1.6	1.2
	PM	2187	2886	5	699	0.7	

SUMMARY OF IMPACTS AND CONCLUSIONS

The key findings of the traffic impact analysis are presented below.

- The proposed warehouse project would generate an estimated 59 vehicle trips (PCEs) during the morning peak hour (43 inbound and 16 outbound), 64 trips during the afternoon peak hour (17 inbound and 47 outbound), and a total of 794 vehicle trips per day.

- An analysis of nine intersections in the vicinity of the proposed project indicates that the additional traffic generated by the proposed warehouses would result in a significant impact at any of the study area intersections for the existing plus project scenario and for the year 2019 and 2040 scenarios according to the City of Colton's significance criteria; i.e., the currently-unsignalized intersection of La Cadena Drive and Tropica Rancho Road.

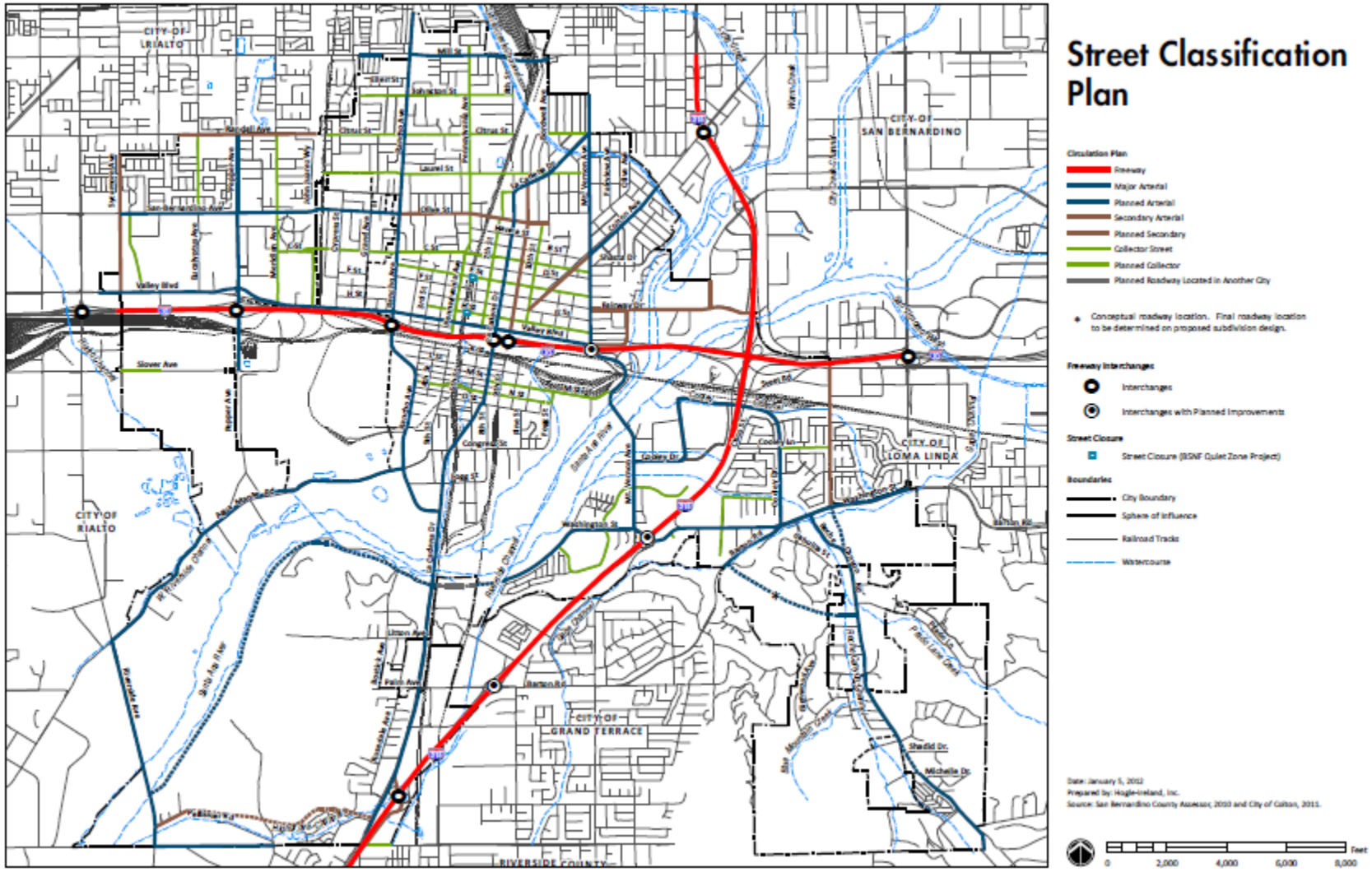
- To mitigate the significant impact and accommodate the ingress and egress demands of the proposed warehouses, there are two measures that could potentially be implemented: 1) Installing a traffic signal at the intersection of La Cadena Drive and Tropica Rancho Road even though a signal is not warranted based on the projected traffic volumes or 2) prohibiting left turns by installing a "Right Turn Only" sign on Tropica Rancho Road at its intersection with La Cadena Drive. This second option would result in circuitous routing of project traffic by requiring all exiting vehicles to travel south on La Cadena Drive, some of which would make U-turns at Barton Road.

- While the project does not directly significantly impact any of the study area intersections that are currently signalized, several of the intersections will operate at deficient levels of service (LOS E or F) with or without this project. The deficient intersections include Iowa Avenue at the I-215 northbound on/off ramps and Rancho Avenue at Agua Mansa Road for the existing conditions scenario, these two intersections plus the La Cadena Drive/Rancho Avenue intersection for the year 2019 scenario, and these three intersections plus the La Cadena Drive/Iowa Avenue intersection for the year 2040 scenario. The deficient conditions projected for these intersections represent significant cumulative impacts and improvements/mitigation measures may be required to bring the intersections into compliance with the City of Colton and Caltrans acceptability standards.

- Mitigation measures have been identified for the significant cumulative impacts (as presented in Table 13) and the proposed project's fair share contribution to the traffic increases at each intersection ranges from 1.1 percent to 8.1 percent (as detailed in Table 15).

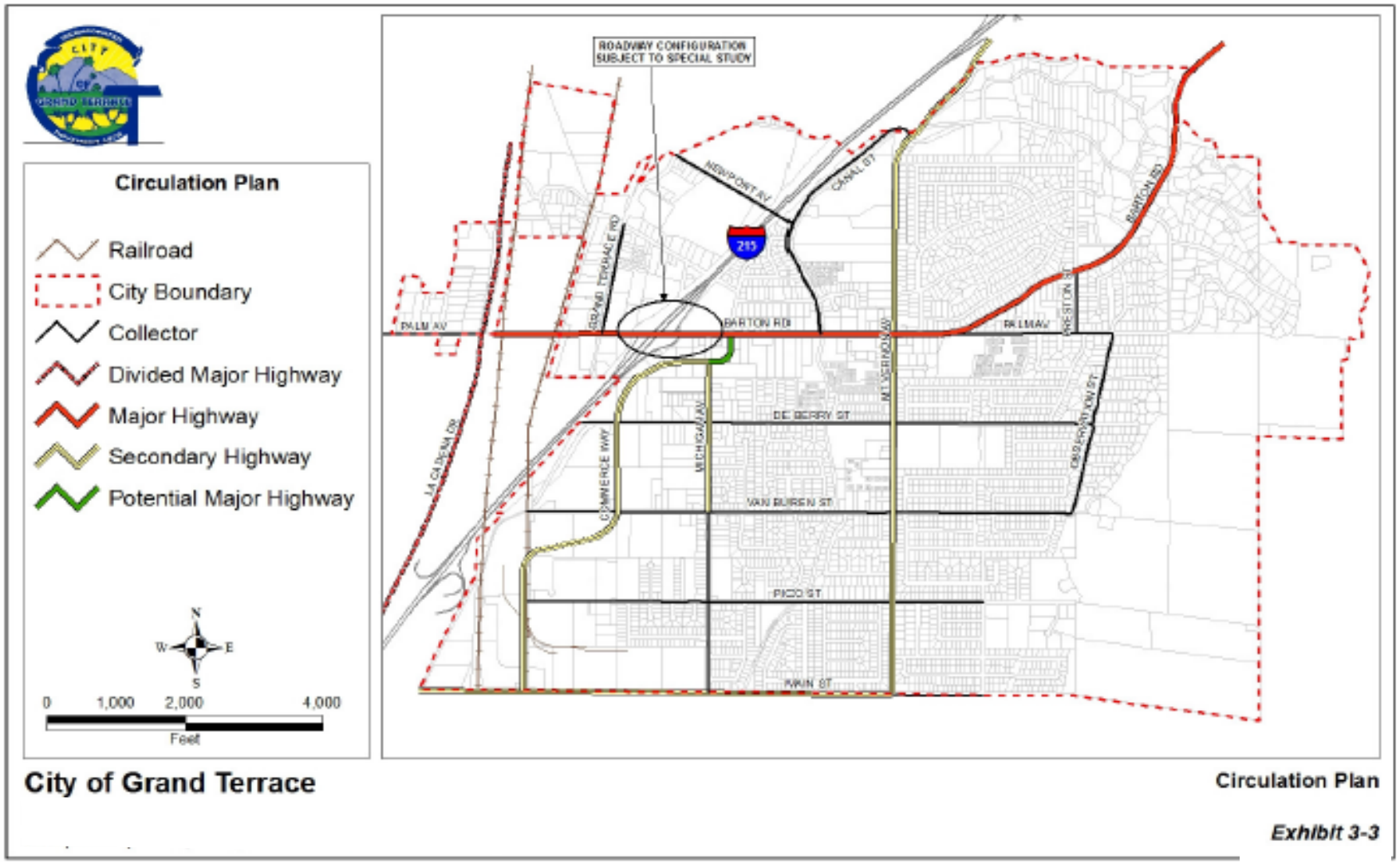
ATTACHMENTS

ATTACHMENT A: CITY OF COLTON STREET CLASSIFICATION MAP



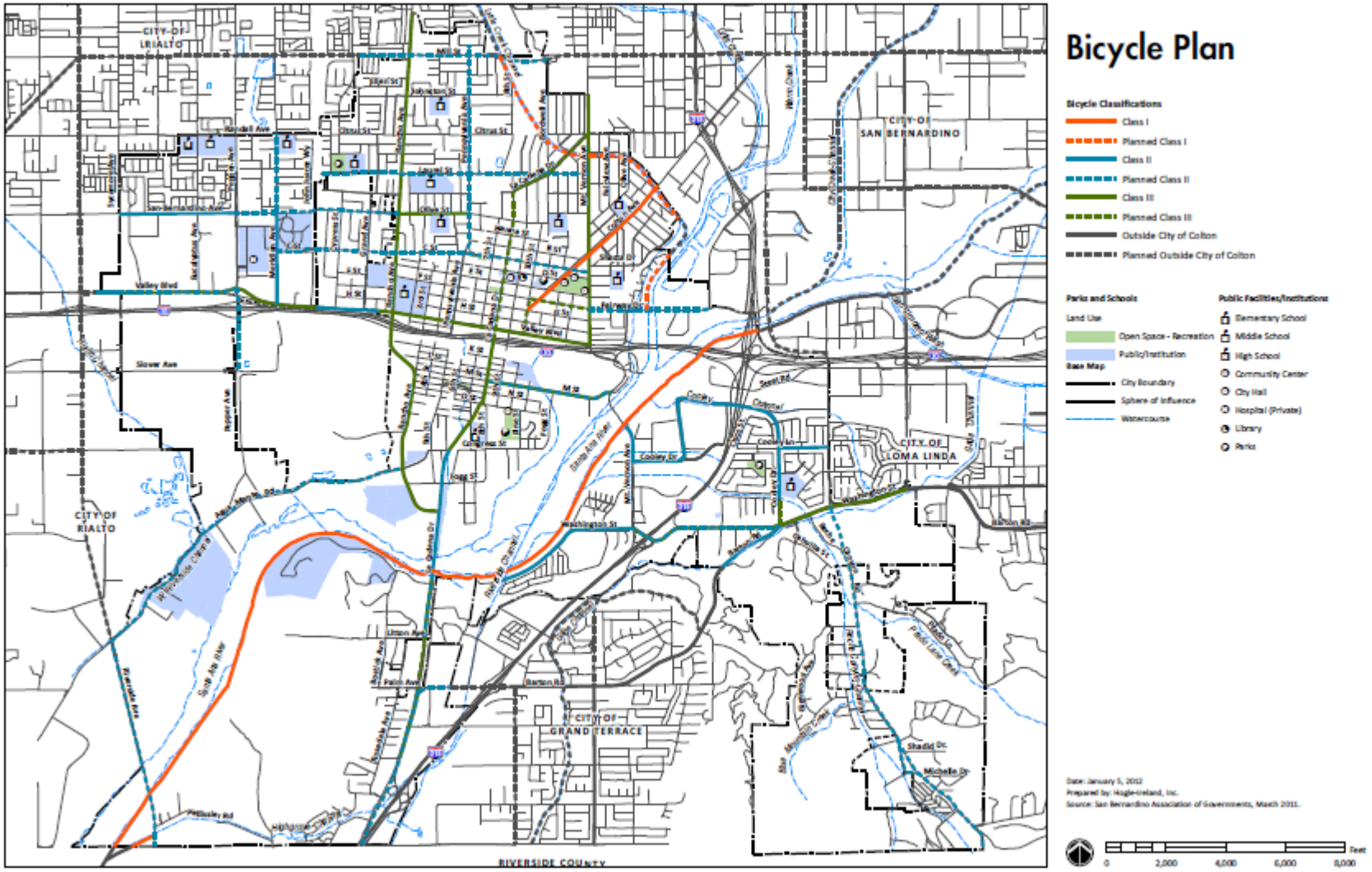
Source: City of Colton Mobility Element

ATTACHMENT B: CITY OF GRAND TERRACE STREET CLASSIFICATION MAP



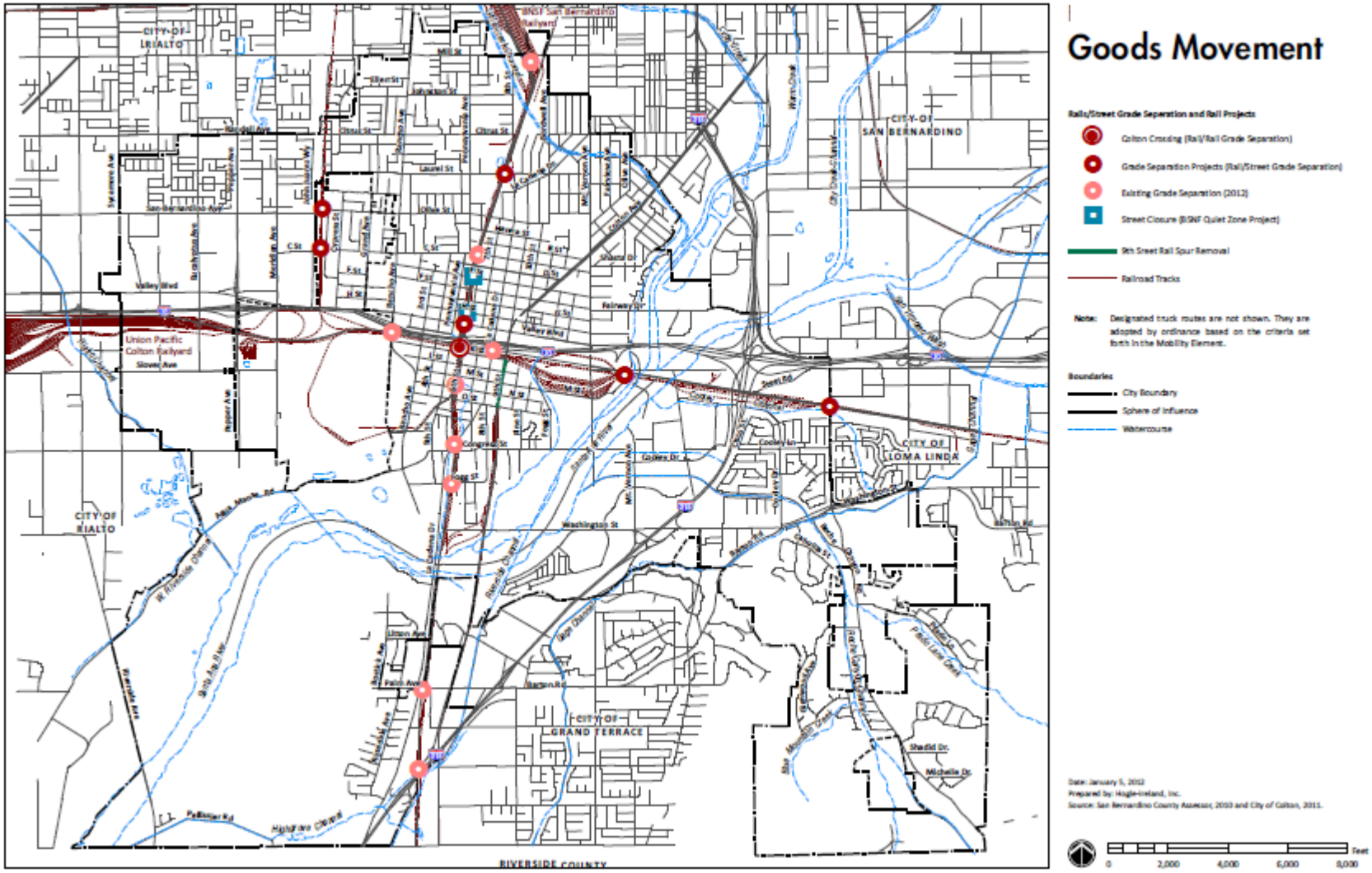
Source: City of Grand Terrace Circulation Element

ATTACHMENT C: CITY OF COLTON ICYCLE PLAN



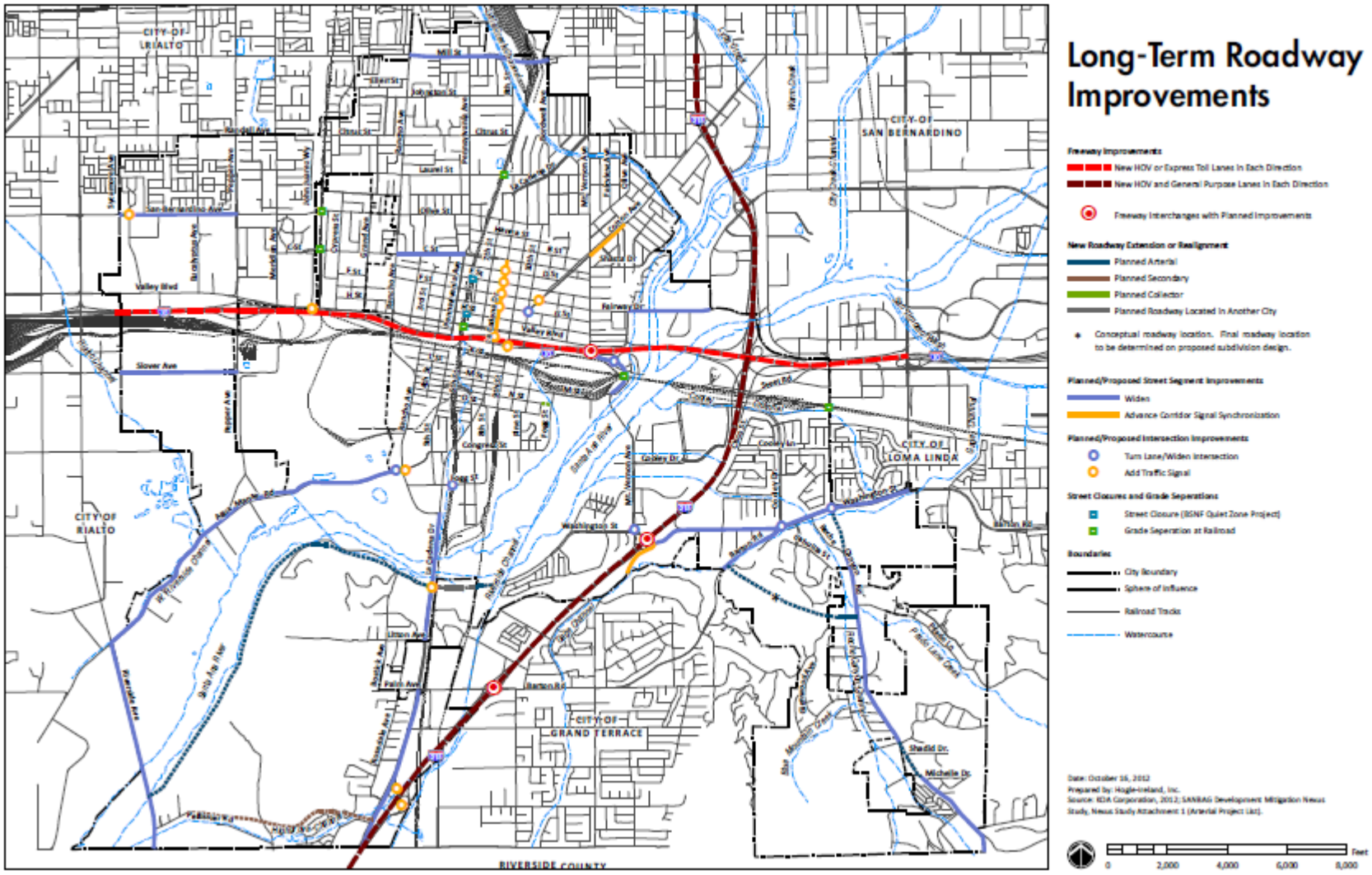
Source: City of Colton Mobility Element

ATTACHMENT D: CITY OF COLTON GOODS MOVEMENT



Source: City of Colton Mobility Element

ATTACHMENT E: CITY OF COLTON LONG-TERM ROADWAY IMPROVEMENTS



Source: City of Colton Mobility Element

ATTACHMENT F: CONCEPT PLAN FOR F T RE IMPROVEMENTS AT THE SANTA ANA RIVER RID E

CONCEPT PLAN AND DISC SSION FOR F T RE IMPROVEMENTS AT RID E

La Cadena Drive over the Santa Ana River Bridge Replacement Project

LSA prepared a construction traffic analysis to assess the potential circulation impacts associated with the proposed construction activity necessary for the La Cadena Drive over the Santa Ana River Bridge Project (project). The City of Colton (City) requested preparation of a construction traffic analysis to determine whether a two-lane bridge could adequately accommodate existing traffic volumes during construction of the proposed project. This construction traffic analysis documents the construction trip generation and analyzes the traffic operations on La Cadena Drive at the intersections and roadway segments between Rancho Avenue and Barton Road under the following two scenarios: 1. Existing conditions; and 2. Existing with construction traffic conditions. Traffic conditions were examined for the weekday a.m. and p.m. peak-hour conditions to identify any potential impacts due to construction vehicle or worker traffic. The a.m. peak hour is defined as the 1 hour of highest traffic volumes occurring between 7:00 and 9:00 a.m. The p.m. peak hour is defined as the 1 hour of highest traffic volumes occurring between 4:00 and 6:00 p.m.

La Cadena Drive runs north and south, and the bridge is located just north of West Tropica Rancho Road and south of Rancho Avenue in the southwestern portion of the City in San Bernardino County (County). The existing bridge includes four travel lanes, a curbed median, and a sidewalk on the west side. The La Cadena Drive Bridge would be constructed in two phases to allow one lane in each direction to remain open at all times during construction. Under Phase 1, the east side of the new bridge would be constructed and the west side would be used for traffic in each direction, with the existing utilities (cable, telephone, and electric) currently located on the east side of the bridge moved to the west side. Under Phase 2, the west side of the new bridge would be constructed with the east side open to traffic in each direction and all utilities moved to the east side.

Construction vehicles and trucks would access the construction site via La Cadena Drive. Currently, La Cadena Drive, which is a four-lane major arterial, connects to the existing four-lane bridge. During construction, one lane in each direction on the bridge would remain open at all times, and it may be necessary to narrow part of La Cadena Drive (from approximately 500 feet north of the bridge to the intersection of La Cadena Drive/Tropica Rancho Road). During demolition, two types of construction trips would be generated: construction worker trips and construction truck trips (e.g., material deliveries and construction waste hauling). Construction activities would generate trips throughout the day. Based on information obtained from Jacobs, 25 workers would work the day shift, 20 workers would work the night shift, and 6 construction vehicles and 15 construction trucks would operate during both a.m. and p.m. peak hours.

Table 13 shows that during demolition of the existing bridge, a total of 230 PCE daily trips would occur, with 87 PCE trips occurring in the a.m. peak hour and 87 PCE trips occurring in the p.m. peak hour.

CONCEPT PLAN AND DISCUSSION FOR FUTURE IMPROVEMENTS AT BRIDGE

Table 13: Total Construction Trip Generation

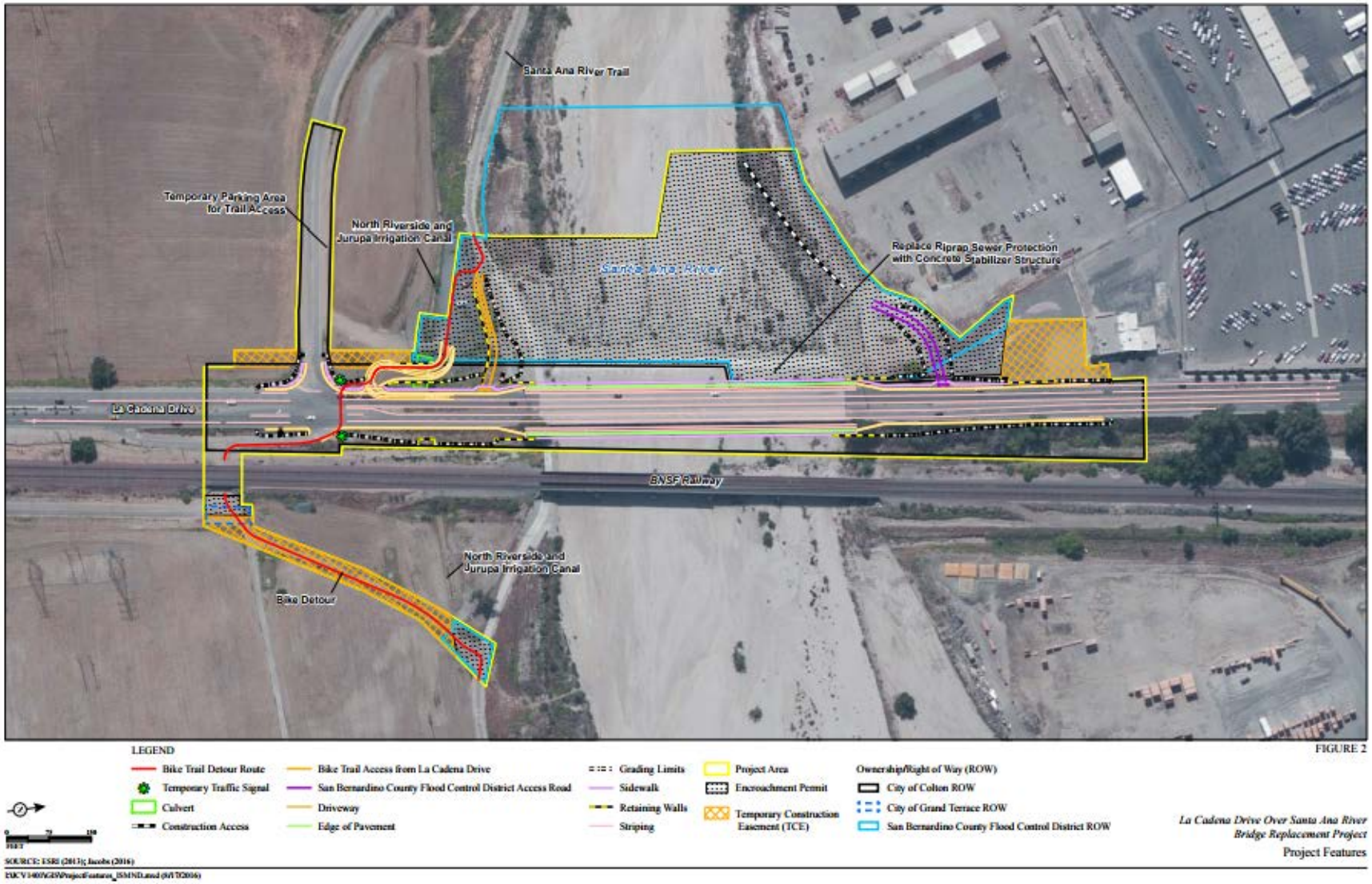
Construction Vehicles					Vehicle Trip Generation							PCE Trip Generation						
						AM Peak Hour			PM Peak Hour				AM Peak Hour			PM Peak Hour		
Description	Quantity	Round Trips	Type	PCE	Daily	In	Out	Total	In	Out	Total	Daily	In	Out	Total	In	Out	Total
orkers1	45	1	Passenger	1	90	25	20	45	20	25	45	90	25	20	45	20	25	45
Construction Car2	12	1	Passenger	1	24	6	6	12	6	6	12	24	6	6	12	6	6	12
Site Grading2	7	1	Truck	2	14	2	2	4	2	2	4	28	4	3	7	3	4	7
Drop Structure2	4	1	Truck	2	8	1	1	2	1	1	2	16	2	2	4	2	2	4
Utility Relocation2	4	1	Truck	2	8	1	1	2	1	1	2	16	2	2	4	2	2	4
Paving2	5	1	Truck	2	10	1	1	2	1	1	2	20	2	2	4	2	2	4
Bridge Construction2	9	1	Truck	2	18	2	3	5	3	2	5	36	4	6	10	6	4	10
Total	**86**				**172**	**38**	**33**	**71**	**33**	**38**	**71**	**230**	**45**	**42**	**87**	**42**	**45**	**87**

Table 14 below demonstrates the daily roadway volumes and LOS classification after the construction. La Cadena Drive between Rancho Avenue and Tropica Rancho Road and La Cadena Drive between Tropica Rancho Road and Barton Road would operate at deficient levels of service (LOS F).

Table 14: Daily Roadway Volumes and Levels of Service Summary with Construction Conditions

	Roadway Segment	Functional Classification	Number of Lanes	Capacity	Volume	V/C	Daily LOS
With Contruction Conditions							
1.	La Cadena Drive Bet. Rancho Ave and Tropica Rancho Rd	Major Arterial	2	17,700	21,857	1.23	F*
2.	La Cadena Drive Bet. Tropica Rancho Rd and Barton Rd	Major Arterial	2	17,700	21,309	1.2	F*

CONCEPT PLAN FOR FUTURE IMPROVEMENTS AT BRIDGE



Source: Initial Study/Mitigated Negative Declaration
LA CADENA DRIVE OVER THE SANTA ANA RIVER BRIDGE REPLACEMENT PROJECT
CITY OF COLTON, COUNTY OF SAN BERNARDINO, CALIFORNIA

ATTACHMENT : ACCESS AT PROJECT SITE

ACCESS AT PROJECT SITE

Major Arterials are roadways designed to move large volumes of traffic, linking freeways with local streets and providing access between cities and sub regions. They carry high traffic volumes and are designed for high speeds, and provide routes for regional transit. Major Arterials may also serve as primary truck routes. On-street parking may be prohibited during peak periods or continuously to allow the street to perform as planned.

Major Arterials: Pepper Avenue, San Bernardino Avenue, Rancho Avenue, La Cadena Drive, Mill Street, Mount Vernon Avenue, Colton Avenue (east of Mount Vernon Avenue), Valley Blvd, Washington Street, Barton Road, and Reche Canyon Road.

Truck Routes: Truck routes will continue to be defined by ordinance via the Municipal Code and will require City Council approval for modification. Truck routes are subject to change based on vehicular traffic, changes to surrounding city truck routes, enforcement, and trucking demand through Colton. At a minimum, the following roadways will continue to serve as truck routes to support industrial business activity:

- Valley Boulevard
- Pepper Avenue
- Mount Vernon Avenue
- Colton Avenue
- Fairway Drive
- La Cadena Drive
- Rancho Avenue (south of Valley Boulevard)
- Washington Street

Truck Routes Performance Criteria

The designation of truck routes in Colton, as adopted by ordinance, routes must adhere to the following performance criteria:

- Truck routes must avoid unnecessary intrusions into residential neighborhoods to limit noise, vibration, and air quality impacts.
- To the extent feasible, truck routes will not be provided on local streets and on streets with mostly residential frontage.
- Truck routes must be located on roadways that provide direct and convenient access between Major Arterials and freeways (I-10 and I-215) and industrial and commercial businesses.
- Truck routes must be located on roadways with the design and construction capacity to accommodate truck traffic.

South La Cadena Drive from Valley Boulevard to the southern City limit, will have the primary purpose of moving vehicles efficiently and safety. Pedestrian improvements will be provided as needed to serve the abutting commercial properties and to allow safe pedestrian crossing of this busy street. To meet the goal of improving the pedestrian environment of La Cadena Drive and also accommodating vehicles along this street, traffic improvements include adding additional traffic signals at intersections where signals are warranted, between Valley Boulevard and C Street.

ATTACHMENT H: TRAFFIC SI NAL WARRANTS ANALYSIS

TRAFFIC SIGNAL WARRANT AND INSTALLATION

Traffic signal installation guidelines are listed in the CAMUTCD *Chapter 4C. Traffic Control Signal Needs Studies*. The study requires an engineering determination of traffic conditions, pedestrian characteristics, and physical characteristics of the location to determine whether installation of a traffic control signal is justified at a particular location. A traffic control signal should not be installed unless there is justification that one or more of the traffic signal warrants listed below are met or engineering judgement has determined that installing a traffic control signal will improve the overall safety and/or operation of the intersection.

The traffic signal warrants outlined in the CAMUTCD are listed as follows:

- Warrant 1, Eight-Hour Vehicular Volume
- Warrant 2, Four-Hour Vehicular Volume
- Warrant 3, Peak Hour
- Warrant 4, Pedestrian Volume N/A
- Warrant 5, School Crossing N/A
- Warrant 6, Coordinated Signal System
- Warrant 7, Crash Experience
- Warrant 8, Roadway Network
- Warrant 9, Intersection Near a Grade Crossing N/A

The CAMUTCD presents warrants as a series of guidelines that are used to help evaluate the situation at hand, not as absolute values. The application of warrants is effective only when combined with knowledgeable engineering judgment. When justified and properly designed, traffic signal installation may;

- Provide for orderly traffic movement
- Reduce the frequency of certain types of crashes
- Increase traffic capacity of an intersection
- Provide for the continuous flow of a platoon of traffic
- Manually provides gaps in heavy traffic flow for other vehicles and pedestrians to cross

The following attachments provide the data used in the traffic signal determination.

TRAFFIC SIGNAL WARRANT ANALYSIS:

When determining if a location or intersection should be signalized, an engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the location shall be performed to determine whether installation of a traffic control signal is justified or warranted. The investigation of the need for a traffic control signal includes an analysis of factors related to the existing operation and safety at the study location and the potential to improve these conditions, as well as the applicable factors contained in the traffic signal warrants outlined.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal. A traffic control signal should not be installed unless an engineering study indicates that installing a traffic control signal will improve the overall safety and/or operation of the intersection. A traffic control signal should not be installed if it will seriously disrupt progressive traffic (CAMUTCD Section 4C.01). Traffic Signal Warrants worksheets are attached in the appendix at the end of this document.

Analysis of the following warrants were thoroughly analyzed and it was concluded that none of the warrants for signal installation per the CAMUTCD were met. This was based on engineering judgement based on field review of the existing roadway characteristics and data collection:

- CAMUTCD Traffic Signal Warrant 1, Eight-Hour Vehicular Volume **Not Met**
- CAMUTCD Traffic Signal Warrant 2, Four-Hour Vehicular Volume **Not Met**
- CAMUTCD Traffic Signal Warrant 3, Peak Hour **Not Met**
- CAMUTCD Traffic Signal Warrant 4, Pedestrian Volume (N/A)
- CAMUTCD Traffic Signal Warrant 5, School Crossing (N/A)
- CAMUTCD Traffic Signal Warrant 6, Coordinated Signal System **Met**
- CAMUTCD Traffic Signal Warrant 7, Crash Experience **Not Met**
- CAMUTCD Traffic Signal Warrant 8, Roadway Network **Not Met**
- CAMUTCD Traffic Signal Warrant 9, Intersection Near a Grade Crossing (N/A)

It is important to install official traffic control devises only when it is warranted or justified. Per CAMUTCD Section 4B.03 Advantages and Disadvantages of Traffic Control Signals states that when properly used, traffic control signals are valuable devices for the control of vehicular and pedestrian traffic. They assign the right-of-way to the various traffic movements and thereby profoundly influence traffic flow.

The traffic signal warrant analysis completed indicates that the intersection of La Cadena Drive and Tropica Rancho Road does not meet or exceed volume thresholds for installation of a traffic signal with or without the addition of project traffic.

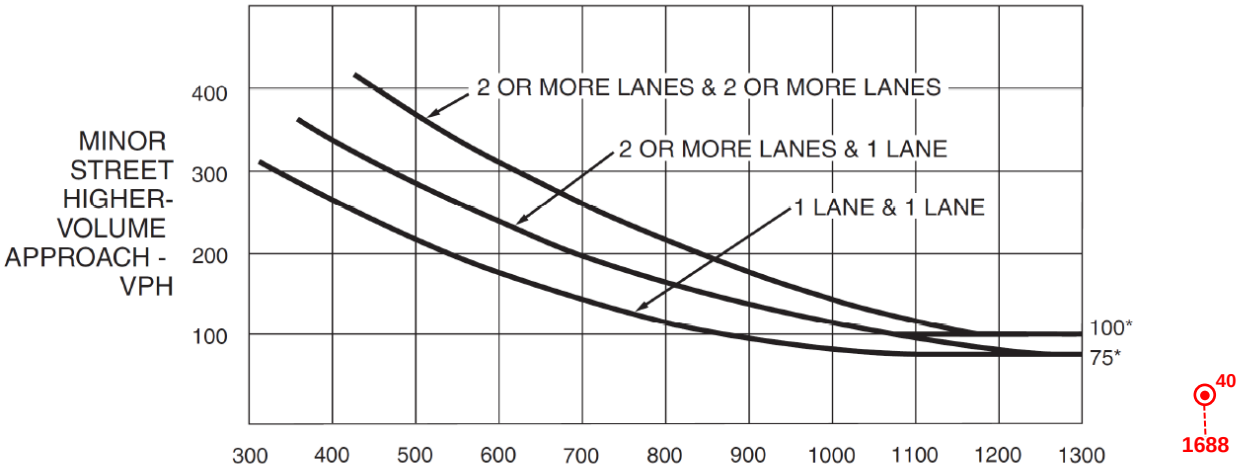
Traffic Signal Warrant Worksheets

The figures on the following pages represent the Traffic Signal Warrants used for the subject intersection per the CAMUTCD.

La Cadena Drive at Tropica Rancho Road

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



40

1688

*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

DIST ____ CO ____ RTE ____ PM ____

COUNT DATE ____
CALC ____ DATE May 2017
CHK ____ DATE ____

Major St: La Cadena Drive — Critical Approach Speed 50 mph
Minor St: Tropica Rancho Road — Critical Approach Speed 25 mph

Speed limit or critical speed on major street traffic > 40 mph..... [x]
or
In built up area of isolated community of < 10,000 population..... [ ] **RURAL (R)**

[ ] **URBAN (U)**

WARRANT 1 - Eight Hour Vehicular Volume — **SATISFIED YES [ ] NO [X]**
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume — **100% SATISFIED YES [ ] NO [X]**
80% SATISFIED YES [ ] NO [X]

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				5-6 am	7-8 am	8-9 am	9-10 am	13-14 pm	14-15 pm	15-16 pm	16-17 pm
	U	R	U	R								Hour
APPROACH LANES	1		2 or More									
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	420 (336)	698	1688	1504	917	1038	1278	1488	1587
Highest Approach Minor Street	150 (120)	105 (84)	200 (160)	140 (112)	5	3	4	3	6	7	13	2

Condition B - Interruption of Continuous Traffic — **100% SATISFIED YES [ ] NO [X]**
80% SATISFIED YES [ ] NO [X]

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				5-6 am	7-8 am	8-9 am	9-10 am	13-14 pm	14-15	15-16 pm	16-17 pm
	U	R	U	R								Hour
APPROACH LANES	1		2 or More									
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)	698	1688	1504	917	1038	1278	1488	1587
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)	5	3	4	3	6	7	13	2

Combination of Conditions A & B — **SATISFIED YES [ ] NO [X]**

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME	X	Yes [ ] No [X]
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC	X	
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes [ ] No [X]

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☒**

Record hourly vehicular volumes for any four hours of an average day

APPROACH LANES	One	2 or More	7-8 am	14-15 pm	15-16 pm	16-17 pm
			Hour			
Both Approaches - Major Street		✓	1688	1278	1488	1587
Higher Approach - Minor Street	✓		3	7	13	2

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☒

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☒**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☒**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND 60 x 4 = 240	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☒
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B With Project Conditions **SATISFIED YES ☐ NO ☒**

APPROACH LANES	One	2 or More	7-8 am
			Hour
Both Approaches - Major Street		✓	1688
Higher Approach - Minor Street	✓		40

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 3 of 5)

WARRANT 4 - Pedestrian Volume
(Parts 1 and 2 Must Be Satisfied)

SATISFIED YES ☐ NO ☐

Part 1 (Parts A or B must be satisfied)

	Hours - - ->				
A.	Vehicles per hour for any 4 hours				
	Pedestrians per hour for any 4 hours				

Figure 4C-5 or Figure 4C-6
SATISFIED YES ☐ NO ☐

	Hours - - ->				
B.	Vehicles per hour for any 1 hour				
	Pedestrians per hour for any 1 hour				

Figure 4C-7 or Figure 4C-8
SATISFIED YES ☐ NO ☐

N/A

Part 2 **SATISFIED YES ☐ NO ☐**

AND, The distance to the nearest traffic signal along the major street is greater than 300 ft	Yes ☐ No ☐
OR, The proposed traffic signal will not restrict progressive traffic flow along the major street.	Yes ☐ No ☐

WARRANT 5 - School Crossing
(Parts A and B Must Be Satisfied)

SATISFIED YES ☐ NO ☐

N/A ---

Part A **SATISFIED YES ☐ NO ☐**

Gap/Minutes and # of Children

		Hour
Gaps vs Minutes	Minute[illegible]ren Using Crossing	
	Num[illegible]er of [illegible]dequat[illegible]Gaps	
School Age Pedestria[illegible] Cross[illegible] Str[illegible]t / hr		

Gaps < [illegible]inut[illegible] YES ☐ NO ☐

AND C[illegible]ldren [illegible]0/hr YES ☐ NO ☐

N/A

AND, Consideration h[illegible] been giv[illegible] less restri[illegible]ve remedial me[illegible]ures.	Yes ☐ No ☐

Part B **SATISFIED YES ☐ NO ☐**

The distance to the nearest traffic signal along the major street is greater than 300 ft	Yes ☐ No ☐
OR, The proposed signal will not restrict the progressive movement of traffic.	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 4 of 5)

WARRANT 6 - Coordinated Signal System **SATISFIED YES ☒ NO ☐**
(All Parts Must Be Satisfied)

MINIMUM REQUIREMENTS	DISTANCE TO NEAREST SIGNAL	
≥ 1000 ft	N 2,400' ft, S 1,920' ft, E _____ ft, W _____ ft	Yes ☒ No ☐
On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.		Yes ☒ No ☐
OR, On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.		

WARRANT 7 - Crash Experience Warrant **SATISFIED YES ☐ NO ☒**
(All Parts Must Be Satisfied)

Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency.			Yes ☐ No ☒
REQUIREMENTS	Number of crashes reported within a 12 month period susceptible to correction by a traffic signal, and involving injury or damage exceeding the requirements for a reportable crash.		Yes ☐ No ☒
5 OR MORE	2 in 2016		
REQUIREMENTS	CONDITIONS	✓	
ONE CONDITION SATISFIED 80%	Warrant 1, Condition A - Minimum Vehicular Volume — No		
	OR, Warrant 1, Condition B - Interruption of Continuous Traffic — No		Yes ☐ No ☒
	OR, Warrant 4, Pedestrian Volume Condition Ped Vol ≥ 152 for any hour OR, Ped Vol ≥ 80 for any 4 hours — No		

WARRANT 8 - Roadway Network **SATISFIED YES ☐ NO ☒**
(All Parts Must Be Satisfied)

MINIMUM VOLUME REQUIREMENTS	ENTERING VOLUMES - ALL APPROACHES	✓	FULFILLED
1000 Veh/Hr	During Typical Weekday Peak Hour 1748 Veh/Hr and has 5-year projected traffic volumes that meet one or more of Warrants 1, 2, and 3 during an average weekday.	✓	Yes ☐ No ☒
	OR During Each of Any 5 Hrs. of a Sat. or Sun _____ Veh/Hr		

CHARACTERISTICS OF MAJOR ROUTES	MAJOR ROUTE A	MAJOR ROUTE B
Hwy. System Serving as Principal Network for Through Traffic	✓	
Rural or Suburban Highway Outside Of, Entering, or Traversing a City		
Appears as Major Route on an Official Plan	✓	
Any Major Route Characteristics Met, Both Streets		Yes ☐ No ☒

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 5 of 5)

N/A ---

WARRANT 9 - Intersection Near a Grade Crossing **SATISFIED YES ☐ NO ☐**
(Both Parts A and B Must Be Satisfied)

PART A A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach. Track Center Line to Limit Line _____	Yes ☐ No ☐
PART B **There is one minor street approach lane at the track crossing** during the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches: _____ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calculate AF) = _____ VPH	Yes ☐ No ☐
OR, There are two or more minor street approach lanes at the track crossing - During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point falls above the applicable curve in Figure 4C-9. Major Street - Total of both approaches : _____ VPH Minor Street - Crosses the track (one direction only, approaching the intersection): _____ VPH X AF (Use Tables 4C-2, 3, & 4 below to calcualte AF) = _____ VPH	Yes ☐ No ☐

The minor street approach volume may be multiplied by one or more following adjustment factors (AF) as described in Section 4C.10.

1- Number of Rail Traffic per Day _____ Adjustment factor from table 4C-2____

2- Percentage of High-Occupancy Vehicles on Minor Street Approach_____ Adjustment factor from table 4C-3____

3- Percentage of Tractor-Trailer Trucks on Minor Street Approach_____ Adjustment factor from table 4C-4____

NOTE: If no data is availale or known, then use AF = 1 (no adjustment)

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

COUNT DATE May 2017

DIST ____ CO ____ RTE ____ PM ____

CALC ____ DATE ____

CHK ____ DATE ____

Major St: La Cadena Drive — Critical Approach Speed 50 mph

Minor St: Tropica Rancho Road — Critical Approach Speed 25 mph

Speed limit or critical speed on major street traffic > 40 mph..... [X]

or

In built up area of isolated community of < 10,000 population..... [ ] **RURAL (R)**

[ ] **URBAN (U)**

(Based on Estimated Average Daily Traffic - See Note)

URBAN..... RURAL..... X

CONDITION A - Minimum Vehicular Volume

Satisfied ____ Not Satisfied X

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1.....	1.....
2 or More.... 19,289	1..... 894 with project
2 or More.....	2 or More.....
1.....	2 or More.....

Minimum Requirements EADT

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
8,000	~~5,600~~	2,400	~~1,680~~
9,600	6,720	2,400	1,680
9,600	~~6,720~~	3,200	2,240
8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied ____ Not Satisfied X

Number of lanes for moving traffic on each approach

Major Street	Minor Street
1.....	1.....
2 or More.... 19,289	1..... 775 with project
2 or More.....	2 or More.....
1.....	2 or More.....

Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Urban	Rural	Urban	Rural
12,000	~~8,400~~	1,200	~~850~~
14,400	10,080	1,200	850
14,400	10,080	1,600	1,120
12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied ____ Not Satisfied X

No one condition satisfied, but following conditions fulfilled 80% or more..... ____ A ____ B

Vehicles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
2 CONDITIONS 80%	2 CONDITIONS 80%

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

ATTACHMENT I: AVERA E DAILY TRAFFIC CO NTS

AVERAGE DAILY TRAFFIC

La Cadena Drive is considered a major arterial and truck route as classified in the City of Colton's Mobility Plan. It has a posted speed limit of 50 mph with two lanes in each direction. There are existing signals at its intersection with Rancho Avenue (2400' to the north) and Litton Avenue (1920' to the south) of Tropica Rancho Road.

Tropica Rancho Road is a small local street serving as a utility access road but will provide the main access to the three proposed industrial buildings.

As a part of this traffic study, Average Daily Traffic (ADT) data was obtained from counts taken on Wednesday, May 24, 2017 while school was in session. The ADT data is expressed below:

Table 1: 2017 AVERAGE DAILY TRAFFIC (ADT)	
Location	***Vehicles per Day (vpd)***
La Cadena Drive: South of Rancho Ave	20,705
La Cadena Drive: South of Tropica Rancho Road	19,289
La Cadena Drive: South of Barton Road	19,056
Tropica Rancho Road: West of La Cadena Drive	100

Prepared by NDS/ATD

VOLUME

La Cadena Dr S/O Tropica Rancho Rd

Day: Wednesday
Date: 5/24/2017

City: Colton
Project #: CA17_6096_001

DAILY TOTALS	NB	SB	EB	WB	Total
	8,396	10,893	0	0	19,289

AM Period	NB		SB		EB		WB		TOTAL	
00:00	13		13						26	
00:15	23		9						32	
00:30	22		15						37	
00:45	19	77	6	43					25	120
01:00	13		15						28	
01:15	14		9						23	
01:30	22		10						32	
01:45	20	69	13	47					33	116
02:00	15		21						36	
02:15	9		7						16	
02:30	14		16						30	
02:45	14	52	14	58					28	110
03:00	12		12						24	
03:15	17		16						33	
03:30	20		22						42	
03:45	22	71	35	85					57	156
04:00	17		29						46	
04:15	32		55						87	
04:30	32		54						86	
04:45	50	131	62	200					112	331
05:00	46		71						117	
05:15	58		87						145	
05:30	91		124						215	
05:45	102	297	119	401					221	698
06:00	67		107						174	
06:15	110		123						233	
06:30	92		150						242	
06:45	161	430	191	571					352	1001
07:00	161		237						398	
07:15	129		241						370	
07:30	141		300						441	
07:45	163	594	316	1094					479	1688
08:00	120		351						471	
08:15	99		308						407	
08:30	123		218						341	
08:45	114	456	171	1048					285	1504
09:00	95		173						268	
09:15	116		125						241	
09:30	93		123						216	
09:45	84	388	108	529					192	917
10:00	84		100						184	
10:15	86		90						176	
10:30	92		98						190	
10:45	81	343	101	389					182	732
11:00	81		95						176	
11:15	98		92						190	
11:30	99		92						191	
11:45	87	365	95	374					182	739
TOTALS		3273		4839						8112
SPLIT %		40.3%		59.7%						42.1%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	90		98						188	
12:15	94		121						215	
12:30	98		96						194	
12:45	88	370	97	412					185	782
13:00	98		114						212	
13:15	115		132						247	
13:30	133		150						283	
13:45	128	474	168	564					296	1038
14:00	112		149						261	
14:15	126		166						292	
14:30	190		193						383	
14:45	151	579	191	699					342	1278
15:00	168		177						345	
15:15	156		196						352	
15:30	163		215						378	
15:45	170	657	243	831					413	1488
16:00	192		227						419	
16:15	174		205						379	
16:30	175		228						403	
16:45	177	718	209	869					386	1587
17:00	182		246						428	
17:15	196		272						468	
17:30	201		244						445	
17:45	183	762	238	1000					421	1762
18:00	129		194						323	
18:15	130		159						289	
18:30	101		123						224	
18:45	119	479	100	576					219	1055
19:00	89		89						178	
19:15	79		88						167	
19:30	74		103						177	
19:45	70	312	77	357					147	669
20:00	81		76						157	
20:15	72		81						153	
20:30	73		73						146	
20:45	50	276	65	295					115	571
21:00	61		81						142	
21:15	59		41						100	
21:30	52		46						98	
21:45	43	215	49	217					92	432
22:00	41		46						87	
22:15	41		39						80	
22:30	39		38						77	
22:45	35	156	29	152					64	308
23:00	33		22						55	
23:15	40		23						63	
23:30	31		18						49	
23:45	21	125	19	82					40	207
TOTALS		5123		6054						11177
SPLIT %		45.8%		54.2%						57.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	8,396	10,893	0	0	19,289

AM Peak Hour	07:00	07:30				07:30	PM Peak Hour	17:00	17:00				17:00
AM Pk Volume	594	1275				1798	PM Pk Volume	762	1000				1762
Pk Hr Factor	0.911	0.908				0.938	Pk Hr Factor	0.948	0.919				0.941
7 - 9 Volume	1050	2142	0	0		3192	4 - 6 Volume	1480	1869	0	0		3349
7 - 9 Peak Hour	07:00	07:30				07:30	4 - 6 Peak Hour	17:00	17:00				17:00
7 - 9 Pk Volume	594	1275	0	0		1798	4 - 6 Pk Volume	762	1000	0	0		1762
Pk Hr Factor	0.911	0.908	0.000	0.000		0.938	Pk Hr Factor	0.948	0.919	0.000	0.000		0.941

Prepared by NDS/ATD

VOLUME

La Cadena Dr S/O Rancho Ave

Day: Wednesday
Date: 5/24/2017

City: Colton
Project #: CA17_6096_002

DAILY TOTALS	NB	SB	EB	WB	Total
	9,722	10,983	0	0	20,705

AM Period	NB		SB		EB		WB		TOTAL	
00:00	15		13						28	
00:15	22		9						31	
00:30	23		15						38	
00:45	18	78	7	44					25	122
01:00	14		17						31	
01:15	14		7						21	
01:30	21		9						30	
01:45	21	70	14	47					35	117
02:00	15		18						33	
02:15	10		7						17	
02:30	14		15						29	
02:45	13	52	14	54					27	106
03:00	12		13						25	
03:15	15		15						30	
03:30	21		26						47	
03:45	23	71	43	97					66	168
04:00	18		30						48	
04:15	33		53						86	
04:30	32		58						90	
04:45	46	129	60	201					106	330
05:00	49		74						123	
05:15	55		96						151	
05:30	86		121						207	
05:45	103	293	123	414					226	707
06:00	67		102						169	
06:15	114		123						237	
06:30	96		157						253	
06:45	154	431	192	574					346	1005
07:00	164		238						402	
07:15	138		244						382	
07:30	157		299						456	
07:45	187	646	320	1101					507	1747
08:00	145		352						497	
08:15	111		304						415	
08:30	136		222						358	
08:45	132	524	171	1049					303	1573
09:00	104		170						274	
09:15	119		126						245	
09:30	113		122						235	
09:45	90	426	112	530					202	956
10:00	92		102						194	
10:15	96		93						189	
10:30	107		98						205	
10:45	93	388	105	398					198	786
11:00	97		102						199	
11:15	108		90						198	
11:30	100		93						193	
11:45	102	407	100	385					202	792
TOTALS		3515		4894						8409
SPLIT %		41.8%		58.2%						40.6%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	120		100						220	
12:15	110		130						240	
12:30	113		94						207	
12:45	106	449	102	426					208	875
13:00	112		112						224	
13:15	142		136						278	
13:30	160		151						311	
13:45	160	574	176	575					336	1149
14:00	144		148						292	
14:15	173		174						347	
14:30	259		193						452	
14:45	187	763	193	708					380	1471
15:00	205		178						383	
15:15	195		193						388	
15:30	216		226						442	
15:45	212	828	230	827					442	1655
16:00	257		236						493	
16:15	220		199						419	
16:30	215		235						450	
16:45	245	937	210	880					455	1817
17:00	227		249						476	
17:15	245		279						524	
17:30	264		239						503	
17:45	217	953	239	1006					456	1959
18:00	152		192						344	
18:15	145		161						306	
18:30	117		114						231	
18:45	138	552	101	568					239	1120
19:00	97		87						184	
19:15	96		95						191	
19:30	79		105						184	
19:45	79	351	77	364					156	715
20:00	87		74						161	
20:15	75		84						159	
20:30	77		74						151	
20:45	52	291	58	290					110	581
21:00	65		79						144	
21:15	61		42						103	
21:30	52		42						94	
21:45	42	220	52	215					94	435
22:00	46		43						89	
22:15	43		39						82	
22:30	41		38						79	
22:45	34	164	30	150					64	314
23:00	36		22						58	
23:15	37		22						59	
23:30	32		17						49	
23:45	20	125	19	80					39	205
TOTALS		6207		6089						12296
SPLIT %		50.5%		49.5%						59.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	9,722	10,983	0	0	20,705

AM Peak Hour	07:00	07:30			07:30	PM Peak Hour	16:45	17:00			17:00
AM Pk Volume	646	1275			1875	PM Pk Volume	981	1006			1959
Pk Hr Factor	0.864	0.906			0.925	Pk Hr Factor	0.929	0.901			0.935
7 - 9 Volume	1170	2150	0	0	3320	4 - 6 Volume	1890	1886	0	0	3776
7 - 9 Peak Hour	07:00	07:30			07:30	4 - 6 Peak Hour	16:45	17:00			17:00
7 - 9 Pk Volume	646	1275	0	0	1875	4 - 6 Pk Volume	981	1006	0	0	1959
Pk Hr Factor	0.864	0.906	0.000	0.000	0.925	Pk Hr Factor	0.929	0.901	0.000	0.000	0.935

Prepared by NDS/ATD

VOLUME

Tropica Rancho Rd W/O La Cadena Dr

Day: Wednesday
Date: 5/24/2017

City: Colton
Project #: CA17_6096_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	53	47	100

AM Period	NB		SB		EB		WB		TOTAL	
00:00					0		0		0	
00:15					0		0		0	
00:30					0		0		0	
00:45					0		0		0	
01:00					0		0		0	
01:15					0		0		0	
01:30					0		0		0	
01:45					0		0		0	
02:00					0		0		0	
02:15					0		0		0	
02:30					0		0		0	
02:45					0		0		0	
03:00					0		0		0	
03:15					0		0		0	
03:30					0		0		0	
03:45					0		0		0	
04:00					0		0		0	
04:15					0		0		0	
04:30					0		1		1	
04:45					0		0	1	0	1
05:00					0		0		0	
05:15					0		3		3	
05:30					0		6		6	
05:45		5		5	2	11	7	16		
06:00					1		1		2	
06:15					1		1		2	
06:30					0		0		0	
06:45		2		2	1	3	1	5		
07:00					3		0		3	
07:15					0		1		1	
07:30					0		1		1	
07:45		3		3	0	2	0	5		
08:00					3		0		3	
08:15					0		1		1	
08:30					0		3		3	
08:45		4		4	1	5	2	9		
09:00					2		0		2	
09:15					0		0		0	
09:30					0		0		0	
09:45		3		3	0		1	3		
10:00					0		1		1	
10:15					0		0		0	
10:30					2		2		4	
10:45		2		2	0	3	0	5		
11:00					1		2		3	
11:15					0		1		1	
11:30					0		0		0	
11:45		1		1	0	4	1	5		
TOTALS				20		29		49		
SPLIT %				40.8%		59.2%		49.0%		

PM Period	NB		SB		EB		WB		TOTAL	
12:00					0		0		0	
12:15					0		0		0	
12:30					1		0		1	
12:45					0	1	1	1	1	2
13:00					2		1		3	
13:15					2		1		3	
13:30					1		0		1	
13:45					1	6	1	3	2	9
14:00					3		1		4	
14:15					1		3		4	
14:30					3		0		3	
14:45					0	7	1	5	1	12
15:00					0		3		3	
15:15					10		0		10	
15:30					1		1		2	
15:45					2	13	0	4	2	17
16:00					2		1		3	
16:15					0		0		0	
16:30					0		0		0	
16:45					0	2	0	1	0	3
17:00					0		0		0	
17:15					0		0		0	
17:30					0		0		0	
17:45					0		0		0	
18:00					0		0		0	
18:15					0		0		0	
18:30					0		0		0	
18:45					0		0		0	
19:00					0		0		0	
19:15					0		0		0	
19:30					0		0		0	
19:45					1	1	1	1	2	2
20:00					0		2		2	
20:15					0		0		0	
20:30					0		1		1	
20:45					1	1	0	3	1	4
21:00					0		0		0	
21:15					2		0		2	
21:30					0		0		0	
21:45					0	2	0		0	2
22:00					0		0		0	
22:15					0		0		0	
22:30					0		0		0	
22:45					0		0		0	
23:00					0		0		0	
23:15					0		0		0	
23:30					0		0		0	
23:45					0		0		0	
TOTALS					33		18		51	
SPLIT %					64.7%		35.3%		51.0%	

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	53	47	100

AM Peak Hour			05:30	05:15	05:15
AM Pk Volume			7	12	18
Pk Hr Factor			0.350	0.500	0.643
7 - 9 Volume	0	0	7	7	14
7 - 9 Peak Hour			08:00	08:00	08:00
7 - 9 Pk Volume	0	0	4	5	9
Pk Hr Factor	0.000	0.000	0.333	0.417	0.750

PM Peak Hour			15:15	14:15	14:30
PM Pk Volume			15	7	17
Pk Hr Factor			0.375	0.583	0.425
4 - 6 Volume	0	0	2	1	3
4 - 6 Peak Hour			16:00	16:00	16:00
4 - 6 Pk Volume	0	0	2	1	3
Pk Hr Factor	0.000	0.000	0.250	0.250	0.250

Prepared by NDS/ATD

VOLUME

La Cadena Dr S/O Barton Rd

Day: Wednesday
Date: 5/24/2017

City: Colton
Project #: CA17_6096_004

DAILY TOTALS	NB	SB	EB	WB	Total
	8,110	10,946	0	0	19,056

AM Period	NB		SB		EB		WB		TOTAL	
00:00	15		11						26	
00:15	23		14						37	
00:30	16		10						26	
00:45	19	73	10	45					29	118
01:00	10		8						18	
01:15	12		8						20	
01:30	10		9						19	
01:45	12	44	11	36					23	80
02:00	9		9						18	
02:15	7		18						25	
02:30	21		5						26	
02:45	9	46	10	42					19	88
03:00	14		11						25	
03:15	14		14						28	
03:30	18		21						39	
03:45	19	65	24	70					43	135
04:00	12		28						40	
04:15	37		48						85	
04:30	35		57						92	
04:45	49	133	66	199					115	332
05:00	41		76						117	
05:15	68		84						152	
05:30	98		115						213	
05:45	103	310	106	381					209	691
06:00	55		104						159	
06:15	80		125						205	
06:30	92		157						249	
06:45	131	358	178	564					309	922
07:00	145		234						379	
07:15	178		257						435	
07:30	135		313						448	
07:45	121	579	316	1120					437	1699
08:00	99		210						309	
08:15	96		200						296	
08:30	108		129						237	
08:45	87	390	117	656					204	1046
09:00	81		93						174	
09:15	99		121						220	
09:30	75		101						176	
09:45	73	328	85	400					158	728
10:00	79		102						181	
10:15	91		93						184	
10:30	80		87						167	
10:45	113	363	105	387					218	750
11:00	71		91						162	
11:15	101		91						192	
11:30	80		112						192	
11:45	83	335	100	394					183	729
TOTALS		3024		4294						7318
SPLIT %		41.3%		58.7%						38.4%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	80		84						164	
12:15	84		112						196	
12:30	86		113						199	
12:45	92	342	89	398					181	740
13:00	103		129						232	
13:15	94		106						200	
13:30	128		127						255	
13:45	120	445	156	518					276	963
14:00	120		159						279	
14:15	139		182						321	
14:30	154		209						363	
14:45	151	564	206	756					357	1320
15:00	166		220						386	
15:15	170		212						382	
15:30	180		270						450	
15:45	194	710	316	1018					510	1728
16:00	169		342						511	
16:15	178		289						467	
16:30	209		267						476	
16:45	177	733	265	1163					442	1896
17:00	232		279						511	
17:15	200		282						482	
17:30	221		276						497	
17:45	160	813	257	1094					417	1907
18:00	143		177						320	
18:15	87		150						237	
18:30	122		122						244	
18:45	107	459	114	563					221	1022
19:00	82		106						188	
19:15	92		95						187	
19:30	77		113						190	
19:45	66	317	84	398					150	715
20:00	70		76						146	
20:15	73		75						148	
20:30	60		79						139	
20:45	49	252	76	306					125	558
21:00	53		64						117	
21:15	48		59						107	
21:30	55		52						107	
21:45	39	195	49	224					88	419
22:00	45		46						91	
22:15	56		27						83	
22:30	29		36						65	
22:45	36	166	15	124					51	290
23:00	22		26						48	
23:15	27		29						56	
23:30	25		22						47	
23:45	16	90	13	90					29	180
TOTALS		5086		6652						11738
SPLIT %		43.3%		56.7%						61.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	8,110	10,946	0	0	19,056

AM Peak Hour	06:45	07:00			07:00
AM Pk Volume	589	1120			1699
Pk Hr Factor	0.827	0.886			0.948
7 - 9 Volume	969	1776	0	0	2745
7 - 9 Peak Hour	07:00	07:00			07:00
7 - 9 Pk Volume	579	1120	0	0	1699
Pk Hr Factor	0.813	0.886	0.000	0.000	0.948

PM Peak Hour	16:45	15:30			15:45
PM Pk Volume	830	1217			1964
Pk Hr Factor	0.894	0.890			0.961
4 - 6 Volume	1546	2257	0	0	3803
4 - 6 Peak Hour	16:45	16:00			16:45
4 - 6 Pk Volume	830	1163	0	0	1932
Pk Hr Factor	0.894	0.850	0.000	0.000	0.945

ATTACHMENT J: RADAR SPEED S RVEY

RADAR SPEED SURVEY

A radar speed survey was conducted to determine the speed of traffic along La Cadena Drive between Tropica Rancho Road and Rancho Avenue and on La Cadena Drive between Tropica Rancho Road and Litton Avenue. The radar speed survey was conducted on May 17, 2017 between the hours of 9:00am to 11:10am. The radar measurements followed guidelines and procedures outlined in the CVC Sections 627, 21400, 22358 and the CAMUTCD 2B.13. Speed samples were taken from an unmarked vehicle so as not to alter or impede the free flow of traffic. Please refer to Table 2 below showing the speed survey results:

Table 2: RADAR SPEED SURVEY ON LA CADENA DRIVE

	Location	Dir. of Travel	Date/Time of Survey	85%ile Speed	50%ile Speed	10 MPH Pace	Percent of Veh in Pace
1	La Cadena Drive between Rancho Avenue and Tropica Rancho Road	NB/SB	05/17/17 9:00-10:00am	51.9	49.2	45-54	92%
2	La Cadena Drive between Tropica Rancho Road and Litton Avenue	NB/SB	05/17/17 10:10-11:10am	51.6	48.8	45-54	93%

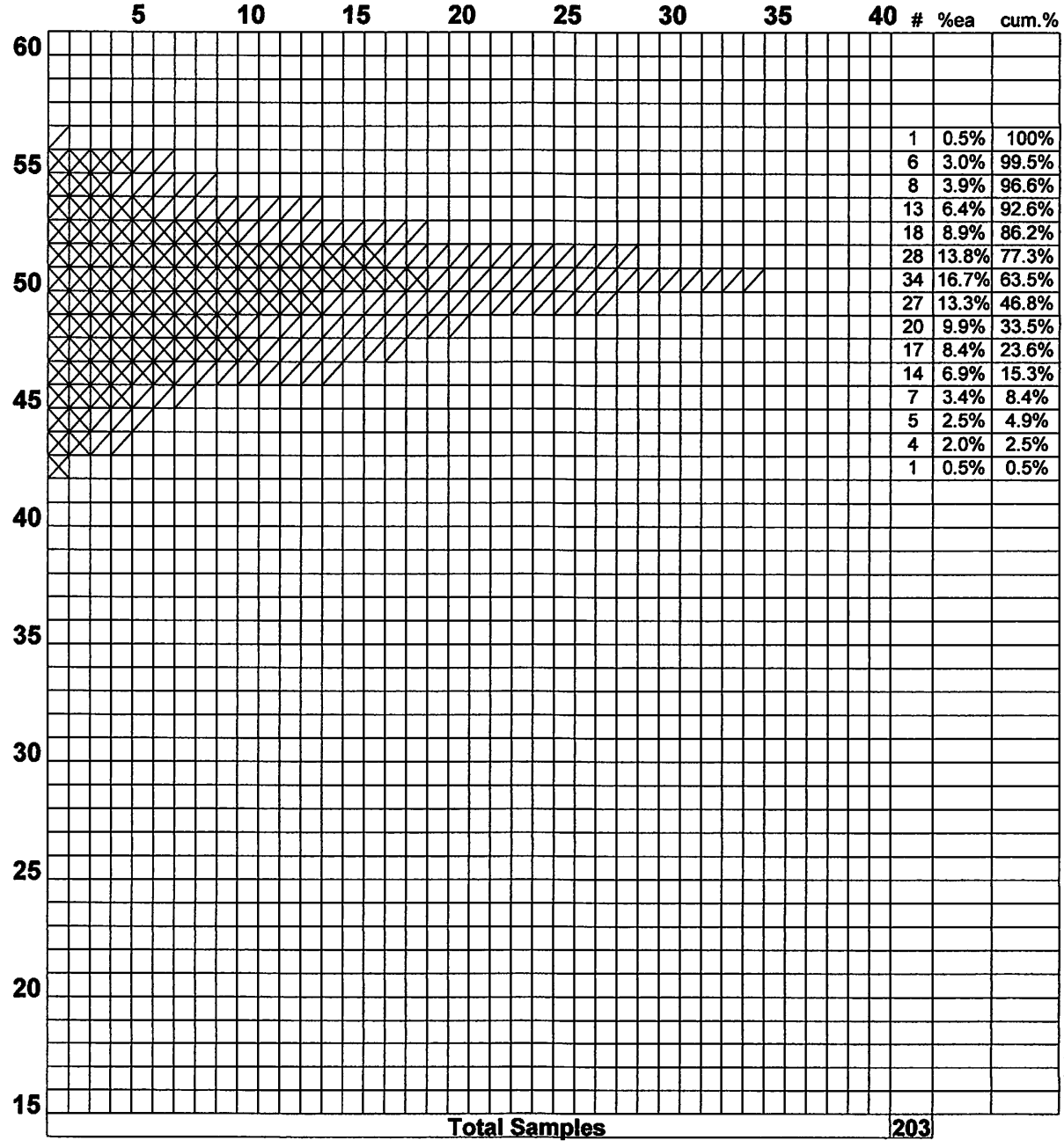
As shown in Table 2, the speed samples taken show that the 85th% speed of vehicles are traveling around 51 mph. A high majority around 90% of sampled vehicles are traveling within 45 mph to 54 mph. The 50 mph posted speed limit reflects what 85% of the vehicles are traveling.

City of Colton
Public Works

Street Name LA CADENA DR
Limits: TROPICA RANCHO RD to RANCHO AVE

Radar Survey Sheet

X=North /=South



#	%ea	cum.%
1	0.5%	100%
6	3.0%	99.5%
8	3.9%	96.6%
13	6.4%	92.6%
18	8.9%	86.2%
28	13.8%	77.3%
34	16.7%	63.5%
27	13.3%	46.8%
20	9.9%	33.5%
17	8.4%	23.6%
14	6.9%	15.3%
7	3.4%	8.4%
5	2.5%	4.9%
4	2.0%	2.5%
1	0.5%	0.5%
Total Samples		203

85th Percentile Speed:	51.9
50th Percentile Speed:	49.2
15th Percentile Speed:	46.0
10 MPH Pace:	45- 54
Number in Pace:	186
Percent in Pace:	91.6%

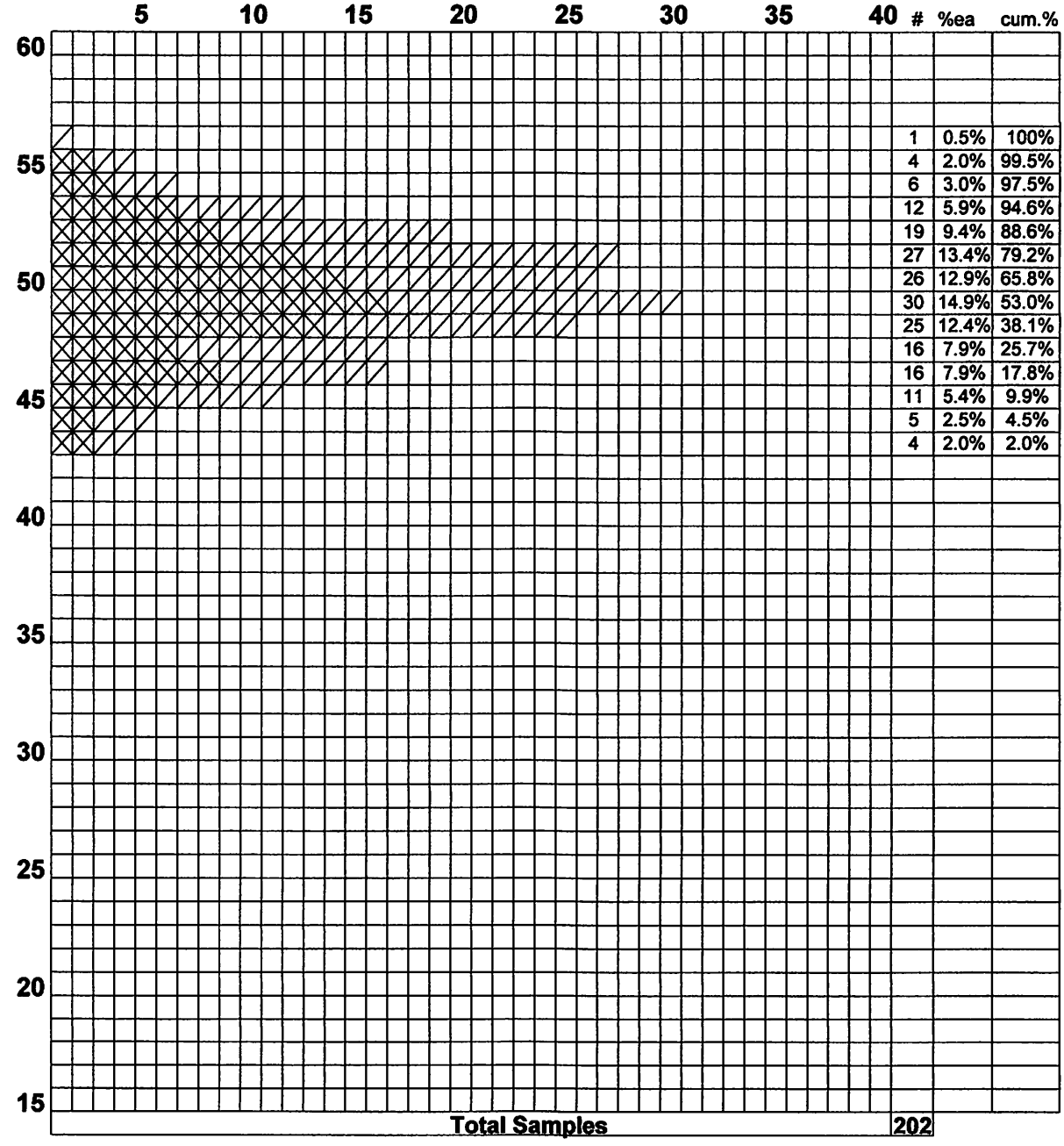
Date of Survey:	5/17/2017	Start Time:	9:00
Weather:	CLOUDY	End Time:	10:00
Road Condition:	Good	Posted Speed:	50
Street Class.:		Observer:	BR
Conditions not Apparent:	No Parking		

City of Colton
Public Works

Street Name: LA CADENA DR
Limits: LITTON AVE to TROPICA RANCHO RD

Radar Survey Sheet

X=North /=South



#	%ea	cum.%
1	0.5%	100%
4	2.0%	99.5%
6	3.0%	97.5%
12	5.9%	94.6%
19	9.4%	88.6%
27	13.4%	79.2%
26	12.9%	65.8%
30	14.9%	53.0%
25	12.4%	38.1%
16	7.9%	25.7%
16	7.9%	17.8%
11	5.4%	9.9%
5	2.5%	4.5%
4	2.0%	2.0%
Total Samples		202

85th Percentile Speed:	51.6
50th Percentile Speed:	48.8
15th Percentile Speed:	45.6
10 MPH Pace:	45- 54
Number in Pace:	188
Percent in Pace:	93.1%

Date of Survey:	5/17/2017	Start Time:	10:10
Weather:	CLOUDY	End Time:	11:10
Road Condition:	GOOD	Posted Speed:	50
Street Class.:		Observer:	BR
Conditions not Apparent:	No Parking		

ATTACHMENT K: COLLISION DATA

COLLISION DATA

Accident data was obtained from the computerized accident records system maintained by the State of California Statewide Integrated Traffic Records System (SWITRS). An accident analysis and history was conducted over a 3.25-year period between January 2014 to the most recent available collision data as of May 2017) for the study segments on La Cadena Drive. Please refer to Tables 3, 4 and 5: Accident History for a detailed list of all the accidents reported.

Based on the information provided via SWITRS, a summary breakdown of the number of collisions within a 3.25-year period is provided below:

Table 3: SUMMARY OF ACCIDENTS PER YEAR

YEAR	SEGMENT 1 La Cadena: Rancho To Tropica Rancho		SEGMENT 2 La Cadena: Tropica Rancho to Litton	
	Total Accidents	Speed Related	Total Accidents	Speed Related
2017 (Jan to May)	0	0	0	0
2016 (Jan to Dec)	4	1	0	0
2015 (Jan to Dec)	2	2	2	0
2014 (Jan to Dec)	4	1	4	1
Totals	10	4	6	1

Table 4:
ACCIDENT HISTORY

Location:	**Segment 1:** La Cadena Drive: Rancho Avenue to Tropica Rancho Road
Accident	2014-May 2017
Location:	Along La Cadena Drive

No	Location	Dist.	Date	Time	Collision Type	Severity	Dir of Travel
1	La Cadena at Rancho	20'S	12/20/16	10:58	Rearend/ Speed	PDO	NB Thru Veh hit NB Stopped Veh (impaired)
2	La Cadena at Tropica Rancho	1320'N	05/09/16	14:59	Hit Object	PDO	SB Thru Veh hit Obj
3	La Cadena at Tropica Rancho	900'N	09/02/16	10:40	Hit Object	PDO	SB Thru Veh hit Obj
4	La Cadena at Rancho	0'	12/19/16	15:51	Head-On	PDO	NB LT veh hit SB Thru Veh

5	Rancho at La Cadena	0'	02/20/15	17:47	Rearend/ Speed	PDO	SB Thru Veh hit SB Stopped Veh
6	Rancho at La Cadena	0'	04/13/15	08:15	Rearend/ Speed	PDO	SB Thru Veh hit SB Stopped Veh (impaired)
7	La Cadena at Tropica Rancho	0'	02/27/14	07:30	Rearend/ Speed	INJ	SB Thru Veh hit SB LT and SB Thru Veh
8	La Cadena at Rancho	0'	07/12/14	15:27	Rearend/ Lane Change	INJ	NB Thru Veh hit NB Thru Veh
9	La Cadena at Rancho	0'	03/07/14	21:10	Broadside	PDO	NB LT Veh hit SB Thru Veh
10	La Cadena at Rancho	40'S	11/16/14	09:07	Hit Obj	PDO	NB Thru Veh hit Obj

Table 5:
ACCIDENT HISTORY

Location:	**Segment 2:** La Cadena Drive: Tropica Rancho Road to Litton Avenue
Accident	2014-May 2017
Location:	Along La Cadena Drive

No	Location	Dist.	Date	Time	Collision Type	Severity	Dir of Travel
1	La Cadena at Litton	625’N	04/04/15	22:30	Sideswipe/ Lane Change	Fatal	SB LT Veh hit SB Thru Veh (both impaired)
2	La Cadena at Litton	0’	03/24/15	12:15	Broadside	INJ	EB LT Veh hit SB Thru Veh
3	La Cadena at Tropica Rancho	100’S	06/16/14	06:54	Sideswipe/ Lane Change	INJ	Rearend/ Speed
4	La Cadena at Vivienda	200’N	01/12/14	12:46	Hit Obj	INJ	NB Thru Veh hit Obj
5	La Cadena at Litton	0’	06/17/14	20:20	Broadside	PDO	EB LT Veh hit SB Thru Veh
6	La Cadena at Vivienda	0’	03/14/14	18:15	Rearend/ Speed	INJ	NB Thru Veh hit NB Thru Veh

To determine the crash rate of specific roadway segments the number of accidents per million vehicle miles of travel over a specific number of years is compared to similar roadways expected collision rate. In this case both segments have collision rates that are below similar roadways expected collision rates. Segment 1 has a collision rate of 0.852, Segment 2 has a collision rate of 0.686. The County's expected collision rate for a 4 lane divided major roadway over 40 mph is 1.15.

ATTACHMENT L: T RNIN MOVEMENT CO NTS

Turning Movement Count

AM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-11-17

PASSENGER CARS

N-S STREET: La Cadena E-W STREET: Barton

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15		114	24	46	212		396				39		45	84			1	
07:15-07:30		115	27	62	245		449				48		36	84				
07:30-07:45		111	24	60	263		458				68		54	122				
07:45-08:00		113	17	50	288		468				59		52	111				
08:00-08:15		88	18	38	236		380				31		34	65				
08:15-08:30		71	12	42	151		276				47		16	63				
08:30-08:45		60	10	34	131		235				42		17	59				
08:45-09:00		58	14	39	99		210				28		27	55	1			

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
07:00-07:15							0							0				
07:15-07:30							0							0				
07:30-07:45							0							0				
07:45-08:00		1					1							0				
08:00-08:15			1	1			2							0				
08:15-08:30		1			1		2							0				
08:30-08:45		1			1		2				1			1				
08:45-09:00				1	1		2							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
07:00-07:15		2	1		5		8				1			1				
07:15-07:30		2			4		6							0				
07:30-07:45		1	2	1	4		8							0				
07:45-08:00		2	3				5							0				
08:00-08:15		2			5		7				2		3	5				
08:15-08:30		2			4		6						1	1				
08:30-08:45		3		1	4		8							0				
08:45-09:00		3			3		6						2	2				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

0 1008 218
SR ST SL
0 EL WR 187
0 ET 07:00-08:00 WT 0
0 ER CARS WL 214
NL NT NR
0 453 92

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE AM

0 1062 225
SR ST SL
0 EL WR 205
0 ET TOTAL PCE WT 0
0 ER ALL VEHICLES WITH PCE WL 222
\ NL NT NR
0 487 94

CALCULATED PEAK HOUR VOLUMES- 3 AXLE TRUCKS

0 3 2
SR ST SL
0 EL WR 0
0 ET 08:00-09:00 WT 0
0 ER WL 1
NL NT NR
0 2 1

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

0 6 4
SR ST SL
0 EL WR 0
0 ET 08:00-09:00 WT 0
0 ER PCE 3 AXLE TRUCKS WL 2
NL NT NR
0 4 2

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

0 16 1
SR ST SL
0 EL WR 6
0 ET 08:00-09:00 WT 0
0 ER WL 2
NL NT NR
0 10 0

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

0 48 3
SR ST SL
0 EL WR 18
0 ET 08:00-09:00 WT 0
0 ER PCE 4+ AXLE TRUCKS WL 6
NL NT NR
0 30 0

Turning Movement Count

PM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-11-17

PASSENGER CARS

N-S STREET: La Cadena E-W STREET: Barton

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
16:00-16:15		133	26	54	191		404				60		26	86				
16:15-16:30		144	30	61	180		415				41		32	73	1			
16:30-16:45		142	32	71	181		426				66		29	95				
16:45-17:00		163	24	46	172		405				51		33	84				
17:00-17:15		179	31	61	225		496				42		35	77				
17:15-17:30		165	30	74	228		497				75		37	112				
17:30-17:45		162	29	60	221		472				57		33	90				
17:45-18:00		149	28	75	203		455				53		37	90				

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
16:00-16:15		2					2							0				
16:15-16:30		1			2		3						1	1				
16:30-16:45		1					1						1	1				
16:45-17:00							0						1	1				
17:00-17:15				1			1						1	1				
17:15-17:30							0						2	2				
17:30-17:45							0							0				
17:45-18:00					2		2							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
16:00-16:15							0							0				
16:15-16:30		3		1	1		5							0				
16:30-16:45					1		1							0				
16:45-17:00							0							0				
17:00-17:15			1	2	2		5							0				
17:15-17:30		1		1			2							0				
17:30-17:45		1		1	1		3							0				
17:45-18:00		4		2	1		7							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-PM

0 877 270
SR ST SL

0 EL WR 142
0 ET 17:00-18:00 WT 0
0 ER CARS WL 227

NL NT NR
0 655 118

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE PM

0 893 288
SR ST SL

0 EL WR 148
0 ET TOTAL PCE WT 0
0 ER ALL VEHICLES PCE WL 227

NL NT NR
0 681 121

CALCULATED PEAK HOUR VOLUMES-TRUCKS

0 2 0
SR ST SL

0 EL WR 3
0 ET 16:00-17:00 WT 0
0 ER WL 0

NL NT NR
0 4 0

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

0 4 0
SR ST SL

0 EL WR 6
0 ET 16:00-17:00 WT 0
0 ER PCE 3 AXLE TRUCKS WL 0

NL NT NR
0 8 0

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

0 4 6
SR ST SL

0 EL WR 0
0 ET 17:00-18:00 WT 0
0 ER WL 0

NL NT NR
0 6 1

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

0 12 18
SR ST SL

0 EL WR 0
0 ET 17:00-18:00 WT 0
0 ER PCE 4+AXLE TRUCKS WL 0

NL NT NR
0 18 3

Turning Movement Count

AM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5/11/17

PASSENGER CARS

N-S STREET: 215 NB Ramps
E-W STREET: Iowa

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15	35	80			3	52	170	15		113				128	1			
07:15-07:30	39	92			6	54	191	25		136				161				
07:30-07:45	31	87			1	43	162	25		174				199				
07:45-08:00	37	68			4	53	162	23		212				235				
08:00-08:15	32	73			7	33	145	17		148				165	1			
08:15-08:30	27	67			4	50	148	22		142				164				
08:30-08:45	31	78			3	45	157	13		128				141				
08:45-09:00	44	76			3	40	163	22		118				140	1			

3+ AXLE TRUCKS

															SCHOOL AGE PED COUNT			
															NL	SL	EL	WL
07:00-07:15	2	2					4			1				1				
07:15-07:30		1				2	3	1						1				
07:30-07:45	1	1				2	4							0				
07:45-08:00		3				2	5	4		2				6				
08:00-08:15	2	1				1	4			1				1				
08:15-08:30		2				1	3	1						1				
08:30-08:45	2	3				2	7	2						2				
08:45-09:00		4				2	6	1		3				4				

4+ Axle Trucks

															BIKE COUNT			
															NL	SL	EL	WL
07:00-07:15	2	2				2	6	4		1				5				
07:15-07:30		4					4	4		2				6				
07:30-07:45	2	2				3	7	3						3				
07:45-08:00	1	7			1		9	4		1				5				
08:00-08:15		5				1	6	4						4				
08:15-08:30	2	3					5	5		2				7				
08:30-08:45	2	5			1	3	11	7						7				
08:45-09:00	3	4				1	8	4						4				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		183	18	0		
		SR	ST	SL		
90	EL				WR	0
0	ET		07:15-08:15		WT	0
670	ER		CARS		WL	0
		NL	NT	NR		
		139	320	0		

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE AM

		207	24	0		
		SR	ST	SL		
164	EL				WR	0
0	ET		TOTAL PCE		WT	0
685	ER		ALL VEHICLES PCE		WL	0
\		NL	NT	NR		
		162	398	0		

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		6	0	0		
		SR	ST	SL		
7	EL				WR	0
0	ET		07:45-08:45		WT	0
3	ER				WL	0
		NL	NT	NR		
		4	9	0		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		12	0	0		
		SR	ST	SL		
14	EL				WR	0
0	ET		07:45-08:45		WT	0
6	ER		PCE 3 AXLE TRUCKS		WL	0
		NL	NT	NR		
		8	18	0		

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		4	2	0		
		SR	ST	SL		
20	EL				WR	0
0	ET		07:45-08:45		WT	0
3	ER				WL	0
		NL	NT	NR		
		5	20	0		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		12	6	0		
		SR	ST	SL		
60	EL				WR	0
0	ET		07:45-08:45		WT	0
9	ER		PCE 4+AXLE TRUCKS		WL	0
		NL	NT	NR		
		15	60	0		

Turning Movement Count

PM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-11-17

PASSENGER CARS

TIME	N-S STREET: 215 NB Rmps							E-W STREET: Iowa										
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
16:00-16:15	82	139			8	69	298	39		116				155				
16:15-16:30	79	153			2	62	296	26		155				181				
16:30-16:45	90	125			10	69	294	35		175				210	1			
16:45-17:00	80	119			8	73	280	28		162				190				
17:00-17:15	70	150			3	75	298	46		166				212				
17:15-17:30	85	141			4	70	300	36		182				218				
17:30-17:45	57	130			9	66	262	21		174				195				
17:45-18:00	59	122			4	76	261	29		203				232				

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
16:00-16:15	1	1				2	4			2				2				
16:15-16:30		1					1			2				2				
16:30-16:45	1	1				2	4			2				2				
16:45-17:00							0							0				
17:00-17:15							0							0				
17:15-17:30							0							0				
17:30-17:45						1	1			3				3				
17:45-18:00		1					1							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
16:00-16:15		8				1	9			3				3				
16:15-16:30		3				1	4			2				2				
16:30-16:45		2					2			2				2				
16:45-17:00		4					4							0				
17:00-17:15	1					1	2			7				7				
17:15-17:30		1				1	2			3				3				
17:30-17:45		2					2			2				2				
17:45-18:00							0			3				3				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-PM

		287	25	0	
		SR	ST	SL	
145	EL			WR	0
0	ET		16:30-17:30	WT	0
685	ER		CARS	WL	0
		NL	NT	NR	
		325	535	0	

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE PM

		301	25	0	
		SR	ST	SL	
145	EL			WR	0
0	ET		TOTAL PCE	WT	0
718	ER		ALL VEHICLES PCE	WL	0
		NL	NT	NR	
		329	592	0	

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		4	0	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
6	ER			WL	0
		NL	NT	NR	
		2	3	0	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		8	0	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
12	ER		PCE 3 AXLETRUCKS	WL	0
		NL	NT	NR	
		4	6	0	

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		2	0	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
7	ER			WL	0
		NL	NT	NR	
		0	17	0	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		6	0	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
21	ER		PCE 4+AXLE TRUCKS	WL	0
		NL	NT	NR	
		0	51	0	

Turning Movement Count

AM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-11-17

PASSENGER CARS

N-S STREET: 215 SB Ramp E-W STREET: Iowa

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15	8		80				88		64			91		155				
07:15-07:30	4		85				89		76			97		173				
07:30-07:45	5		98				103		106			80		186				
07:45-08:00	9		121				130		115			106		221				
08:00-08:15	5		100				105		72			70		142				
08:15-08:30	13		96				109		72			79		151				
08:30-08:45	5		70				75		66			78		144				
08:45-09:00	2		63				65		81			79		160				

3+ AXLE TRUCKS

															SCHOOL AGE PED COUNT			
															NL	SL	EL	WL
07:00-07:15							0		1			3		4				
07:15-07:30							0		1					1				
07:30-07:45							0					2		2				
07:45-08:00			1				1							0				
08:00-08:15							0					2		2				
08:15-08:30							0					1		1				
08:30-08:45			2				2					2		2				
08:45-09:00			1				1		2			1		3				

4+ Axle Trucks

															BIKE COUNT			
															NL	SL	EL	WL
07:00-07:15			3				3					3		3				
07:15-07:30			3				3		3			1		4				
07:30-07:45			2				2		1			5		6				
07:45-08:00			5				5		1			2		3				
08:00-08:15			5				5		1			1		2				
08:15-08:30			6				6					1		1				
08:30-08:45	1		5				6		1			8		9				
08:45-09:00			4				4					4		4				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
369	ET		07:15-08:15		WT	353
0	ER		CARS		WL	0
		NL	NT	NR		
		23	0	404		

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE AM

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
382	ET		TOTAL PCE		WT	401
0	ER		ALL VEHICLES PCE		WL	0
\		NL	NT	NR		
		26	0	473		

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
2	ET		08:00-09:00		WT	6
0	ER				WL	0
		NL	NT	NR		
		0	0	3		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
4	ET		08:00-09:00		WT	12
0	ER		PCE 3 AXLE TRUCKS		WL	0
		NL	NT	NR		
		0	0	6		

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
3	ET		07:45-08:45		WT	12
0	ER				WL	0
		NL	NT	NR		
		1	0	21		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
9	ET		07:45-08:45		WT	36
0	ER		PCE 4+AXLE TRUCKS		WL	0
		NL	NT	NR		
		3	0	63		

Turning Movement Count

PM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-11-17

PASSENGER CARS

N-S STREET: 215 SB Ramp E-W STREET: Iowa

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
16:00-16:15	7		69				76		97			145		242				
16:15-16:30	16		75				91		126			154		280				
16:30-16:45	15		100				115		95			161		256				
16:45-17:00	13		92				105		116			168		284				
17:00-17:15	7		100				107		130			152		282				
17:15-17:30	4		90				94		134			157		291				
17:30-17:45	6		94				100		121			126		247				
17:45-18:00	5		122				127		115			145		260				

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
16:00-16:15			2				2					4		4				
16:15-16:30							0							0				
16:30-16:45			1				1		2			3		5				
16:45-17:00	1						1							0				
17:00-17:15			1				1		1					1				
17:15-17:30							0							0				
17:30-17:45			2				2		1					1				
17:45-18:00							0							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
16:00-16:15			3				3					1		1				
16:15-16:30			1				1		1			1		2				
16:30-16:45			2				2					1		1				
16:45-17:00							0					2		2				
17:00-17:15			3				3		4			2		6				
17:15-17:30	1		2				3					1		1				
17:30-17:45			2				2		1			1		2				
17:45-18:00			1				1		1					1				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-PM

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
475	ET		16:30-17:30		WT	638
0	ER		CARS		WL	0
		NL	NT	NR		
		39	0	382		

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE PM

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
494	ET		TOTAL PCE		WT	670
0	ER		ALL VEHICLES PCE		WL	0
		NL	NT	NR		
		44	0	409		

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
2	ET		16:00-17:00		WT	7
0	ER				WL	0
		NL	NT	NR		
		1	0	3		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
4	ET		16:00-17:00		WT	14
0	ER		PCE 3 AXLETRUCKS		WL	0
		NL	NT	NR		
		2	0	6		

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
5	ET		16:45-17:45		WT	6
0	ER				WL	0
		NL	NT	NR		
		1	0	7		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
15	ET		16:45-17:45		WT	18
0	ER		PCE 4+AXLE TRUCKS		WL	0
		NL	NT	NR		
		3	0	21		

Turning Movement Count

AM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-11-17

PASSENGER CARS

N-S STREET: La Cadena
E-W STREET: Iowa

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15	16		16	50	131		213				13		85	98				
07:15-07:30	29		29	50	163		271				15		81	96				
07:30-07:45	10		24	85	227		346				14		73	87				
07:45-08:00	19		20	95	238		372				7		93	100				
08:00-08:15	18		10	63	162		253				9		67	76				
08:15-08:30	14		18	54	127		213				24		70	94				
08:30-08:45	15		12	54	94		175				11		66	77				
08:45-09:00	10		23	55	58		146				14		70	84				

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
07:00-07:15			1		1		2						2	2				
07:15-07:30				1			1							0				
07:30-07:45							0						2	2				
07:45-08:00				1			1							0				
08:00-08:15					1		1						2	2				
08:15-08:30				1			1						1	1				
08:30-08:45							0						3	3				
08:45-09:00			1				1				1		2	3				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
07:00-07:15	1						1				2		2	4				
07:15-07:30			1	2	5		8						1	1				
07:30-07:45				1	5		6						5	5				
07:45-08:00			1		3		4						2	2				
08:00-08:15				1	6		7						3	3				
08:15-08:30					3		3						1	1				
08:30-08:45				1	5		6						7	7				
08:45-09:00					1		1				2		2	4				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

0 790 293
SR ST SL
0 EL WR 314
0 ET 07:15-08:15 WT 0
0 ER CARS WL 45
NL NT NR
76 0 83

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE AM

0 849 307
SR ST SL
0 EL WR 363
0 ET TOTAL PCE WT 0
0 ER ALL VEHICLES PCE WL 47
\ NL NT NR
76 0 91

CALCULATED PEAK HOUR VOLUMES-TRUCKS

0 1 1
SR ST SL
0 EL WR 8
0 ET 08:00-09:00 WT 0
0 ER WL 1
NL NT NR
0 0 1

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

0 2 2
SR ST SL
0 EL WR 16
0 ET 08:00-09:00 WT 0
0 ER PCE 3 AXLE TRUCKS WL 2
NL NT NR
0 0 2

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

0 19 4
SR ST SL
0 EL WR 11
0 ET 07:15-08:15 WT 0
0 ER WL 0
NL NT NR
0 0 2

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

0 57 12
SR ST SL
0 EL WR 33
0 ET 07:15-08:15 WT 0
0 ER PCE 4+AXLE TRUCKS WL 0
NL NT NR
0 0 6

Turning Movement Count

PM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-11-17

PASSENGER CARS

N-S STREET: La Cadena
E-W STREET: Iowa

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
16:00-16:15	49		42	58	217		366				16		140	156				
16:15-16:30	55		26	90	235		406				14		140	154			1	
16:30-16:45	57		25	64	226		372				20		143	163				
16:45-17:00	44		29	83	210		366				27		147	174				
17:00-17:15	63		38	88	221		410				18		137	155				
17:15-17:30	50		30	85	198		363				15		147	162				
17:30-17:45	41		29	76	222		368				17		107	124				
17:45-18:00	49		30	84	201		364				17		128	145				

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
16:00-16:15	1						1						3	3				
16:15-16:30				1	2		3							0				
16:30-16:45				2			2						2	2				
16:45-17:00	1				2		3							0				
17:00-17:15				1			1				1			1				
17:15-17:30							0							0				
17:30-17:45				1			1							0				
17:45-18:00					1		1							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
16:00-16:15	1				2		3						1	1				
16:15-16:30	1			1	4		6						1	1				
16:30-16:45					2		2				1			1				
16:45-17:00			1		2		3						1	1				
17:00-17:15				4	2		6						2	2				
17:15-17:30					1		1						2	2				
17:30-17:45				1			1							0				
17:45-18:00				1			1							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-PM

		0	892	325	
		SR	ST	SL	
0	EL			WR	567
0	ET		16:15-17:15	WT	0
0	ER		CARS	WL	79
		NL	NT	NR	
		219	0	118	

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE PM

		0	930	346	
		SR	ST	SL	
0	EL			WR	589
0	ET		TOTAL PCE	WT	0
0	ER		ALL VEHICLES PCE	WL	82
		NL	NT	NR	
		226	0	121	

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		0	4	3	
		SR	ST	SL	
0	EL			WR	5
0	ET		16:00-17:00	WT	0
0	ER			WL	0
		NL	NT	NR	
		2	0	0	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		0	8	6	
		SR	ST	SL	
0	EL			WR	10
0	ET		16:00-17:00	WT	0
0	ER		PCE 3 AXLETRUCKS	WL	0
		NL	NT	NR	
		4	0	0	

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		0	10	5	
		SR	ST	SL	
0	EL			WR	4
0	ET		16:15-17:15	WT	0
0	ER			WL	1
		NL	NT	NR	
		1	0	1	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		0	30	15	
		SR	ST	SL	
0	EL			WR	12
0	ET		16:15-17:15	WT	0
0	ER		PCE 4+AXLE TRUCKS	WL	3
		NL	NT	NR	
		3	0	3	

Turning Movement Count

AM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-9-17

PASSENGER CARS

N-S STREET: La Cadena
E-W STREET: Rancho

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15	74	81			74		229	1		156				157				
07:15-07:30	90	121			129	2	342	1		179				180				1
07:30-07:45	70	77			130	2	279	2		156				158				1
07:45-08:00	81	92			109	5	287	1		177				178				
08:00-08:15	60	81			70	2	213	1		124				125				
08:15-08:30	40	68			61	2	171	1		110				111				
08:30-08:45	53	70			52		175			108				108				1
08:45-09:00	34	45			34	2	115	3		72				75				

3+ AXLE TRUCKS

															SCHOOL AGE PED COUNT			
															NL	SL	EL	WL
07:00-07:15	2				2		4			3				3				
07:15-07:30	1	2			1		4							0				
07:30-07:45		1			1		2			2				2				
07:45-08:00	1	1			3		5			1				1				
08:00-08:15	1	3			1		5			3				3				
08:15-08:30		1			2		3			1				1				
08:30-08:45	1	1			1		3			2				2				
08:45-09:00	1	4					5			2				2				

4+ Axle Trucks

															BIKE COUNT			
															NL	SL	EL	WL
07:00-07:15							0							0				
07:15-07:30	1	1			1		3							0				
07:30-07:45	2	2			2		6			4				4				
07:45-08:00							0	1		1				2				
08:00-08:15	1				3		4	1		2				3				
08:15-08:30	1	1			2		4			4				4				
08:30-08:45	2	2			1		5			1				1				
08:45-09:00		3			2		5			1				1				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		9	442	0	
		SR	ST	SL	
5	EL			WR	0
0	ET		07:00-08:00	WT	0
668	ER		CARS	WL	0
		NL	NT	NR	
		315	371	0	

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE AM

		9	471	0	
		SR	ST	SL	
11	EL			WR	0
0	ET		TOTAL PCE	WT	0
717	ER		ALL VEHICLES PCE	WL	0
\		NL	NT	NR	
		333	398	0	

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		0	4	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		08:00-09:00	WT	0
8	ER			WL	0
		NL	NT	NR	
		3	9	0	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		0	8	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		08:00-09:00	WT	0
16	ER		PCE 3 AXLE TRUCKS	WL	0
		NL	NT	NR	
		6	18	0	

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		0	7	0	
		SR	ST	SL	
2	EL			WR	0
0	ET		07:30-08:30	WT	0
11	ER			WL	0
		NL	NT	NR	
		4	3	0	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		0	21	0	
		SR	ST	SL	
6	EL			WR	0
0	ET		07:30-08:30	WT	0
33	ER		PCE 4+AXLE TRUCKS	WL	0
		NL	NT	NR	
		12	9	0	

Turning Movement Count

PM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-9-17

PASSENGER CARS

N-S STREET: La Cadena | E-W STREET: Rancho

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
16:00-16:15	68	114			92	3	277	4		158				162				
16:15-16:30	76	104			93	3	276	2		149				151				
16:30-16:45	82	113			102	1	298	7		158				165				
16:45-17:00	79	126			101	2	308	5		164				169				
17:00-17:15	73	107			92	2	274	9		176				185				
17:15-17:30	80	127			120	4	331	10		185				195				
17:30-17:45	74	131			119		324	6		200				206				
17:45-18:00	68	99			95	3	265	5		161				166				

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
16:00-16:15		1			1		2			2				2				
16:15-16:30	1	1					2							0				
16:30-16:45							0			2				2				
16:45-17:00	1				1		2			1				1				
17:00-17:15							0							0				
17:15-17:30	2	2					4			1				1				
17:30-17:45							0			1				1				
17:45-18:00	1						1							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
16:00-16:15	2				1		3			3				3				
16:15-16:30	1						1	1		1				2				
16:30-16:45							0			2				2				
16:45-17:00	1						1							0				
17:00-17:15	1						1							0				
17:15-17:30							0							0				
17:30-17:45					1		1			2				2				
17:45-18:00					1		1							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-PM

		8	432	0		
		SR	ST	SL		
30	EL				WR	0
0	ET		16:45-17:45		WT	0
725	ER		CARS		WL	0
		NL	NT	NR		
		306	491	0		

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE PM

		8	439	0		
		SR	ST	SL		
33	EL				WR	0
0	ET		TOTAL PCE		WT	0
753	ER		ALL VEHICLES PCE		WL	0
		NL	NT	NR		
		322	495	0		

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		0	2	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		16:00-17:00		WT	0
5	ER				WL	0
		NL	NT	NR		
		2	2	0		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		0	4	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		16:00-17:00		WT	0
10	ER		PCE 3 AXLETRUCKS		WL	0
		NL	NT	NR		
		4	4	0		

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		0	1	0		
		SR	ST	SL		
1	EL				WR	0
0	ET		16:00-17:00		WT	0
6	ER				WL	0
		NL	NT	NR		
		4	0	0		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		0	3	0		
		SR	ST	SL		
3	EL				WR	0
0	ET		16:00-17:00		WT	0
18	ER		PCE 4+AXLE TRUCKS		WL	0
		NL	NT	NR		
		12	0	0		

Turning Movement Count

AM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-9-17

PASSENGER CARS

N-S STREET: La Cadena
E-W STREET: Tropicana Racho/Vivinda

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15		163			233	1	397						3	3				
07:15-07:30		171	1		293	1	466			1			8	9				
07:30-07:45		172	1		295	1	469						10	10				
07:45-08:00		167			322	3	492						6	6				
08:00-08:15		137			280	2	419						5	5				
08:15-08:30		94			194		288			1			2	3				
08:30-08:45		96			162		258			2			7	9				
08:45-09:00		86			132	2	220						1	1				

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
07:00-07:15		1			3		4							0				
07:15-07:30							0							0				
07:30-07:45		1			2		3							0				
07:45-08:00		1			1		2							0				
08:00-08:15		1			3		4							0				
08:15-08:30		2			3		5							0				
08:30-08:45		4			2		6							0				
08:45-09:00		3			2		5							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
07:00-07:15					2		2							0				
07:15-07:30		2			3		5							0				
07:30-07:45		1			4		5							0				
07:45-08:00		2					2							0				
08:00-08:15		1			3		4							0				
08:15-08:30		4			1		5							0				
08:30-08:45		3			6		9							0				
08:45-09:00		2			2		4							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		7	1190	0		
		SR	ST	SL		
0	EL				WR	29
0	ET		07:15-08:15		WT	0
1	ER		CARS		WL	0
		NL	NT	NR		
		0	647	2		

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE AM

		7	1246	0		
		SR	ST	SL		
0	EL				WR	29
0	ET		TOTAL PCE		WT	0
1	ER		ALL VEHICLES PCE		WL	0
\		NL	NT	NR		
		0	697	2		

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		0	10	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		08:00-09:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	10	0		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		0	20	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		08:00-09:00		WT	0
0	ER		PCE 3 AXLE TRUCKS		WL	0
		NL	NT	NR		
		0	20	0		

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		0	12	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		08:00-09:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	10	0		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		0	36	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		08:00-09:00		WT	0
0	ER		PCE 4+AXLE TRUCKS		WL	0
		NL	NT	NR		
		0	30	0		

Turning Movement Count

PM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-9-17

PASSENGER CARS

N-S STREET: La Cadena
E-W STREET: Tropicna Rancho/Vivinda

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
16:00-16:15		174			254	1	429						10	10				
16:15-16:30		185			220		405			1			8	9				
16:30-16:45		168			251		419						6	6				
16:45-17:00		165			253		418						13	13				
17:00-17:15		191			277		468						4	4				
17:15-17:30		185			296	1	482			1			11	12				
17:30-17:45		201			294		495						7	7				
17:45-18:00		162			247		409						2	2				

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
16:00-16:15		2					2							0				
16:15-16:30		1			1		2							0				
16:30-16:45					1		1							0				
16:45-17:00					2		2							0				
17:00-17:15					1		1							0				
17:15-17:30		1					1							0				
17:30-17:45		1					1							0				
17:45-18:00					3		3							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
16:00-16:15		1			6		7							0				
16:15-16:30		1					1							0				
16:30-16:45		1			2		3							0				
16:45-17:00					1		1							0				
17:00-17:15							0							0				
17:15-17:30		3					3							0				
17:30-17:45					1		1							0				
17:45-18:00					1		1							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-PM

		1	1120	0	
		SR	ST	SL	
0	EL			WR	35
0	ET		16:45-17:45	WT	0
1	ER		CARS	WL	0
		NL	NT	NR	
		0	742	0	

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE PM

		1	1155	0	
		SR	ST	SL	
0	EL			WR	35
0	ET		TOTAL PCE	WT	0
1	ER		ALL VEHICLES PCE	WL	0
		NL	NT	NR	
		0	757	0	

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		0	4	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
0	ER			WL	0
		NL	NT	NR	
		0	3	0	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		0	8	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
0	ER		PCE 3 AXLETRUCKS	WL	0
		NL	NT	NR	
		0	6	0	

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		0	9	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
0	ER			WL	0
		NL	NT	NR	
		0	3	0	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		0	27	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
0	ER		PCE 4+AXLE TRUCKS	WL	0
		NL	NT	NR	
		0	9	0	

Turning Movement Count

AM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-9-17

PASSENGER CARS

N-S STREET: Rancho
E-W STREET: Agua Mansa

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15	10	79		4	163	53	309	30	4	6		6	1	47				
07:15-07:30	14	88		1	140	47	290	28	2	6		5	3	44				
07:30-07:45	10	74	2	4	174	74	338	29	3	4		9		45				
07:45-08:00	11	69	3	14	156	90	343	31	8	13		6	2	60				
08:00-08:15	5	55	1	9	99	28	197	24	4	12	4	9	14	67				
08:15-08:30	9	46		4	115	29	203	20	5	2		6	4	37				
08:30-08:45	7	36	1	1	84	26	155	16	2	5		1	3	27				
08:45-09:00	7	44		3	73	22	149	21	5	4		4	1	35				

3+ AXLE TRUCKS

															SCHOOL AGE PED COUNT			
															NL	SL	EL	WL
07:00-07:15					1		1	1						1				
07:15-07:30					2	1	3							0				
07:30-07:45		2			3	1	6	1						1				
07:45-08:00	1	2			3	1	7	1						1				
08:00-08:15		1			2	4	7	1						1				
08:15-08:30							0			1				1				
08:30-08:45					2	2	4			1				1				
08:45-09:00			2		2		4	2		1				3				

4+ Axle Trucks

															BIKE COUNT			
															NL	SL	EL	WL
07:00-07:15		2			3	1	6	3						3				
07:15-07:30	1	2			3	2	8	5		1				6				
07:30-07:45					3	3	6	2		1				3				
07:45-08:00	2	3			6	4	15	2						2				
08:00-08:15		1				1	2	1						1				
08:15-08:30	1	2			6	2	11	2		1				3				
08:30-08:45	1	4			6	6	17	3						3				
08:45-09:00		3			6	3	12	3						3				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

264 633 23
SR ST SL

118 EL WR 6
17 ET 07:00-08:00 WT 26
29 ER CARS WL 0

NL NT NR
45 310 5

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE AM

317 707 23
SR ST SL

148 EL WR 6
17 ET TOTAL PCE WT 26
32 ER ALL VEHICLES PCE WL 0
\

NL NT NR
59 350 5

CALCULATED PEAK HOUR VOLUMES-TRUCKS

7 10 0
SR ST SL

3 EL WR 0
0 ET 07:15-08:15 WT 0
0 ER WL 0

NL NT NR
1 5 0

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

14 20 0
SR ST SL

6 EL WR 0
0 ET 07:15-08:15 WT 0
0 ER PCE 3 AXLE TRUCKS WL 0

NL NT NR
2 10 0

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

13 18 0
SR ST SL

8 EL WR 0
0 ET 07:45-08:45 WT 0
1 ER WL 0

NL NT NR
4 10 0

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

39 54 0
SR ST SL

24 EL WR 0
0 ET 07:45-08:45 WT 0
3 ER PCE 4+AXLE TRUCKS WL 0

NL NT NR
12 30 0

Turning Movement Count

PM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-9-17

PASSENGER CARS

N-S STREET: Rancho E-W STREET: Agua Mansa

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
16:00-16:15	9	65		2	136	29	241	117	13	15	4	3	29	181				
16:15-16:30	4	69	2	2	126	19	222	136	16	17	1	8	4	182				
16:30-16:45	13	95		3	162	20	293	97	16	12		7	5	137				
16:45-17:00	8	85		4	152	33	282	94	10	15		5	6	130				
17:00-17:15	17	71		2	184	28	302	133	12	18	1	5	6	175				
17:15-17:30	3	97			261	31	392	135	19	23		4	1	182				
17:30-17:45	14	94		2	197	48	355	99	18	14		2	6	139				
17:45-18:00	12	88		3	189	46	338	106	17	21		4	3	151				

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
16:00-16:15	1				2	1	4	1						1				
16:15-16:30						2	2	2						2				
16:30-16:45		4			1	2	7	1						1				
16:45-17:00		1			1		2			1				1				
17:00-17:15					2	1	3							0				
17:15-17:30	1				1		2							0				
17:30-17:45		1			1	1	3			2				2				
17:45-18:00					2		2							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
16:00-16:15		1			2	3	6	5	1	1				7				
16:15-16:30		2			2	2	6	2		1				3				
16:30-16:45		1			1	3	5	2		3				5				
16:45-17:00		1					1	2		1				3				
17:00-17:15	1				1	2	4							0				
17:15-17:30	1					1	2							0				
17:30-17:45					3	1	4	1		1				2				
17:45-18:00		1				1	2		1					1				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-PM

		153	831	7	
		SR	ST	SL	
473	EL			WR	16
66	ET		17:00-18:00	WT	15
76	ER		CARS	WL	1
		NL	NT	NR	
		46	350	0	

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE PM

		187	854	7	
		SR	ST	SL	
514	EL			WR	16
69	ET		TOTAL PCE	WT	15
96	ER		ALL VEHICLES PCE	WL	1
		NL	NT	NR	
		48	375	0	

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		5	4	0	
		SR	ST	SL	
4	EL			WR	0
0	ET		16:00-17:00	WT	0
1	ER			WL	0
		NL	NT	NR	
		1	5	0	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		10	8	0	
		SR	ST	SL	
8	EL			WR	0
0	ET		16:00-17:00	WT	0
2	ER		PCE 3 AXLETRUCKS	WL	0
		NL	NT	NR	
		2	10	0	

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		8	5	0	
		SR	ST	SL	
11	EL			WR	0
1	ET		16:00-17:00	WT	0
6	ER			WL	0
		NL	NT	NR	
		0	5	0	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		24	15	0	
		SR	ST	SL	
33	EL			WR	0
3	ET		16:00-17:00	WT	0
18	ER		PCE 4+AXLE TRUCKS	WL	0
		NL	NT	NR	
		0	15	0	

Turning Movement Count

AM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-10-17

PASSENGER CARS

N-S STREET: La Cadena E-W STREET: Litton

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15	2	141			210	1	354	17		9				26				
07:15-07:30	5	142			261	1	409	8		7				15				
07:30-07:45	12	183			268	9	472	15		10				25				
07:45-08:00	7	130			292	2	431	16		8				24				
08:00-08:15	7	125			219		351	9		6				15				
08:15-08:30	8	100			152	3	263	9		7				16				
08:30-08:45	10	108			129	8	255	10		5				15				
08:45-09:00	3	73			127	7	210	8		4				12				

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
07:00-07:15		1			1		2							0				
07:15-07:30					2	1	3							0				
07:30-07:45					2		2							0				
07:45-08:00		4			3		7							0				
08:00-08:15		5			2		7							0				
08:15-08:30		3			3		6							0				
08:30-08:45		2			1		3							0				
08:45-09:00		2			1		3							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
07:00-07:15		3			2		5							0				
07:15-07:30					3		3							0				
07:30-07:45		1			4		5							0				
07:45-08:00		2			2		4							0				
08:00-08:15		1			6		7							0				
08:15-08:30		3					3							0				
08:30-08:45		1			1		2							0				
08:45-09:00		3			3		6							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

13 1031 0
SR ST SL

56 EL WR 0
0 ET 07:00-08:00 WT 0
34 ER CARS WL 0

NL NT NR
26 596 0

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE AM

13 1094 0
SR ST SL

56 EL WR 0
0 ET TOTAL PCE WT 0
34 ER ALL VEHICLES PCE WL 0
\
NL NT NR
26 636 0

CALCULATED PEAK HOUR VOLUMES-TRUCKS

0 9 0
SR ST SL

0 EL WR 0
0 ET 07:45-08:45 WT 0
0 ER WL 0

NL NT NR
0 14 0

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

0 18 0
SR ST SL

0 EL WR 0
0 ET 07:45-08:45 WT 0
0 ER PCE 3 AXLE TRUCKS WL 0

NL NT NR
0 28 0

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

0 15 0
SR ST SL

0 EL WR 0
0 ET 07:15-08:15 WT 0
0 ER WL 0

NL NT NR
0 4 0

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

0 45 0
SR ST SL

0 EL WR 0
0 ET 07:15-08:15 WT 0
0 ER PCE 4+AXLE TRUCKS WL 0

NL NT NR
0 12 0

Turning Movement Count

PM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-10-11

PASSENGER CARS

N-S STREET: La Cadena E-W STREET: Litton

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
16:00-16:15	10	135			260	7	412	6		8				14				
16:15-16:30	5	146			199	8	358	5		7				12				
16:30-16:45	12	150			247	4	413	5		1				6				
16:45-17:00	7	152			266	13	438	7		10				17				
17:00-17:15	15	141			275	11	442	6		6				12				
17:15-17:30	9	181			373	13	576	16		6				22				
17:30-17:45	17	165			379	10	571	7		9				16				
17:45-18:00	9	159			230	11	409	6		2				8				

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
16:00-16:15							0							0				
16:15-16:30		1			2		3							0				
16:30-16:45		1					1							0				
16:45-17:00		1			2		3							0				
17:00-17:15							0							0				
17:15-17:30							0							0				
17:30-17:45					1		1							0				
17:45-18:00							0							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
16:00-16:15		2			1		3							0				
16:15-16:30		4			2		6							0				
16:30-16:45		2			1		3							0				
16:45-17:00		1					1							0				
17:00-17:15		2			1		3							0				
17:15-17:30							0							0				
17:30-17:45		7					7							0				
17:45-18:00		1					1							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-PM

		47	1293	0	
		SR	ST	SL	
36	EL			WR	0
0	ET		16:45-17:45	WT	0
31	ER		CARS	WL	0
		NL	NT	NR	
		48	639	0	

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE PM

		47	1313	0	
		SR	ST	SL	
36	EL			WR	0
0	ET		TOTAL PCE	WT	0
31	ER		ALL VEHICLES PCE	WL	0
		NL	NT	NR	
		48	672	0	

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		0	4	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
0	ER			WL	0
		NL	NT	NR	
		0	3	0	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		0	8	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
0	ER		PCE 3 AXLETRUCKS	WL	0
		NL	NT	NR	
		0	6	0	

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		0	4	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
0	ER			WL	0
		NL	NT	NR	
		0	9	0	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		0	12	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
0	ER		PCE 4+AXLE TRUCKS	WL	0
		NL	NT	NR	
		0	27	0	

Turning Movement Count

AM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-10-17

PASSENGER CARS

N-S STREET: La Cadena E-W STREET: 7th/Maple

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15		52	10	6	85	1	154		1	2	13	1	15	32	1		1	
07:15-07:30	1	66	21	13	95		196	1	8	2	9	5	16	41				1
07:30-07:45	1	81	23	5	109		219		6	1	23	4	25	59	5			5
07:45-08:00		77	7	8	69		161		2	1	6	2	11	22				
08:00-08:15		68	5	3	61		137		1		5		5	11				2
08:15-08:30		47	5	4	49		105		1		3		1	5				
08:30-08:45		38	6	6	48		98		1		7		11	19	2			1
08:45-09:00		54	6	3	32	2	97	1		3	2		6	12	1			

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
07:00-07:15				1			1							0				
07:15-07:30							0							0				
07:30-07:45		1	1		1		3							0				
07:45-08:00		1	1		1		3							0				
08:00-08:15			1	1	2		4							0				
08:15-08:30			1				1							0				
08:30-08:45			1		1		2						1	1				
08:45-09:00		2			1		3							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
07:00-07:15			1	1			2							0				
07:15-07:30							0		1				1	2				
07:30-07:45							0							0				
07:45-08:00		1			1		2							0				
08:00-08:15		1			1		2				1			1				
08:15-08:30							0							0				
08:30-08:45		2	1		1		4						1	1				
08:45-09:00				1	1		2							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		1	358	32	
		SR	ST	SL	
1	EL			WR	67
17	ET		07:00-08:00	WT	12
6	ER		CARS	WL	51
		NL	NT	NR	
		2	276	61	

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE AM

		1	375	34	
		SR	ST	SL	
1	EL			WR	70
17	ET		TOTAL PCE	WT	12
6	ER		ALL VEHICLES PCE	WL	54
\		NL	NT	NR	
		2	292	72	

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		0	4	1	
		SR	ST	SL	
0	EL			WR	0
0	ET		07:30-08:30	WT	0
0	ER			WL	0
		NL	NT	NR	
		0	2	4	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		0	8	2	
		SR	ST	SL	
0	EL			WR	0
0	ET		07:30-08:30	WT	0
0	ER		PCE 3 AXLE TRUCKS	WL	0
		NL	NT	NR	
		0	4	8	

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		0	3	0	
		SR	ST	SL	
0	EL			WR	1
0	ET		07:45-08:45	WT	0
0	ER			WL	1
		NL	NT	NR	
		0	4	1	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		0	9	0	
		SR	ST	SL	
0	EL			WR	3
0	ET		07:45-08:45	WT	0
0	ER		PCE 4+AXLE TRUCKS	WL	3
		NL	NT	NR	
		0	12	3	

Turning Movement Count

PM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-10-17

PASSENGER CARS

N-S STREET: La Cadena
E-W STREET: 7th/Maple

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
16:00-16:15		92	4	9	79	1	185				16	5	11	32	1			
16:15-16:30		97	5	10	88	3	203	1		1	8	2	11	23		1		
16:30-16:45		104	8	7	103	1	223		1	4	13	1	6	25				
16:45-17:00	1	99	5	8	81	2	196			2	5		12	19				3
17:00-17:15	1	139	6	8	93	2	249	1		1	5	3	9	19				1
17:15-17:30		103	2	10	86	1	202		4	3	3	1	7	18	3			1
17:30-17:45	1	121	10	6	104	1	243		1	3	5		7	16	3			2
17:45-18:00		92	5	7	74	1	179		1	2	6	1	6	16	3		3	

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
16:00-16:15		1				1	2							0				
16:15-16:30		1					1							0				
16:30-16:45							0							0				
16:45-17:00		1					1							0				
17:00-17:15							0							0				
17:15-17:30					2		2							0				
17:30-17:45							0							0				
17:45-18:00							0							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
16:00-16:15		1			1		2							0				
16:15-16:30							0							0				
16:30-16:45		1			1		2							0				
16:45-17:00							0							0				
17:00-17:15							0							0				
17:15-17:30					1		1							0				
17:30-17:45							0							0				
17:45-18:00		1					1							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-PM

		6	364	32	
		SR	ST	SL	
1	EL			WR	35
5	ET		16:45-17:45	WT	4
9	ER		CARS	WL	18
		NL	NT	NR	
		3	462	23	

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE PM

		8	370	32	
		SR	ST	SL	
1	EL			WR	35
5	ET		TOTAL PCE	WT	4
9	ER		ALL VEHICLES PCE	WL	18
		NL	NT	NR	
		3	474	23	

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		1	0	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
0	ER			WL	0
		NL	NT	NR	
		0	3	0	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		2	0	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
0	ER		PCE 3 AXLETRUCKS	WL	0
		NL	NT	NR	
		0	6	0	

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		0	2	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
0	ER			WL	0
		NL	NT	NR	
		0	2	0	

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		0	6	0	
		SR	ST	SL	
0	EL			WR	0
0	ET		16:00-17:00	WT	0
0	ER		PCE 4+AXLE TRUCKS	WL	0
		NL	NT	NR	
		0	6	0	

Turning Movement Count

AM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-10-17

PASSENGER CARS

TIME	N-S STREET: La Cadena							E-W STREET: Maple (7th) (left onto La Cadena)							(Maple right onto			
	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
07:00-07:15	1						1		1	1	1			3				
07:15-07:30							0		1	1				2				1
07:30-07:45						1	1		1				1	2				3
07:45-08:00						2	2		1	1				2				
08:00-08:15	1					1	2		2					2				2
08:15-08:30						2	2		1	1				2				1
08:30-08:45	1						1		1					1				3
08:45-09:00	3					4	7							0				1

3+ AXLE TRUCKS

	SCHOOL AGE PED COUNT			
	NL	SL	EL	WL
07:00-07:15				
07:15-07:30				
07:30-07:45				
07:45-08:00				
08:00-08:15				
08:15-08:30				
08:30-08:45				
08:45-09:00				

4+ Axle Trucks

	BIKE COUNT			
	NL	SL	EL	WL
07:00-07:15				
07:15-07:30				
07:30-07:45				
07:45-08:00				
08:00-08:15				
08:15-08:30				
08:30-08:45				
08:45-09:00				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-AM

		7	0	0		
		SR	ST	SL		
0	EL				WR	0
4	ET		08:00-09:00		WT	0
1	ER		CARS		WL	0
		NL	NT	NR		
		5	0	0		

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE AM

		7	0	0		
		SR	ST	SL		
0	EL				WR	0
4	ET		TOTAL PCE		WT	0
1	ER		ALL VEHICLES PCE		WL	0
\		NL	NT	NR		
		5	0	0		

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		07:00-08:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		07:00-08:00		WT	0
0	ER		PCE 3 AXLE TRUCKS		WL	0
		NL	NT	NR		
		0	0	0		

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		07:00-08:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		07:00-08:00		WT	0
0	ER		PCE 4+AXLE TRUCKS		WL	0
		NL	NT	NR		
		0	0	0		

Turning Movement Count

PM PEAK COUNT

TURNING MOVEMENT COUNT

Prepared by: G.E. Traffic Surveys

PROJECT NAME: TROPICA RANCHO WAREHOUSE PROJECT IN CITY OF COLTON
PROJECT NO: JN# 16326
DATE: 5-10-17

PASSENGER CARS

N-S STREET: La Cadena
E-W STREET: Maple (7th)
(left onto La Cadena)
(Maple right onto

TIME	NORTH BOUND			SOUTH BOUND			N-S	EAST BOUND			WEST BOUND			E-W	ADULT PED COUNT			
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	TOTAL	NL	SL	EL	WL
16:00-16:15							0		3					3				
16:15-16:30	1						1		2					2				
16:30-16:45						1	1	1	1					2				1
16:45-17:00	2					2	4		1				1	2				3
17:00-17:15	1						1		2	1				3				1
17:15-17:30	1					2	3	1	1				1	3				1
17:30-17:45	1					1	2		7	4				11				
17:45-18:00						2	2		3	1	1			5				

3+ AXLE TRUCKS

SCHOOL AGE PED COUNT

															NL	SL	EL	WL
16:00-16:15							0							0				
16:15-16:30							0							0				
16:30-16:45							0							0				
16:45-17:00							0							0				
17:00-17:15							0							0				
17:15-17:30							0							0				
17:30-17:45							0							0				
17:45-18:00							0							0				

4+ Axle Trucks

BIKE COUNT

															NL	SL	EL	WL
16:00-16:15							0							0				
16:15-16:30							0							0				
16:30-16:45							0							0				
16:45-17:00							0							0				
17:00-17:15							0							0				
17:15-17:30							0							0				
17:30-17:45							0							0				
17:45-18:00							0							0				

PEAK-HOUR VOLUME ANALYSIS

CALCULATED PEAK HOUR VOLUMES-PM

		5	0	0		
		SR	ST	SL		
1	EL				WR	1
13	ET		17:00-18:00		WT	0
6	ER		CARS		WL	1
		NL	NT	NR		
		3	0	0		

ADJUSTED PEAK HOUR VOLUMES- TOTAL PCE PM

		5	0	0		
		SR	ST	SL		
1	EL				WR	1
13	ET		TOTAL PCE		WT	0
6	ER		ALL VEHICLES PCE		WL	1
		NL	NT	NR		
		3	0	0		

CALCULATED PEAK HOUR VOLUMES-TRUCKS

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		16:00-17:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 2.0

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		16:00-17:00		WT	0
0	ER		PCE 3 AXLETRUCKS		WL	0
		NL	NT	NR		
		0	0	0		

CALCULATED PEAK HOUR VOLUMES 4+AXLE TRUCKS

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		16:00-17:00		WT	0
0	ER				WL	0
		NL	NT	NR		
		0	0	0		

ADJUSTED PEAK HOUR VOLUMES AFTER PCE OF 3.0

		0	0	0		
		SR	ST	SL		
0	EL				WR	0
0	ET		16:00-17:00		WT	0
0	ER		PCE 4+AXLE TRUCKS		WL	0
		NL	NT	NR		
		0	0	0		

ATTACHMENT M: SI HT DISTANCE

SIGHT DISTANCE AT PROJECT DRIVEWAYS

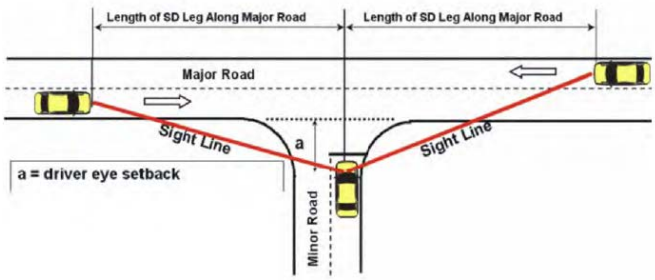
Driveways provide the link between land use activity and the road network. Traffic maneuvering to or from driveways can potentially conflict with the traffic flow on a main road and may therefore affect the safe and efficient operation of the road. Driveways should be located, designed and constructed so that vehicles can enter or leave a driveway in a safe and convenient manner without causing any undue adverse effect on the safe and efficient operation of the roadway network. The potential for adverse effects depends on:

- the number of movements to or from the driveway;
- the traffic functions and traffic flow on the frontage road;
- the number and spacing of driveways along the road.

Generally the potential for adverse effects increases with increasing numbers of movements to or from driveways with higher traffic flows on the main road. In general, the design of driveways should: (a) Achieve sufficient visibility between vehicles on the main road and vehicles using the driveway. (b) Cater to the types of vehicle using the driveway and in particular allow vehicles to turn to or from the driveway without crossing the road center-line. (c) Avoid confusion between vehicle maneuvers at other driveways or intersections. (d) Provide adequate visibility between vehicles using the driveway and pedestrians.

The sight distance required at a driveway depends on the traffic speeds and function of the main road and on the expectancy of driveway maneuvers. Whatever sight distance is provided, it is the obligation of traffic turning to or from a driveway to select gaps in through traffic of adequate width for their proposed maneuver. The minimum criteria for safety is that the through traffic on the main road can, if necessary, stop in time to avoid a collision with a vehicle turning to or from a driveway that may have misjudged a gap selection or stalled during its maneuver.

Visibility requirements at driveways are for clear lines of sight between vehicles on the main road and vehicles using the driveway. The lines of clear sight can therefore be measured from driver eye height to driver eye height, i.e. 4.2’ above ground level. If the driveway is expected to be regularly used by heavy vehicles, then the lines of clear sight should also allow for the different driver’s eye height between these and light vehicles.



Per AASHTO's guidelines, for a roadway with a posted speed of 50 mph the sight distance is 425 feet.

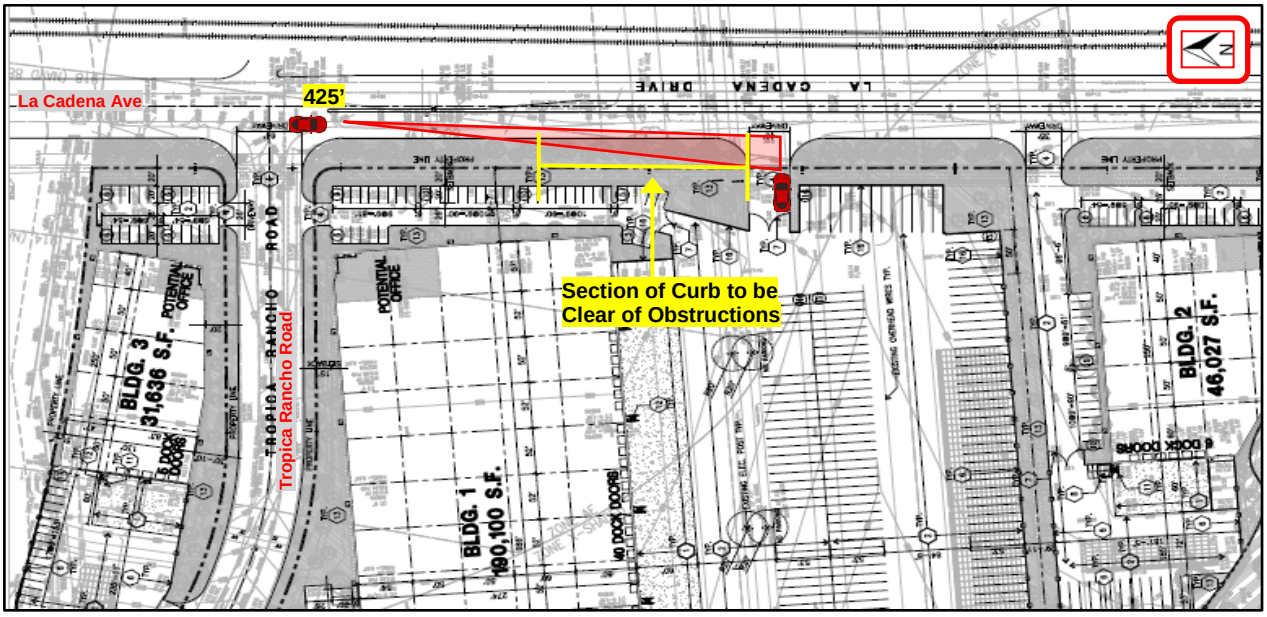
Table 6: Stopping Sight Distance

Design Speed (mph)	Brake reaction distance (ft)	Braking distance on level (ft)	Stopping Sight Distance	
			Calculated (ft)	Design (ft)
15	55.1	21.6	76.7	80
20	73.5	38.4	111.9	115
25	91.9	60.0	151.9	155
30	110.3	86.4	196.7	200
35	128.6	117.6	246.2	250
40	147.0	153.6	300.6	305
45	165.4	194.4	359.8	360
50	183.8	240.0	423.8	425
55	202.1	290.3	492.4	495
60	220.5	345.5	566.0	570
65	238.9	405.5	644.4	645

Note: Brake reaction distance predicated on a time of 2.5s; deceleration rate 11.2 ft/sec²

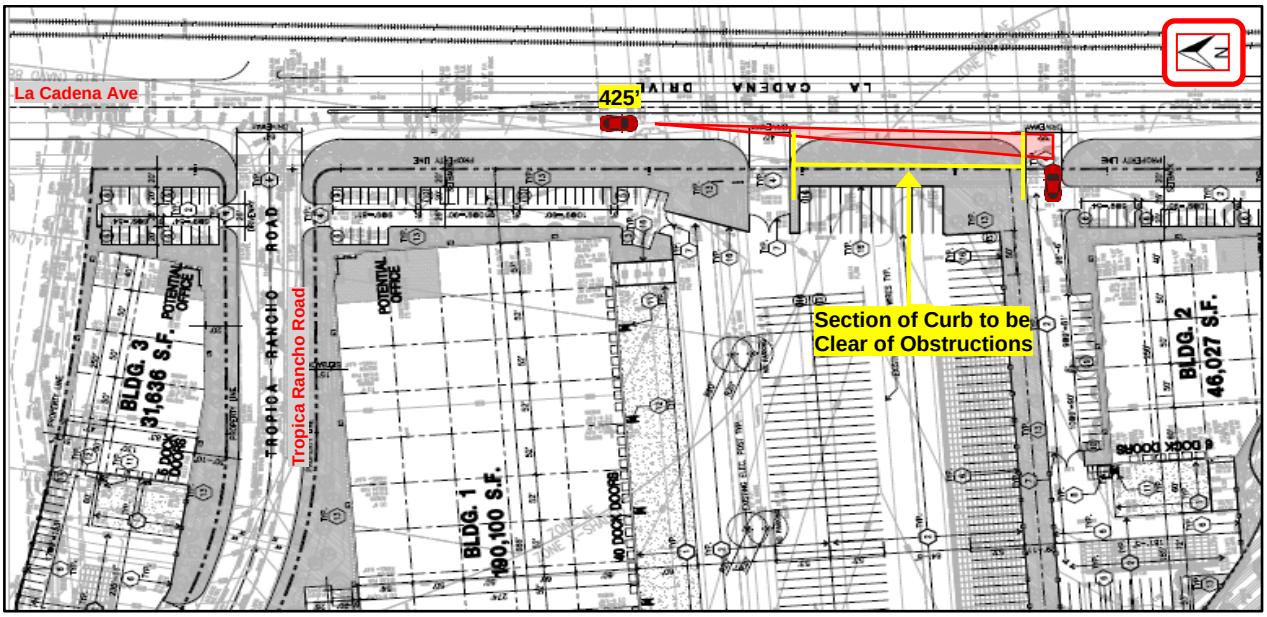
Line of Sight Triangle

Driveway to Building 1



The minimum recommended stopping sight distance based on the design speed and the sum of reaction distance and braking distance is 425' (feet).

Line of Sight Triangle
Driveway to Building 2



The minimum recommended stopping sight distance based on the design speed and the sum of reaction distance and braking distance is 425’ (feet).

TRUCK TURNING INTO PROJECT DRIVEWAYS

The dominant function of arterial roads is to carry through traffic from one major area of activity to another. Drivers on these roads are therefore unlikely to expect many driveway maneuver type conflicts. The minimum visibility requirement at driveways therefore must allow time for these drivers to observe and react to potential conflicts and then if necessary stop before reaching the conflict point. In particular right turn movements into a driveway will disrupt the through traffic. They are also the most common movement in accidents at driveways.

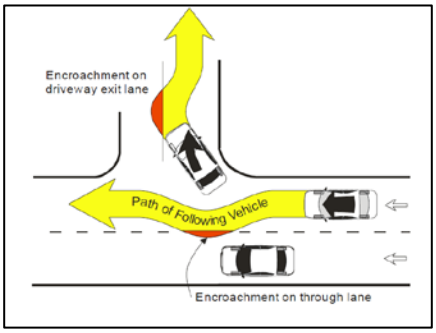


Exhibit A: Truck Turning Templates Exiting onto La Cadena from Project Driveways - 65 foot trucks

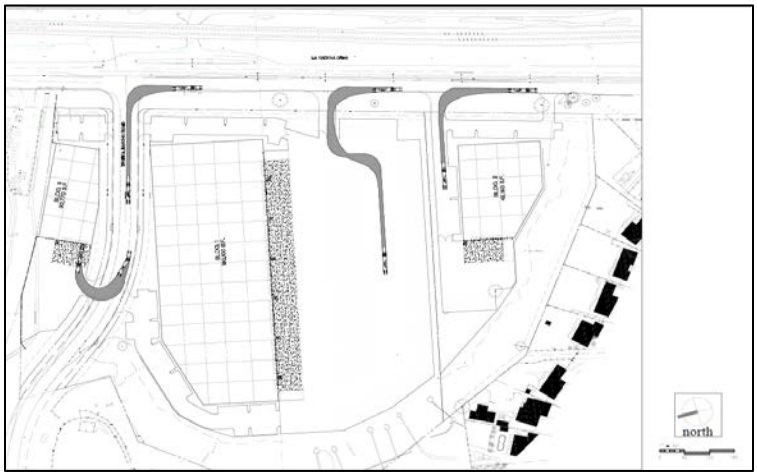
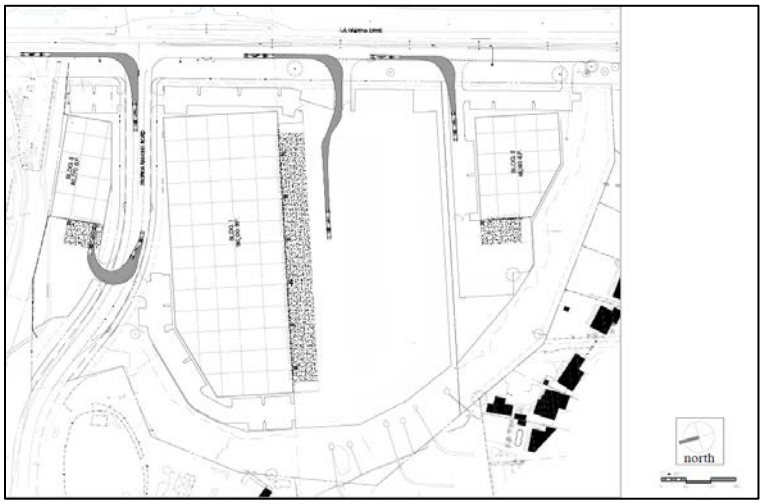


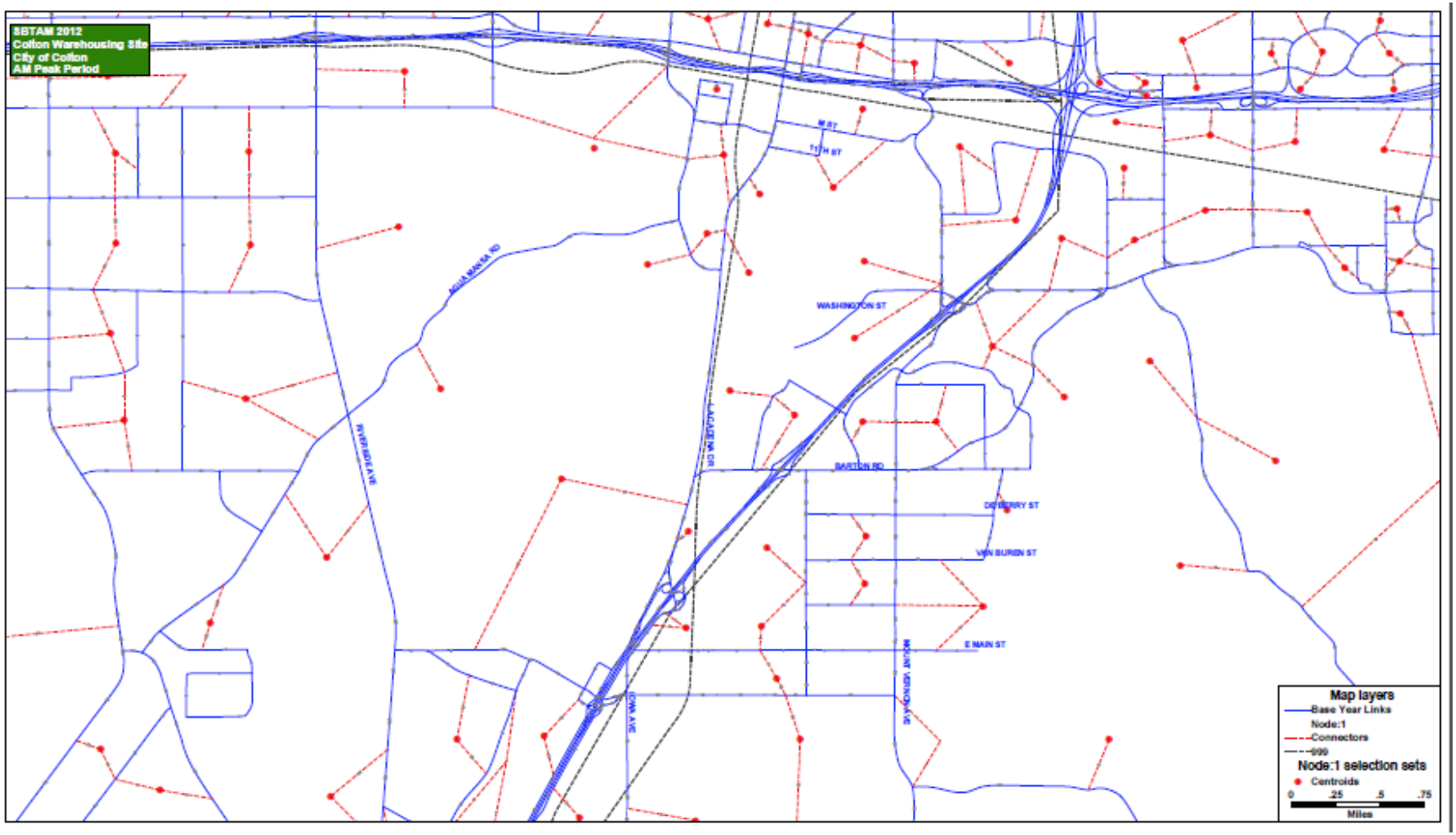
Exhibit B: Truck Turning Templates Entering onto La Cadena from Project Driveways - 65 foot trucks



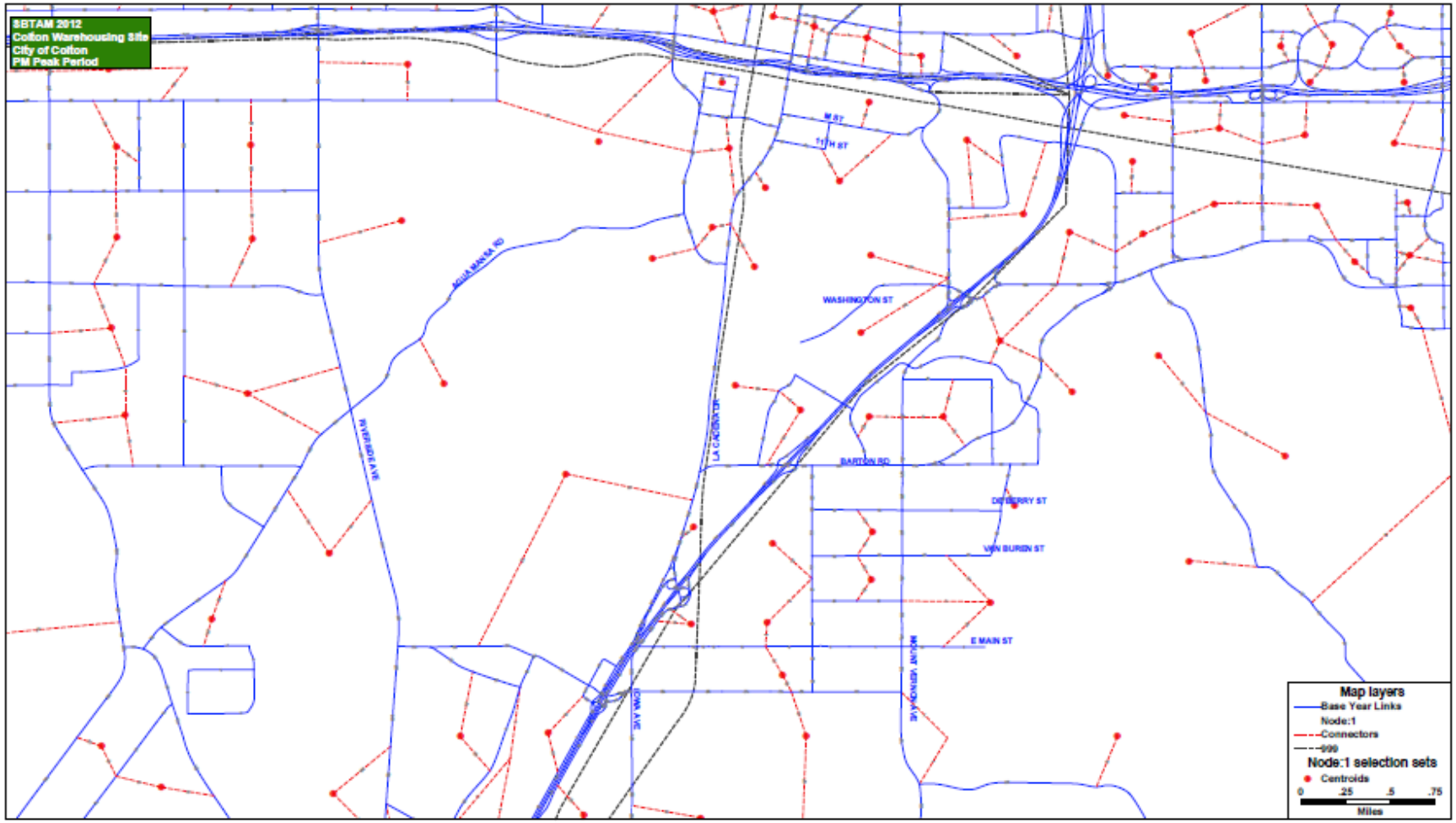
As indicated in Exhibits A and B, trucks are able to turn into and out of project driveways while remaining in their own lane with a rounding of the curb returns. However, they will be forced to slow down to maneuver into the driveways.

NOTE: Site distance and truck turning curb return radii analysis at the itnersection and driveway approaches have been preliminary reviewed. The final analysis and design for the proposed project will be completed during final engineering review utilizing the final roadway geometrics.

ATTACHMENT N: SANBAG SBTAM MODEL DATA (AM)



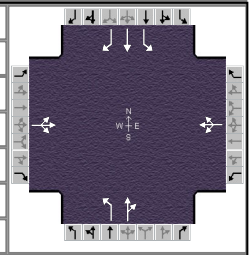
ATTACHMENT N: SANBAG SBTAM MODEL DATA (PM)



ATTACHMENT O: LEVEL OF SERVICE ANALYSIS
EXISTIN CONDITIONS AND EXISTIN CONDITIONS PL S PROJECT

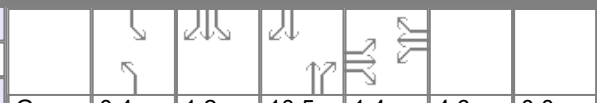
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Dr at 7th Street	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	La Cadena 7th-Maple Exist 2017 AM.xus				
Project Description	Colton Warehouses - La Cadena				

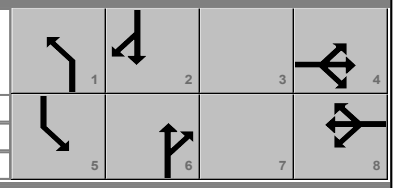


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	1	21	7	54	12	70	7	292	72	34	375	8

Signal Information			
Cycle, s	38.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	0.4	1.2	10.5	1.4	4.6	0.0						
Yellow	3.0	0.0	3.0	3.0	3.0	0.0						
Red	2.0	0.0	2.0	2.0	2.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		12.0	2.0	4.0	2.0	3.0
Phase Duration, s		6.4		9.6	5.4	15.5	6.6	16.7
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.4	3.0	3.0	3.0	2.9
Queue Clearance Time *(g_s)*, s		2.7		5.5	2.2	9.8	2.8	9.4
Green Extension Time *(g_e)*, s		0.0		0.3	0.0	0.7	0.0	0.7
Phase Call Probability		0.28		0.78	0.08	1.00	0.32	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

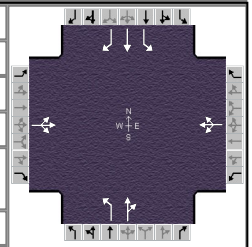
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		31			143		7	383		36	395	8
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1627			1528		1619	1738		1619	1800	1525
Queue Service Time *(g_s)*, s		0.7			3.5		0.2	7.8		0.8	7.4	0.1
Cycle Queue Clearance Time *(g_c)*, s		0.7			3.5		0.2	7.8		0.8	7.4	0.1
Capacity *(c)*, veh/h		60			184		16	482		68	556	471
Volume-to-Capacity Ratio *(X)*		0.509			0.778		0.451	0.796		0.525	0.710	0.018
Available Capacity *(c_a)*, veh/h		1703			1600		1272	2275		1272	2356	1997
Back of Queue *(Q)*, veh/ln (50th percentile)		0.3			1.2		0.1	2.1		0.3	2.0	0.0
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		18.1			16.3		18.8	12.8		17.9	11.7	9.2
Incremental Delay *(d_2)*, s/veh		2.5			2.7		7.2	1.2		2.3	0.6	0.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Control Delay *(d)*, s/veh		20.5			19.0		26.0	14.0		20.3	12.3	9.2
Level of Service (LOS)		C			B		C	B		C	B	A
Approach Delay, s/veh / LOS	20.5	C		19.0	B		14.2	B		12.9	B	
Intersection Delay, s/veh / LOS	14.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.4	A	1.8	A	1.9	A

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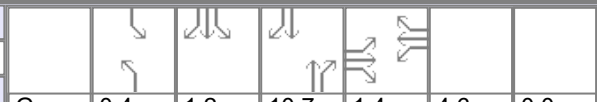
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Dr at 7th Street	Analysis Year	Existing plus Project	Analysis Period	1> 7:00
File Name	La Cadena 7th-Maple Exist + Proj AM.xus				
Project Description	Colton Warehouses - La Cadena				

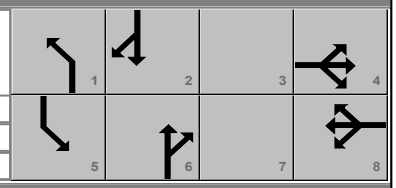


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	1	21	7	54	12	70	7	297	72	34	387	8

Signal Information			
Cycle, s	38.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	0.4	1.2		10.7	1.4	4.6	0.0					
Yellow	3.0	0.0		3.0	3.0	3.0	0.0					
Red	2.0	0.0		2.0	2.0	2.0	0.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		12.0	2.0	4.0	2.0	3.0
Phase Duration, s		6.4		9.6	5.4	15.7	6.6	16.9
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.4	3.0	2.9	3.0	2.9
Queue Clearance Time *(g_s)*, s		2.7		5.5	2.2	10.0	2.8	9.7
Green Extension Time *(g_e)*, s		0.0		0.3	0.0	0.7	0.0	0.7
Phase Call Probability		0.28		0.78	0.08	1.00	0.32	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

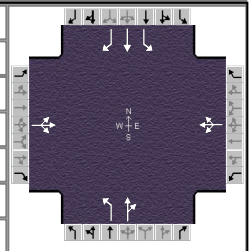
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		31			143		7	388		36	407	8
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1627			1528		1619	1739		1619	1800	1525
Queue Service Time *(g_s)*, s		0.7			3.5		0.2	8.0		0.8	7.7	0.1
Cycle Queue Clearance Time *(g_c)*, s		0.7			3.5		0.2	8.0		0.8	7.7	0.1
Capacity *(c)*, veh/h		60			184		16	486		68	561	475
Volume-to-Capacity Ratio *(X)*		0.509			0.778		0.451	0.799		0.526	0.726	0.018
Available Capacity *(c_a)*, veh/h		1695			1592		1265	2265		1265	2345	1987
Back of Queue *(Q)*, veh/ln (50th percentile)		0.3			1.2		0.1	2.1		0.3	2.1	0.0
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		18.1			16.4		18.9	12.8		18.0	11.8	9.1
Incremental Delay *(d_2)*, s/veh		2.5			2.7		7.2	1.2		2.3	0.7	0.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Control Delay *(d)*, s/veh		20.6			19.1		26.1	14.0		20.4	12.4	9.2
Level of Service (LOS)		C			B		C	B		C	B	A
Approach Delay, s/veh / LOS	20.6	C		19.1	B		14.2	B		13.0	B	
Intersection Delay, s/veh / LOS	14.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.4	A	1.8	A	1.9	A

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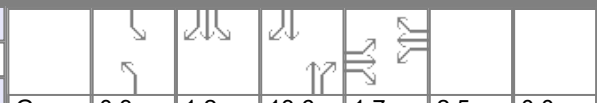
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Dr at 7th Street	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	La Cadena 7th-Maple Exist 2017 PM.xus				
Project Description	Colton Warehouses - La Cadena				

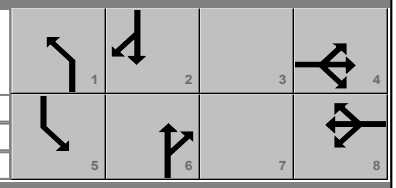


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	2	18	15	19	4	36	6	474	23	32	370	13

Signal Information			
Cycle, s	39.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	0.3	1.2	13.6	1.7	2.5	0.0						
Yellow	3.0	0.0	3.0	3.0	3.0	0.0						
Red	2.0	0.0	2.0	2.0	2.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		12.0	2.0	4.0	2.0	3.0
Phase Duration, s		6.7		7.5	5.3	18.6	6.6	19.8
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.4	3.0	2.9	3.0	2.9
Queue Clearance Time *(g_s)*, s		2.9		3.6	2.2	12.7	2.8	8.8
Green Extension Time *(g_e)*, s		0.1		0.1	0.0	0.9	0.0	0.7
Phase Call Probability		0.33		0.49	0.07	1.00	0.31	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

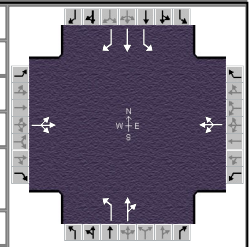
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		37			62		6	523		34	389	14
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1574			1510		1619	1785		1619	1800	1525
Queue Service Time *(g_s)*, s		0.9			1.6		0.2	10.7		0.8	6.8	0.2
Cycle Queue Clearance Time *(g_c)*, s		0.9			1.6		0.2	10.7		0.8	6.8	0.2
Capacity *(c)*, veh/h		67			96		14	620		64	681	577
Volume-to-Capacity Ratio *(X)*		0.548			0.649		0.450	0.844		0.524	0.572	0.024
Available Capacity *(c_a)*, veh/h		1597			1532		1232	2263		1232	2282	1934
Back of Queue *(Q)*, veh/ln (50th percentile)		0.3			0.6		0.1	2.7		0.3	1.7	0.0
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		18.5			18.0		19.5	11.9		18.6	9.7	7.7
Incremental Delay *(d_2)*, s/veh		2.6			2.8		8.4	1.3		2.5	0.3	0.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Control Delay *(d)*, s/veh		21.1			20.8		27.8	13.2		21.0	10.0	7.7
Level of Service (LOS)		C			C		C	B		C	B	A
Approach Delay, s/veh / LOS	21.1	C		20.8	C		13.3	B		10.8	B	
Intersection Delay, s/veh / LOS	13.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.2	A	2.0	B	1.9	A

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HCS 2010 Signalized Intersection Results Summary

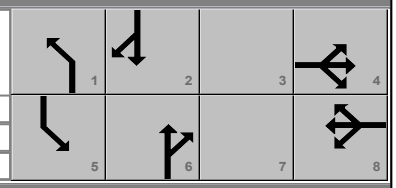
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Dr at 7th Street	Analysis Year	Existing plus Project	Analysis Period	1> 7:00
File Name	La Cadena 7th-Maple Exist + Proj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	2	18	15	19	4	36	6	488	23	32	375	13

Signal Information			
Cycle, s	39.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	0.3	1.2	14.1	1.7	2.5	0.0	
Yellow	3.0	0.0	3.0	3.0	3.0	0.0	
Red	2.0	0.0	2.0	2.0	2.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		12.0	2.0	4.0	2.0	3.0
Phase Duration, s		6.7		7.5	5.3	19.1	6.6	20.3
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.4	3.0	2.9	3.0	2.9
Queue Clearance Time *(g_s)*, s		2.9		3.6	2.2	13.1	2.8	8.9
Green Extension Time *(g_e)*, s		0.1		0.1	0.0	0.9	0.0	0.7
Phase Call Probability		0.34		0.50	0.07	1.00	0.31	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

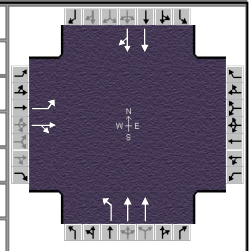
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		37			62		6	538		34	395	14
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1574			1510		1619	1786		1619	1800	1525
Queue Service Time *(g_s)*, s		0.9			1.6		0.2	11.1		0.8	6.9	0.2
Cycle Queue Clearance Time *(g_c)*, s		0.9			1.6		0.2	11.1		0.8	6.9	0.2
Capacity *(c)*, veh/h		67			95		14	633		64	694	588
Volume-to-Capacity Ratio *(X)*		0.549			0.652		0.451	0.850		0.525	0.569	0.023
Available Capacity *(c_a)*, veh/h		1575			1510		1215	2233		1215	2251	1907
Back of Queue *(Q)*, veh/ln (50th percentile)		0.3			0.6		0.1	2.9		0.3	1.7	0.0
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		18.8			18.3		19.7	11.9		18.8	9.7	7.6
Incremental Delay *(d_2)*, s/veh		2.6			2.8		8.4	1.3		2.5	0.3	0.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Control Delay *(d)*, s/veh		21.4			21.1		28.1	13.2		21.3	9.9	7.6
Level of Service (LOS)		C			C		C	B		C	A	A
Approach Delay, s/veh / LOS	21.4	C		21.1	C		13.4	B		10.7	B	
Intersection Delay, s/veh / LOS	13.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.2	A	2.0	B	1.9	A

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	La Cadena Rancho Exist 2017 AM.xus				
Project Description	Colton Warehouses - La Cadena				

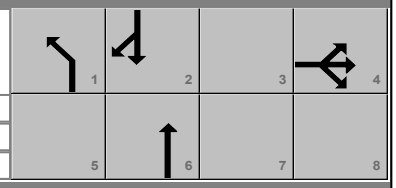


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	11	0	717				333	398			471	9

Signal Information			
Cycle, s	113.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	26.7	23.1	49.0	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		10.0			2.0	4.0		8.3
Phase Duration, s		54.0			31.7	59.7		28.1
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		47.4			26.1	10.2		22.5
Green Extension Time *(g_e)*, s		1.5			0.5	0.8		0.6
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.04

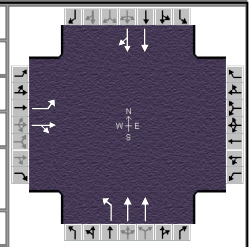
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	12	628					351	419			253	252
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525					1619	1714			1800	1788
Queue Service Time *(g_s)*, s	0.5	45.4					24.1	8.2			20.5	14.9
Cycle Queue Clearance Time *(g_c)*, s	0.5	45.4					24.1	8.2			20.5	14.9
Capacity *(c)*, veh/h	698	658					380	1649			365	362
Volume-to-Capacity Ratio *(X)*	0.017	0.956					0.923	0.254			0.695	0.696
Available Capacity *(c_a)*, veh/h	995	938					569	1649			474	471
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2	18.8					10.7	3.0			6.5	6.5
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	18.6	31.3					42.6	17.5			42.1	42.2
Incremental Delay *(d_2)*, s/veh	0.0	18.6					15.0	0.0			1.6	1.6
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	18.6	49.9					57.5	17.5			43.7	43.8
Level of Service (LOS)	B	D					E	B			D	D
Approach Delay, s/veh / LOS	49.4	D		0.0			35.7	D		43.8	D	
Intersection Delay, s/veh / LOS	42.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.9	A	2.5	B
Bicycle LOS Score / LOS	2.2	B			1.8	A	1.5	A

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HCS 2010 Signalized Intersection Results Summary

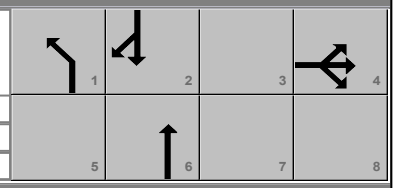
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	Existing plus Project	Analysis Period	1> 7:00
File Name	La Cadena Rancho Exist + Proj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	11	0	721				334	403			483	9

Signal Information			
Cycle, s	116.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	27.3	23.7	50.4	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		10.0			2.0	4.0		8.3
Phase Duration, s		55.4			32.3	61.0		28.7
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		48.8			26.7	10.5		23.1
Green Extension Time *(g_e)*, s		1.5			0.5	0.8		0.6
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.07

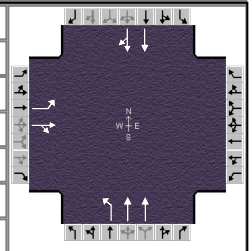
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	12	633					352	424			260	258
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525					1619	1714			1800	1788
Queue Service Time *(g_s)*, s	0.5	46.8					24.7	8.5			21.1	15.7
Cycle Queue Clearance Time *(g_c)*, s	0.5	46.8					24.7	8.5			21.1	15.7
Capacity *(c)*, veh/h	702	661					380	1648			366	363
Volume-to-Capacity Ratio *(X)*	0.017	0.957					0.925	0.257			0.710	0.711
Available Capacity *(c_a)*, veh/h	973	917					556	1648			464	461
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2	19.7					11.2	3.2			6.9	6.9
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	18.8	32.0					43.6	17.9			43.2	43.2
Incremental Delay *(d_2)*, s/veh	0.0	20.4					16.7	0.0			2.3	2.3
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	18.8	52.4					60.3	17.9			45.5	45.6
Level of Service (LOS)	B	D					E	B			D	D
Approach Delay, s/veh / LOS	51.8	D		0.0			37.1	D		45.5	D	
Intersection Delay, s/veh / LOS	44.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.9	A	2.5	B
Bicycle LOS Score / LOS	2.2	B			1.8	A	1.6	A

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	La Cadena Rancho Exist 2017 PM.xus				
Project Description	Colton Warehouses - La Cadena				

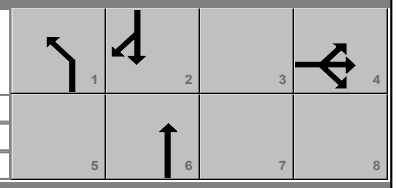


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	33	0	753				322	495			439	8

Signal Information			
Cycle, s	114.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	26.1	21.4	52.3	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		10.0			2.0	4.0		8.3
Phase Duration, s		57.3			31.1	57.5		26.4
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		50.6			25.5	13.2		20.9
Green Extension Time *(g_e)*, s		1.7			0.5	1.0		0.6
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.01

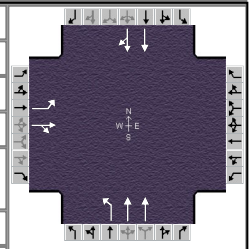
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	35	666					339	521			236	235
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525					1619	1714			1800	1788
Queue Service Time *(g_s)*, s	1.4	48.6					23.5	11.2			18.9	14.1
Cycle Queue Clearance Time *(g_c)*, s	1.4	48.6					23.5	11.2			18.9	14.1
Capacity *(c)*, veh/h	738	695					368	1567			336	333
Volume-to-Capacity Ratio *(X)*	0.047	0.958					0.921	0.332			0.703	0.704
Available Capacity *(c_a)*, veh/h	985	928					563	1567			469	466
Back of Queue *(Q)*, veh/ln (50th percentile)	0.5	20.6					10.4	4.2			6.1	6.1
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	17.4	30.2					43.4	20.0			43.8	43.8
Incremental Delay *(d_2)*, s/veh	0.0	21.9					13.8	0.0			1.1	1.1
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	17.4	52.2					57.2	20.0			44.9	44.9
Level of Service (LOS)	B	D					E	C			D	D
Approach Delay, s/veh / LOS	50.4	D		0.0			34.7	C		44.9	D	
Intersection Delay, s/veh / LOS	42.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.9	A	2.5	B
Bicycle LOS Score / LOS	2.3	B			1.8	A	1.5	A

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	Existing plus Project	Analysis Period	1> 7:00
File Name	La Cadena Rancho Exist + Proj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	33	0	753				326	509			444	8

Signal Information			
Cycle, s	116.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

							1	2	3	4		
Green	26.7	21.7	53.0	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0	5	6	7	8		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		10.0			2.0	4.0		8.3
Phase Duration, s		58.0			31.7	58.4		26.7
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		51.2			26.1	13.7		21.1
Green Extension Time *(g_e)*, s		1.7			0.5	1.0		0.6
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	35	666					343	536			238	237
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525					1619	1714			1800	1789
Queue Service Time *(g_s)*, s	1.4	49.2					24.1	11.7			19.1	14.5
Cycle Queue Clearance Time *(g_c)*, s	1.4	49.2					24.1	11.7			19.1	14.5
Capacity *(c)*, veh/h	737	695					372	1572			335	333
Volume-to-Capacity Ratio *(X)*	0.047	0.959					0.923	0.341			0.712	0.713
Available Capacity *(c_a)*, veh/h	973	916					556	1572			463	460
Back of Queue *(Q)*, veh/ln (50th percentile)	0.5	21.0					10.8	4.4			6.3	6.3
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	17.7	30.7					43.9	20.2			44.5	44.5
Incremental Delay *(d_2)*, s/veh	0.0	22.8					15.3	0.0			1.4	1.5
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	17.7	53.5					59.2	20.3			45.9	46.0
Level of Service (LOS)	B	D					E	C			D	D
Approach Delay, s/veh / LOS	51.7	D		0.0			35.5	D		45.9	D	
Intersection Delay, s/veh / LOS	43.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.9	A	2.5	B
Bicycle LOS Score / LOS	2.3	B			1.9	A	1.5	A

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*City of Colton*
Date Performed	*7/9/2017*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*La Cadena Dr/Tropica Rancho Rd*
Jurisdiction	*City of Colton*
Analysis Year	*Existing 2017*

Project Description *Colton Warehouses - La Cadena/Tropica Rancho*

East/West Street: *Tropica Rancho Rd/Vivienda Ave* | North/South Street: *La Cadena Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*697*	*2*	*0*	*1246*	*7*
Peak-Hour Factor, PHF	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*733*	*2*	*0*	*1311*	*7*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*1*	*0*	*0*	*29*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*1*	*0*	*0*	*30*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*1*	*0*
Configuration			*R*		*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				*R*
v (veh/h)		*0*		*30*				*1*
C (m) (veh/h)		*879*		*682*				*467*
v/c		*0.00*		*0.04*				*0.00*
95% queue length		*0.00*		*0.14*				*0.01*
Control Delay (s/veh)		*9.1*		*10.5*				*12.7*
LOS		*A*		*B*				*B*
Approach Delay (s/veh)	--	--	*10.5*			*12.7*		
Approach LOS	--	--	*B*			*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*City of Colton*
Date Performed	*7/9/2017*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*La Cadena Dr/Tropica Rancho Rd*
Jurisdiction	*City of Colton*
Analysis Year	*Existing 2017 + Project*

Project Description *Colton Warehouses - La Cadena/Tropica Rancho*

East/West Street: *Tropica Rancho Rd/Vivienda Ave* | North/South Street: *La Cadena Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*25*	*699*	*2*	*0*	*1257*	*12*
Peak-Hour Factor, PHF	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*25*	*735*	*2*	*0*	*1323*	*12*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*0*
Configuration	*L*	*T*	*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*4*	*0*	*7*	*2*	*0*	*29*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*4*	*0*	*7*	*2*	*0*	*30*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*LT*		*LTR*			*LTR*	
v (veh/h)	*25*	*0*		*32*			*11*	
C (m) (veh/h)	*523*	*878*		*481*			*119*	
v/c	*0.05*	*0.00*		*0.07*			*0.09*	
95% queue length	*0.15*	*0.00*		*0.21*			*0.30*	
Control Delay (s/veh)	*12.2*	*9.1*		*13.0*			*38.3*	
LOS	*B*	*A*		*B*			*E*	
Approach Delay (s/veh)	--	--	*13.0*			*38.3*		
Approach LOS	--	--	*B*			*E*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*City of Colton*
Date Performed	*7/9/2017*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*La Cadena Dr/Tropica Rancho Rd*
Jurisdiction	*City of Colton*
Analysis Year	*Existing 2017*

Project Description *Colton Warehouses - La Cadena/Tropica Rancho*

East/West Street: *Tropica Rancho Rd/Vivienda Ave* | North/South Street: *La Cadena Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*757*	*0*	*0*	*1155*	*1*
Peak-Hour Factor, PHF	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*796*	*0*	*0*	*1215*	*1*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*1*	*0*	*0*	*35*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*1*	*0*	*0*	*36*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*1*	*0*
Configuration			*R*		*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				*R*
v (veh/h)		*0*		*36*				*1*
C (m) (veh/h)		*835*		*656*				*499*
v/c		*0.00*		*0.05*				*0.00*
95% queue length		*0.00*		*0.17*				*0.01*
Control Delay (s/veh)		*9.3*		*10.8*				*12.2*
LOS		*A*		*B*				*B*
Approach Delay (s/veh)	--	--	*10.8*			*12.2*		
Approach LOS	--	--	*B*			*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*City of Colton*
Date Performed	*7/9/2017*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*La Cadena Dr/Tropica Rancho Rd*
Jurisdiction	*City of Colton*
Analysis Year	*Existing + Project*

Project Description *Colton Warehouses - La Cadena/Tropica Rancho*

East/West Street: *Tropica Rancho Rd/Vivienda Ave* | North/South Street: *La Cadena Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*10*	*763*	*0*	*0*	*1159*	*3*
Peak-Hour Factor, PHF	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*10*	*803*	*0*	*0*	*1220*	*3*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*0*
Configuration	*L*	*T*	*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*12*	*0*	*11*	*1*	*0*	*35*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*12*	*0*	*11*	*1*	*0*	*36*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*LT*		*LTR*			*LTR*	
v (veh/h)	*10*	*0*		*37*			*23*	
C (m) (veh/h)	*577*	*830*		*562*			*107*	
v/c	*0.02*	*0.00*		*0.07*			*0.21*	
95% queue length	*0.05*	*0.00*		*0.21*			*0.81*	
Control Delay (s/veh)	*11.3*	*9.3*		*11.9*			*47.8*	
LOS	*B*	*A*		*B*			*E*	
Approach Delay (s/veh)	--	--	*11.9*			*47.8*		
Approach LOS	--	--	*B*			*E*		

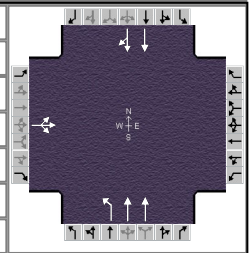
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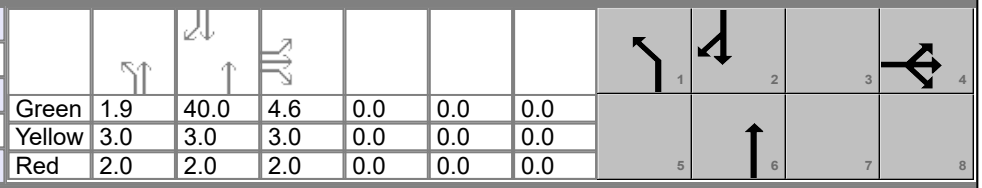
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Litton A	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	La Cadena Litton Exist 2017 AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	56	0	34				26	636			1094	13

Signal Information			
Cycle, s	61.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	1.9	40.0	4.6	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		9.6			6.9	51.9		45.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.4			3.0	2.9		2.9
Queue Clearance Time *(gs)*, s		5.5			3.0	5.5		42.8
Green Extension Time *(ge)*, s		0.2			0.0	1.4		0.0
Phase Call Probability		0.80			0.37	1.00		1.00
Max Out Probability		0.00			0.00	0.00		1.00

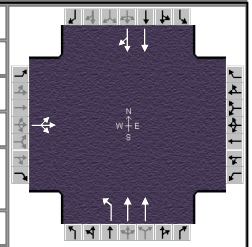
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		95					27	669			584	581
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1638					1619	1714			1800	1792
Queue Service Time *(gs)*, s		3.5					1.0	3.5			40.8	10.3
Cycle Queue Clearance Time *(gc)*, s		3.5					1.0	3.5			40.8	10.3
Capacity *(c)*, veh/h		121					49	2615			1172	1167
Volume-to-Capacity Ratio *(X)*		0.780					0.556	0.256			0.498	0.498
Available Capacity *(ca)*, veh/h		1066					791	2615			1172	1167
Back of Queue *(Q)*, veh/ln (50th percentile)		1.5					0.4	0.1			1.9	1.9
Overflow Queue *(Q3)*, veh/ln		0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d1)*, s/veh		27.9					29.4	2.1			5.5	5.5
Incremental Delay *(d2)*, s/veh		4.2					3.6	0.0			0.1	0.1
Initial Queue Delay *(d3)*, s/veh		0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh		32.1					33.0	2.2			5.7	5.7
Level of Service (LOS)		C					C	A			A	A
Approach Delay, s/veh / LOS	32.1	C		0.0			3.4	A		5.7	A	
Intersection Delay, s/veh / LOS	6.1						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.8	A	2.0	B
Bicycle LOS Score / LOS	1.3	A			1.7	A	2.1	B

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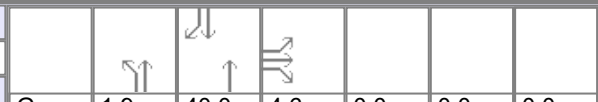
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Litton A	Analysis Year	Existing plus Project Revised	Analysis Period	1> 7:00
File Name	La Cadena Litton Exist + Proj AM Rev.xus				
Project Description	Colton Warehouses - La Cadena				

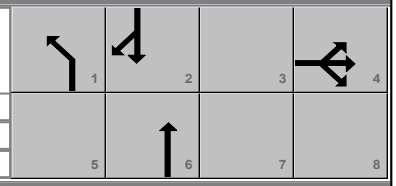


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	56	0	34				26	665			1106	13

Signal Information			
Cycle, s	61.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	1.9	40.0	4.6	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		9.6			6.9	51.9		45.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.4			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		5.5			3.0	5.7		48.3
Green Extension Time *(g_e)*, s		0.2			0.0	1.5		0.0
Phase Call Probability		0.80			0.37	1.00		1.00
Max Out Probability		0.00			0.00	0.00		1.00

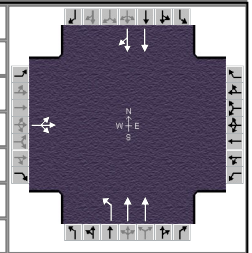
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		95					27	700			590	588
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1638					1619	1714			1800	1792
Queue Service Time *(g_s)*, s		3.5					1.0	3.7			46.3	10.5
Cycle Queue Clearance Time *(g_c)*, s		3.5					1.0	3.7			46.3	10.5
Capacity *(c)*, veh/h		121					49	2615			1172	1167
Volume-to-Capacity Ratio *(X)*		0.780					0.555	0.268			0.503	0.504
Available Capacity *(c_a)*, veh/h		1066					1054	2615			1172	1167
Back of Queue *(Q)*, veh/ln (50th percentile)		1.5					0.4	0.1			1.9	1.9
Overflow Queue *(Q_3)*, veh/ln		0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh		27.9					29.4	2.2			5.6	5.6
Incremental Delay *(d_2)*, s/veh		4.2					3.6	0.0			0.1	0.1
Initial Queue Delay *(d_3)*, s/veh		0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh		32.1					33.0	2.2			5.7	5.7
Level of Service (LOS)		C					C	A			A	A
Approach Delay, s/veh / LOS	32.1	C		0.0			3.3	A		5.7	A	
Intersection Delay, s/veh / LOS	6.1						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.8	A	2.0	B
Bicycle LOS Score / LOS	1.3	A			1.7	A	2.1	B

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Litton A	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	La Cadena Litton Exist 2017 PM.xus				
Project Description	Colton Warehouses - La Cadena				

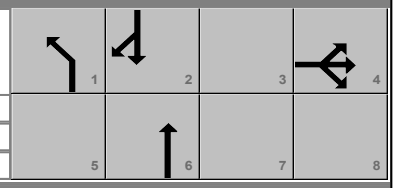


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	36	0	31				48	672			1313	47

Signal Information			
Cycle, s	61.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	2.9	40.0	3.5	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		8.5			7.9	52.9		45.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.4			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		4.6			3.9	5.5		58.7
Green Extension Time *(g_e)*, s		0.1			0.1	1.5		0.0
Phase Call Probability		0.70			0.58	1.00		1.00
Max Out Probability		0.00			0.00	0.00		1.00

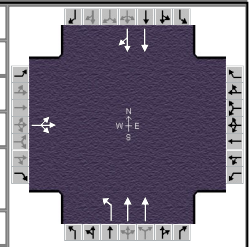
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		71					51	707			719	712
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1621					1619	1714			1800	1778
Queue Service Time *(g_s)*, s		2.6					1.9	3.5			56.7	14.3
Cycle Queue Clearance Time *(g_c)*, s		2.6					1.9	3.5			56.7	14.3
Capacity *(c)*, veh/h		92					76	2673			1173	1158
Volume-to-Capacity Ratio *(X)*		0.762					0.663	0.265			0.613	0.615
Available Capacity *(c_a)*, veh/h		1056					791	2673			1173	1158
Back of Queue *(Q)*, veh/ln (50th percentile)		1.1					0.7	0.0			2.8	2.8
Overflow Queue *(Q_3)*, veh/ln		0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh		28.5					28.8	1.9			6.2	6.2
Incremental Delay *(d_2)*, s/veh		5.0					3.7	0.0			0.7	0.7
Initial Queue Delay *(d_3)*, s/veh		0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh		33.5					32.5	1.9			6.9	6.9
Level of Service (LOS)		C					C	A			A	A
Approach Delay, s/veh / LOS	33.5	C		0.0			3.9	A		6.9	A	
Intersection Delay, s/veh / LOS	6.8						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.8	A	2.0	B
Bicycle LOS Score / LOS	1.2	A			1.8	A	2.3	B

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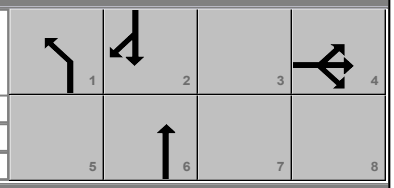
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Litton A	Analysis Year	Existing plus Project Revised	Analysis Period	1> 7:00
File Name	La Cadena Litton Exist + Proj PM Rev.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	36	0	31				48	689			1349	47

Signal Information			
Cycle, s	61.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	2.9	40.0	3.5	0.0	0.0	0.0		
Yellow	3.0	3.0	3.0	0.0	0.0	0.0		
Red	2.0	2.0	2.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		8.5			7.9	52.9		45.0
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.4			3.0	2.9		2.9
Queue Clearance Time (g_s), s		4.6			3.9	5.6		61.2
Green Extension Time (g_e), s		0.1			0.1	1.6		0.0
Phase Call Probability		0.70			0.58	1.00		1.00
Max Out Probability		0.00			0.00	0.00		1.00

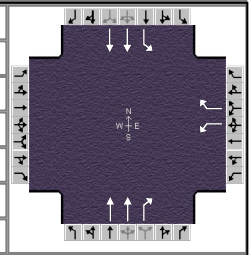
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		71					51	725			738	731
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1621					1619	1714			1800	1778
Queue Service Time (g_s), s		2.6					1.9	3.6			59.2	14.9
Cycle Queue Clearance Time (g_c), s		2.6					1.9	3.6			59.2	14.9
Capacity *(c)*, veh/h		92					76	2673			1173	1159
Volume-to-Capacity Ratio *(X)*		0.762					0.663	0.271			0.629	0.631
Available Capacity (c_a), veh/h		1056					791	2673			1173	1159
Back of Queue *(Q)*, veh/ln (50th percentile)		1.1					0.7	0.0			3.0	3.0
Overflow Queue (Q_3), veh/ln		0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh		28.5					28.8	1.9			6.3	6.3
Incremental Delay (d_2), s/veh		5.0					3.7	0.0			0.8	0.9
Initial Queue Delay (d_3), s/veh		0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh		33.5					32.5	1.9			7.1	7.2
Level of Service (LOS)		C					C	A			A	A
Approach Delay, s/veh / LOS	33.5	C		0.0			3.9	A		7.2	A	
Intersection Delay, s/veh / LOS	6.9						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.8	A	2.0	B
Bicycle LOS Score / LOS	1.2	A			1.8	A	2.3	B

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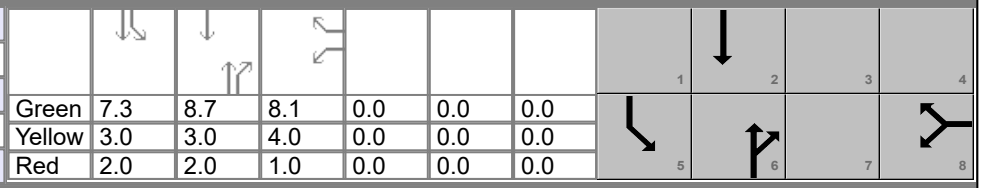
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Barton	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	La Cadena Barton Exist 2017 AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				222		205		487	94	225	1062	

Signal Information			
Cycle, s	39.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	7.3	8.7	8.1	0.0	0.0	0.0
Yellow	3.0	3.0	4.0	0.0	0.0	0.0
Red	2.0	2.0	1.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		6	5	2
Case Number				9.0		7.3	2.0	4.0
Phase Duration, s				13.1		13.7	12.3	26.0
Change Period, *(Y+Rc)*, s				5.0		5.0	5.0	5.0
Max Allow Headway *(MAH)*, s				3.2		2.9	3.0	2.9
Queue Clearance Time *(g_s)*, s				7.3		7.4	7.5	10.8
Green Extension Time *(g_e)*, s				0.9		1.3	0.4	2.7
Phase Call Probability				0.99		1.00	0.92	1.00
Max Out Probability				0.00		0.00	0.00	0.00

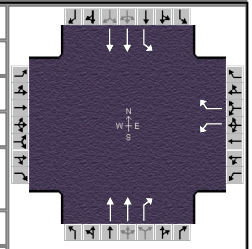
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		6	16	5	2	
Adjusted Flow Rate *(v)*, veh/h				234		216		513	99	237	1118	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln				1619		1525		1714	1525	1619	1714	
Queue Service Time *(g_s)*, s				5.3		5.1		5.4	2.1	5.5	8.8	
Cycle Queue Clearance Time *(g_c)*, s				5.3		5.1		5.4	2.1	5.5	8.8	
Capacity *(c)*, veh/h				336		317		763	340	304	1843	
Volume-to-Capacity Ratio *(X)*				0.695		0.681		0.672	0.291	0.778	0.607	
Available Capacity *(c_a)*, veh/h				2060		1941		3489	1553	1648	3489	
Back of Queue *(Q)*, veh/ln (50th percentile)				1.5		1.4		1.5	0.5	1.6	1.1	
Overflow Queue *(Q_3)*, veh/ln				0.0		0.0		0.0	0.0	0.0	0.0	
Queue Storage Ratio *(RQ)* (50th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay *(d_1)*, s/veh				14.4		14.4		14.0	12.7	15.2	6.2	
Incremental Delay *(d_2)*, s/veh				1.0		1.0		0.4	0.2	1.7	0.1	
Initial Queue Delay *(d_3)*, s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay *(d)*, s/veh				15.4		15.3		14.3	12.9	16.8	6.4	
Level of Service (LOS)				B		B		B	B	B	A	
Approach Delay, s/veh / LOS	0.0			15.4		B	14.1		B	8.2		A
Intersection Delay, s/veh / LOS	11.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.3	B	0.7	A
Bicycle LOS Score / LOS				F	1.6	A	2.2	B

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HCS 2010 Signalized Intersection Results Summary

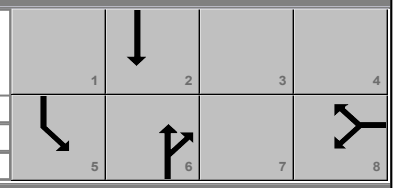
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Barton	Analysis Year	Existing plus Project Revised	Analysis Period	1> 7:00
File Name	La Cadena Barton Exist + Proj AM Rev.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				222		223		496	94	233	1066	

Signal Information			
Cycle, s	40.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	7.8	9.0	8.7	0.0	0.0	0.0
Yellow	3.0	3.0	4.0	0.0	0.0	0.0
Red	2.0	2.0	1.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		6	5	2
Case Number				9.0		7.3	2.0	4.0
Phase Duration, s				13.7		14.0	12.8	26.9
Change Period, *(Y+Rc)*, s				5.0		5.0	5.0	5.0
Max Allow Headway *(MAH)*, s				3.2		2.9	3.0	2.9
Queue Clearance Time *(g_s)*, s				7.8		7.7	7.9	11.2
Green Extension Time *(g_e)*, s				0.9		1.3	0.4	2.7
Phase Call Probability				1.00		1.00	0.94	1.00
Max Out Probability				0.00		0.00	0.00	0.00

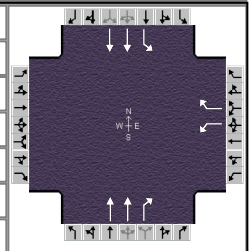
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		6	16	5	2	
Adjusted Flow Rate *(v)*, veh/h				234		235		522	99	245	1122	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln				1619		1525		1714	1525	1619	1714	
Queue Service Time *(g_s)*, s				5.4		5.8		5.7	2.2	5.9	9.2	
Cycle Queue Clearance Time *(g_c)*, s				5.4		5.8		5.7	2.2	5.9	9.2	
Capacity *(c)*, veh/h				349		329		764	340	313	1848	
Volume-to-Capacity Ratio *(X)*				0.669		0.713		0.683	0.291	0.783	0.607	
Available Capacity *(c_a)*, veh/h				1984		1869		3360	1496	1587	3360	
Back of Queue *(Q)*, veh/ln (50th percentile)				1.5		1.6		1.6	0.5	1.7	1.2	
Overflow Queue *(Q_3)*, veh/ln				0.0		0.0		0.0	0.0	0.0	0.0	
Queue Storage Ratio *(RQ)* (50th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay *(d_1)*, s/veh				14.7		14.8		14.5	13.2	15.6	6.4	
Incremental Delay *(d_2)*, s/veh				0.8		1.1		0.4	0.2	1.7	0.1	
Initial Queue Delay *(d_3)*, s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay *(d)*, s/veh				15.5		15.9		14.9	13.3	17.3	6.6	
Level of Service (LOS)				B		B		B	B	B	A	
Approach Delay, s/veh / LOS	0.0			15.7		B	14.7		B	8.5		A
Intersection Delay, s/veh / LOS	11.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.3	B	0.7	A
Bicycle LOS Score / LOS				F	1.6	A	2.3	B

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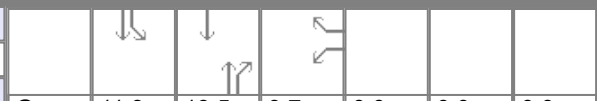
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Barton	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	La Cadena Barton Exist 2017 PM.xus				
Project Description	Colton Warehouses - La Cadena				

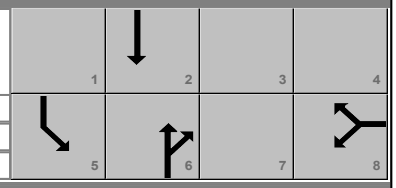


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				227		148		681	121	288	893	

Signal Information			
Cycle, s	49.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	11.3	13.5	9.7	0.0	0.0	0.0						
Yellow	3.0	3.0	4.0	0.0	0.0	0.0						
Red	2.0	2.0	1.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		6	5	2
Case Number				9.0		7.3	2.0	4.0
Phase Duration, s				14.7		18.5	16.3	34.8
Change Period, *(Y+Rc)*, s				5.0		5.0	5.0	5.0
Max Allow Headway *(MAH)*, s				3.1		2.9	3.0	2.9
Queue Clearance Time *(g_s)*, s				8.9		11.6	10.8	9.5
Green Extension Time *(g_e)*, s				0.7		1.8	0.5	2.2
Phase Call Probability				1.00		1.00	0.98	1.00
Max Out Probability				0.00		0.00	0.00	0.00

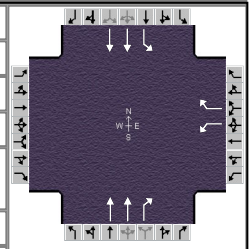
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		6	16	5	2	
Adjusted Flow Rate *(v)*, veh/h				239		156		717	127	303	940	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln				1619		1525		1714	1525	1619	1714	
Queue Service Time *(g_s)*, s				6.9		4.6		9.6	3.3	8.8	7.5	
Cycle Queue Clearance Time *(g_c)*, s				6.9		4.6		9.6	3.3	8.8	7.5	
Capacity *(c)*, veh/h				318		300		937	417	370	2065	
Volume-to-Capacity Ratio *(X)*				0.751		0.519		0.765	0.305	0.818	0.455	
Available Capacity *(c_a)*, veh/h				1625		1531		2753	1225	1300	2753	
Back of Queue *(Q)*, veh/ln (50th percentile)				2.2		1.4		2.9	0.9	2.7	1.1	
Overflow Queue *(Q_3)*, veh/ln				0.0		0.0		0.0	0.0	0.0	0.0	
Queue Storage Ratio *(RQ)* (50th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay *(d_1)*, s/veh				18.9		17.9		16.6	14.3	18.2	5.4	
Incremental Delay *(d_2)*, s/veh				1.4		0.5		0.5	0.2	1.7	0.1	
Initial Queue Delay *(d_3)*, s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay *(d)*, s/veh				20.2		18.4		17.1	14.5	20.0	5.5	
Level of Service (LOS)				C		B		B	B	B	A	
Approach Delay, s/veh / LOS	0.0			19.5		B	16.7		B	9.0		A
Intersection Delay, s/veh / LOS	13.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.3	B	0.7	A
Bicycle LOS Score / LOS				F	1.8	A	2.2	B

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HCS 2010 Signalized Intersection Results Summary

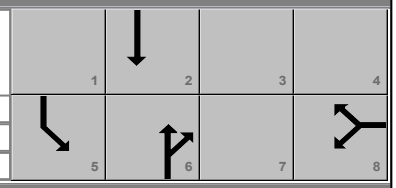
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Barton	Analysis Year	Existing plus Project Revised	Analysis Period	1> 7:00
File Name	La Cadena Barton Exist + Proj PM Rev.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				227		155		685	121	314	903	

Signal Information			
Cycle, s	51.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	12.7	14.1	10.1	0.0	0.0	0.0
Yellow	3.0	3.0	4.0	0.0	0.0	0.0
Red	2.0	2.0	1.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		6	5	2
Case Number				9.0		7.3	2.0	4.0
Phase Duration, s				15.1		19.1	17.7	36.7
Change Period, $(Y+R_c)$, s				5.0		5.0	5.0	5.0
Max Allow Headway *(MAH)*, s				3.1		2.9	3.0	2.9
Queue Clearance Time (g_s), s				9.3		12.1	12.1	9.7
Green Extension Time (g_e), s				0.8		1.8	0.6	2.2
Phase Call Probability				1.00		1.00	0.99	1.00
Max Out Probability				0.00		0.00	0.00	0.00

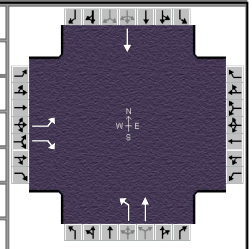
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		6	16	5	2	
Adjusted Flow Rate *(v)*, veh/h				239		163		721	127	331	951	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln				1619		1525		1714	1525	1619	1714	
Queue Service Time (g_s), s				7.3		5.0		10.1	3.5	10.1	7.7	
Cycle Queue Clearance Time (g_c), s				7.3		5.0		10.1	3.5	10.1	7.7	
Capacity *(c)*, veh/h				316		298		932	415	397	2101	
Volume-to-Capacity Ratio *(X)*				0.757		0.548		0.773	0.307	0.832	0.452	
Available Capacity (c_a), veh/h				1553		1463		2629	1170	1242	2629	
Back of Queue *(Q)*, veh/ln (50th percentile)				2.4		1.5		3.2	1.0	3.2	1.2	
Overflow Queue (Q_3), veh/ln				0.0		0.0		0.0	0.0	0.0	0.0	
Queue Storage Ratio *(RQ)* (50th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh				19.8		18.9		17.5	15.1	18.7	5.4	
Incremental Delay (d_2), s/veh				1.4		0.6		0.5	0.2	1.8	0.1	
Initial Queue Delay (d_3), s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay *(d)*, s/veh				21.2		19.5		18.0	15.2	20.5	5.5	
Level of Service (LOS)				C		B		B	B	C	A	
Approach Delay, s/veh / LOS	0.0			20.5		C	17.6		B	9.3		A
Intersection Delay, s/veh / LOS	13.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.3	B	0.7	A
Bicycle LOS Score / LOS				F	1.8	A	2.2	B

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HCS 2010 Signalized Intersection Results Summary

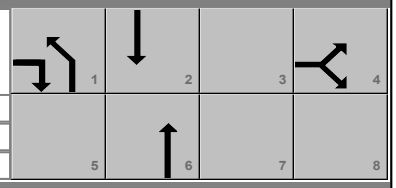
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Iowa A	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	La Cadena Iowa Exist 2017 AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	76		91				47	363			307	

Signal Information			
Cycle, s	27.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	1.6	7.0	3.7	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		8.7			6.6	18.5		12.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		3.5			2.8	5.7		6.4
Green Extension Time *(g_e)*, s		0.3			0.1	0.6		0.5
Phase Call Probability		0.74			0.31	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.00

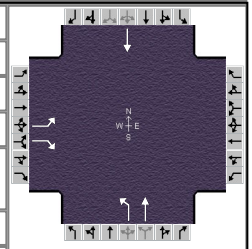
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	
Adjusted Flow Rate *(v)*, veh/h	80		96				49	382			323	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1800			1800	
Queue Service Time *(g_s)*, s	1.2		1.5				0.8	3.7			4.4	
Cycle Queue Clearance Time *(g_c)*, s	1.2		1.5				0.8	3.7			4.4	
Capacity *(c)*, veh/h	220		295				94	895			461	
Volume-to-Capacity Ratio *(X)*	0.364		0.324				0.528	0.427			0.702	
Available Capacity *(c_a)*, veh/h	2377		2328				1783	2643			2643	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.3		0.3				0.2	0.0			0.8	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	10.7		9.5				12.5	4.4			9.2	
Incremental Delay *(d_2)*, s/veh	0.4		0.2				1.7	0.1			0.7	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	11.1		9.7				14.2	4.5			9.9	
Level of Service (LOS)	B		A				B	A			A	
Approach Delay, s/veh / LOS	10.3		B	0.0			5.6		A	9.9		A
Intersection Delay, s/veh / LOS	8.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.1	B	0.6	A	2.2	B
Bicycle LOS Score / LOS		F			1.8	A	1.7	A

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HCS 2010 Signalized Intersection Results Summary

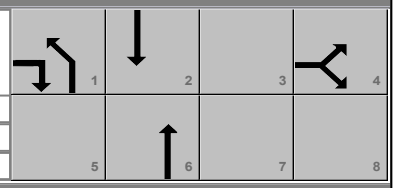
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Iowa A	Analysis Year	Existing plus Project	Analysis Period	1> 7:00
File Name	La Cadena Iowa Exist + Proj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	76		91				47	372			307	

Signal Information			
Cycle, s	27.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	1.6	7.0	3.7	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		8.7			6.6	18.5		12.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		3.5			2.8	5.8		6.4
Green Extension Time *(g_e)*, s		0.3			0.1	0.6		0.5
Phase Call Probability		0.74			0.31	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.00

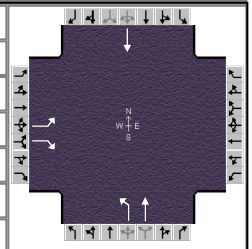
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	
Adjusted Flow Rate *(v)*, veh/h	80		96				49	392			323	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1800			1800	
Queue Service Time *(g_s)*, s	1.2		1.5				0.8	3.8			4.4	
Cycle Queue Clearance Time *(g_c)*, s	1.2		1.5				0.8	3.8			4.4	
Capacity *(c)*, veh/h	220		295				94	895			461	
Volume-to-Capacity Ratio *(X)*	0.364		0.324				0.528	0.438			0.702	
Available Capacity *(c_a)*, veh/h	2377		2328				1783	2643			2643	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.3		0.3				0.2	0.0			0.8	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	10.7		9.5				12.5	4.4			9.2	
Incremental Delay *(d_2)*, s/veh	0.4		0.2				1.7	0.1			0.7	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	11.1		9.7				14.2	4.5			9.9	
Level of Service (LOS)	B		A				B	A			A	
Approach Delay, s/veh / LOS	10.3	B		0.0			5.6	A		9.9	A	
Intersection Delay, s/veh / LOS	8.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.1	B	0.6	A	2.2	B
Bicycle LOS Score / LOS		F			1.9	A	1.7	A

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HCS 2010 Signalized Intersection Results Summary

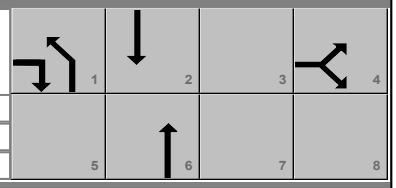
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Iowa A	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	La Cadena Iowa Exist 2017 PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	226		121				82	589			346	

Signal Information			
Cycle, s	33.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	2.8	8.9	7.1	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		12.1			7.8	21.7		13.9
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.1			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		6.6			3.8	11.0		8.3
Green Extension Time *(g_e)*, s		0.7			0.1	1.1		0.6
Phase Call Probability		0.97			0.56	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.00

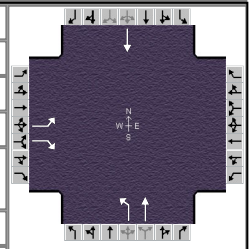
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	
Adjusted Flow Rate *(v)*, veh/h	238		127				86	620			364	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1800			1800	
Queue Service Time *(g_s)*, s	4.6		2.2				1.8	9.0			6.3	
Cycle Queue Clearance Time *(g_c)*, s	4.6		2.2				1.8	9.0			6.3	
Capacity *(c)*, veh/h	340		447				134	891			477	
Volume-to-Capacity Ratio *(X)*	0.699		0.285				0.643	0.696			0.764	
Available Capacity *(c_a)*, veh/h	1909		1925				1432	2122			2122	
Back of Queue *(Q)*, veh/ln (50th percentile)	1.2		0.4				0.5	1.0			1.6	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	12.4		9.2				15.1	6.6			11.5	
Incremental Delay *(d_2)*, s/veh	1.0		0.1				1.9	0.4			1.0	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	13.4		9.4				17.0	7.0			12.5	
Level of Service (LOS)	B		A				B	A			B	
Approach Delay, s/veh / LOS	12.0		B	0.0			8.2		A	12.5		B
Intersection Delay, s/veh / LOS	10.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.1	B	0.7	A	2.2	B
Bicycle LOS Score / LOS		F			2.3	B	1.7	A

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HCS 2010 Signalized Intersection Results Summary

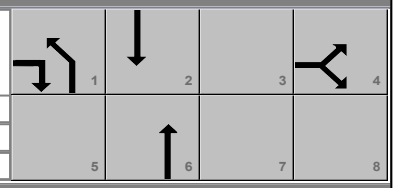
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Iowa A	Analysis Year	Existing plus Project	Analysis Period	1> 7:00
File Name	La Cadena Iowa Exist + Proj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	226		121				82	593			346	

Signal Information			
Cycle, s	33.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	2.8	8.9	7.1	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		12.1			7.8	21.7		13.9
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.1			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		6.6			3.8	11.1		8.3
Green Extension Time *(g_e)*, s		0.7			0.1	1.1		0.6
Phase Call Probability		0.97			0.56	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.00

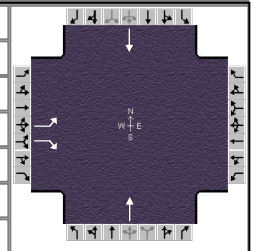
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	
Adjusted Flow Rate *(v)*, veh/h	238		127				86	624			364	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1800			1800	
Queue Service Time *(g_s)*, s	4.6		2.2				1.8	9.1			6.3	
Cycle Queue Clearance Time *(g_c)*, s	4.6		2.2				1.8	9.1			6.3	
Capacity *(c)*, veh/h	340		447				134	891			477	
Volume-to-Capacity Ratio *(X)*	0.699		0.285				0.643	0.700			0.764	
Available Capacity *(c_a)*, veh/h	1909		1925				1432	2122			2122	
Back of Queue *(Q)*, veh/ln (50th percentile)	1.2		0.4				0.5	1.0			1.6	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	12.4		9.2				15.1	6.6			11.5	
Incremental Delay *(d_2)*, s/veh	1.0		0.1				1.9	0.4			1.0	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	13.4		9.4				17.0	7.0			12.5	
Level of Service (LOS)	B		A				B	A			B	
Approach Delay, s/veh / LOS	12.0	B		0.0			8.2	A		12.5	B	
Intersection Delay, s/veh / LOS	10.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.1	B	0.7	A	2.2	B
Bicycle LOS Score / LOS		F			2.3	B	1.7	A

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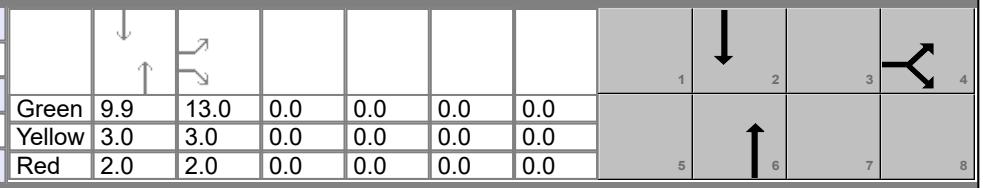
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 SB O	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	Iowa I-215 SB OffRamp Exist 2017 AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	26		473					401			382	

Signal Information			
Cycle, s	32.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	9.9	13.0	0.0	0.0	0.0	0.0		
Yellow	3.0	3.0	0.0	0.0	0.0	0.0		
Red	2.0	2.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				6		2
Case Number		9.0				8.0		8.0
Phase Duration, s		18.0				14.9		14.9
Change Period, *(Y+Rc)*, s		5.0				5.0		5.0
Max Allow Headway *(MAH)*, s		3.4				3.0		3.0
Queue Clearance Time *(gs)*, s		11.7				9.1		8.6
Green Extension Time *(ge)*, s		1.4				0.8		0.7
Phase Call Probability		0.99				1.00		1.00
Max Out Probability		0.00				0.00		0.00

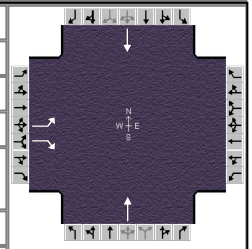
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14					6			2	
Adjusted Flow Rate *(v)*, veh/h	27		498					422			402	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525					1800			1800	
Queue Service Time *(gs)*, s	0.3		9.7					7.1			6.6	
Cycle Queue Clearance Time *(gc)*, s	0.3		9.7					7.1			6.6	
Capacity *(c)*, veh/h	640		603					542			542	
Volume-to-Capacity Ratio *(X)*	0.043		0.826					0.778			0.742	
Available Capacity *(ca)*, veh/h	1965		1851					2185			2185	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.1		1.6					1.6			1.5	
Overflow Queue *(Q3)*, veh/ln	0.0		0.0					0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00					0.00			0.00	
Uniform Delay *(d1)*, s/veh	6.1		8.9					10.5			10.4	
Incremental Delay *(d2)*, s/veh	0.0		1.1					0.9			0.8	
Initial Queue Delay *(d3)*, s/veh	0.0		0.0					0.0			0.0	
Control Delay *(d)*, s/veh	6.1		10.1					11.4			11.1	
Level of Service (LOS)	A		B					B			B	
Approach Delay, s/veh / LOS	9.9	A		0.0			11.4	B		11.1	B	
Intersection Delay, s/veh / LOS	10.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	0.7	A	1.7	A
Bicycle LOS Score / LOS		F			1.8	A	1.8	A

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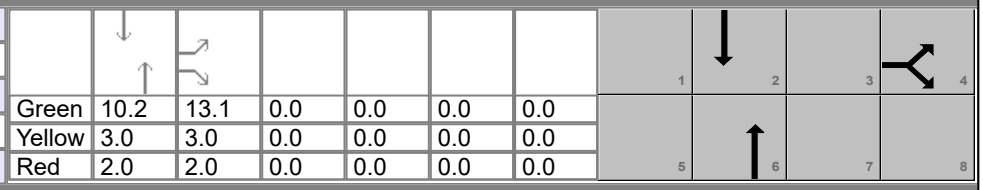
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 SB O	Analysis Year	Existing plus Project	Analysis Period	1> 7:00
File Name	Iowa I-215 SB OffRamp Exist + Proj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	26		473					410			382	

Signal Information			
Cycle, s	33.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



	EB		WB		NB		SB	
Green	10.2	13.1	0.0	0.0	0.0	0.0		
Yellow	3.0	3.0	0.0	0.0	0.0	0.0		
Red	2.0	2.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				6		2
Case Number		9.0				8.0		8.0
Phase Duration, s		18.1				15.2		15.2
Change Period, *(Y+Rc)*, s		5.0				5.0		5.0
Max Allow Headway *(MAH)*, s		3.4				3.0		3.0
Queue Clearance Time *(g_s)*, s		11.8				9.3		8.7
Green Extension Time *(g_e)*, s		1.4				0.8		0.7
Phase Call Probability		0.99				1.00		1.00
Max Out Probability		0.00				0.00		0.00

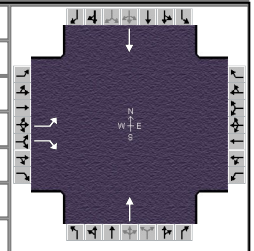
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14					6			2	
Adjusted Flow Rate *(v)*, veh/h	27		498					432			402	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525					1800			1800	
Queue Service Time *(g_s)*, s	0.3		9.8					7.3			6.7	
Cycle Queue Clearance Time *(g_c)*, s	0.3		9.8					7.3			6.7	
Capacity *(c)*, veh/h	639		602					550			550	
Volume-to-Capacity Ratio *(X)*	0.043		0.827					0.784			0.731	
Available Capacity *(c_a)*, veh/h	1940		1828					2157			2157	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.1		1.7					1.7			1.5	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0					0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00					0.00			0.00	
Uniform Delay *(d_1)*, s/veh	6.2		9.1					10.6			10.4	
Incremental Delay *(d_2)*, s/veh	0.0		1.1					1.0			0.7	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0					0.0			0.0	
Control Delay *(d)*, s/veh	6.2		10.2					11.5			11.1	
Level of Service (LOS)	A		B					B			B	
Approach Delay, s/veh / LOS	10.0		B	0.0			11.5		B	11.1		B
Intersection Delay, s/veh / LOS	10.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	0.7	A	1.7	A
Bicycle LOS Score / LOS		F			1.8	A	1.8	A

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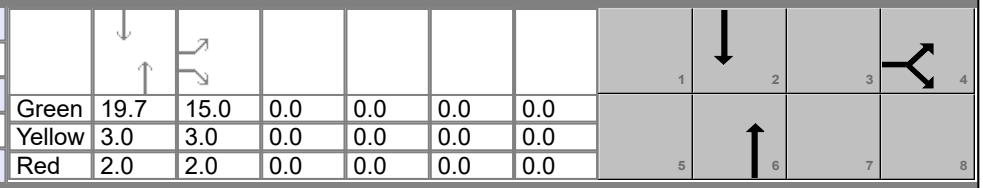
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 SB O	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	Iowa I-215 SB OffRamp Exist 2017 PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	44		409					670			494	

Signal Information			
Cycle, s	44.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	19.7	15.0	0.0	0.0	0.0	0.0		
Yellow	3.0	3.0	0.0	0.0	0.0	0.0		
Red	2.0	2.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				6		2
Case Number		9.0				8.0		8.0
Phase Duration, s		20.0				24.7		24.7
Change Period, *(Y+Rc)*, s		5.0				5.0		5.0
Max Allow Headway *(MAH)*, s		3.4				3.0		3.0
Queue Clearance Time *(gs)*, s		13.7				18.1		12.2
Green Extension Time *(ge)*, s		1.2				1.5		1.0
Phase Call Probability		1.00				1.00		1.00
Max Out Probability		0.00				0.00		0.00

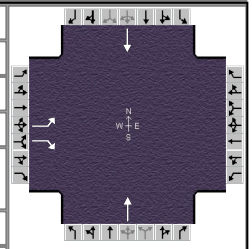
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14					6			2	
Adjusted Flow Rate *(v)*, veh/h	46		431					705			520	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525					1800			1800	
Queue Service Time *(gs)*, s	0.9		11.7					16.1			10.2	
Cycle Queue Clearance Time *(gc)*, s	0.9		11.7					16.1			10.2	
Capacity *(c)*, veh/h	543		512					795			795	
Volume-to-Capacity Ratio *(X)*	0.085		0.842					0.887			0.654	
Available Capacity *(ca)*, veh/h	1443		1359					1604			1604	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2		3.1					4.0			2.4	
Overflow Queue *(Q3)*, veh/ln	0.0		0.0					0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00					0.00			0.00	
Uniform Delay *(d1)*, s/veh	10.2		13.8					11.5			9.8	
Incremental Delay *(d2)*, s/veh	0.0		1.5					1.4			0.3	
Initial Queue Delay *(d3)*, s/veh	0.0		0.0					0.0			0.0	
Control Delay *(d)*, s/veh	10.2		15.3					12.9			10.2	
Level of Service (LOS)	B		B					B			B	
Approach Delay, s/veh / LOS	14.8		B	0.0			12.9		B	10.2		B
Intersection Delay, s/veh / LOS	12.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	0.7	A	1.7	A
Bicycle LOS Score / LOS		F			2.3	B	2.0	A

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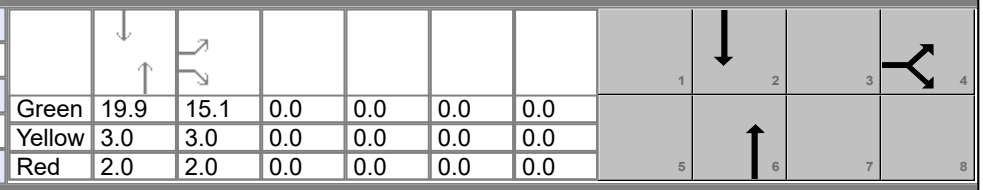
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 SB O	Analysis Year	Existing plus Project	Analysis Period	1> 7:00
File Name	Iowa I-215 SB OffRamp Exist + Proj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	44		409					674			494	

Signal Information			
Cycle, s	45.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	19.9	15.1	0.0	0.0	0.0	0.0		
Yellow	3.0	3.0	0.0	0.0	0.0	0.0		
Red	2.0	2.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				6		2
Case Number		9.0				8.0		8.0
Phase Duration, s		20.1				24.9		24.9
Change Period, *(Y+Rc)*, s		5.0				5.0		5.0
Max Allow Headway *(MAH)*, s		3.4				3.0		3.0
Queue Clearance Time *(gs)*, s		13.8				18.4		12.2
Green Extension Time *(ge)*, s		1.2				1.5		1.0
Phase Call Probability		1.00				1.00		1.00
Max Out Probability		0.00				0.00		0.00

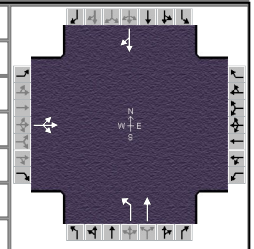
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14					6			2	
Adjusted Flow Rate *(v)*, veh/h	46		431					709			520	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525					1800			1800	
Queue Service Time *(gs)*, s	0.9		11.8					16.4			10.2	
Cycle Queue Clearance Time *(gc)*, s	0.9		11.8					16.4			10.2	
Capacity *(c)*, veh/h	542		511					799			799	
Volume-to-Capacity Ratio *(X)*	0.085		0.842					0.888			0.651	
Available Capacity *(ca)*, veh/h	1432		1350					1592			1592	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2		3.1					4.1			2.4	
Overflow Queue *(Q3)*, veh/ln	0.0		0.0					0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00					0.00			0.00	
Uniform Delay *(d1)*, s/veh	10.3		13.9					11.5			9.8	
Incremental Delay *(d2)*, s/veh	0.0		1.5					1.4			0.3	
Initial Queue Delay *(d3)*, s/veh	0.0		0.0					0.0			0.0	
Control Delay *(d)*, s/veh	10.3		15.4					13.0			10.2	
Level of Service (LOS)	B		B					B			B	
Approach Delay, s/veh / LOS	14.9		B	0.0			13.0		B	10.2		B
Intersection Delay, s/veh / LOS	12.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	0.7	A	1.7	A
Bicycle LOS Score / LOS		F			2.3	B	2.0	A

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps Exist 2017 AM.xus				
Project Description	Colton Warehouses - La Cadena				

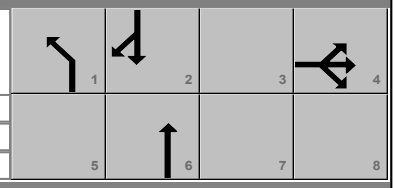


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	164	0	685				162	398			24	207

Signal Information			
Cycle, s	147.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	17.5	25.2	90.0	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		95.0			22.5	52.7		30.2
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time *(g_s)*, s		91.2			17.3	32.3		24.8
Green Extension Time *(g_e)*, s		0.0			0.2	0.0		0.4
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			0.00	1.00		0.00

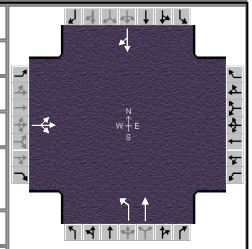
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		894					171	419			243	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1472					1619	1800			1550	
Queue Service Time *(g_s)*, s		89.2					15.3	30.3			22.8	
Cycle Queue Clearance Time *(g_c)*, s		89.2					15.3	30.3			22.8	
Capacity *(c)*, veh/h		897					192	582			265	
Volume-to-Capacity Ratio *(X)*		0.997					0.888	0.720			0.919	
Available Capacity *(c_a)*, veh/h		897					329	582			420	
Back of Queue *(Q)*, veh/ln (50th percentile)		41.7					6.6	13.7			9.9	
Overflow Queue *(Q_3)*, veh/ln		0.0					0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh		28.7					64.1	44.1			60.3	
Incremental Delay *(d_2)*, s/veh		55.5					8.2	3.8			15.7	
Initial Queue Delay *(d_3)*, s/veh		0.0					0.0	0.0			0.0	
Control Delay *(d)*, s/veh		84.2					72.3	48.0			76.0	
Level of Service (LOS)		F					E	D			E	
Approach Delay, s/veh / LOS	84.2	F		0.0			55.0	D		76.0	E	
Intersection Delay, s/veh / LOS	73.1						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	1.9	A	2.1	B
Bicycle LOS Score / LOS	2.6	B			2.1	B	1.5	A

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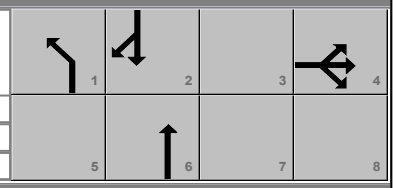
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	Existing plus Project	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps Exist + Proj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	164	0	685				162	398			24	216

Signal Information												
Cycle, s	149.0	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	0.0	0.0	0.0	0.0	0.0	0.0		
Uncoordinated	Yes	Simult. Gap E/W	Off	Yellow	0.0	0.0	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	Off	Red	0.0	0.0	0.0	0.0	0.0	0.0		



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		95.0			22.7	54.0		31.3
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		0.0			0.0	0.0		0.0
Queue Clearance Time (g_s), s		0.0			0.0	0.0		0.0
Green Extension Time (g_e), s		0.0			0.0	0.0		0.0
Phase Call Probability		0.00			0.00	0.00		0.00
Max Out Probability		0.00			0.00	0.00		0.00

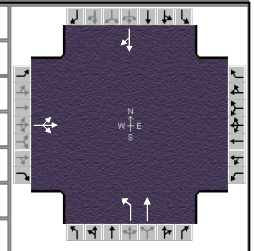
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		0					0	0			0	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		0					0	0			0	
Queue Service Time (g_s), s		0.0					0.0	0.0			0.0	
Cycle Queue Clearance Time (g_c), s		0.0					0.0	0.0			0.0	
Capacity *(c)*, veh/h		889					192	592			274	
Volume-to-Capacity Ratio *(X)*		1.005					0.889	0.708			0.923	
Available Capacity (c_a), veh/h		0					0	0			0	
Back of Queue *(Q)*, veh/ln (50th percentile)		44.0					6.7	13.7			10.6	
Overflow Queue (Q_3), veh/ln		0.0					0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay (d_1), s/veh		29.5					64.7	43.7			60.3	
Incremental Delay (d_2), s/veh		63.4					8.8	3.4			19.1	
Initial Queue Delay (d_3), s/veh		0.0					0.0	0.0			0.0	
Control Delay *(d)*, s/veh		92.9					73.5	47.1			79.4	
Level of Service (LOS)		F					E	D			E	
Approach Delay, s/veh / LOS	92.9	F		0.0			54.8	D		79.4	E	
Intersection Delay, s/veh / LOS	78.0						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	1.9	A	2.1	B
Bicycle LOS Score / LOS	2.6	B			2.1	B	1.5	A

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HCS 2010 Signalized Intersection Results Summary

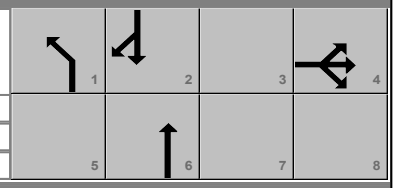
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps Exist 2017 PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	145	0	718				329	592			25	301

Signal Information			
Cycle, s	145.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	30.0	30.0	70.0	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		75.0			35.0	70.0		35.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time *(g_s)*, s		72.0			32.0	44.4		32.0
Green Extension Time *(g_e)*, s		0.0			0.0	0.0		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	1.00		1.00

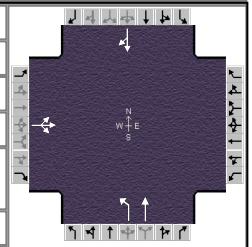
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		782					346	623			343	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1472					1619	1800			1543	
Queue Service Time *(g_s)*, s		70.0					30.0	42.4			30.0	
Cycle Queue Clearance Time *(g_c)*, s		70.0					30.0	42.4			30.0	
Capacity *(c)*, veh/h		711					335	807			319	
Volume-to-Capacity Ratio *(X)*		1.100					1.034	0.772			1.075	
Available Capacity *(c_a)*, veh/h		711					335	807			319	
Back of Queue *(Q)*, veh/ln (50th percentile)		62.1					24.0	18.6			27.6	
Overflow Queue *(Q_3)*, veh/ln		0.0					0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh		37.5					57.5	33.8			57.5	
Incremental Delay *(d_2)*, s/veh		195.9					130.6	4.3			183.8	
Initial Queue Delay *(d_3)*, s/veh		0.0					0.0	0.0			0.0	
Control Delay *(d)*, s/veh		233.4					188.1	38.1			241.3	
Level of Service (LOS)		F					F	D			F	
Approach Delay, s/veh / LOS	233.4	F		0.0			91.7	F		241.3	F	
Intersection Delay, s/veh / LOS	169.1						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	1.9	A	2.3	B
Bicycle LOS Score / LOS	2.4	B			2.7	B	1.7	A

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HCS 2010 Signalized Intersection Results Summary

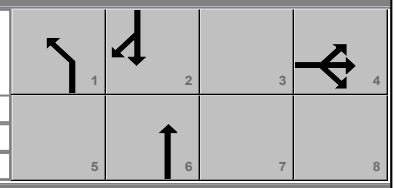
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	Existing plus Project	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps Exist + Proj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	145	0	718				329	592			25	305

Signal Information			
Cycle, s	145.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	30.0	30.0	70.0	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		75.0			35.0	70.0		35.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time *(g_s)*, s		72.0			32.0	44.4		32.0
Green Extension Time *(g_e)*, s		0.0			0.0	0.0		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	1.00		1.00

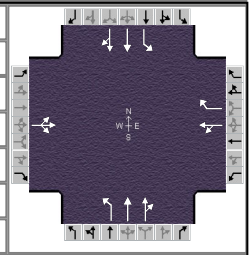
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		782					346	623			347	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1472					1619	1800			1543	
Queue Service Time *(g_s)*, s		70.0					30.0	42.4			30.0	
Cycle Queue Clearance Time *(g_c)*, s		70.0					30.0	42.4			30.0	
Capacity *(c)*, veh/h		711					335	807			319	
Volume-to-Capacity Ratio *(X)*		1.100					1.034	0.772			1.088	
Available Capacity *(c_a)*, veh/h		711					335	807			319	
Back of Queue *(Q)*, veh/ln (50th percentile)		62.1					24.0	18.6			29.3	
Overflow Queue *(Q_3)*, veh/ln		0.0					0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh		37.5					57.5	33.8			57.5	
Incremental Delay *(d_2)*, s/veh		195.9					130.6	4.3			202.2	
Initial Queue Delay *(d_3)*, s/veh		0.0					0.0	0.0			0.0	
Control Delay *(d)*, s/veh		233.4					188.1	38.1			259.7	
Level of Service (LOS)		F					F	D			F	
Approach Delay, s/veh / LOS	233.4	F		0.0			91.7	F		259.7	F	
Intersection Delay, s/veh / LOS	172.3						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	1.9	A	2.3	B
Bicycle LOS Score / LOS	2.4	B			2.7	B	1.7	A

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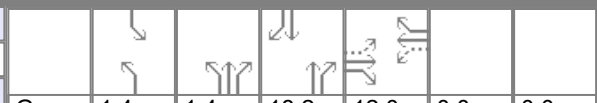
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	Rancho AguaMansa Exist 2017 AM.xus				
Project Description	Colton Warehouses - La Cadena				

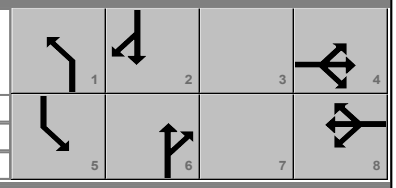


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	148	17	32	0	26	6	59	350	5	23	707	317

Signal Information			
Cycle, s	48.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	1.4	1.4	18.2	12.0	0.0	0.0						
Yellow	3.0	0.0	3.0	3.0	0.0	0.0						
Red	2.0	0.0	2.0	2.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		8.0		7.0	2.0	4.0	2.0	4.0
Phase Duration, s		17.0		17.0	7.9	24.6	6.4	23.2
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.1		3.1	3.0	2.9	3.0	3.0
Queue Clearance Time *(g_s)*, s		12.0		2.6	3.8	5.3	2.7	15.9
Green Extension Time *(g_e)*, s		0.4		0.0	0.1	0.6	0.0	2.2
Phase Call Probability		0.96		0.96	0.57	1.00	0.28	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

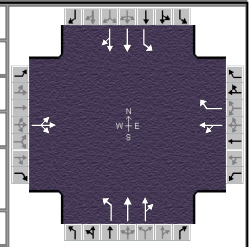
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		207			0	6	62	187	187	24	569	509
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		947			0	1525	1619	1800	1791	1619	1800	1610
Queue Service Time *(g_s)*, s		9.4			0.0	0.2	1.8	3.3	3.3	0.7	13.9	13.9
Cycle Queue Clearance Time *(g_c)*, s		10.0			0.0	0.2	1.8	3.3	3.3	0.7	13.9	13.9
Capacity *(c)*, veh/h		368				383	96	737	733	48	682	610
Volume-to-Capacity Ratio *(X)*		0.563			0.000	0.016	0.645	0.254	0.255	0.509	0.833	0.834
Available Capacity *(c_a)*, veh/h		887				1262	1005	1489	1482	1005	1489	1332
Back of Queue *(Q)*, veh/ln (50th percentile)		1.9				0.0	0.7	0.9	0.9	0.3	4.2	3.8
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		17.0				13.6	22.2	9.4	9.4	23.1	13.6	13.6
Incremental Delay *(d_2)*, s/veh		0.5			0.0	0.0	2.7	0.1	0.1	3.1	1.1	1.2
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		17.5				13.6	25.0	9.5	9.5	26.3	14.7	14.8
Level of Service (LOS)		B				B	C	A	A	C	B	B
Approach Delay, s/veh / LOS	17.5	B		13.8	B		11.7	B		15.0	B	
Intersection Delay, s/veh / LOS	14.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.2	B	2.1	B
Bicycle LOS Score / LOS	1.5	A	1.2	A	1.5	A	2.0	B

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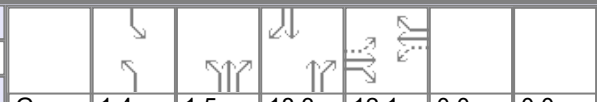
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	Existing plus Project	Analysis Period	1> 7:00
File Name	Rancho AguaMansa Exist + Proj AM.xus				
Project Description	Colton Warehouses - La Cadena				

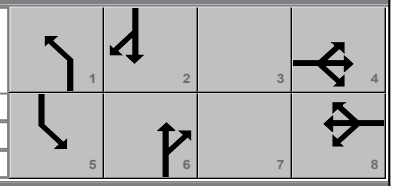


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	148	17	32	0	26	6	59	351	5	23	711	317

Signal Information			
Cycle, s	48.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	1.4	1.5	18.3	12.1	0.0	0.0						
Yellow	3.0	0.0	3.0	3.0	0.0	0.0						
Red	2.0	0.0	2.0	2.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		8.0		7.0	2.0	4.0	2.0	4.0
Phase Duration, s		17.1		17.1	7.9	24.7	6.4	23.3
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.1		3.1	3.0	2.9	3.0	3.0
Queue Clearance Time *(g_s)*, s		12.0		2.6	3.8	5.3	2.7	16.0
Green Extension Time *(g_e)*, s		0.4		0.0	0.1	0.6	0.0	2.2
Phase Call Probability		0.96		0.96	0.57	1.00	0.28	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

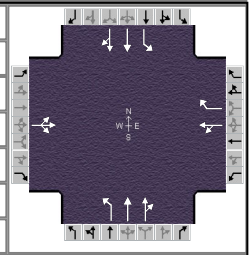
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		207			0	6	62	188	187	24	571	511
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		947			0	1525	1619	1800	1791	1619	1800	1611
Queue Service Time *(g_s)*, s		9.4			0.0	0.2	1.8	3.3	3.3	0.7	14.0	14.0
Cycle Queue Clearance Time *(g_c)*, s		10.0			0.0	0.2	1.8	3.3	3.3	0.7	14.0	14.0
Capacity *(c)*, veh/h		368				383	96	738	735	47	684	612
Volume-to-Capacity Ratio *(X)*		0.564			0.000	0.016	0.646	0.254	0.255	0.510	0.834	0.835
Available Capacity *(c_a)*, veh/h		885				1258	1001	1484	1477	1001	1484	1328
Back of Queue *(Q)*, veh/ln (50th percentile)		1.9				0.0	0.7	0.9	0.9	0.3	4.2	3.8
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		17.1				13.7	22.3	9.4	9.4	23.2	13.6	13.7
Incremental Delay *(d_2)*, s/veh		0.5			0.0	0.0	2.7	0.1	0.1	3.1	1.1	1.2
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		17.6				13.7	25.0	9.5	9.5	26.3	14.7	14.8
Level of Service (LOS)		B				B	C	A	A	C	B	B
Approach Delay, s/veh / LOS	17.6	B		13.8	B		11.7	B		15.0	B	
Intersection Delay, s/veh / LOS	14.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.2	B	2.1	B
Bicycle LOS Score / LOS	1.5	A	1.2	A	1.5	A	2.0	B

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HCS 2010 Signalized Intersection Results Summary

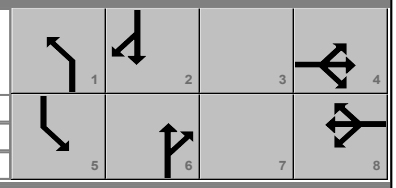
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	2017 Existing	Analysis Period	1> 7:00
File Name	Rancho AguaMansa Exist 2017 PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	514	69	96	1	15	16	48	375	0	7	854	187

Signal Information			
Cycle, s	128.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	1.2	3.9	43.2	56.5	3.5	0.0	
Yellow	3.0	0.0	3.0	3.0	3.0	0.0	
Red	2.0	0.0	2.0	2.0	2.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		11.0	2.0	4.0	2.0	4.0
Phase Duration, s		61.5		8.5	10.1	52.1	6.2	48.2
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.2	3.0	2.9	3.0	3.0
Queue Clearance Time *(g_s)*, s		54.7		3.4	6.0	12.0	2.6	41.2
Green Extension Time *(g_e)*, s		1.5		0.0	0.1	0.8	0.0	1.7
Phase Call Probability		1.00		0.70	0.84	1.00	0.23	1.00
Max Out Probability		0.01		0.00	0.00	0.00	0.00	0.15

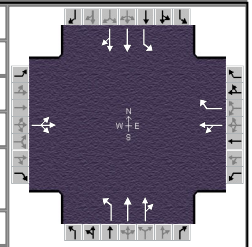
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		715			17	17	51	395	0	7	565	530
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1693			1794	1525	1619	1800	0	1619	1800	1687
Queue Service Time *(g_s)*, s		52.7			1.2	1.4	4.0	10.0	0.0	0.6	39.2	39.2
Cycle Queue Clearance Time *(g_c)*, s		52.7			1.2	1.4	4.0	10.0	0.0	0.6	39.2	39.2
Capacity *(c)*, veh/h		747			49	42	64	1323		15	606	568
Volume-to-Capacity Ratio *(X)*		0.957			0.343	0.403	0.784	0.298	0.000	0.499	0.933	0.934
Available Capacity *(c_a)*, veh/h		919			278	237	377	1323		377	698	654
Back of Queue *(Q)*, veh/ln (50th percentile)		25.9			0.6	0.6	1.7	4.2		0.3	20.4	19.4
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		34.9			61.6	61.7	61.4	29.0		63.6	41.4	41.4
Incremental Delay *(d_2)*, s/veh		24.1			1.5	2.3	8.0	0.0	0.0	9.6	22.4	24.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		58.9			63.1	64.0	69.3	29.0		73.2	63.8	65.4
Level of Service (LOS)		E			E	E	E	C		E	E	E
Approach Delay, s/veh / LOS	58.9	E		63.6	E		33.6	C		64.6	E	
Intersection Delay, s/veh / LOS	56.8						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.9	C	2.3	B	2.1	B
Bicycle LOS Score / LOS	2.3	B	1.2	A	1.5	A	2.0	B

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HCS 2010 Signalized Intersection Results Summary

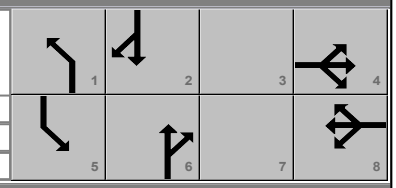
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	Existing plus Project	Analysis Period	1> 7:00
File Name	Rancho AguaMansa Exist + Proj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	514	69	96	1	15	16	48	379	0	7	855	187

Signal Information			
Cycle, s	128.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	1.2	3.9	43.3	56.6	3.5	0.0	
Yellow	3.0	0.0	3.0	3.0	3.0	0.0	
Red	2.0	0.0	2.0	2.0	2.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		11.0	2.0	4.0	2.0	4.0
Phase Duration, s		61.6		8.5	10.1	52.2	6.2	48.3
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.2	3.0	2.9	3.0	3.0
Queue Clearance Time *(g_s)*, s		54.7		3.4	6.0	12.2	2.6	41.3
Green Extension Time *(g_e)*, s		1.5		0.0	0.1	0.8	0.0	1.7
Phase Call Probability		1.00		0.70	0.84	1.00	0.23	1.00
Max Out Probability		0.01		0.00	0.00	0.00	0.00	0.16

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		715			17	17	51	399	0	7	566	531
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1693			1794	1525	1619	1800	0	1619	1800	1687
Queue Service Time *(g_s)*, s		52.7			1.2	1.4	4.0	10.2	0.0	0.6	39.2	39.3
Cycle Queue Clearance Time *(g_c)*, s		52.7			1.2	1.4	4.0	10.2	0.0	0.6	39.2	39.3
Capacity *(c)*, veh/h		746			49	42	64	1323		15	607	569
Volume-to-Capacity Ratio *(X)*		0.957			0.343	0.403	0.784	0.301	0.000	0.499	0.933	0.934
Available Capacity *(c_a)*, veh/h		918			278	236	376	1323		376	697	654
Back of Queue *(Q)*, veh/ln (50th percentile)		26.0			0.6	0.6	1.8	4.3		0.3	20.5	19.5
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		34.9			61.6	61.7	61.4	29.0		63.7	41.4	41.4
Incremental Delay *(d_2)*, s/veh		24.2			1.5	2.3	8.0	0.0	0.0	9.6	22.6	24.1
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		59.1			63.2	64.1	69.4	29.1		73.3	63.9	65.5
Level of Service (LOS)		E			E	E	E	C		E	E	E
Approach Delay, s/veh / LOS	59.1	E		63.6	E		33.6	C		64.8	E	
Intersection Delay, s/veh / LOS	56.9						E					

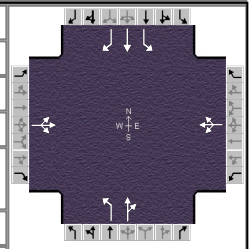
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.9	C	2.3	B	2.1	B
Bicycle LOS Score / LOS	2.3	B	1.2	A	1.5	A	2.0	B

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ATTACHMENT P: LEVEL OF SERVICE ANALYSIS
22019 WITHO T AND WITH PROJECT

HCS 2010 Signalized Intersection Results Summary

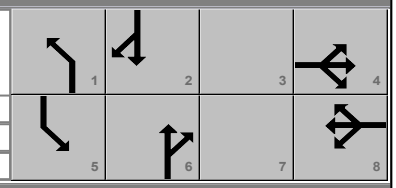
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Dr at 7th Street	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	La Cadena 7th-Maple 2019 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	1	22	7	56	13	73	7	368	75	35	423	8

Signal Information			
Cycle, s	41.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	0.4	1.3	13.3	1.6	5.3	0.0	
Yellow	3.0	0.0	3.0	3.0	3.0	0.0	
Red	2.0	0.0	2.0	2.0	2.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		12.0	2.0	4.0	2.0	3.0
Phase Duration, s		6.6		10.3	5.4	18.3	6.8	19.7
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.4	3.0	2.9	3.0	2.9
Queue Clearance Time *(g_s)*, s		2.8		6.0	2.2	12.4	2.9	11.0
Green Extension Time *(g_e)*, s		0.0		0.3	0.0	0.8	0.0	0.8
Phase Call Probability		0.31		0.83	0.08	1.00	0.35	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

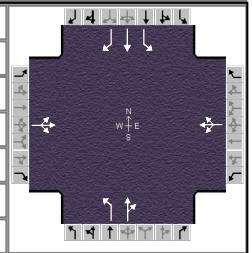
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		32			149		7	466		37	445	8
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1629			1528		1619	1747		1619	1800	1525
Queue Service Time *(g_s)*, s		0.8			4.0		0.2	10.4		0.9	9.0	0.2
Cycle Queue Clearance Time *(g_c)*, s		0.8			4.0		0.2	10.4		0.9	9.0	0.2
Capacity *(c)*, veh/h		61			193		16	557		69	632	536
Volume-to-Capacity Ratio *(X)*		0.519			0.775		0.453	0.837		0.537	0.704	0.016
Available Capacity *(c_a)*, veh/h		1548			1453		1154	2075		1154	2138	1812
Back of Queue *(Q)*, veh/ln (50th percentile)		0.3			1.4		0.1	2.9		0.3	2.5	0.0
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		19.9			17.8		20.7	13.3		19.7	11.8	8.9
Incremental Delay *(d_2)*, s/veh		2.5			2.6		7.3	1.3		2.4	0.5	0.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Control Delay *(d)*, s/veh		22.4			20.4		28.0	14.6		22.2	12.3	8.9
Level of Service (LOS)		C			C		C	B		C	B	A
Approach Delay, s/veh / LOS	22.4	C		20.4	C		14.9	B		13.0	B	
Intersection Delay, s/veh / LOS	15.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.4	A	1.9	A	1.9	A

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Dr at 7th Street	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	La Cadena 7th-Maple 2019 wProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	1	22	7	56	13	73	7	373	75	35	435	8

Signal Information			
Cycle, s	42.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	0.4	1.4	13.5	1.6	5.3	0.0	1	2	3	4		
Yellow	3.0	0.0	3.0	3.0	3.0	0.0	5	6	7	8		
Red	2.0	0.0	2.0	2.0	2.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		12.0	2.0	4.0	2.0	3.0
Phase Duration, s		6.6		10.3	5.4	18.5	6.8	19.9
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.4	3.0	2.9	3.0	2.9
Queue Clearance Time *(g_s)*, s		2.8		6.0	2.2	12.6	2.9	11.3
Green Extension Time *(g_e)*, s		0.0		0.3	0.0	0.8	0.0	0.8
Phase Call Probability		0.31		0.83	0.08	1.00	0.35	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

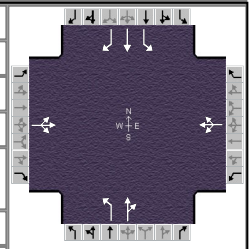
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		32			149		7	472		37	458	8
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1629			1528		1619	1747		1619	1800	1525
Queue Service Time *(g_s)*, s		0.8			4.0		0.2	10.6		0.9	9.3	0.2
Cycle Queue Clearance Time *(g_c)*, s		0.8			4.0		0.2	10.6		0.9	9.3	0.2
Capacity *(c)*, veh/h		61			193		16	562		68	637	540
Volume-to-Capacity Ratio *(X)*		0.519			0.775		0.453	0.839		0.538	0.719	0.016
Available Capacity *(c_a)*, veh/h		1540			1445		1148	2064		1148	2127	1802
Back of Queue *(Q)*, veh/ln (50th percentile)		0.3			1.4		0.1	2.9		0.3	2.6	0.0
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		20.0			17.9		20.8	13.3		19.9	11.9	8.9
Incremental Delay *(d_2)*, s/veh		2.6			2.6		7.3	1.3		2.4	0.6	0.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Control Delay *(d)*, s/veh		22.5			20.5		28.1	14.7		22.3	12.4	8.9
Level of Service (LOS)		C			C		C	B		C	B	A
Approach Delay, s/veh / LOS	22.5	C		20.5	C		14.9	B		13.1	B	
Intersection Delay, s/veh / LOS	15.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.4	A	1.9	A	2.0	A

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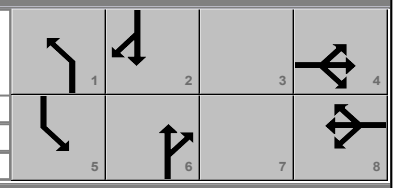
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Dr at 7th Street	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	La Cadena 7th-Maple 2019 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	2	19	15	20	4	37	6	539	24	33	459	14

Signal Information												
Cycle, s	42.3	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	0.4	1.3	16.1	1.8	2.7	0.0		
Uncoordinated	Yes	Simult. Gap E/W	Off	Yellow	3.0	0.0	3.0	3.0	3.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	Off	Red	2.0	0.0	2.0	2.0	2.0	0.0		



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		12.0	2.0	4.0	2.0	3.0
Phase Duration, s		6.8		7.7	5.4	21.1	6.7	22.5
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.4	3.0	2.9	3.0	2.9
Queue Clearance Time *(gs)*, s		3.0		3.8	2.2	15.0	2.9	11.1
Green Extension Time *(ge)*, s		0.1		0.1	0.0	1.0	0.0	0.9
Phase Call Probability		0.36		0.53	0.07	1.00	0.34	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

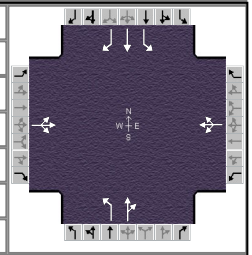
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		38			64		6	593		35	483	15
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1577			1510		1619	1786		1619	1800	1525
Queue Service Time *(gs)*, s		1.0			1.8		0.2	13.0		0.9	9.1	0.2
Cycle Queue Clearance Time *(gc)*, s		1.0			1.8		0.2	13.0		0.9	9.1	0.2
Capacity *(c)*, veh/h		68			96		14	682		65	744	631
Volume-to-Capacity Ratio *(X)*		0.557			0.671		0.451	0.869		0.534	0.649	0.023
Available Capacity *(ca)*, veh/h		1487			1424		1145	2105		1145	2121	1798
Back of Queue *(Q)*, veh/ln (50th percentile)		0.4			0.6		0.1	3.4		0.3	2.3	0.1
Overflow Queue *(Q3)*, veh/ln		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay *(d1)*, s/veh		19.9			19.4		20.9	12.1		20.0	10.0	7.4
Incremental Delay *(d2)*, s/veh		2.7			3.1		8.4	1.4		2.5	0.4	0.0
Initial Queue Delay *(d3)*, s/veh		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Control Delay *(d)*, s/veh		22.6			22.5		29.3	13.5		22.5	10.3	7.4
Level of Service (LOS)		C			C		C	B		C	B	A
Approach Delay, s/veh / LOS	22.6	C		22.5	C		13.7	B		11.0	B	
Intersection Delay, s/veh / LOS	13.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.2	A	2.1	B	2.0	B

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HCS 2010 Signalized Intersection Results Summary

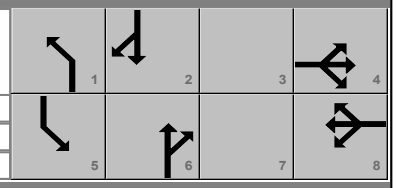
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Dr at 7th Street	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	La Cadena 7th-Maple 2019 wProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	2	19	15	20	4	37	6	553	24	33	464	14

Signal Information			
Cycle, s	42.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	0.4	1.3	16.7	1.8	2.7	0.0	
Yellow	3.0	0.0	3.0	3.0	3.0	0.0	
Red	2.0	0.0	2.0	2.0	2.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		12.0	2.0	4.0	2.0	3.0
Phase Duration, s		6.8		7.7	5.4	21.7	6.7	23.0
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.4	3.0	2.9	3.0	2.9
Queue Clearance Time *(g_s)*, s		3.0		3.8	2.2	15.5	2.9	11.3
Green Extension Time *(g_e)*, s		0.1		0.1	0.0	1.1	0.0	0.9
Phase Call Probability		0.36		0.54	0.07	1.00	0.34	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

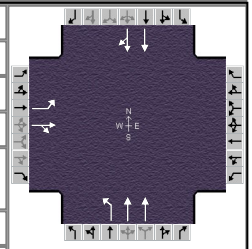
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		38			64		6	607		35	488	15
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1577			1510		1619	1787		1619	1800	1525
Queue Service Time *(g_s)*, s		1.0			1.8		0.2	13.5		0.9	9.3	0.2
Cycle Queue Clearance Time *(g_c)*, s		1.0			1.8		0.2	13.5		0.9	9.3	0.2
Capacity *(c)*, veh/h		68			95		14	696		65	758	642
Volume-to-Capacity Ratio *(X)*		0.559			0.674		0.451	0.873		0.535	0.645	0.023
Available Capacity *(c_a)*, veh/h		1465			1403		1128	2075		1128	2090	1771
Back of Queue *(Q)*, veh/ln (50th percentile)		0.4			0.7		0.1	3.5		0.3	2.3	0.1
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		20.2			19.7		21.2	12.2		20.3	9.9	7.3
Incremental Delay *(d_2)*, s/veh		2.7			3.1		8.4	1.4		2.6	0.3	0.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Control Delay *(d)*, s/veh		22.9			22.9		29.7	13.6		22.8	10.3	7.3
Level of Service (LOS)		C			C		C	B		C	B	A
Approach Delay, s/veh / LOS	22.9	C		22.9	C		13.7	B		11.0	B	
Intersection Delay, s/veh / LOS	13.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.2	A	2.1	B	2.0	B

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Rancho 2019 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	12	0	807				422	477			522	10

Signal Information			
Cycle, s	147.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	42.0	26.5	63.4	0.0	0.0	0.0	1	2	3	4		
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0	5	6	7	8		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		10.0			2.0	4.0		8.3
Phase Duration, s		68.4			47.0	78.5		31.5
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		62.2			41.7	14.6		26.0
Green Extension Time *(g_e)*, s		1.2			0.3	1.0		0.5
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.14			0.80	0.00		0.51

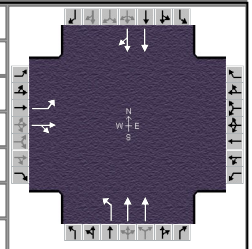
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	13	639					444	502			281	279
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525					1619	1714			1800	1788
Queue Service Time *(g_s)*, s	0.7	60.2					39.7	12.6			24.0	22.3
Cycle Queue Clearance Time *(g_c)*, s	0.7	60.2					39.7	12.6			24.0	22.3
Capacity *(c)*, veh/h	699	658					463	1715			324	322
Volume-to-Capacity Ratio *(X)*	0.018	0.970					0.959	0.293			0.866	0.867
Available Capacity *(c_a)*, veh/h	771	726					496	1715			367	365
Back of Queue *(Q)*, veh/ln (50th percentile)	0.3	28.8					21.3	4.9			11.6	11.5
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	23.9	40.9					51.6	21.5			58.5	58.5
Incremental Delay *(d_2)*, s/veh	0.0	39.3					44.8	0.0			18.7	19.0
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	23.9	80.2					96.4	21.5			77.2	77.6
Level of Service (LOS)	C	F					F	C			E	E
Approach Delay, s/veh / LOS	79.1	E		0.0			56.7	E		77.4	E	
Intersection Delay, s/veh / LOS	68.8						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.8	C	1.9	A	2.6	B
Bicycle LOS Score / LOS	2.2	B			1.9	A	1.6	A

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	La Cadena Rancho 2019 wProj AM.xus				
Project Description	Colton Warehouses - La Cadena				

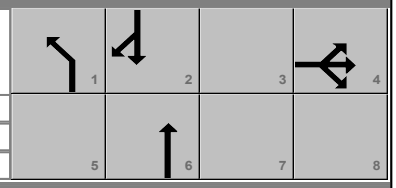


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	12	0	811				423	482			534	10

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	42.9	27.1	65.0	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		10.0			2.0	4.0		8.3
Phase Duration, s		70.0			47.9	80.0		32.1
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		64.0			42.6	15.0		26.7
Green Extension Time *(g_e)*, s		1.0			0.3	1.0		0.4
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.31			1.00	0.00		0.77

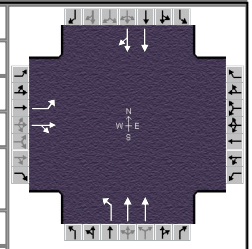
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	13	643					445	507			287	286
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525					1619	1714			1800	1788
Queue Service Time *(g_s)*, s	0.7	62.0					40.6	13.0			24.7	23.4
Cycle Queue Clearance Time *(g_c)*, s	0.7	62.0					40.6	13.0			24.7	23.4
Capacity *(c)*, veh/h	702	661					463	1713			325	323
Volume-to-Capacity Ratio *(X)*	0.018	0.973					0.961	0.296			0.883	0.884
Available Capacity *(c_a)*, veh/h	755	711					485	1713			360	357
Back of Queue *(Q)*, veh/ln (50th percentile)	0.3	30.1					22.1	5.1			12.5	12.5
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	24.3	41.6					52.8	22.0			60.0	60.0
Incremental Delay *(d_2)*, s/veh	0.0	42.1					47.6	0.0			23.6	24.0
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	24.3	83.7					100.4	22.1			83.5	83.9
Level of Service (LOS)	C	F					F	C			F	F
Approach Delay, s/veh / LOS	82.6	F		0.0			58.7	E		83.7	F	
Intersection Delay, s/veh / LOS	72.4						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.8	C	1.9	A	2.6	B
Bicycle LOS Score / LOS	2.2	B			1.9	A	1.6	A

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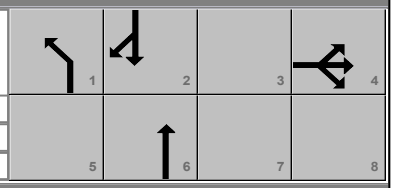
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Rancho 2019 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	35	0	857				398	560			530	9

Signal Information			
Cycle, s	150.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	40.0	26.2	69.5	0.0	0.0	0.0			
Yellow	3.0	3.0	3.0	0.0	0.0	0.0			
Red	2.0	2.0	2.0	0.0	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		10.0			2.0	4.0		8.3
Phase Duration, s		74.5			45.0	76.2		31.2
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		69.4			40.7	18.5		25.5
Green Extension Time *(g_e)*, s		0.2			0.0	1.1		0.7
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	0.00		0.02

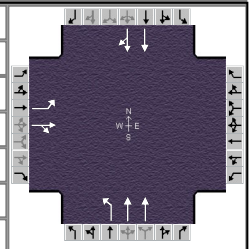
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	37	692					419	589			284	283
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525					1619	1714			1800	1789
Queue Service Time *(g_s)*, s	1.9	67.4					38.7	16.5			23.5	23.4
Cycle Queue Clearance Time *(g_c)*, s	1.9	67.4					38.7	16.5			23.5	23.4
Capacity *(c)*, veh/h	747	704					430	1619			313	311
Volume-to-Capacity Ratio *(X)*	0.049	0.983					0.975	0.364			0.909	0.910
Available Capacity *(c_a)*, veh/h	752	708					430	1619			418	415
Back of Queue *(Q)*, veh/ln (50th percentile)	0.7	34.0					22.8	6.5			12.2	12.2
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	22.4	40.0					54.9	25.3			61.1	61.1
Incremental Delay *(d_2)*, s/veh	0.0	51.1					63.1	0.1			20.9	21.2
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	22.4	91.1					118.0	25.4			81.9	82.3
Level of Service (LOS)	C	F					F	C			F	F
Approach Delay, s/veh / LOS	87.6	F		0.0			63.9	E		82.1	F	
Intersection Delay, s/veh / LOS	75.9						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.8	C	1.9	A	2.6	B
Bicycle LOS Score / LOS	2.3	B			2.0	A	1.6	A

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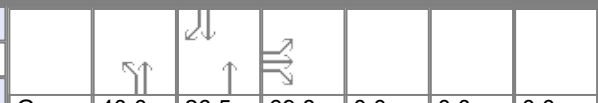
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	La Cadena Rancho 2019 wProj PM.xus				
Project Description	Colton Warehouses - La Cadena				

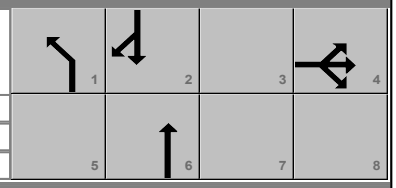


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	35	0	858				402	574			535	9

Signal Information			
Cycle, s	151.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	40.0	26.5	69.8	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		10.0			2.0	4.0		8.3
Phase Duration, s		74.8			45.0	76.5		31.5
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		69.8			41.4	19.1		25.7
Green Extension Time *(g_e)*, s		0.1			0.0	1.1		0.7
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	0.00		0.02

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	37	693					423	604			287	286
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525					1619	1714			1800	1789
Queue Service Time *(g_s)*, s	1.9	67.8					39.4	17.1			23.7	23.7
Cycle Queue Clearance Time *(g_c)*, s	1.9	67.8					39.4	17.1			23.7	23.7
Capacity *(c)*, veh/h	747	704					428	1619			315	313
Volume-to-Capacity Ratio *(X)*	0.049	0.984					0.989	0.373			0.912	0.913
Available Capacity *(c_a)*, veh/h	749	706					428	1619			416	414
Back of Queue *(Q)*, veh/ln (50th percentile)	0.7	34.4					24.4	6.8			12.5	12.5
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	22.4	40.2					55.4	25.6			61.3	61.3
Incremental Delay *(d_2)*, s/veh	0.0	52.0					74.2	0.1			22.0	22.4
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	22.5	92.2					129.6	25.6			83.3	83.7
Level of Service (LOS)	C	F					F	C			F	F
Approach Delay, s/veh / LOS	88.7	F		0.0			68.5	E		83.5	F	
Intersection Delay, s/veh / LOS	78.5						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.8	C	1.9	A	2.6	B
Bicycle LOS Score / LOS	2.3	B			2.0	A	1.6	A

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*City of Colton*
Date Performed	*7/9/2017*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*La Cadena Dr/Tropica Rancho Rd*
Jurisdiction	*City of Colton*
Analysis Year	*2019 Without Project*

Project Description *Colton Warehouses - La Cadena/Tropica Rancho*

East/West Street: *Tropica Rancho Rd/Vivienda Ave* | North/South Street: *La Cadena Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*864*	*2*	*0*	*1389*	*7*
Peak-Hour Factor, PHF	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*909*	*2*	*0*	*1462*	*7*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*1*	*0*	*0*	*30*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*1*	*0*	*0*	*31*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*1*	*0*
Configuration			*R*		*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				*R*
v (veh/h)		*0*		*31*				*1*
C (m) (veh/h)		*756*		*609*				*423*
v/c		*0.00*		*0.05*				*0.00*
95% queue length		*0.00*		*0.16*				*0.01*
Control Delay (s/veh)		*9.8*		*11.2*				*13.5*
LOS		*A*		*B*				*B*
Approach Delay (s/veh)	--	--	*11.2*			*13.5*		
Approach LOS	--	--	*B*			*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*City of Colton*
Date Performed	*7/9/2017*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*La Cadena Dr/Tropica Rancho Rd*
Jurisdiction	*City of Colton*
Analysis Year	*2019 With Project*

Project Description *Colton Warehouses - La Cadena/Tropica Rancho*

East/West Street: *Tropica Rancho Rd/Vivienda Ave* | North/South Street: *La Cadena Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*25*	*866*	*2*	*0*	*1400*	*12*
Peak-Hour Factor, PHF	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*25*	*911*	*2*	*0*	*1473*	*12*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*0*
Configuration	*L*	*T*	*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*4*	*0*	*7*	*2*	*0*	*30*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*4*	*0*	*7*	*2*	*0*	*31*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*LT*		*LTR*			*LTR*	
v (veh/h)	*25*	*0*		*33*			*11*	
C (m) (veh/h)	*459*	*755*		*384*			*82*	
v/c	*0.05*	*0.00*		*0.09*			*0.13*	
95% queue length	*0.17*	*0.00*		*0.28*			*0.46*	
Control Delay (s/veh)	*13.3*	*9.8*		*15.3*			*55.7*	
LOS	*B*	*A*		*C*			*F*	
Approach Delay (s/veh)	--	--	*15.3*			*55.7*		
Approach LOS	--	--	*C*			*F*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*City of Colton*
Date Performed	*7/9/2017*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*La Cadena Dr/Tropica Rancho Rd*
Jurisdiction	*City of Colton*
Analysis Year	*2019 Without Project*

Project Description *Colton Warehouses - La Cadena/Tropica Rancho*

East/West Street: *Tropica Rancho Rd/Vivienda Ave* | North/South Street: *La Cadena Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*895*	*0*	*0*	*1348*	*1*
Peak-Hour Factor, PHF	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*942*	*0*	*0*	*1418*	*1*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*1*	*0*	*0*	*36*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*1*	*0*	*0*	*37*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*1*	*0*
Configuration			*R*		*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				*R*
v (veh/h)		*0*		*37*				*1*
C (m) (veh/h)		*736*		*597*				*437*
v/c		*0.00*		*0.06*				*0.00*
95% queue length		*0.00*		*0.20*				*0.01*
Control Delay (s/veh)		*9.9*		*11.4*				*13.3*
LOS		*A*		*B*				*B*
Approach Delay (s/veh)	--	--	*11.4*			*13.3*		
Approach LOS	--	--	*B*			*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*City of Colton*
Date Performed	*7/9/2017*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*La Cadena Dr/Tropica Rancho Rd*
Jurisdiction	*City of Colton*
Analysis Year	*2019 With Project*

Project Description *Colton Warehouses - La Cadena/Tropica Rancho*

East/West Street: *Tropica Rancho Rd/Vivienda Ave* | North/South Street: *La Cadena Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*10*	*901*	*0*	*0*	*1352*	*3*
Peak-Hour Factor, PHF	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*10*	*948*	*0*	*0*	*1423*	*3*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*0*
Configuration	*L*	*T*	*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*12*	*0*	*11*	*1*	*0*	*36*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*12*	*0*	*11*	*1*	*0*	*37*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*LT*		*LTR*			*LTR*	
v (veh/h)	*10*	*0*		*38*			*23*	
C (m) (veh/h)	*483*	*732*		*482*			*69*	
v/c	*0.02*	*0.00*		*0.08*			*0.33*	
95% queue length	*0.06*	*0.00*		*0.26*			*1.41*	
Control Delay (s/veh)	*12.6*	*9.9*		*13.1*			*82.7*	
LOS	*B*	*A*		*B*			*F*	
Approach Delay (s/veh)	--	--	*13.1*			*82.7*		
Approach LOS	--	--	*B*			*F*		

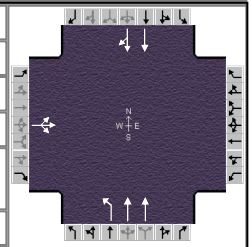
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HCS 2010 Signalized Intersection Results Summary

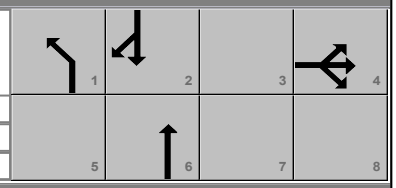
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Litton A	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Litton 2019 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	76	0	70				45	782			1225	20

Signal Information			
Cycle, s	65.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	2.9	40.0	7.9	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		12.9			7.9	52.9		45.0
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.4			3.0	2.9		2.9
Queue Clearance Time (g_s), s		8.1			3.9	7.7		50.9
Green Extension Time (g_e), s		0.3			0.1	1.8		0.0
Phase Call Probability		0.94			0.58	1.00		1.00
Max Out Probability		0.00			0.00	0.00		1.00

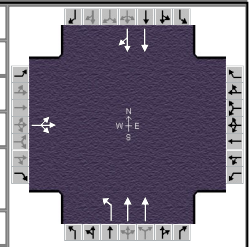
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		154					47	823			657	654
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1618					1619	1714			1800	1790
Queue Service Time (g_s), s		6.1					1.9	5.7			48.9	14.8
Cycle Queue Clearance Time (g_c), s		6.1					1.9	5.7			48.9	14.8
Capacity *(c)*, veh/h		194					71	2495			1094	1088
Volume-to-Capacity Ratio *(X)*		0.791					0.664	0.330			0.600	0.601
Available Capacity (c_a), veh/h		984					738	2495			1094	1088
Back of Queue *(Q)*, veh/ln (50th percentile)		2.4					0.7	0.7			3.7	3.7
Overflow Queue (Q_3), veh/ln		0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh		28.1					31.0	3.2			8.0	8.0
Incremental Delay (d_2), s/veh		2.8					4.0	0.0			0.7	0.7
Initial Queue Delay (d_3), s/veh		0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh		30.9					34.9	3.2			8.6	8.6
Level of Service (LOS)		C					C	A			A	A
Approach Delay, s/veh / LOS	30.9	C		0.0			5.0	A		8.6	A	
Intersection Delay, s/veh / LOS	8.7						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.8	A	2.1	B
Bicycle LOS Score / LOS	1.4	A			1.8	A	2.2	B

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HCS 2010 Signalized Intersection Results Summary

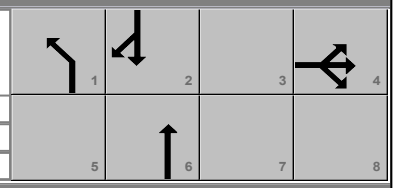
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Litton A	Analysis Year	2019 With Project Revised	Analysis Period	1> 7:00
File Name	La Cadena Litton 2019 wProj AM Rev.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	76	0	70				45	811			1237	20

Signal Information			
Cycle, s	65.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	2.9	40.0	7.9	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		12.9			7.9	52.9		45.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.4			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		8.1			3.9	7.9		51.6
Green Extension Time *(g_e)*, s		0.3			0.1	1.9		0.0
Phase Call Probability		0.94			0.58	1.00		1.00
Max Out Probability		0.00			0.00	0.00		1.00

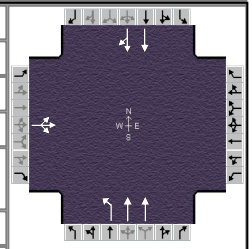
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		154					47	854			663	660
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1618					1619	1714			1800	1790
Queue Service Time *(g_s)*, s		6.1					1.9	5.9			49.6	15.1
Cycle Queue Clearance Time *(g_c)*, s		6.1					1.9	5.9			49.6	15.1
Capacity *(c)*, veh/h		194					71	2495			1094	1088
Volume-to-Capacity Ratio *(X)*		0.791					0.664	0.342			0.606	0.607
Available Capacity *(c_a)*, veh/h		984					738	2495			1094	1088
Back of Queue *(Q)*, veh/ln (50th percentile)		2.4					0.7	0.7			3.8	3.8
Overflow Queue *(Q_3)*, veh/ln		0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh		28.1					31.0	3.2			8.0	8.0
Incremental Delay *(d_2)*, s/veh		2.8					4.0	0.0			0.7	0.7
Initial Queue Delay *(d_3)*, s/veh		0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh		30.9					34.9	3.3			8.7	8.7
Level of Service (LOS)		C					C	A			A	A
Approach Delay, s/veh / LOS	30.9	C		0.0			4.9	A		8.7	A	
Intersection Delay, s/veh / LOS	8.7						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.8	A	2.1	B
Bicycle LOS Score / LOS	1.4	A			1.9	A	2.2	B

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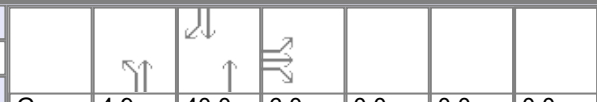
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Litton A	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Litton 2019 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				

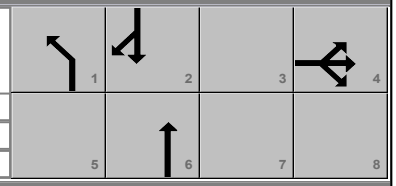


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	49	0	60				90	795			1493	69

Signal Information			
Cycle, s	65.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	4.9	40.0	6.0	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		11.0			9.9	54.9		45.0
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.4			3.0	2.9		2.9
Queue Clearance Time (g_s), s		6.6			5.8	7.2		74.5
Green Extension Time (g_e), s		0.2			0.1	1.9		0.0
Phase Call Probability		0.88			0.82	1.00		1.00
Max Out Probability		0.00			0.00	0.00		1.00

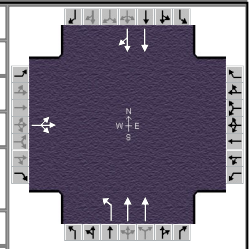
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		115					95	837			826	819
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1605					1619	1714			1800	1772
Queue Service Time (g_s), s		4.6					3.8	5.2			72.5	22.2
Cycle Queue Clearance Time (g_c), s		4.6					3.8	5.2			72.5	22.2
Capacity *(c)*, veh/h		147					120	2594			1093	1075
Volume-to-Capacity Ratio *(X)*		0.783					0.790	0.323			0.756	0.761
Available Capacity (c_a), veh/h		974					737	2594			1093	1075
Back of Queue *(Q)*, veh/ln (50th percentile)		1.9					1.5	0.4			6.0	6.1
Overflow Queue (Q_3), veh/ln		0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh		29.3					30.0	2.6			9.4	9.5
Incremental Delay (d_2), s/veh		3.5					4.5	0.0			2.8	3.0
Initial Queue Delay (d_3), s/veh		0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh		32.8					34.5	2.6			12.2	12.4
Level of Service (LOS)		C					C	A			B	B
Approach Delay, s/veh / LOS	32.8	C		0.0			5.8	A		12.3	B	
Intersection Delay, s/veh / LOS	10.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.8	A	2.1	B
Bicycle LOS Score / LOS	1.3	A			1.9	A	2.5	B

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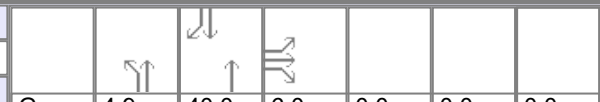
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Litton A	Analysis Year	2019 With Project Revised	Analysis Period	1> 7:00
File Name	La Cadena Litton 2019 wProj PM Rev.xus				
Project Description	Colton Warehouses - La Cadena				

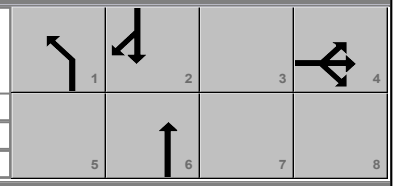


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	49	0	60				90	812			1529	69

Signal Information			
Cycle, s	65.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	4.9	40.0	6.0	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		11.0			9.9	54.9		45.0
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.4			3.0	2.9		2.9
Queue Clearance Time (g_s), s		6.6			5.8	7.3		77.6
Green Extension Time (g_e), s		0.2			0.1	1.9		0.0
Phase Call Probability		0.88			0.82	1.00		1.00
Max Out Probability		0.00			0.00	0.00		1.00

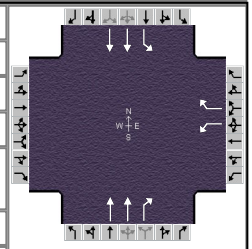
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		115					95	855			844	838
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1605					1619	1714			1800	1772
Queue Service Time (g_s), s		4.6					3.8	5.3			75.6	23.2
Cycle Queue Clearance Time (g_c), s		4.6					3.8	5.3			75.6	23.2
Capacity *(c)*, veh/h		147					120	2594			1093	1076
Volume-to-Capacity Ratio *(X)*		0.783					0.790	0.329			0.773	0.779
Available Capacity (c_a), veh/h		974					737	2594			1093	1076
Back of Queue *(Q)*, veh/ln (50th percentile)		1.9					1.5	0.4			6.4	6.5
Overflow Queue (Q_3), veh/ln		0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh		29.3					30.0	2.6			9.6	9.7
Incremental Delay (d_2), s/veh		3.5					4.5	0.0			3.2	3.5
Initial Queue Delay (d_3), s/veh		0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh		32.8					34.5	2.6			12.8	13.1
Level of Service (LOS)		C					C	A			B	B
Approach Delay, s/veh / LOS	32.8	C		0.0			5.8	A		13.0	B	
Intersection Delay, s/veh / LOS	11.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.8	A	2.1	B
Bicycle LOS Score / LOS	1.3	A			1.9	A	2.5	B

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HCS 2010 Signalized Intersection Results Summary

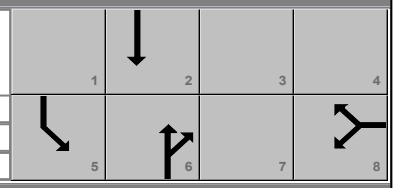
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Barton	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Barton 2019 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				288		243		615	240	297	1163	

Signal Information			
Cycle, s	53.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	12.4	13.4	12.7	0.0	0.0	0.0
Yellow	3.0	3.0	4.0	0.0	0.0	0.0
Red	2.0	2.0	1.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		6	5	2
Case Number				9.0		7.3	2.0	4.0
Phase Duration, s				17.7		18.4	17.4	35.9
Change Period, *(Y+Rc)*, s				5.0		5.0	5.0	5.0
Max Allow Headway *(MAH)*, s				3.1		3.0	3.0	2.9
Queue Clearance Time *(g_s)*, s				11.5		11.4	11.9	14.7
Green Extension Time *(g_e)*, s				1.1		1.9	0.5	3.0
Phase Call Probability				1.00		1.00	0.99	1.00
Max Out Probability				0.00		0.00	0.00	0.00

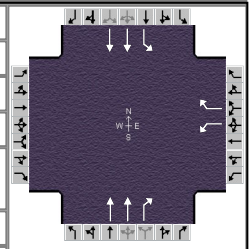
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		6	16	5	2	
Adjusted Flow Rate *(v)*, veh/h				303		256		647	253	313	1224	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln				1619		1525		1714	1525	1619	1714	
Queue Service Time *(g_s)*, s				9.5		8.3		9.4	8.0	9.9	12.7	
Cycle Queue Clearance Time *(g_c)*, s				9.5		8.3		9.4	8.0	9.9	12.7	
Capacity *(c)*, veh/h				384		362		862	384	377	1978	
Volume-to-Capacity Ratio *(X)*				0.789		0.707		0.751	0.658	0.830	0.619	
Available Capacity *(c_a)*, veh/h				1503		1416		2546	1133	1203	2546	
Back of Queue *(Q)*, veh/ln (50th percentile)				3.1		2.5		3.0	2.3	3.2	2.4	
Overflow Queue *(Q_3)*, veh/ln				0.0		0.0		0.0	0.0	0.0	0.0	
Queue Storage Ratio *(RQ)* (50th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay *(d_1)*, s/veh				19.3		18.8		18.6	18.1	19.6	7.5	
Incremental Delay *(d_2)*, s/veh				1.4		1.0		0.5	0.7	1.9	0.1	
Initial Queue Delay *(d_3)*, s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay *(d)*, s/veh				20.7		19.8		19.1	18.8	21.5	7.6	
Level of Service (LOS)				C		B		B	B	C	A	
Approach Delay, s/veh / LOS	0.0			20.3		C	19.0		B	10.4		B
Intersection Delay, s/veh / LOS	14.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.3	B	0.7	A
Bicycle LOS Score / LOS				F	1.9	A	2.4	B

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HCS 2010 Signalized Intersection Results Summary

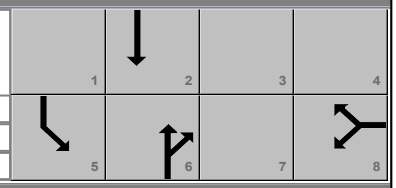
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Barton	Analysis Year	2019 With Project Revised	Analysis Period	1> 7:00
File Name	La Cadena Barton 2019 wProj AM Rev.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				288		261		624	240	305	1167	

Signal Information			
Cycle, s	54.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	13.0	13.8	12.9	0.0	0.0	0.0
Yellow	3.0	3.0	4.0	0.0	0.0	0.0
Red	2.0	2.0	1.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		6	5	2
Case Number				9.0		7.3	2.0	4.0
Phase Duration, s				17.9		18.8	18.0	36.8
Change Period, *(Y+Rc)*, s				5.0		5.0	5.0	5.0
Max Allow Headway *(MAH)*, s				3.1		3.0	3.0	2.9
Queue Clearance Time *(g_s)*, s				11.7		11.7	12.4	14.9
Green Extension Time *(g_e)*, s				1.1		2.0	0.5	3.0
Phase Call Probability				1.00		1.00	0.99	1.00
Max Out Probability				0.00		0.00	0.00	0.00

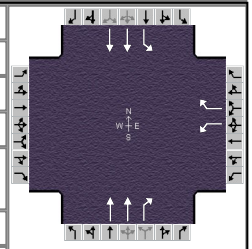
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		6	16	5	2	
Adjusted Flow Rate *(v)*, veh/h				303		275		657	253	321	1228	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln				1619		1525		1714	1525	1619	1714	
Queue Service Time *(g_s)*, s				9.7		9.2		9.7	8.2	10.4	12.9	
Cycle Queue Clearance Time *(g_c)*, s				9.7		9.2		9.7	8.2	10.4	12.9	
Capacity *(c)*, veh/h				384		361		868	386	384	1993	
Volume-to-Capacity Ratio *(X)*				0.790		0.760		0.757	0.654	0.835	0.616	
Available Capacity *(c_a)*, veh/h				1470		1385		2490	1108	1176	2490	
Back of Queue *(Q)*, veh/ln (50th percentile)				3.2		2.8		3.2	2.4	3.3	2.5	
Overflow Queue *(Q_3)*, veh/ln				0.0		0.0		0.0	0.0	0.0	0.0	
Queue Storage Ratio *(RQ)* (50th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay *(d_1)*, s/veh				19.7		19.6		19.0	18.4	20.0	7.5	
Incremental Delay *(d_2)*, s/veh				1.4		1.3		0.5	0.7	1.9	0.1	
Initial Queue Delay *(d_3)*, s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay *(d)*, s/veh				21.1		20.8		19.5	19.1	21.9	7.6	
Level of Service (LOS)				C		C		B	B	C	A	
Approach Delay, s/veh / LOS	0.0			21.0		C	19.4		B	10.6		B
Intersection Delay, s/veh / LOS	15.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.3	B	0.7	A
Bicycle LOS Score / LOS				F	1.9	A	2.4	B

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HCS 2010 Signalized Intersection Results Summary

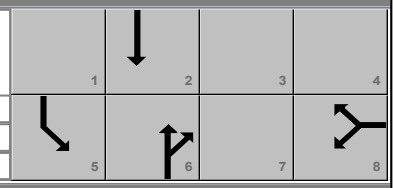
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Barton	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Barton 2019 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				387		202		796	218	332	1052	

Signal Information			
Cycle, s	81.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	19.8	23.4	23.2	0.0	0.0	0.0
Yellow	3.0	3.0	4.0	0.0	0.0	0.0
Red	2.0	2.0	1.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		6	5	2
Case Number				9.0		7.3	2.0	4.0
Phase Duration, s				28.2		28.4	24.8	53.3
Change Period, *(Y+Rc)*, s				5.0		5.0	5.0	5.0
Max Allow Headway *(MAH)*, s				3.1		3.0	3.0	2.9
Queue Clearance Time *(gs)*, s				21.7		20.9	19.1	17.9
Green Extension Time *(ge)*, s				1.2		2.3	0.6	2.6
Phase Call Probability				1.00		1.00	1.00	1.00
Max Out Probability				0.00		0.00	0.00	0.00

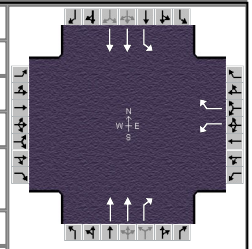
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		6	16	5	2	
Adjusted Flow Rate *(v)*, veh/h				407		213		838	229	349	1107	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln				1619		1525		1714	1525	1619	1714	
Queue Service Time *(gs)*, s				19.7		9.5		18.9	10.3	17.1	15.9	
Cycle Queue Clearance Time *(gc)*, s				19.7		9.5		18.9	10.3	17.1	15.9	
Capacity *(c)*, veh/h				461		435		988	440	395	2033	
Volume-to-Capacity Ratio *(X)*				0.883		0.489		0.848	0.522	0.884	0.545	
Available Capacity *(ca)*, veh/h				986		929		1670	743	789	2033	
Back of Queue *(Q)*, veh/ln (50th percentile)				7.2		3.2		7.0	3.4	6.3	4.5	
Overflow Queue *(Q3)*, veh/ln				0.0		0.0		0.0	0.0	0.0	0.0	
Queue Storage Ratio *(RQ)* (50th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay *(d1)*, s/veh				28.0		24.4		27.5	24.5	29.9	10.0	
Incremental Delay *(d2)*, s/veh				2.3		0.3		0.8	0.4	2.7	0.2	
Initial Queue Delay *(d3)*, s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay *(d)*, s/veh				30.4		24.7		28.4	24.8	32.7	10.2	
Level of Service (LOS)				C		C		C	C	C	B	
Approach Delay, s/veh / LOS	0.0			28.4		C	27.6		C	15.6		B
Intersection Delay, s/veh / LOS	22.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.9	C	2.3	B	0.7	A
Bicycle LOS Score / LOS				F	2.0	B	2.3	B

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HCS 2010 Signalized Intersection Results Summary

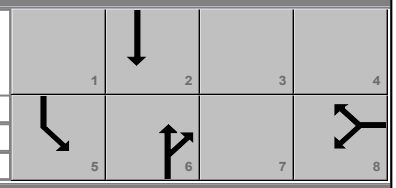
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Barton	Analysis Year	2019 With Project Revised	Analysis Period	1> 7:00
File Name	La Cadena Barton 2019 wProj PM Rev.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				387		209		800	218	358	1062	

Signal Information			
Cycle, s	87.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	22.5	24.9	24.6	0.0	0.0	0.0
Yellow	3.0	3.0	4.0	0.0	0.0	0.0
Red	2.0	2.0	1.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		6	5	2
Case Number				9.0		7.3	2.0	4.0
Phase Duration, s				29.6		29.9	27.5	57.4
Change Period, *(Y+Rc)*, s				5.0		5.0	5.0	5.0
Max Allow Headway *(MAH)*, s				3.1		3.0	3.0	2.9
Queue Clearance Time *(g_s)*, s				23.1		22.4	21.7	18.8
Green Extension Time *(g_e)*, s				1.2		2.3	0.6	2.6
Phase Call Probability				1.00		1.00	1.00	1.00
Max Out Probability				0.00		0.00	0.00	0.00

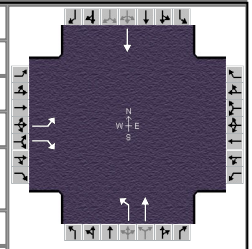
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		6	16	5	2	
Adjusted Flow Rate *(v)*, veh/h				407		220		842	229	377	1118	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln				1619		1525		1714	1525	1619	1714	
Queue Service Time *(g_s)*, s				21.1		10.6		20.4	11.1	19.7	16.8	
Cycle Queue Clearance Time *(g_c)*, s				21.1		10.6		20.4	11.1	19.7	16.8	
Capacity *(c)*, veh/h				458		432		982	437	420	2066	
Volume-to-Capacity Ratio *(X)*				0.889		0.510		0.858	0.525	0.897	0.541	
Available Capacity *(c_a)*, veh/h				924		870		1565	696	739	2066	
Back of Queue *(Q)*, veh/ln (50th percentile)				7.9		3.6		7.8	3.7	7.4	4.9	
Overflow Queue *(Q_3)*, veh/ln				0.0		0.0		0.0	0.0	0.0	0.0	
Queue Storage Ratio *(RQ)* (50th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay *(d_1)*, s/veh				30.1		26.3		29.6	26.2	31.3	10.3	
Incremental Delay *(d_2)*, s/veh				2.5		0.3		1.6	0.4	3.6	0.2	
Initial Queue Delay *(d_3)*, s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay *(d)*, s/veh				32.6		26.7		31.2	26.6	34.9	10.4	
Level of Service (LOS)				C		C		C	C	C	B	
Approach Delay, s/veh / LOS	0.0			30.5		C	30.2		C	16.6		B
Intersection Delay, s/veh / LOS	23.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.9	C	2.3	B	0.7	A
Bicycle LOS Score / LOS				F	2.0	B	2.4	B

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HCS 2010 Signalized Intersection Results Summary

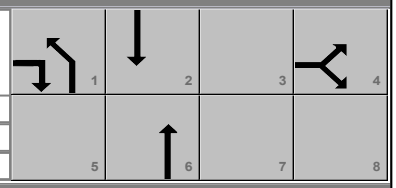
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Iowa A	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Iowa 2019 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	324		187				93	386			331	

Signal Information			
Cycle, s	38.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	3.3	9.5	10.5	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	0.0	0.0	0.0
Red	2.0	2.0	2.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		15.5			8.3	22.8		14.5
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.1			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		9.4			4.3	8.0		8.9
Green Extension Time *(g_e)*, s		1.0			0.1	0.7		0.5
Phase Call Probability		1.00			0.65	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.00

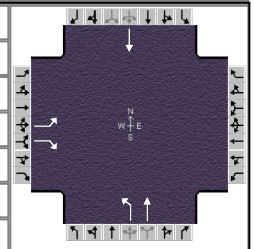
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	
Adjusted Flow Rate *(v)*, veh/h	341		197				98	406			348	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1800			1800	
Queue Service Time *(g_s)*, s	7.4		3.6				2.3	6.0			6.9	
Cycle Queue Clearance Time *(g_c)*, s	7.4		3.6				2.3	6.0			6.9	
Capacity *(c)*, veh/h	444		549				138	837			448	
Volume-to-Capacity Ratio *(X)*	0.767		0.359				0.709	0.486			0.777	
Available Capacity *(c_a)*, veh/h	1688		1721				1266	1877			1877	
Back of Queue *(Q)*, veh/ln (50th percentile)	1.9		0.7				0.7	1.0			2.0	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	12.8		9.0				17.1	7.1			13.4	
Incremental Delay *(d_2)*, s/veh	1.1		0.1				2.5	0.2			1.1	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	13.9		9.2				19.6	7.3			14.5	
Level of Service (LOS)	B		A				B	A			B	
Approach Delay, s/veh / LOS	12.1	B		0.0			9.7	A		14.5	B	
Intersection Delay, s/veh / LOS	11.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.1	B	0.7	A	2.3	B
Bicycle LOS Score / LOS		F			2.0	A	1.7	A

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HCS 2010 Signalized Intersection Results Summary

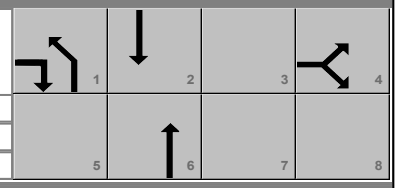
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Iowa A	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	La Cadena Iowa 2019 wProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	324		187				93	395			331	

Signal Information			
Cycle, s	38.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	3.3	9.5	10.5	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		15.5			8.3	22.8		14.5
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.1			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		9.4			4.3	8.2		8.9
Green Extension Time *(g_e)*, s		1.0			0.1	0.7		0.5
Phase Call Probability		1.00			0.65	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.00

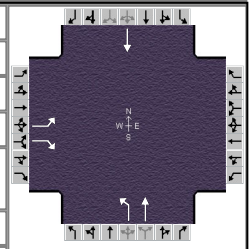
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	
Adjusted Flow Rate *(v)*, veh/h	341		197				98	416			348	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1800			1800	
Queue Service Time *(g_s)*, s	7.4		3.6				2.3	6.2			6.9	
Cycle Queue Clearance Time *(g_c)*, s	7.4		3.6				2.3	6.2			6.9	
Capacity *(c)*, veh/h	444		549				138	837			448	
Volume-to-Capacity Ratio *(X)*	0.767		0.359				0.709	0.497			0.777	
Available Capacity *(c_a)*, veh/h	1688		1721				1266	1877			1877	
Back of Queue *(Q)*, veh/ln (50th percentile)	1.9		0.7				0.7	1.1			2.0	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	12.8		9.0				17.1	7.1			13.4	
Incremental Delay *(d_2)*, s/veh	1.1		0.1				2.5	0.2			1.1	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	13.9		9.2				19.6	7.3			14.5	
Level of Service (LOS)	B		A				B	A			B	
Approach Delay, s/veh / LOS	12.1	B		0.0			9.7	A		14.5	B	
Intersection Delay, s/veh / LOS	11.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.1	B	0.7	A	2.3	B
Bicycle LOS Score / LOS		F			2.0	A	1.7	A

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HCS 2010 Signalized Intersection Results Summary

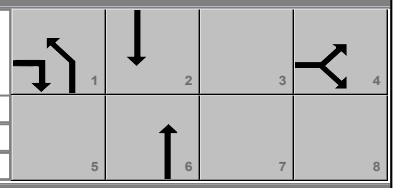
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Iowa A	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Iowa 2019 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	398		183				175	631			367	

Signal Information			
Cycle, s	51.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	7.5	13.3	15.9	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		20.9			12.5	30.7		18.3
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.1			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		14.5			7.7	17.2		12.5
Green Extension Time *(g_e)*, s		1.2			0.3	1.2		0.6
Phase Call Probability		1.00			0.93	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.00

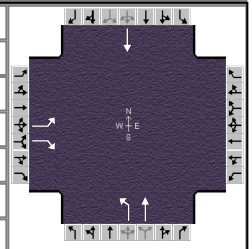
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	
Adjusted Flow Rate *(v)*, veh/h	419		193				184	664			386	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1800			1800	
Queue Service Time *(g_s)*, s	12.5		4.1				5.7	15.2			10.5	
Cycle Queue Clearance Time *(g_c)*, s	12.5		4.1				5.7	15.2			10.5	
Capacity *(c)*, veh/h	498		692				236	899			464	
Volume-to-Capacity Ratio *(X)*	0.841		0.278				0.781	0.739			0.833	
Available Capacity *(c_a)*, veh/h	1247		1397				935	1387			1387	
Back of Queue *(Q)*, veh/ln (50th percentile)	3.8		1.0				1.9	3.7			3.6	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	16.8		8.9				21.4	10.3			18.2	
Incremental Delay *(d_2)*, s/veh	1.5		0.1				2.2	0.5			1.5	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	18.3		9.0				23.5	10.8			19.8	
Level of Service (LOS)	B		A				C	B			B	
Approach Delay, s/veh / LOS	15.4		B	0.0			13.5		B	19.8		B
Intersection Delay, s/veh / LOS	15.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.1	B	0.7	A	2.3	B
Bicycle LOS Score / LOS		F			2.5	B	1.8	A

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HCS 2010 Signalized Intersection Results Summary

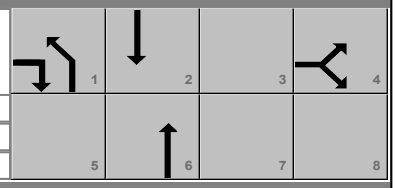
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Iowa A	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	La Cadena Iowa 2019 wProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	398		183				175	635			367	

Signal Information			
Cycle, s	51.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	7.5	13.3	15.9	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		20.9			12.5	30.7		18.3
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.1			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		14.5			7.7	17.4		12.5
Green Extension Time *(g_e)*, s		1.2			0.3	1.2		0.6
Phase Call Probability		1.00			0.93	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.00

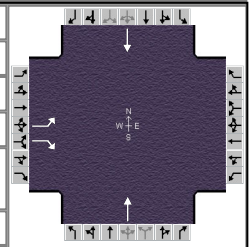
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	
Adjusted Flow Rate *(v)*, veh/h	419		193				184	668			386	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1800			1800	
Queue Service Time *(g_s)*, s	12.5		4.1				5.7	15.4			10.5	
Cycle Queue Clearance Time *(g_c)*, s	12.5		4.1				5.7	15.4			10.5	
Capacity *(c)*, veh/h	498		692				236	899			464	
Volume-to-Capacity Ratio *(X)*	0.841		0.278				0.781	0.743			0.833	
Available Capacity *(c_a)*, veh/h	1247		1397				935	1387			1387	
Back of Queue *(Q)*, veh/ln (50th percentile)	3.8		1.0				1.9	3.8			3.6	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	16.8		8.9				21.4	10.3			18.2	
Incremental Delay *(d_2)*, s/veh	1.5		0.1				2.2	0.5			1.5	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	18.3		9.0				23.5	10.8			19.8	
Level of Service (LOS)	B		A				C	B			B	
Approach Delay, s/veh / LOS	15.4		B	0.0			13.6		B	19.8		B
Intersection Delay, s/veh / LOS	15.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.1	B	0.7	A	2.3	B
Bicycle LOS Score / LOS		F			2.5	B	1.8	A

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HCS 2010 Signalized Intersection Results Summary

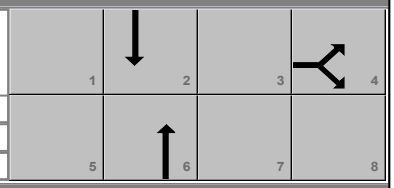
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 SB O	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	Iowa I-215 SB OffRamp 2019 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	50		492					446			501	

Signal Information			
Cycle, s	39.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	13.8	15.8	0.0	0.0	0.0	0.0	
Yellow	3.0	3.0	0.0	0.0	0.0	0.0	
Red	2.0	2.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				6		2
Case Number		9.0				8.0		8.0
Phase Duration, s		20.8				18.8		18.8
Change Period, *(Y+Rc)*, s		5.0				5.0		5.0
Max Allow Headway *(MAH)*, s		3.4				3.0		3.0
Queue Clearance Time *(g_s)*, s		14.3				11.1		12.7
Green Extension Time *(g_e)*, s		1.5				0.9		1.0
Phase Call Probability		1.00				1.00		1.00
Max Out Probability		0.00				0.00		0.00

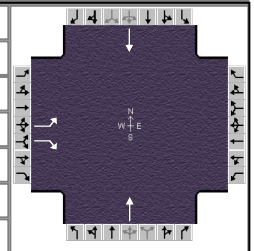
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14					6			2	
Adjusted Flow Rate *(v)*, veh/h	53		518					469			527	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525					1800			1800	
Queue Service Time *(g_s)*, s	0.8		12.3					9.1			10.7	
Cycle Queue Clearance Time *(g_c)*, s	0.8		12.3					9.1			10.7	
Capacity *(c)*, veh/h	647		609					629			629	
Volume-to-Capacity Ratio *(X)*	0.081		0.850					0.747			0.839	
Available Capacity *(c_a)*, veh/h	1627		1533					1809			1809	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2		2.7					2.3			2.7	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0					0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00					0.00			0.00	
Uniform Delay *(d_1)*, s/veh	7.4		10.9					11.4			11.9	
Incremental Delay *(d_2)*, s/veh	0.0		1.3					0.7			1.2	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0					0.0			0.0	
Control Delay *(d)*, s/veh	7.4		12.2					12.1			13.1	
Level of Service (LOS)	A		B					B			B	
Approach Delay, s/veh / LOS	11.8		B	0.0			12.1		B	13.1		B
Intersection Delay, s/veh / LOS	12.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	0.7	A	1.7	A
Bicycle LOS Score / LOS		F			1.9	A	2.0	B

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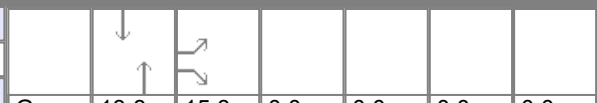
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 SB O	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	Iowa I-215 SB OffRamp 2019 wProj AM.xus				
Project Description	Colton Warehouses - La Cadena				

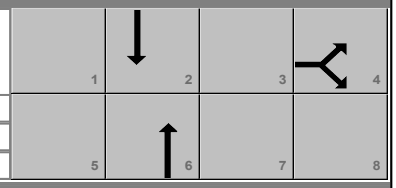


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	50		492					455			501	

Signal Information			
Cycle, s	39.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	13.8	15.8	0.0	0.0	0.0	0.0						
Yellow	3.0	3.0	0.0	0.0	0.0	0.0						
Red	2.0	2.0	0.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				6		2
Case Number		9.0				8.0		8.0
Phase Duration, s		20.8				18.8		18.8
Change Period, *(Y+Rc)*, s		5.0				5.0		5.0
Max Allow Headway *(MAH)*, s		3.4				3.0		3.0
Queue Clearance Time *(g_s)*, s		14.3				11.4		12.7
Green Extension Time *(g_e)*, s		1.5				0.9		1.0
Phase Call Probability		1.00				1.00		1.00
Max Out Probability		0.00				0.00		0.00

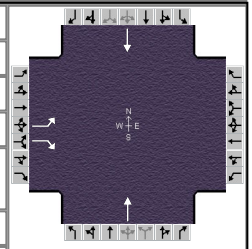
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14					6			2	
Adjusted Flow Rate *(v)*, veh/h	53		518					479			527	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525					1800			1800	
Queue Service Time *(g_s)*, s	0.8		12.3					9.4			10.7	
Cycle Queue Clearance Time *(g_c)*, s	0.8		12.3					9.4			10.7	
Capacity *(c)*, veh/h	647		609					629			629	
Volume-to-Capacity Ratio *(X)*	0.081		0.850					0.762			0.839	
Available Capacity *(c_a)*, veh/h	1627		1533					1809			1809	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2		2.7					2.3			2.7	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0					0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00					0.00			0.00	
Uniform Delay *(d_1)*, s/veh	7.4		10.9					11.5			11.9	
Incremental Delay *(d_2)*, s/veh	0.0		1.3					0.7			1.2	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0					0.0			0.0	
Control Delay *(d)*, s/veh	7.4		12.2					12.2			13.1	
Level of Service (LOS)	A		B					B			B	
Approach Delay, s/veh / LOS	11.8		B	0.0			12.2		B	13.1		B
Intersection Delay, s/veh / LOS	12.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	0.7	A	1.7	A
Bicycle LOS Score / LOS		F			1.9	A	2.0	B

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HCS 2010 Signalized Intersection Results Summary

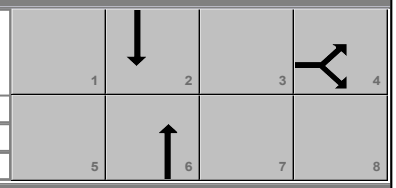
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 SB O	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	Iowa I-215 SB OffRamp 2019 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	111		425					740			578	

Signal Information			
Cycle, s	53.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	25.3	18.2	0.0	0.0	0.0	0.0	
Yellow	3.0	3.0	0.0	0.0	0.0	0.0	
Red	2.0	2.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				6		2
Case Number		9.0				8.0		8.0
Phase Duration, s		23.2				30.3		30.3
Change Period, *(Y+Rc)*, s		5.0				5.0		5.0
Max Allow Headway *(MAH)*, s		3.4				3.0		3.0
Queue Clearance Time *(g_s)*, s		16.7				23.6		16.4
Green Extension Time *(g_e)*, s		1.4				1.6		1.2
Phase Call Probability		1.00				1.00		1.00
Max Out Probability		0.00				0.00		0.00

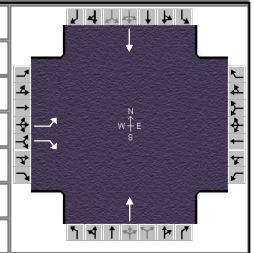
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14					6			2	
Adjusted Flow Rate *(v)*, veh/h	117		447					779			608	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525					1800			1800	
Queue Service Time *(g_s)*, s	2.8		14.7					21.6			14.4	
Cycle Queue Clearance Time *(g_c)*, s	2.8		14.7					21.6			14.4	
Capacity *(c)*, veh/h	551		519					853			853	
Volume-to-Capacity Ratio *(X)*	0.212		0.862					0.913			0.713	
Available Capacity *(c_a)*, veh/h	1205		1135					1339			1339	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.8		4.2					6.8			3.8	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0					0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00					0.00			0.00	
Uniform Delay *(d_1)*, s/veh	12.6		16.6					13.1			11.2	
Incremental Delay *(d_2)*, s/veh	0.1		1.7					5.0			0.4	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0					0.0			0.0	
Control Delay *(d)*, s/veh	12.7		18.3					18.1			11.7	
Level of Service (LOS)	B		B					B			B	
Approach Delay, s/veh / LOS	17.1		B	0.0			18.1		B	11.7		B
Intersection Delay, s/veh / LOS	15.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	0.7	A	1.7	A
Bicycle LOS Score / LOS		F			2.4	B	2.1	B

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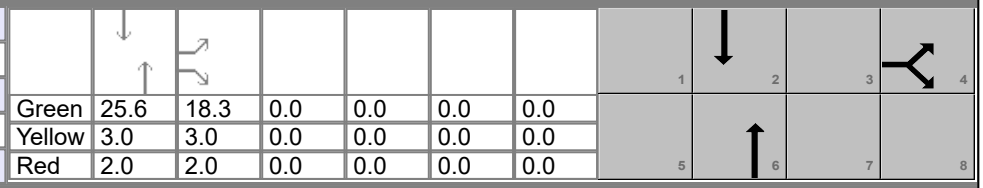
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 SB O	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	Iowa I-215 SB OffRamp 2019 wProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	111		425					744			578	

Signal Information			
Cycle, s	53.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	25.6	18.3	0.0	0.0	0.0	0.0		
Yellow	3.0	3.0	0.0	0.0	0.0	0.0		
Red	2.0	2.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				6		2
Case Number		9.0				8.0		8.0
Phase Duration, s		23.3				30.6		30.6
Change Period, *(Y+Rc)*, s		5.0				5.0		5.0
Max Allow Headway *(MAH)*, s		3.4				3.0		3.0
Queue Clearance Time *(gs)*, s		16.9				23.9		16.5
Green Extension Time *(ge)*, s		1.4				1.6		1.2
Phase Call Probability		1.00				1.00		1.00
Max Out Probability		0.00				0.00		0.00

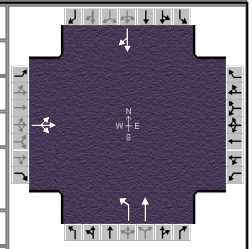
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14					6			2	
Adjusted Flow Rate *(v)*, veh/h	117		447					783			608	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525					1800			1800	
Queue Service Time *(gs)*, s	2.8		14.9					21.9			14.5	
Cycle Queue Clearance Time *(gc)*, s	2.8		14.9					21.9			14.5	
Capacity *(c)*, veh/h	550		518					856			856	
Volume-to-Capacity Ratio *(X)*	0.212		0.863					0.914			0.710	
Available Capacity *(ca)*, veh/h	1195		1126					1328			1328	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.8		4.3					7.0			3.9	
Overflow Queue *(Q3)*, veh/ln	0.0		0.0					0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00					0.00			0.00	
Uniform Delay *(d1)*, s/veh	12.7		16.7					13.2			11.3	
Incremental Delay *(d2)*, s/veh	0.1		1.7					5.3			0.4	
Initial Queue Delay *(d3)*, s/veh	0.0		0.0					0.0			0.0	
Control Delay *(d)*, s/veh	12.8		18.5					18.5			11.7	
Level of Service (LOS)	B		B					B			B	
Approach Delay, s/veh / LOS	17.3		B	0.0			18.5		B	11.7		B
Intersection Delay, s/veh / LOS	16.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	0.7	A	1.7	A
Bicycle LOS Score / LOS		F			2.4	B	2.1	B

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HCS 2010 Signalized Intersection Results Summary

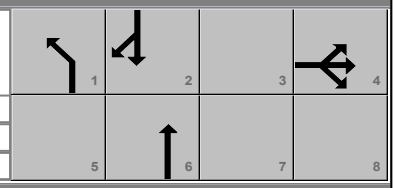
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps 2019 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	231	0	756				193	414			25	219

Signal Information			
Cycle, s	153.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	21.2	27.5	90.0	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		95.0			26.2	58.7		32.5
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time *(g_s)*, s		92.0			21.0	33.9		27.1
Green Extension Time *(g_e)*, s		0.0			0.2	0.0		0.4
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			0.00	1.00		0.00

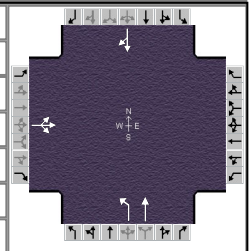
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		1039					203	436			257	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1479					1619	1800			1550	
Queue Service Time *(g_s)*, s		90.0					19.0	31.9			25.1	
Cycle Queue Clearance Time *(g_c)*, s		90.0					19.0	31.9			25.1	
Capacity *(c)*, veh/h		866					224	629			277	
Volume-to-Capacity Ratio *(X)*		1.200					0.909	0.693			0.927	
Available Capacity *(c_a)*, veh/h		866					316	629			403	
Back of Queue *(Q)*, veh/ln (50th percentile)		114.2					9.1	14.3			11.4	
Overflow Queue *(Q_3)*, veh/ln		0.0					0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh		31.9					65.3	42.9			62.1	
Incremental Delay *(d_2)*, s/veh		354.1					23.8	2.8			23.0	
Initial Queue Delay *(d_3)*, s/veh		0.0					0.0	0.0			0.0	
Control Delay *(d)*, s/veh		385.9					89.1	45.7			85.1	
Level of Service (LOS)		F					F	D			F	
Approach Delay, s/veh / LOS	385.9	F		0.0			59.5	E		85.1	F	
Intersection Delay, s/veh / LOS	238.2						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	1.9	A	2.1	B
Bicycle LOS Score / LOS	2.8	C			2.2	B	1.6	A

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HCS 2010 Signalized Intersection Results Summary

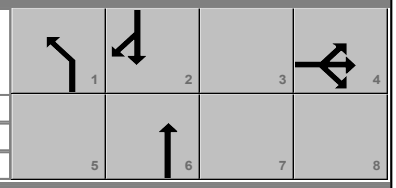
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps 2019 wProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	231	0	756				193	414			25	228

Signal Information			
Cycle, s	155.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	21.4	28.7	90.0	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		95.0			26.4	60.1		33.7
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time *(g_s)*, s		92.0			21.2	33.9		28.2
Green Extension Time *(g_e)*, s		0.0			0.2	0.0		0.4
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			0.00	1.00		0.00

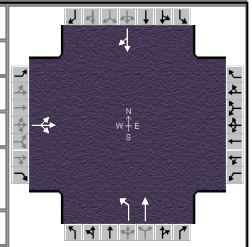
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		1039					203	436			266	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1479					1619	1800			1549	
Queue Service Time *(g_s)*, s		90.0					19.2	31.9			26.2	
Cycle Queue Clearance Time *(g_c)*, s		90.0					19.2	31.9			26.2	
Capacity *(c)*, veh/h		858					223	639			286	
Volume-to-Capacity Ratio *(X)*		1.210					0.909	0.682			0.930	
Available Capacity *(c_a)*, veh/h		858					313	639			400	
Back of Queue *(Q)*, veh/ln (50th percentile)		117.8					9.3	14.2			12.2	
Overflow Queue *(Q_3)*, veh/ln		0.0					0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh		32.5					65.9	42.5			62.2	
Incremental Delay *(d_2)*, s/veh		371.6					24.7	2.5			26.5	
Initial Queue Delay *(d_3)*, s/veh		0.0					0.0	0.0			0.0	
Control Delay *(d)*, s/veh		404.1					90.5	45.0			88.7	
Level of Service (LOS)		F					F	D			F	
Approach Delay, s/veh / LOS	404.1	F		0.0			59.5	E		88.7	F	
Intersection Delay, s/veh / LOS	247.7						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	1.9	A	2.1	B
Bicycle LOS Score / LOS	2.8	C			2.2	B	1.6	A

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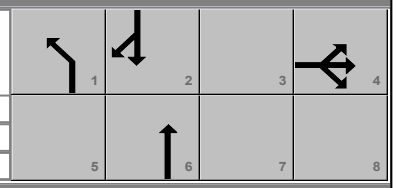
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps 2019 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	190	0	772				378	616			26	320

Signal Information					EB			WB			NB		
Cycle, s	150.0	Reference Phase	2										
Offset, s	0	Reference Point	End	Green	30.0	30.0	75.0	0.0	0.0	0.0			
Uncoordinated	Yes	Simult. Gap E/W	Off	Yellow	3.0	3.0	3.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	Off	Red	2.0	2.0	2.0	0.0	0.0	0.0			



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		80.0			35.0	70.0		35.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time *(g_s)*, s		77.0			32.0	49.9		32.0
Green Extension Time *(g_e)*, s		0.0			0.0	0.0		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	1.00		1.00

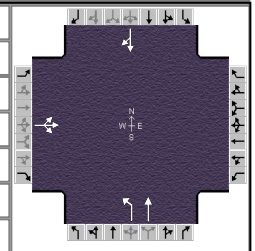
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		823					398	648			364	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1480					1619	1800			1543	
Queue Service Time *(g_s)*, s		75.0					30.0	47.9			30.0	
Cycle Queue Clearance Time *(g_c)*, s		75.0					30.0	47.9			30.0	
Capacity *(c)*, veh/h		740					324	780			309	
Volume-to-Capacity Ratio *(X)*		1.112					1.229	0.831			1.180	
Available Capacity *(c_a)*, veh/h		740					324	780			309	
Back of Queue *(Q)*, veh/ln (50th percentile)		69.1					49.7	21.8			40.8	
Overflow Queue *(Q_3)*, veh/ln		0.0					0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh		37.5					60.0	37.6			60.0	
Incremental Delay *(d_2)*, s/veh		213.4					419.1	7.6			342.3	
Initial Queue Delay *(d_3)*, s/veh		0.0					0.0	0.0			0.0	
Control Delay *(d)*, s/veh		250.9					479.1	45.3			402.3	
Level of Service (LOS)		F					F	D			F	
Approach Delay, s/veh / LOS	250.9	F		0.0			210.3	F		402.3	F	
Intersection Delay, s/veh / LOS	256.6						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	1.9	A	2.4	B
Bicycle LOS Score / LOS	2.5	B			2.9	C	1.7	A

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps 2019 wProj PM.xus				
Project Description	Colton Warehouses - La Cadena				

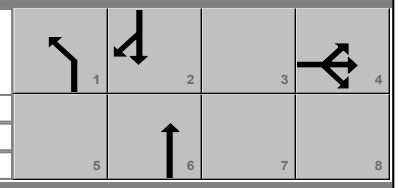


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	190	0	772				378	616			26	324

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	30.0	30.0	75.0	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		80.0			35.0	70.0		35.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time *(g_s)*, s		77.0			32.0	49.9		32.0
Green Extension Time *(g_e)*, s		0.0			0.0	0.0		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	1.00		1.00

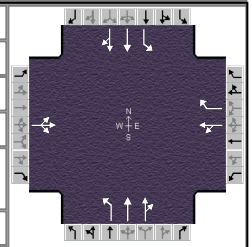
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		823					398	648			368	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1480					1619	1800			1543	
Queue Service Time *(g_s)*, s		75.0					30.0	47.9			30.0	
Cycle Queue Clearance Time *(g_c)*, s		75.0					30.0	47.9			30.0	
Capacity *(c)*, veh/h		740					324	780			309	
Volume-to-Capacity Ratio *(X)*		1.112					1.229	0.831			1.194	
Available Capacity *(c_a)*, veh/h		740					324	780			309	
Back of Queue *(Q)*, veh/ln (50th percentile)		69.1					49.7	21.8			42.6	
Overflow Queue *(Q_3)*, veh/ln		0.0					0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh		37.5					60.0	37.6			60.0	
Incremental Delay *(d_2)*, s/veh		213.4					419.1	7.6			364.2	
Initial Queue Delay *(d_3)*, s/veh		0.0					0.0	0.0			0.0	
Control Delay *(d)*, s/veh		250.9					479.1	45.3			424.2	
Level of Service (LOS)		F					F	D			F	
Approach Delay, s/veh / LOS	250.9	F		0.0			210.3	F		424.2	F	
Intersection Delay, s/veh / LOS	260.5						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	1.9	A	2.4	B
Bicycle LOS Score / LOS	2.5	B			2.9	C	1.7	A

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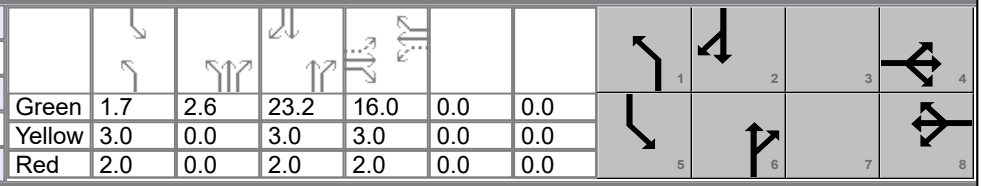
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	2019 Without Project	Analysis Period	1> 7:00
File Name	Rancho AguaMansa 2019 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	158	18	45	0	27	6	88	431	5	24	772	340

Signal Information			
Cycle, s	58.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	1.7	2.6	23.2	16.0	0.0	0.0
Yellow	3.0	0.0	3.0	3.0	0.0	0.0
Red	2.0	0.0	2.0	2.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		8.0		7.0	2.0	4.0	2.0	4.0
Phase Duration, s		21.0		21.0	9.3	30.8	6.7	28.2
Change Period, $(Y+R_c)$, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.1	3.0	2.9	3.0	3.0
Queue Clearance Time (g_s), s		15.6		2.7	5.3	6.8	2.9	20.6
Green Extension Time (g_e), s		0.4		0.0	0.1	0.7	0.0	2.4
Phase Call Probability		0.99		0.99	0.78	1.00	0.34	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.01

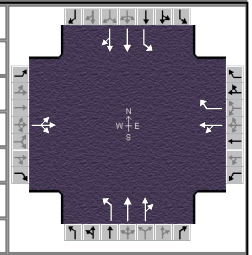
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		233			0	6	93	230	229	25	616	554
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		959			0	1525	1619	1800	1793	1619	1800	1613
Queue Service Time (g_s), s		12.8			0.0	0.2	3.3	4.8	4.8	0.9	18.5	18.6
Cycle Queue Clearance Time (g_c), s		13.6			0.0	0.2	3.3	4.8	4.8	0.9	18.5	18.6
Capacity *(c)*, veh/h		368				418	120	796	792	48	715	641
Volume-to-Capacity Ratio *(X)*		0.633			0.000	0.015	0.772	0.289	0.289	0.530	0.862	0.865
Available Capacity (c_a), veh/h		740				1036	825	1222	1217	825	1222	1095
Back of Queue *(Q)*, veh/ln (50th percentile)		2.7				0.1	1.3	1.5	1.5	0.4	6.2	5.6
Overflow Queue (Q_3), veh/ln		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d_1), s/veh		20.1				15.6	26.8	10.5	10.5	28.2	16.3	16.3
Incremental Delay (d_2), s/veh		0.7			0.0	0.0	4.0	0.1	0.1	3.4	1.4	1.6
Initial Queue Delay (d_3), s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		20.8				15.6	30.8	10.6	10.6	31.6	17.6	17.9
Level of Service (LOS)		C				B	C	B	B	C	B	B
Approach Delay, s/veh / LOS	20.8	C		15.8	B		14.0	B		18.1	B	
Intersection Delay, s/veh / LOS	17.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.2	B	2.1	B
Bicycle LOS Score / LOS	1.5	A	1.2	A	1.6	A	2.1	B

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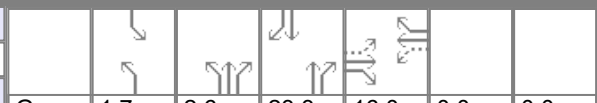
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	Rancho AguaMansa 2019 wProj AM.xus				
Project Description	Colton Warehouses - La Cadena				

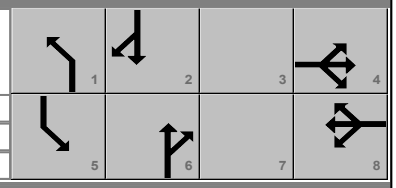


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	158	18	45	0	27	6	88	432	5	24	776	340

Signal Information			
Cycle, s	58.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	1.7	2.6	23.3	16.0	0.0	0.0
Yellow	3.0	0.0	3.0	3.0	0.0	0.0
Red	2.0	0.0	2.0	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		8.0		7.0	2.0	4.0	2.0	4.0
Phase Duration, s		21.0		21.0	9.3	30.9	6.7	28.3
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.1	3.0	2.9	3.0	3.0
Queue Clearance Time *(g_s)*, s		15.6		2.7	5.3	6.8	2.9	20.7
Green Extension Time *(g_e)*, s		0.4		0.0	0.1	0.7	0.0	2.4
Phase Call Probability		0.99		0.99	0.78	1.00	0.34	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.01

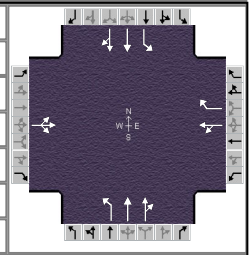
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		233			0	6	93	230	230	25	618	557
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		959			0	1525	1619	1800	1793	1619	1800	1613
Queue Service Time *(g_s)*, s		12.8			0.0	0.2	3.3	4.8	4.8	0.9	18.6	18.7
Cycle Queue Clearance Time *(g_c)*, s		13.6			0.0	0.2	3.3	4.8	4.8	0.9	18.6	18.7
Capacity *(c)*, veh/h		367				418	120	797	794	48	717	643
Volume-to-Capacity Ratio *(X)*		0.634			0.000	0.015	0.772	0.289	0.289	0.531	0.862	0.866
Available Capacity *(c_a)*, veh/h		737				1032	821	1218	1213	821	1218	1091
Back of Queue *(Q)*, veh/ln (50th percentile)		2.8				0.1	1.3	1.5	1.5	0.4	6.2	5.7
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		20.2				15.7	26.9	10.5	10.5	28.3	16.3	16.3
Incremental Delay *(d_2)*, s/veh		0.7			0.0	0.0	4.0	0.1	0.1	3.4	1.5	1.8
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		20.9				15.7	30.9	10.6	10.6	31.7	17.8	18.1
Level of Service (LOS)		C				B	C	B	B	C	B	B
Approach Delay, s/veh / LOS	20.9	C		15.8	B		14.0	B		18.2	B	
Intersection Delay, s/veh / LOS	17.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.2	B	2.1	B
Bicycle LOS Score / LOS	1.5	A	1.2	A	1.6	A	2.1	B

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	Rancho AguaMansa 2019 wProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	158	18	45	0	27	6	88	432	5	24	776	340

Signal Information			
Cycle, s	58.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	1.7	2.6	23.3	16.0	0.0	0.0	1	2	3	4		
Yellow	3.0	0.0	3.0	3.0	0.0	0.0	5	6	7	8		
Red	2.0	0.0	2.0	2.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		8.0		7.0	2.0	4.0	2.0	4.0
Phase Duration, s		21.0		21.0	9.3	30.9	6.7	28.3
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.1	3.0	2.9	3.0	3.0
Queue Clearance Time *(g_s)*, s		15.6		2.7	5.3	6.8	2.9	20.7
Green Extension Time *(g_e)*, s		0.4		0.0	0.1	0.7	0.0	2.4
Phase Call Probability		0.99		0.99	0.78	1.00	0.34	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.01

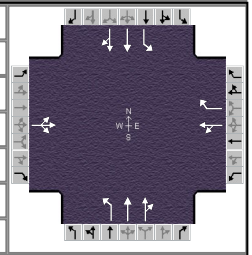
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		233			0	6	93	230	230	25	618	557
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		959			0	1525	1619	1800	1793	1619	1800	1613
Queue Service Time *(g_s)*, s		12.8			0.0	0.2	3.3	4.8	4.8	0.9	18.6	18.7
Cycle Queue Clearance Time *(g_c)*, s		13.6			0.0	0.2	3.3	4.8	4.8	0.9	18.6	18.7
Capacity *(c)*, veh/h		367				418	120	797	794	48	717	643
Volume-to-Capacity Ratio *(X)*		0.634			0.000	0.015	0.772	0.289	0.289	0.531	0.862	0.866
Available Capacity *(c_a)*, veh/h		737				1032	821	1218	1213	821	1218	1091
Back of Queue *(Q)*, veh/ln (50th percentile)		2.8				0.1	1.3	1.5	1.5	0.4	6.2	5.7
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		20.2				15.7	26.9	10.5	10.5	28.3	16.3	16.3
Incremental Delay *(d_2)*, s/veh		0.7			0.0	0.0	4.0	0.1	0.1	3.4	1.5	1.8
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		20.9				15.7	30.9	10.6	10.6	31.7	17.8	18.1
Level of Service (LOS)		C				B	C	B	B	C	B	B
Approach Delay, s/veh / LOS	20.9	C		15.8	B		14.0	B		18.2	B	
Intersection Delay, s/veh / LOS	17.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.2	B	2.1	B
Bicycle LOS Score / LOS	1.5	A	1.2	A	1.6	A	2.1	B

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HCS 2010 Signalized Intersection Results Summary

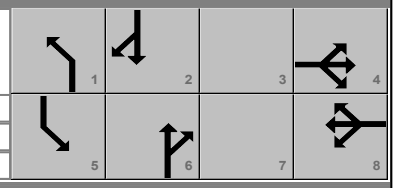
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	2019 With Project	Analysis Period	1> 7:00
File Name	Rancho AguaMansa 2019 wProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	545	72	129	1	16	17	66	428	0	7	952	199

Signal Information			
Cycle, s	167.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	1.5	2.4	59.7	75.0	4.1	0.0						
Yellow	3.0	3.0	3.0	3.0	3.0	0.0						
Red	2.0	2.0	2.0	2.0	2.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		11.0	2.0	4.0	2.0	4.0
Phase Duration, s		80.0		9.1	13.8	72.1	6.5	64.7
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.2	3.0	2.9	3.0	3.0
Queue Clearance Time *(g_s)*, s		77.0		3.9	9.1	16.4	2.8	59.5
Green Extension Time *(g_e)*, s		0.0		0.0	0.1	0.9	0.0	0.2
Phase Call Probability		1.00		0.81	0.96	1.00	0.29	1.00
Max Out Probability		1.00		0.00	0.00	0.00	0.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		785			18	18	69	451	0	7	624	588
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1686			1795	1525	1619	1800	0	1619	1800	1692
Queue Service Time *(g_s)*, s		75.0			1.6	1.9	7.1	14.4	0.0	0.8	57.2	57.5
Cycle Queue Clearance Time *(g_c)*, s		75.0			1.6	1.9	7.1	14.4	0.0	0.8	57.2	57.5
Capacity *(c)*, veh/h		754			43	37	85	1441		14	641	603
Volume-to-Capacity Ratio *(X)*		1.041			0.412	0.485	0.813	0.313	0.000	0.525	0.972	0.976
Available Capacity *(c_a)*, veh/h		754			214	182	290	1441		290	644	605
Back of Queue *(Q)*, veh/ln (50th percentile)		53.7			0.8	0.8	3.1	6.3		0.4	33.5	32.3
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		46.3			80.6	80.7	78.6	34.4		82.7	53.1	53.2
Incremental Delay *(d_2)*, s/veh		109.0			2.3	3.7	7.2	0.0	0.0	11.2	46.6	51.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		155.3			82.9	84.4	85.8	34.5		93.9	99.8	104.3
Level of Service (LOS)		F			F	F	F	C		F	F	F
Approach Delay, s/veh / LOS	155.3	F		83.7	F		41.3	D		101.9	F	
Intersection Delay, s/veh / LOS	105.7						F					

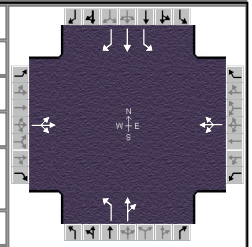
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.9	C	2.3	B	2.1	B
Bicycle LOS Score / LOS	2.4	B	1.2	A	1.6	A	2.1	B

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ATTACHMENT Q: LEVEL OF SERVICE ANALYSIS 2040 WITHO T AND WITH PROJECT

HCS 2010 Signalized Intersection Results Summary

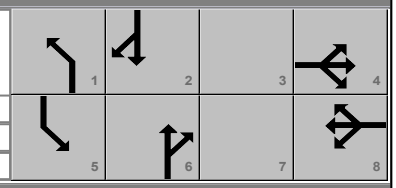
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Dr at 7th Street	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	La Cadena 7th-Maple 2040 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	25	15	65	15	85	10	350	85	40	550	10

Signal Information			
Cycle, s	47.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	0.7	1.5	15.9	2.3	6.9	0.0						
Yellow	3.0	0.0	3.0	3.0	3.0	0.0						
Red	2.0	0.0	2.0	2.0	2.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		12.0	2.0	4.0	2.0	3.0
Phase Duration, s		7.3		11.9	5.7	20.9	7.1	22.4
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.4	3.0	2.9	3.0	2.9
Queue Clearance Time *(g_s)*, s		3.4		7.2	2.3	13.3	3.2	16.2
Green Extension Time *(g_e)*, s		0.1		0.4	0.0	0.8	0.0	1.1
Phase Call Probability		0.46		0.90	0.13	1.00	0.43	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

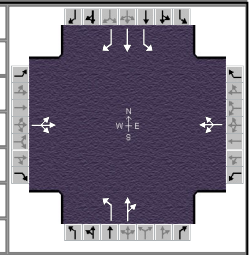
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		47			174		11	458		42	579	11
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1595			1528		1619	1739		1619	1800	1525
Queue Service Time *(g_s)*, s		1.4			5.2		0.3	11.3		1.2	14.2	0.2
Cycle Queue Clearance Time *(g_c)*, s		1.4			5.2		0.3	11.3		1.2	14.2	0.2
Capacity *(c)*, veh/h		79			223		23	586		74	664	563
Volume-to-Capacity Ratio *(X)*		0.596			0.777		0.465	0.781		0.569	0.872	0.019
Available Capacity *(c_a)*, veh/h		1344			1287		1023	1831		1023	1895	1606
Back of Queue *(Q)*, veh/ln (50th percentile)		0.5			1.8		0.1	3.2		0.4	4.3	0.1
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		22.1			19.5		23.2	14.2		22.2	13.9	9.5
Incremental Delay *(d_2)*, s/veh		2.7			2.2		5.5	0.9		2.6	1.5	0.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Control Delay *(d)*, s/veh		24.8			21.8		28.7	15.0		24.8	15.4	9.5
Level of Service (LOS)		C			C		C	B		C	B	A
Approach Delay, s/veh / LOS	24.8	C		21.8	C		15.3	B		15.9	B	
Intersection Delay, s/veh / LOS	16.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.4	A	1.9	A	2.2	B

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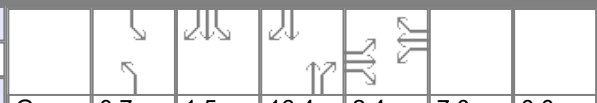
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Dr at 7th Street	Analysis Year	2040 With Project	Analysis Period	1> 7:00
File Name	La Cadena 7th-Maple 2040 wProj AM.xus				
Project Description	Colton Warehouses - La Cadena				

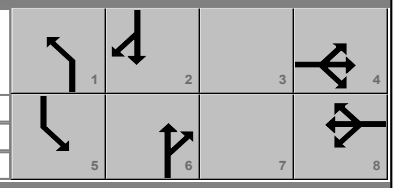


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	5	25	15	65	15	85	10	355	85	40	562	10

Signal Information			
Cycle, s	48.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	0.7	1.5	16.4	2.4	7.0	0.0						
Yellow	3.0	0.0	3.0	3.0	3.0	0.0						
Red	2.0	0.0	2.0	2.0	2.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		12.0	2.0	4.0	2.0	3.0
Phase Duration, s		7.4		12.0	5.7	21.4	7.2	22.9
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.4	3.0	2.9	3.0	2.9
Queue Clearance Time *(g_s)*, s		3.4		7.3	2.3	13.5	3.2	16.7
Green Extension Time *(g_e)*, s		0.1		0.4	0.0	0.8	0.0	1.1
Phase Call Probability		0.47		0.90	0.13	1.00	0.43	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

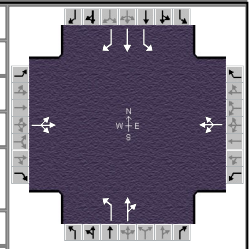
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		47			174		11	463		42	592	11
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1595			1528		1619	1740		1619	1800	1525
Queue Service Time *(g_s)*, s		1.4			5.3		0.3	11.5		1.2	14.7	0.2
Cycle Queue Clearance Time *(g_c)*, s		1.4			5.3		0.3	11.5		1.2	14.7	0.2
Capacity *(c)*, veh/h		79			223		23	598		74	675	572
Volume-to-Capacity Ratio *(X)*		0.599			0.778		0.465	0.775		0.571	0.876	0.018
Available Capacity *(c_a)*, veh/h		1325			1269		1008	1805		1008	1868	1583
Back of Queue *(Q)*, veh/ln (50th percentile)		0.6			1.9		0.1	3.3		0.5	4.5	0.1
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		22.4			19.8		23.6	14.1		22.5	14.0	9.5
Incremental Delay *(d_2)*, s/veh		2.7			2.2		5.5	0.8		2.6	1.5	0.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Control Delay *(d)*, s/veh		25.1			22.1		29.1	15.0		25.1	15.5	9.5
Level of Service (LOS)		C			C		C	B		C	B	A
Approach Delay, s/veh / LOS	25.1	C		22.1	C		15.3	B		16.0	B	
Intersection Delay, s/veh / LOS	16.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.4	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.4	A	1.9	A	2.2	B

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HCS 2010 Signalized Intersection Results Summary

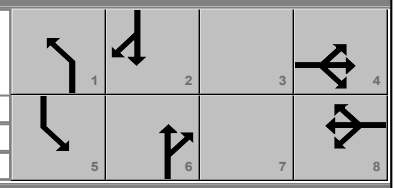
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Dr at 7th Street	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	La Cadena 7th-Maple 2040 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	10	30	25	35	5	65	10	830	40	45	550	20

Signal Information			
Cycle, s	73.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	1.0	2.2	39.9	4.0	6.8	0.0	
Yellow	3.0	0.0	3.0	3.0	3.0	0.0	
Red	2.0	0.0	2.0	2.0	2.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		12.0	2.0	4.0	2.0	3.0
Phase Duration, s		9.0		11.8	6.0	44.9	8.1	47.0
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.4	3.0	2.9	3.0	2.9
Queue Clearance Time *(g_s)*, s		5.2		7.3	2.5	38.0	4.1	17.2
Green Extension Time *(g_e)*, s		0.1		0.2	0.0	1.7	0.1	1.1
Phase Call Probability		0.76		0.90	0.20	1.00	0.62	1.00
Max Out Probability		0.00		0.00	0.00	0.03	0.00	0.00

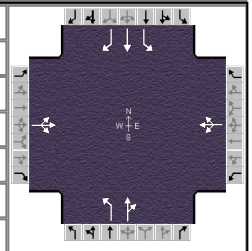
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		68			111		11	916		47	579	21
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1579			1507		1619	1785		1619	1800	1525
Queue Service Time *(g_s)*, s		3.2			5.3		0.5	36.0		2.1	15.2	0.4
Cycle Queue Clearance Time *(g_c)*, s		3.2			5.3		0.5	36.0		2.1	15.2	0.4
Capacity *(c)*, veh/h		87			140		22	964		69	1025	868
Volume-to-Capacity Ratio *(X)*		0.788			0.789		0.486	0.950		0.689	0.565	0.024
Available Capacity *(c_a)*, veh/h		850			812		654	1202		654	1212	1027
Back of Queue *(Q)*, veh/ln (50th percentile)		1.3			2.1		0.2	15.1		0.9	4.6	0.1
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		34.7			33.0		36.4	16.1		35.1	10.2	7.0
Incremental Delay *(d_2)*, s/veh		6.1			3.8		6.3	16.6		4.6	0.2	0.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Control Delay *(d)*, s/veh		40.7			36.8		42.6	32.7		39.7	10.3	7.0
Level of Service (LOS)		D			D		D	C		D	B	A
Approach Delay, s/veh / LOS	40.7	D		36.8	D		32.8	C		12.4	B	
Intersection Delay, s/veh / LOS	25.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.5	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.3	A	2.7	B	2.2	B

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HCS 2010 Signalized Intersection Results Summary

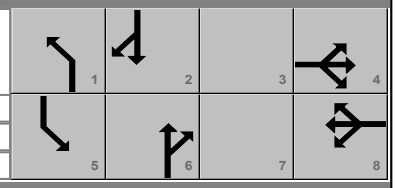
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Dr at 7th Street	Analysis Year	2040 With Project	Analysis Period	1> 7:00
File Name	La Cadena 7th-Maple 2040 wProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	10	30	25	35	5	65	10	844	40	45	555	20

Signal Information			
Cycle, s	75.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	1.0	2.2	41.3	4.1	7.0	0.0						
Yellow	3.0	0.0	3.0	3.0	3.0	0.0						
Red	2.0	0.0	2.0	2.0	2.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		12.0	2.0	4.0	2.0	3.0
Phase Duration, s		9.1		12.0	6.0	46.3	8.2	48.5
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.3		3.4	3.0	2.9	3.0	2.9
Queue Clearance Time *(g_s)*, s		5.3		7.5	2.5	39.5	4.2	17.5
Green Extension Time *(g_e)*, s		0.1		0.2	0.0	1.7	0.1	1.1
Phase Call Probability		0.76		0.90	0.20	1.00	0.63	1.00
Max Out Probability		0.00		0.00	0.00	0.06	0.00	0.00

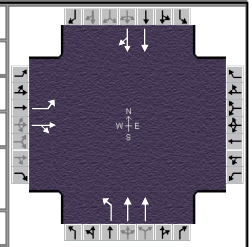
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		68			111		11	931		47	584	21
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1579			1507		1619	1785		1619	1800	1525
Queue Service Time *(g_s)*, s		3.3			5.5		0.5	37.5		2.2	15.5	0.5
Cycle Queue Clearance Time *(g_c)*, s		3.3			5.5		0.5	37.5		2.2	15.5	0.5
Capacity *(c)*, veh/h		87			140		22	977		68	1036	878
Volume-to-Capacity Ratio *(X)*		0.788			0.791		0.488	0.953		0.696	0.564	0.024
Available Capacity *(c_a)*, veh/h		831			793		639	1175		639	1185	1004
Back of Queue *(Q)*, veh/ln (50th percentile)		1.4			2.1		0.2	16.3		0.9	4.7	0.1
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		35.5			33.7		37.2	16.3		35.9	10.1	6.9
Incremental Delay *(d_2)*, s/veh		6.1			3.9		6.3	18.6		4.8	0.2	0.0
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0		0.0	0.0	0.0
Control Delay *(d)*, s/veh		41.5			37.6		43.6	34.9		40.7	10.3	6.9
Level of Service (LOS)		D			D		D	C		D	B	A
Approach Delay, s/veh / LOS	41.5	D		37.6	D		35.0	D		12.4	B	
Intersection Delay, s/veh / LOS	27.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.5	B	2.1	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.3	A	2.7	B	2.2	B

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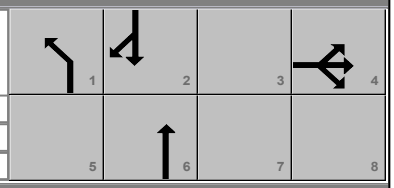
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Rancho 2040 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	26	0	846				549	466			585	19

Signal Information			
Cycle, s	165.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	55.0	30.0	65.0	0.0	0.0	0.0		
Yellow	3.0	3.0	3.0	0.0	0.0	0.0		
Red	2.0	2.0	2.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		10.0			2.0	4.0		8.3
Phase Duration, s		70.0			60.0	95.0		35.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		67.0			57.0	14.5		31.2
Green Extension Time *(g_e)*, s		0.0			0.0	1.0		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	0.00		1.00

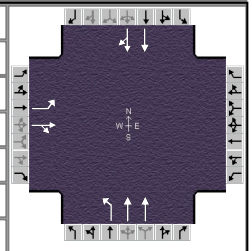
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	27	680					578	491			319	316
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525					1619	1714			1800	1780
Queue Service Time *(g_s)*, s	1.7	65.0					55.0	12.5			29.1	29.2
Cycle Queue Clearance Time *(g_c)*, s	1.7	65.0					55.0	12.5			29.1	29.2
Capacity *(c)*, veh/h	638	601					540	1869			327	324
Volume-to-Capacity Ratio *(X)*	0.043	1.132					1.071	0.262			0.976	0.977
Available Capacity *(c_a)*, veh/h	638	601					540	1869			327	324
Back of Queue *(Q)*, veh/ln (50th percentile)	0.7	65.4					45.6	4.9			19.9	19.9
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	30.8	50.0					55.0	19.9			67.1	67.2
Incremental Delay *(d_2)*, s/veh	0.0	248.3					159.4	0.0			75.5	77.1
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	30.8	298.3					214.4	19.9			142.7	144.3
Level of Service (LOS)	C	F					F	B			F	F
Approach Delay, s/veh / LOS	288.0	F		0.0			125.1	F		143.5	F	
Intersection Delay, s/veh / LOS	177.7						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.8	C	1.9	A	2.6	B
Bicycle LOS Score / LOS	2.3	B			2.0	B	1.7	A

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2040 With Project	Analysis Period	1> 7:00
File Name	La Cadena Rancho 2040 wProj AM.xus				
Project Description	Colton Warehouses - La Cadena				

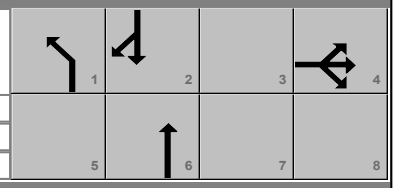


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	26	0	850				550	471			597	19

Signal Information			
Cycle, s	165.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	55.0	30.0	65.0	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		10.0			2.0	4.0		8.3
Phase Duration, s		70.0			60.0	95.0		35.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		67.0			57.0	14.7		31.9
Green Extension Time *(g_e)*, s		0.0			0.0	1.0		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	0.00		1.00

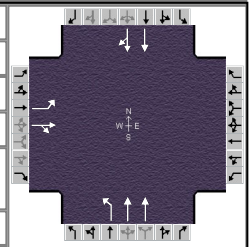
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	27	684					579	496			326	323
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525					1619	1714			1800	1780
Queue Service Time *(g_s)*, s	1.7	65.0					55.0	12.7			29.9	29.9
Cycle Queue Clearance Time *(g_c)*, s	1.7	65.0					55.0	12.7			29.9	29.9
Capacity *(c)*, veh/h	638	601					540	1869			327	324
Volume-to-Capacity Ratio *(X)*	0.043	1.139					1.073	0.265			0.996	0.997
Available Capacity *(c_a)*, veh/h	638	601					540	1869			327	324
Back of Queue *(Q)*, veh/ln (50th percentile)	0.7	67.3					46.0	5.0			21.8	21.8
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	30.8	50.0					55.0	19.9			67.4	67.5
Incremental Delay *(d_2)*, s/veh	0.0	259.5					162.1	0.0			92.6	94.3
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	30.8	309.5					217.1	20.0			160.1	161.8
Level of Service (LOS)	C	F					F	B			F	F
Approach Delay, s/veh / LOS	298.7	F		0.0			126.2	F		160.9	F	
Intersection Delay, s/veh / LOS	185.9						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.8	C	1.9	A	2.6	B
Bicycle LOS Score / LOS	2.3	B			2.0	B	1.7	A

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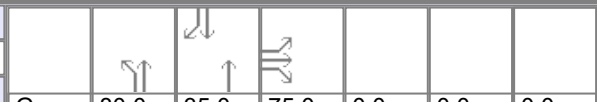
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Rancho 2040 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				

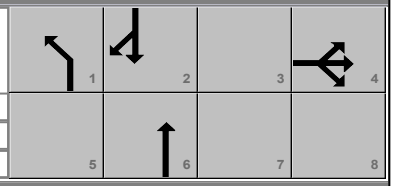


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	22	0	1050				627	818			635	37

Signal Information			
Cycle, s	205.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	80.0	35.0	75.0	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		10.0			2.0	4.0		8.3
Phase Duration, s		80.0			85.0	125.0		40.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		77.0			82.0	30.5		44.1
Green Extension Time *(g_e)*, s		0.0			0.0	1.0		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	0.45		1.00

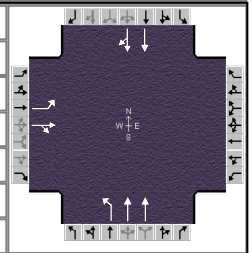
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	23	895					660	861			357	350
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525					1619	1714			1800	1765
Queue Service Time *(g_s)*, s	1.9	75.0					80.0	28.5			42.1	35.0
Cycle Queue Clearance Time *(g_c)*, s	1.9	75.0					80.0	28.5			42.1	35.0
Capacity *(c)*, veh/h	592	558					632	2006			307	301
Volume-to-Capacity Ratio *(X)*	0.039	1.603					1.045	0.429			1.161	1.163
Available Capacity *(c_a)*, veh/h	592	558					632	2006			307	301
Back of Queue *(Q)*, veh/ln (50th percentile)	0.8	189.9					52.9	11.4			42.8	42.3
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	41.8	65.0					62.5	23.5			85.0	85.0
Incremental Delay *(d_2)*, s/veh	0.0	1040.0					119.0	0.1			313.2	316.5
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	41.8	1105.0					181.5	23.6			398.2	401.5
Level of Service (LOS)	D	F					F	C			F	F
Approach Delay, s/veh / LOS	1078.2	F		0.0			92.1	F		399.8	F	
Intersection Delay, s/veh / LOS	449.0						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.8	C	1.9	A	2.6	B
Bicycle LOS Score / LOS	2.6	B			2.4	B	1.7	A

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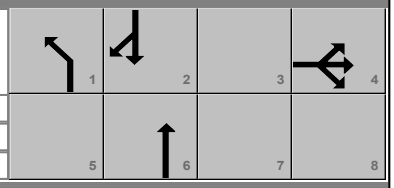
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2040 With Project	Analysis Period	1> 7:00
File Name	La Cadena Rancho 2040 wProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	22	0	1051				631	832			640	37

Signal Information			
Cycle, s	205.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	80.0	35.0	75.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	0.0	0.0	0.0
Red	2.0	2.0	2.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		10.0			2.0	4.0		8.3
Phase Duration, s		80.0			85.0	125.0		40.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(gs)*, s		77.0			82.0	31.2		44.4
Green Extension Time *(ge)*, s		0.0			0.0	1.0		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	0.63		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	23	896					664	876			360	353
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525					1619	1714			1800	1765
Queue Service Time *(gs)*, s	1.9	75.0					80.0	29.2			42.4	35.0
Cycle Queue Clearance Time *(gc)*, s	1.9	75.0					80.0	29.2			42.4	35.0
Capacity *(c)*, veh/h	592	558					632	2006			307	301
Volume-to-Capacity Ratio *(X)*	0.039	1.605					1.051	0.437			1.170	1.172
Available Capacity *(ca)*, veh/h	592	558					632	2006			307	301
Back of Queue *(Q)*, veh/ln (50th percentile)	0.8	190.4					54.5	11.7			44.0	43.4
Overflow Queue *(Q3)*, veh/ln	0.0	0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00					0.00	0.00			0.00	0.00
Uniform Delay *(d1)*, s/veh	41.8	65.0					62.5	23.7			85.0	85.0
Incremental Delay *(d2)*, s/veh	0.0	1043.2					127.7	0.1			326.6	329.8
Initial Queue Delay *(d3)*, s/veh	0.0	0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	41.8	1108.2					190.2	23.7			411.6	414.8
Level of Service (LOS)	D	F					F	C			F	F
Approach Delay, s/veh / LOS	1081.3	F		0.0			95.5	F		413.2	F	
Intersection Delay, s/veh / LOS	452.6						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.8	C	1.9	A	2.6	B
Bicycle LOS Score / LOS	2.6	B			2.4	B	1.7	A

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*City of Colton*
Date Performed	*7/9/2017*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*La Cadena Dr/Tropica Rancho Rd*
Jurisdiction	*City of Colton*
Analysis Year	*2040 Without Project*

Project Description *Colton Warehouses - La Cadena/Tropica Rancho*

East/West Street: *Tropica Rancho Rd/Vivienda Ave* | North/South Street: *La Cadena Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*950*	*5*	*0*	*1400*	*10*
Peak-Hour Factor, PHF	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*1000*	*5*	*0*	*1473*	*10*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*5*	*0*	*0*	*40*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*5*	*0*	*0*	*42*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*1*	*0*
Configuration			*R*		*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				*R*
v (veh/h)		*0*		*42*				*5*
C (m) (veh/h)		*697*		*573*				*419*
v/c		*0.00*		*0.07*				*0.01*
95% queue length		*0.00*		*0.24*				*0.04*
Control Delay (s/veh)		*10.2*		*11.8*				*13.7*
LOS		*B*		*B*				*B*
Approach Delay (s/veh)	--	--	*11.8*			*13.7*		
Approach LOS	--	--	*B*			*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*City of Colton*
Date Performed	*7/9/2017*
Analysis Time Period	*AM Peak Hour*

Site Information

Intersection	*La Cadena Dr/Tropica Rancho Rd*
Jurisdiction	*City of Colton*
Analysis Year	*2040 With Project*

Project Description *Colton Warehouses - La Cadena/Tropica Rancho*

East/West Street: *Tropica Rancho Rd/Vivienda Ave* | North/South Street: *La Cadena Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*25*	*952*	*5*	*0*	*1411*	*15*
Peak-Hour Factor, PHF	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*25*	*1002*	*5*	*0*	*1485*	*15*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*0*
Configuration	*L*	*T*	*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*4*	*0*	*11*	*2*	*0*	*40*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*4*	*0*	*11*	*2*	*0*	*42*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*LT*		*LTR*			*LTR*	
v (veh/h)	*25*	*0*		*44*			*15*	
C (m) (veh/h)	*453*	*696*		*382*			*94*	
v/c	*0.06*	*0.00*		*0.12*			*0.16*	
95% queue length	*0.18*	*0.00*		*0.39*			*0.56*	
Control Delay (s/veh)	*13.4*	*10.2*		*15.6*			*50.5*	
LOS	*B*	*B*		*C*			*F*	
Approach Delay (s/veh)	--	--	*15.6*			*50.5*		
Approach LOS	--	--	*C*			*F*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*City of Colton*
Date Performed	*7/9/2017*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*La Cadena Dr/Tropica Rancho Rd*
Jurisdiction	*City of Colton*
Analysis Year	*2040 Without Project*

Project Description *Colton Warehouses - La Cadena/Tropica Rancho*

East/West Street: *Tropica Rancho Rd/Vivienda Ave* | North/South Street: *La Cadena Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		*1570*	*0*	*0*	*1490*	*5*
Peak-Hour Factor, PHF	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*1652*	*0*	*0*	*1568*	*5*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*0*	*2*	*0*	*0*	*2*	*0*
Configuration		*T*	*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			*5*	*0*	*0*	*70*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*0*	*0*	*5*	*0*	*0*	*73*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*0*	*1*	*0*	*1*	*0*
Configuration			*R*		*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		*LT*		*LTR*				*R*
v (veh/h)		*0*		*73*				*5*
C (m) (veh/h)		*396*		*375*				*395*
v/c		*0.00*		*0.19*				*0.01*
95% queue length		*0.00*		*0.72*				*0.04*
Control Delay (s/veh)		*14.1*		*16.9*				*14.2*
LOS		*B*		*C*				*B*
Approach Delay (s/veh)	--	--	*16.9*			*14.2*		
Approach LOS	--	--	*C*			*B*		

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TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	*R Garland*
Agency/Co.	*City of Colton*
Date Performed	*7/9/2017*
Analysis Time Period	*PM Peak Hour*

Site Information

Intersection	*La Cadena Dr/Tropica Rancho Rd*
Jurisdiction	*City of Colton*
Analysis Year	*2040 With Project*

Project Description *Colton Warehouses - La Cadena/Tropica Rancho*

East/West Street: *Tropica Rancho Rd/Vivienda Ave* | North/South Street: *La Cadena Drive*

Intersection Orientation: *North-South* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	*10*	*1576*	*0*	*0*	*1494*	*7*
Peak-Hour Factor, PHF	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*10*	*1658*	*0*	*0*	*1572*	*7*
Percent Heavy Vehicles	*0*	--	--	*0*	--	--
Median Type	*Undivided*					
RT Channelized			*0*			*0*
Lanes	*1*	*2*	*0*	*0*	*2*	*0*
Configuration	*L*	*T*	*TR*	*LT*		*TR*
Upstream Signal		*0*			*0*	

Minor Street	Eastbound			Westbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	*12*	*0*	*15*	*1*	*0*	*70*
Peak-Hour Factor, PHF	*1.00*	*1.00*	*0.95*	*0.95*	*0.95*	*0.95*
Hourly Flow Rate, HFR (veh/h)	*12*	*0*	*15*	*1*	*0*	*73*
Percent Heavy Vehicles	*0*	*0*	*0*	*0*	*0*	*0*
Percent Grade (%)		*0*			*0*	
Flared Approach		*N*			*N*	
Storage		*0*			*0*	
RT Channelized			*0*			*0*
Lanes	*0*	*1*	*0*	*0*	*1*	*0*
Configuration		*LTR*			*LTR*	

Delay, Queue Length, and Level of Service

Approach	Northbound	Southbound	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	*L*	*LT*		*LTR*			*LTR*	
v (veh/h)	*10*	*0*		*74*			*27*	
C (m) (veh/h)	*422*	*394*		*283*			*28*	
v/c	*0.02*	*0.00*		*0.26*			*0.96*	
95% queue length	*0.07*	*0.00*		*1.05*			*6.12*	
Control Delay (s/veh)	*13.7*	*14.1*		*22.2*			*574.9*	
LOS	*B*	*B*		*C*			*F*	
Approach Delay (s/veh)	--	--	*22.2*			*574.9*		
Approach LOS	--	--	*C*			*F*		

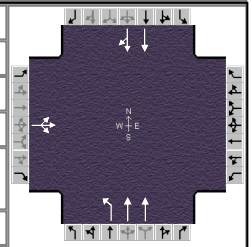
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HCS 2010 Signalized Intersection Results Summary

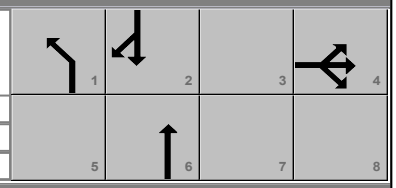
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Litton A	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Litton 2040 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	80	0	40				35	870			1230	15

Signal Information			
Cycle, s	63.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	2.4	40.0	6.3	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		11.3			7.4	52.4		45.0
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time (g_s), s		6.8			3.4	7.9		50.8
Green Extension Time (g_e), s		0.3			0.0	2.1		0.0
Phase Call Probability		0.89			0.48	1.00		1.00
Max Out Probability		0.00			0.00	0.00		1.00

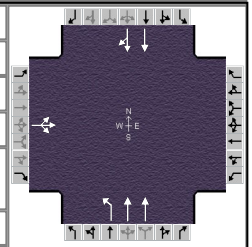
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		126					37	916			657	654
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1646					1619	1714			1800	1792
Queue Service Time (g_s), s		4.8					1.4	5.9			48.8	13.6
Cycle Queue Clearance Time (g_c), s		4.8					1.4	5.9			48.8	13.6
Capacity *(c)*, veh/h		162					61	2551			1131	1126
Volume-to-Capacity Ratio *(X)*		0.778					0.604	0.359			0.581	0.581
Available Capacity (c_a), veh/h		1034					763	2551			1131	1126
Back of Queue *(Q)*, veh/ln (50th percentile)		2.0					0.6	0.5			3.0	3.0
Overflow Queue (Q_3), veh/ln		0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh		28.0					30.2	2.8			6.9	6.9
Incremental Delay (d_2), s/veh		3.1					3.6	0.0			0.5	0.5
Initial Queue Delay (d_3), s/veh		0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh		31.1					33.8	2.9			7.4	7.4
Level of Service (LOS)		C					C	A			A	A
Approach Delay, s/veh / LOS	31.1	C		0.0			4.1	A		7.4	A	
Intersection Delay, s/veh / LOS	7.3						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.8	A	2.0	B
Bicycle LOS Score / LOS	1.3	A			1.9	A	2.2	B

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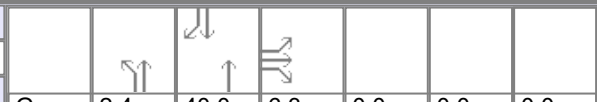
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Litton A	Analysis Year	2040 With Project Revised	Analysis Period	1> 7:00
File Name	La Cadena Litton 2040 wProj AM Rev.xus				
Project Description	Colton Warehouses - La Cadena				

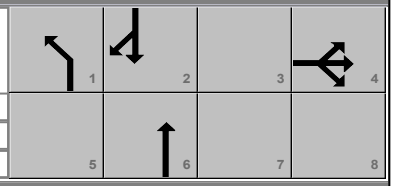


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	80	0	40				35	899			1242	15

Signal Information			
Cycle, s	63.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	2.4	40.0	6.3	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		11.3			7.4	52.4		45.0
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time (g_s), s		6.8			3.4	8.2		51.6
Green Extension Time (g_e), s		0.3			0.0	2.2		0.0
Phase Call Probability		0.89			0.48	1.00		1.00
Max Out Probability		0.00			0.00	0.00		1.00

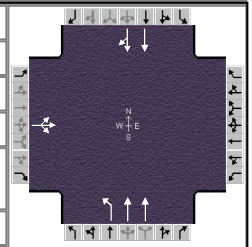
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		126					37	946			663	660
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1646					1619	1714			1800	1792
Queue Service Time (g_s), s		4.8					1.4	6.2			49.6	13.8
Cycle Queue Clearance Time (g_c), s		4.8					1.4	6.2			49.6	13.8
Capacity *(c)*, veh/h		162					61	2551			1131	1126
Volume-to-Capacity Ratio *(X)*		0.778					0.604	0.371			0.586	0.587
Available Capacity (c_a), veh/h		1034					763	2551			1131	1126
Back of Queue *(Q)*, veh/ln (50th percentile)		2.0					0.6	0.5			3.1	3.1
Overflow Queue (Q_3), veh/ln		0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh		28.0					30.2	2.9			7.0	7.0
Incremental Delay (d_2), s/veh		3.1					3.6	0.0			0.5	0.5
Initial Queue Delay (d_3), s/veh		0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh		31.1					33.8	2.9			7.5	7.5
Level of Service (LOS)		C					C	A			A	A
Approach Delay, s/veh / LOS	31.1	C		0.0			4.1	A		7.5	A	
Intersection Delay, s/veh / LOS	7.3						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.8	A	2.0	B
Bicycle LOS Score / LOS	1.3	A			1.9	A	2.2	B

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HCS 2010 Signalized Intersection Results Summary

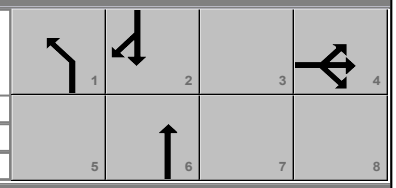
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Litton A	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Litton 2040 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	75	0	40				100	1390			1690	60

Signal Information			
Cycle, s	66.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	5.5	40.0	6.3	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		11.3			10.5	55.5		45.0
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time (g_s), s		6.8			6.3	14.2		92.2
Green Extension Time (g_e), s		0.2			0.1	3.9		0.0
Phase Call Probability		0.89			0.86	1.00		1.00
Max Out Probability		0.00			0.00	0.00		1.00

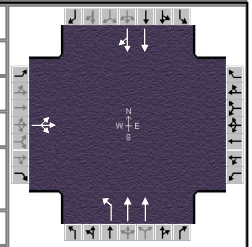
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		121					105	1463			922	920
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1644					1619	1714			1800	1778
Queue Service Time (g_s), s		4.8					4.3	12.2			90.2	28.8
Cycle Queue Clearance Time (g_c), s		4.8					4.3	12.2			90.2	28.8
Capacity *(c)*, veh/h		155					133	2590			1077	1064
Volume-to-Capacity Ratio *(X)*		0.779					0.789	0.565			0.856	0.864
Available Capacity (c_a), veh/h		984					727	2590			1077	1064
Back of Queue *(Q)*, veh/ln (50th percentile)		2.0					1.6	1.0			9.1	9.3
Overflow Queue (Q_3), veh/ln		0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh		29.6					30.1	3.5			11.0	11.2
Incremental Delay (d_2), s/veh		3.3					4.0	0.2			7.1	7.8
Initial Queue Delay (d_3), s/veh		0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh		32.8					34.1	3.7			18.1	19.0
Level of Service (LOS)		C					C	A			B	B
Approach Delay, s/veh / LOS	32.8	C		0.0			5.7	A		18.5	B	
Intersection Delay, s/veh / LOS	13.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.8	A	2.1	B
Bicycle LOS Score / LOS	1.3	A			2.4	B	2.7	B

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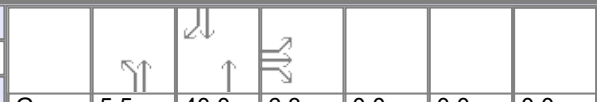
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Litton A	Analysis Year	2040 With Project Revised	Analysis Period	1> 7:00
File Name	La Cadena Litton 2040 wProj PM Rev.xus				
Project Description	Colton Warehouses - La Cadena				

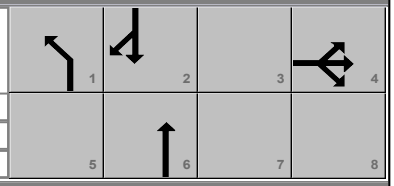


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	75	0	40				100	1407			1726	60

Signal Information			
Cycle, s	66.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	5.5	40.0	6.3	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		11.3			10.5	55.5		45.0
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time (g_s), s		6.8			6.3	14.4		96.0
Green Extension Time (g_e), s		0.2			0.1	4.0		0.0
Phase Call Probability		0.89			0.86	1.00		1.00
Max Out Probability		0.00			0.00	0.00		1.00

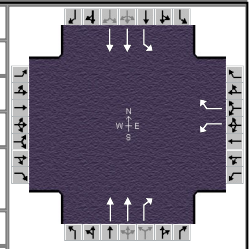
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		121					105	1481			941	939
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1644					1619	1714			1800	1778
Queue Service Time (g_s), s		4.8					4.3	12.4			94.0	30.0
Cycle Queue Clearance Time (g_c), s		4.8					4.3	12.4			94.0	30.0
Capacity *(c)*, veh/h		155					133	2590			1077	1065
Volume-to-Capacity Ratio *(X)*		0.779					0.789	0.572			0.873	0.882
Available Capacity (c_a), veh/h		984					727	2590			1077	1065
Back of Queue *(Q)*, veh/ln (50th percentile)		2.0					1.6	1.1			9.8	10.1
Overflow Queue (Q_3), veh/ln		0.0					0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh		29.6					30.1	3.5			11.3	11.4
Incremental Delay (d_2), s/veh		3.3					4.0	0.2			8.5	9.5
Initial Queue Delay (d_3), s/veh		0.0					0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh		32.8					34.1	3.7			19.8	20.9
Level of Service (LOS)		C					C	A			B	C
Approach Delay, s/veh / LOS	32.8	C		0.0			5.7	A		20.3	C	
Intersection Delay, s/veh / LOS	14.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.7	B	1.8	A	2.1	B
Bicycle LOS Score / LOS	1.3	A			2.4	B	2.7	B

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Barton	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Barton 2040 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				250		263		667	167	201	1124	

Signal Information			
Cycle, s	46.6	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	7.8	12.8	11.1	0.0	0.0	0.0	1	2	3	4	
Yellow	3.0	3.0	4.0	0.0	0.0	0.0	5	6	7	8	
Red	2.0	2.0	1.0	0.0	0.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		6	5	2
Case Number				9.0		7.3	2.0	4.0
Phase Duration, s				16.1		17.8	12.8	30.5
Change Period, ($Y+R_c$), s				5.0		5.0	5.0	5.0
Max Allow Headway (*MAH*), s				3.2		3.0	3.0	2.9
Queue Clearance Time (g_s), s				9.9		10.8	7.9	13.1
Green Extension Time (g_e), s				1.1		1.9	0.3	2.9
Phase Call Probability				1.00		1.00	0.94	1.00
Max Out Probability				0.00		0.00	0.00	0.00

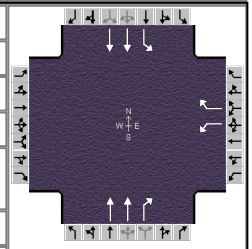
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		6	16	5	2	
Adjusted Flow Rate (*v*), veh/h				263		277		702	176	212	1183	
Adjusted Saturation Flow Rate (*s*), veh/h/ln				1619		1525		1714	1525	1619	1714	
Queue Service Time (g_s), s				6.9		7.9		8.8	4.4	5.9	11.1	
Cycle Queue Clearance Time (g_c), s				6.9		7.9		8.8	4.4	5.9	11.1	
Capacity (*c*), veh/h				385		363		940	419	271	1880	
Volume-to-Capacity Ratio (*X*)				0.683		0.763		0.747	0.420	0.781	0.629	
Available Capacity (c_a), veh/h				1729		1629		2928	1303	1383	2928	
Back of Queue (*Q*), veh/ln (50th percentile)				2.1		2.3		2.5	1.1	1.9	1.9	
Overflow Queue (Q_3), veh/ln				0.0		0.0		0.0	0.0	0.0	0.0	
Queue Storage Ratio (*RQ*) (50th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh				16.2		16.6		15.5	13.9	18.7	7.3	
Incremental Delay (d_2), s/veh				0.8		1.3		0.5	0.2	1.9	0.1	
Initial Queue Delay (d_3), s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh				17.0		17.9		16.0	14.2	20.6	7.4	
Level of Service (LOS)				B		B		B	B	C	A	
Approach Delay, s/veh / LOS	0.0			17.5		B	15.6		B	9.4		A
Intersection Delay, s/veh / LOS	12.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.3	B	0.7	A
Bicycle LOS Score / LOS				F	1.9	A	2.3	B

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HCS 2010 Signalized Intersection Results Summary

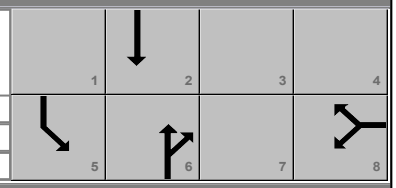
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Barton	Analysis Year	2040 With Project Revised	Analysis Period	1> 7:00
File Name	La Cadena Barton 2040 wProj AM Rev.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				250		281		676	167	209	1128	

Signal Information			
Cycle, s	48.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	8.4	13.4	12.1	0.0	0.0	0.0
Yellow	3.0	3.0	4.0	0.0	0.0	0.0
Red	2.0	2.0	1.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		6	5	2
Case Number				9.0		7.3	2.0	4.0
Phase Duration, s				17.1		18.4	13.4	31.8
Change Period, $(Y+R_c)$, s				5.0		5.0	5.0	5.0
Max Allow Headway *(MAH)*, s				3.2		2.9	3.0	2.9
Queue Clearance Time (g_s), s				10.9		11.4	8.4	13.8
Green Extension Time (g_e), s				1.1		1.9	0.4	2.9
Phase Call Probability				1.00		1.00	0.95	1.00
Max Out Probability				0.00		0.00	0.00	0.00

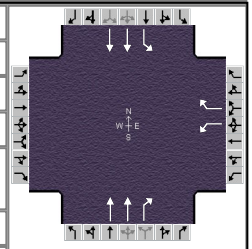
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		6	16	5	2	
Adjusted Flow Rate *(v)*, veh/h				263		296		712	176	220	1187	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln				1619		1525		1714	1525	1619	1714	
Queue Service Time (g_s), s				7.2		8.9		9.4	4.6	6.4	11.8	
Cycle Queue Clearance Time (g_c), s				7.2		8.9		9.4	4.6	6.4	11.8	
Capacity *(c)*, veh/h				402		378		940	418	280	1880	
Volume-to-Capacity Ratio *(X)*				0.655		0.782		0.757	0.420	0.787	0.632	
Available Capacity (c_a), veh/h				1646		1551		2787	1240	1317	2787	
Back of Queue *(Q)*, veh/ln (50th percentile)				2.2		2.6		2.8	1.2	2.1	2.2	
Overflow Queue (Q_3), veh/ln				0.0		0.0		0.0	0.0	0.0	0.0	
Queue Storage Ratio *(RQ)* (50th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh				16.6		17.2		16.3	14.6	19.5	7.7	
Incremental Delay (d_2), s/veh				0.7		1.4		0.5	0.3	1.9	0.1	
Initial Queue Delay (d_3), s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay *(d)*, s/veh				17.3		18.6		16.8	14.9	21.4	7.8	
Level of Service (LOS)				B		B		B	B	C	A	
Approach Delay, s/veh / LOS	0.0			18.0		B	16.4		B	9.9		A
Intersection Delay, s/veh / LOS	13.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.3	B	0.7	A
Bicycle LOS Score / LOS				F	1.9	A	2.3	B

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HCS 2010 Signalized Intersection Results Summary

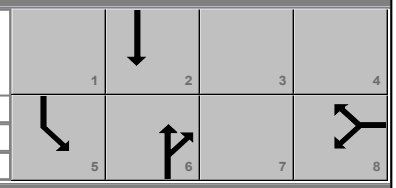
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Barton	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Barton 2040 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				247		310		1380	537	345	1038	

Signal Information			
Cycle, s	155.4	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	36.6	68.4	35.4	0.0	0.0	0.0
Yellow	3.0	3.0	4.0	0.0	0.0	0.0
Red	2.0	2.0	1.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		6	5	2
Case Number				9.0		7.3	2.0	4.0
Phase Duration, s				40.4		73.4	41.6	115.0
Change Period, $(Y+R_c)$, s				5.0		5.0	5.0	5.0
Max Allow Headway *(MAH)*, s				3.2		3.0	3.0	2.9
Queue Clearance Time (g_s), s				34.7		66.1	36.4	23.3
Green Extension Time (g_e), s				0.7		2.3	0.3	2.5
Phase Call Probability				1.00		1.00	1.00	1.00
Max Out Probability				0.32		0.86	0.60	0.00

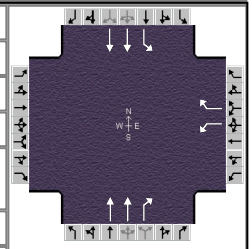
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		6	16	5	2	
Adjusted Flow Rate *(v)*, veh/h				260		326		1453	565	363	1093	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln				1619		1525		1714	1525	1619	1714	
Queue Service Time (g_s), s				23.0		32.7		64.1	51.3	34.4	21.3	
Cycle Queue Clearance Time (g_c), s				23.0		32.7		64.1	51.3	34.4	21.3	
Capacity *(c)*, veh/h				369		348		1507	671	382	2426	
Volume-to-Capacity Ratio *(X)*				0.705		0.939		0.964	0.842	0.951	0.450	
Available Capacity (c_a), veh/h				417		392		1543	687	417	2426	
Back of Queue *(Q)*, veh/ln (50th percentile)				9.6		16.2		30.1	20.1	18.5	7.1	
Overflow Queue (Q_3), veh/ln				0.0		0.0		0.0	0.0	0.0	0.0	
Queue Storage Ratio *(RQ)* (50th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh				55.2		59.0		42.3	38.8	58.5	9.7	
Incremental Delay (d_2), s/veh				3.6		39.8		21.1	9.4	45.4	0.0	
Initial Queue Delay (d_3), s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay *(d)*, s/veh				58.8		98.8		63.4	48.1	103.9	9.8	
Level of Service (LOS)				E		F		E	D	F	A	
Approach Delay, s/veh / LOS	0.0			81.1		F	59.1		E	33.3		C
Intersection Delay, s/veh / LOS	53.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.9	C	2.3	B	0.7	A
Bicycle LOS Score / LOS				F	2.8	C	2.3	B

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HCS 2010 Signalized Intersection Results Summary

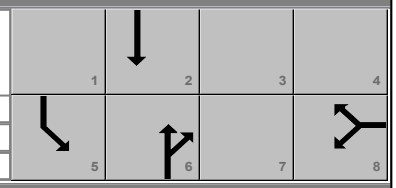
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Barton	Analysis Year	2040 With Project Revised	Analysis Period	1> 7:00
File Name	La Cadena Barton 2040 wProj PM Rev.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h				247		317		1384	537	371	1048	

Signal Information			
Cycle, s	168.9	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	40.0	75.2	38.7	0.0	0.0	0.0
Yellow	3.0	3.0	4.0	0.0	0.0	0.0
Red	2.0	2.0	1.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				8		6	5	2
Case Number				9.0		7.3	2.0	4.0
Phase Duration, s				43.7		80.2	45.0	125.2
Change Period, $(Y+R_c)$, s				5.0		5.0	5.0	5.0
Max Allow Headway *(MAH)*, s				3.2		3.0	3.0	2.9
Queue Clearance Time (g_s), s				38.5		71.3	42.0	25.1
Green Extension Time (g_e), s				0.3		3.9	0.0	2.4
Phase Call Probability				1.00		1.00	1.00	1.00
Max Out Probability				1.00		0.42	1.00	0.01

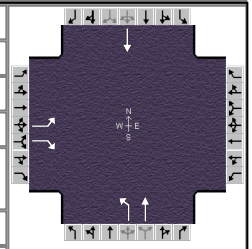
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3		18		6	16	5	2	
Adjusted Flow Rate *(v)*, veh/h				260		334		1457	565	391	1103	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln				1619		1525		1714	1525	1619	1714	
Queue Service Time (g_s), s				24.9		36.5		69.3	55.2	40.0	23.1	
Cycle Queue Clearance Time (g_c), s				24.9		36.5		69.3	55.2	40.0	23.1	
Capacity *(c)*, veh/h				371		350		1526	679	383	2438	
Volume-to-Capacity Ratio *(X)*				0.700		0.954		0.955	0.832	1.019	0.452	
Available Capacity (c_a), veh/h				383		361		1623	722	383	2438	
Back of Queue *(Q)*, veh/ln (50th percentile)				10.6		19.2		31.7	21.4	27.6	8.0	
Overflow Queue (Q_3), veh/ln				0.0		0.0		0.0	0.0	0.0	0.0	
Queue Storage Ratio *(RQ)* (50th percentile)				0.00		0.00		0.00	0.00	0.00	0.00	
Uniform Delay (d_1), s/veh				59.8		64.2		45.2	41.3	64.5	10.4	
Incremental Delay (d_2), s/veh				4.6		54.3		16.7	7.7	108.0	0.0	
Initial Queue Delay (d_3), s/veh				0.0		0.0		0.0	0.0	0.0	0.0	
Control Delay *(d)*, s/veh				64.4		118.5		61.9	49.0	172.5	10.4	
Level of Service (LOS)				E		F		E	D	F	B	
Approach Delay, s/veh / LOS	0.0			94.8		F	58.3		E	52.8		D
Intersection Delay, s/veh / LOS	61.6						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.9	C	2.3	B	0.7	A
Bicycle LOS Score / LOS				F	2.8	C	2.4	B

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HCS 2010 Signalized Intersection Results Summary

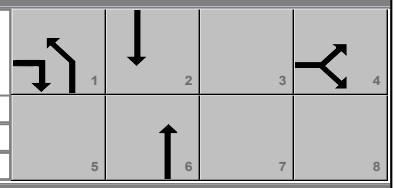
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Iowa A	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Iowa 2040 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	110		100				110	858			230	

Signal Information			
Cycle, s	32.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	3.3	10.1	4.3	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	0.0	0.0	0.0
Red	2.0	2.0	2.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		9.3			8.3	23.4		15.1
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		4.2			4.3	16.5		5.5
Green Extension Time *(g_e)*, s		0.4			0.2	1.8		0.4
Phase Call Probability		0.87			0.65	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.00

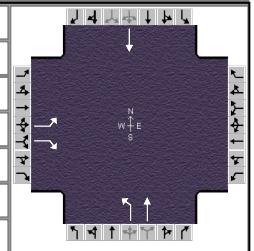
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	
Adjusted Flow Rate *(v)*, veh/h	116		105				116	903			242	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1800			1800	
Queue Service Time *(g_s)*, s	2.2		1.9				2.3	14.5			3.5	
Cycle Queue Clearance Time *(g_c)*, s	2.2		1.9				2.3	14.5			3.5	
Capacity *(c)*, veh/h	215		356				163	1012			556	
Volume-to-Capacity Ratio *(X)*	0.538		0.295				0.711	0.893			0.435	
Available Capacity *(c_a)*, veh/h	1975		2014				1481	2195			2195	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.6		0.4				0.7	0.7			0.7	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	13.3		10.3				14.3	6.3			9.0	
Incremental Delay *(d_2)*, s/veh	0.8		0.2				2.2	1.2			0.2	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	14.1		10.5				16.5	7.5			9.2	
Level of Service (LOS)	B		B				B	A			A	
Approach Delay, s/veh / LOS	12.4	B		0.0			8.5	A		9.2	A	
Intersection Delay, s/veh / LOS	9.2						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.1	B	0.6	A	2.2	B
Bicycle LOS Score / LOS		F			2.8	C	1.5	A

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HCS 2010 Signalized Intersection Results Summary

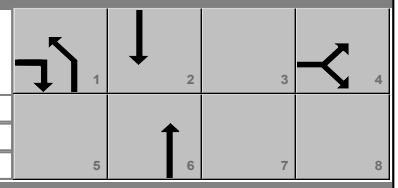
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Iowa A	Analysis Year	2040 With Project	Analysis Period	1> 7:00
File Name	La Cadena Iowa 2040 wProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	110		100				110	867			230	

Signal Information			
Cycle, s	33.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	3.3	10.4	4.4	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		9.4			8.3	23.7		15.4
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		4.2			4.3	16.8		5.5
Green Extension Time *(g_e)*, s		0.4			0.2	1.9		0.4
Phase Call Probability		0.87			0.66	1.00		1.00
Max Out Probability		0.00			0.00	0.00		0.00

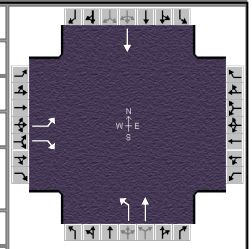
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	
Adjusted Flow Rate *(v)*, veh/h	116		105				116	913			242	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1800			1800	
Queue Service Time *(g_s)*, s	2.2		1.9				2.3	14.8			3.5	
Cycle Queue Clearance Time *(g_c)*, s	2.2		1.9				2.3	14.8			3.5	
Capacity *(c)*, veh/h	214		354				162	1020			568	
Volume-to-Capacity Ratio *(X)*	0.542		0.297				0.715	0.895			0.426	
Available Capacity *(c_a)*, veh/h	1952		1992				1464	2170			2170	
Back of Queue *(Q)*, veh/ln (50th percentile)	0.6		0.4				0.7	0.7			0.7	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	13.5		10.5				14.5	6.3			9.0	
Incremental Delay *(d_2)*, s/veh	0.8		0.2				2.2	1.2			0.2	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	14.3		10.7				16.7	7.5			9.2	
Level of Service (LOS)	B		B				B	A			A	
Approach Delay, s/veh / LOS	12.6		B	0.0			8.6		A	9.2		A
Intersection Delay, s/veh / LOS	9.2						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.1	B	0.6	A	2.2	B
Bicycle LOS Score / LOS		F			2.8	C	1.5	A

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HCS 2010 Signalized Intersection Results Summary

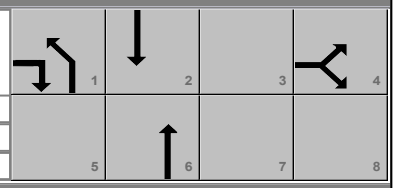
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Iowa A	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	La Cadena Iowa 2040 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	400		100				100	1488			323	

Signal Information			
Cycle, s	145.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	11.3	83.7	35.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	0.0	0.0	0.0
Red	2.0	2.0	2.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		40.0			16.3	105.0		88.7
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.1			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		37.0			11.3	102.0		16.3
Green Extension Time *(g_e)*, s		0.0			0.1	0.0		0.5
Phase Call Probability		1.00			0.99	1.00		1.00
Max Out Probability		1.00			0.00	1.00		0.00

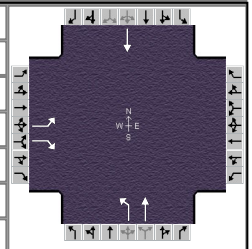
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	
Adjusted Flow Rate *(v)*, veh/h	421		105				105	1566			340	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1800			1800	
Queue Service Time *(g_s)*, s	35.0		7.3				9.3	100.0			14.3	
Cycle Queue Clearance Time *(g_c)*, s	35.0		7.3				9.3	100.0			14.3	
Capacity *(c)*, veh/h	391		487				126	1241			1039	
Volume-to-Capacity Ratio *(X)*	1.077		0.216				0.837	1.262			0.327	
Available Capacity *(c_a)*, veh/h	391		487				335	1241			1039	
Back of Queue *(Q)*, veh/ln (50th percentile)	33.4		2.7				4.0	191.6			5.6	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	55.0		36.1				66.0	22.5			16.0	
Incremental Delay *(d_2)*, s/veh	179.6		0.1				5.8	454.5			0.1	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	234.6		36.2				71.7	477.0			16.0	
Level of Service (LOS)	F		D				E	F			B	
Approach Delay, s/veh / LOS	194.9	F		0.0			451.5	F		16.0	B	
Intersection Delay, s/veh / LOS	339.9						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	0.7	A	2.3	B
Bicycle LOS Score / LOS		F			3.9	D	1.7	A

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HCS 2010 Signalized Intersection Results Summary

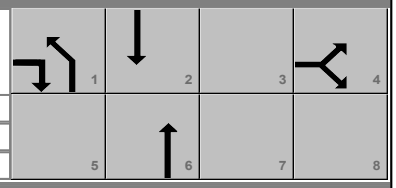
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Iowa A	Analysis Year	2040 With Project	Analysis Period	1> 7:00
File Name	La Cadena Iowa 2040 wProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	400		100				100	1492			323	

Signal Information			
Cycle, s	145.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	11.3	83.7	35.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	0.0	0.0	0.0
Red	2.0	2.0	2.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		40.0			16.3	105.0		88.7
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.1			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		37.0			11.3	102.0		16.3
Green Extension Time *(g_e)*, s		0.0			0.1	0.0		0.5
Phase Call Probability		1.00			0.99	1.00		1.00
Max Out Probability		1.00			0.00	1.00		0.00

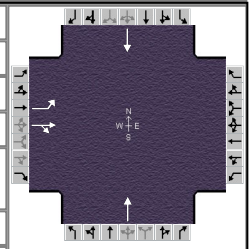
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	
Adjusted Flow Rate *(v)*, veh/h	421		105				105	1571			340	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1800			1800	
Queue Service Time *(g_s)*, s	35.0		7.3				9.3	100.0			14.3	
Cycle Queue Clearance Time *(g_c)*, s	35.0		7.3				9.3	100.0			14.3	
Capacity *(c)*, veh/h	391		487				126	1241			1039	
Volume-to-Capacity Ratio *(X)*	1.077		0.216				0.837	1.265			0.327	
Available Capacity *(c_a)*, veh/h	391		487				335	1241			1039	
Back of Queue *(Q)*, veh/ln (50th percentile)	33.4		2.7				4.0	193.6			5.6	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	55.0		36.1				66.0	22.5			16.0	
Incremental Delay *(d_2)*, s/veh	179.6		0.1				5.8	460.2			0.1	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	234.6		36.2				71.7	482.7			16.0	
Level of Service (LOS)	F		D				E	F			B	
Approach Delay, s/veh / LOS	194.9		F	0.0			456.9		F	16.0		B
Intersection Delay, s/veh / LOS	343.7						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	0.7	A	2.3	B
Bicycle LOS Score / LOS		F			3.9	D	1.7	A

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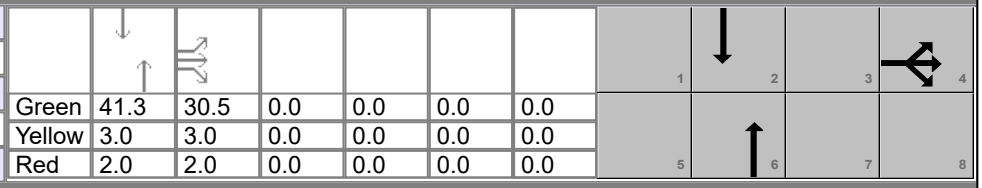
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 SB O	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	Iowa I-215 SB OffRamp 2040 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	150	0	560					821			230	

Signal Information			
Cycle, s	81.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	41.3	30.5	0.0	0.0	0.0	0.0						
Yellow	3.0	3.0	0.0	0.0	0.0	0.0						
Red	2.0	2.0	0.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				6		2
Case Number		10.0				8.0		8.0
Phase Duration, s		35.5				46.3		46.3
Change Period, *(Y+Rc)*, s		5.0				5.0		5.0
Max Allow Headway *(MAH)*, s		3.3				3.0		3.0
Queue Clearance Time *(gs)*, s		29.1				39.5		8.3
Green Extension Time *(ge)*, s		1.3				1.7		0.4
Phase Call Probability		1.00				1.00		1.00
Max Out Probability		0.04				0.07		0.00

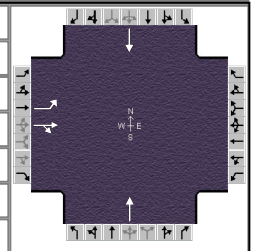
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14					6			2	
Adjusted Flow Rate *(v)*, veh/h	158	526						864			242	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525						1800			1800	
Queue Service Time *(gs)*, s	5.6	27.1						37.5			6.3	
Cycle Queue Clearance Time *(gc)*, s	5.6	27.1						37.5			6.3	
Capacity *(c)*, veh/h	604	569						909			909	
Volume-to-Capacity Ratio *(X)*	0.261	0.925						0.951			0.266	
Available Capacity *(ca)*, veh/h	789	744						1097			1097	
Back of Queue *(Q)*, veh/ln (50th percentile)	1.9	11.1						17.3			2.1	
Overflow Queue *(Q3)*, veh/ln	0.0	0.0						0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00						0.00			0.00	
Uniform Delay *(d1)*, s/veh	17.9	24.6						19.3			11.6	
Incremental Delay *(d2)*, s/veh	0.1	16.0						19.0			0.1	
Initial Queue Delay *(d3)*, s/veh	0.0	0.0						0.0			0.0	
Control Delay *(d)*, s/veh	18.0	40.6						38.3			11.7	
Level of Service (LOS)	B	D						D			B	
Approach Delay, s/veh / LOS	35.4	D		0.0			38.3	D		11.7	B	
Intersection Delay, s/veh / LOS	33.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	1.9	A	1.7	A
Bicycle LOS Score / LOS	2.3	B			2.6	B	1.5	A

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 SB O	Analysis Year	2040 With Project	Analysis Period	1> 7:00
File Name	Iowa I-215 SB OffRamp 2040 wProj AM.xus				
Project Description	Colton Warehouses - La Cadena				

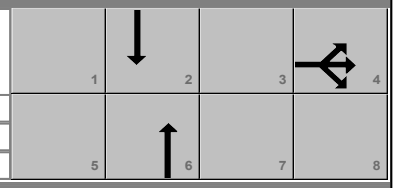


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	150	0	560					830			230	

Signal Information			
Cycle, s	83.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	42.6	31.2	0.0	0.0	0.0	0.0	
Yellow	3.0	3.0	0.0	0.0	0.0	0.0	
Red	2.0	2.0	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				6		2
Case Number		10.0				8.0		8.0
Phase Duration, s		36.2				47.6		47.6
Change Period, *(Y+Rc)*, s		5.0				5.0		5.0
Max Allow Headway *(MAH)*, s		3.3				3.0		3.0
Queue Clearance Time *(g_s)*, s		29.8				40.9		8.4
Green Extension Time *(g_e)*, s		1.3				1.6		0.4
Phase Call Probability		1.00				1.00		1.00
Max Out Probability		0.05				0.11		0.00

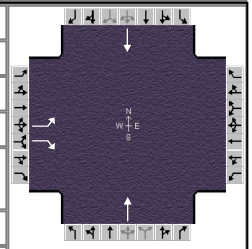
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14					6			2	
Adjusted Flow Rate *(v)*, veh/h	158	526						874			242	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619	1525						1800			1800	
Queue Service Time *(g_s)*, s	5.7	27.8						38.9			6.4	
Cycle Queue Clearance Time *(g_c)*, s	5.7	27.8						38.9			6.4	
Capacity *(c)*, veh/h	602	568						916			916	
Volume-to-Capacity Ratio *(X)*	0.262	0.927						0.954			0.264	
Available Capacity *(c_a)*, veh/h	771	727						1072			1072	
Back of Queue *(Q)*, veh/ln (50th percentile)	2.0	11.7						18.4			2.2	
Overflow Queue *(Q_3)*, veh/ln	0.0	0.0						0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00	0.00						0.00			0.00	
Uniform Delay *(d_1)*, s/veh	18.3	25.3						19.7			11.7	
Incremental Delay *(d_2)*, s/veh	0.1	17.5						21.1			0.1	
Initial Queue Delay *(d_3)*, s/veh	0.0	0.0						0.0			0.0	
Control Delay *(d)*, s/veh	18.4	42.8						40.8			11.8	
Level of Service (LOS)	B	D						D			B	
Approach Delay, s/veh / LOS	37.2	D		0.0			40.8	D		11.8	B	
Intersection Delay, s/veh / LOS	35.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.1	B	2.1	B	1.9	A	1.8	A
Bicycle LOS Score / LOS	2.3	B			2.6	B	1.5	A

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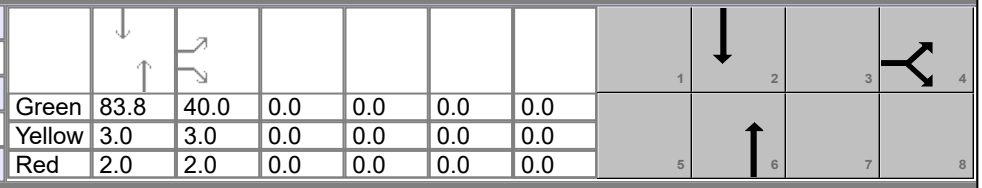
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 SB O	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	Iowa I-215 SB OffRamp 2040 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	454		409					1050			423	

Signal Information			
Cycle, s	133.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	83.8	40.0	0.0	0.0	0.0	0.0		
Yellow	3.0	3.0	0.0	0.0	0.0	0.0		
Red	2.0	2.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				6		2
Case Number		9.0				8.0		8.0
Phase Duration, s		45.0				88.8		88.8
Change Period, *(Y+Rc)*, s		5.0				5.0		5.0
Max Allow Headway *(MAH)*, s		3.3				3.0		3.0
Queue Clearance Time *(gs)*, s		41.3				81.5		18.4
Green Extension Time *(ge)*, s		0.0				2.2		0.8
Phase Call Probability		1.00				1.00		1.00
Max Out Probability		1.00				0.24		0.00

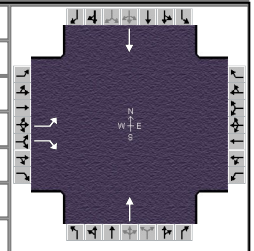
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14					6			2	
Adjusted Flow Rate *(v)*, veh/h	478		431					1105			445	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525					1800			1800	
Queue Service Time *(gs)*, s	39.3		36.9					79.5			16.4	
Cycle Queue Clearance Time *(gc)*, s	39.3		36.9					79.5			16.4	
Capacity *(c)*, veh/h	484		456					1127			1127	
Volume-to-Capacity Ratio *(X)*	0.987		0.944					0.980			0.395	
Available Capacity *(ca)*, veh/h	484		456					1211			1127	
Back of Queue *(Q)*, veh/ln (50th percentile)	24.4		18.8					39.5			6.0	
Overflow Queue *(Q3)*, veh/ln	0.0		0.0					0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00					0.00			0.00	
Uniform Delay *(d1)*, s/veh	46.6		45.8					24.2			12.4	
Incremental Delay *(d2)*, s/veh	68.1		41.6					33.6			0.1	
Initial Queue Delay *(d3)*, s/veh	0.0		0.0					0.0			0.0	
Control Delay *(d)*, s/veh	114.7		87.4					57.8			12.5	
Level of Service (LOS)	F		F					E			B	
Approach Delay, s/veh / LOS	101.8		F	0.0			57.8		E	12.5		B
Intersection Delay, s/veh / LOS	65.8						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.2	B	2.2	B	0.7	A	1.7	A
Bicycle LOS Score / LOS		F			3.0	C	1.9	A

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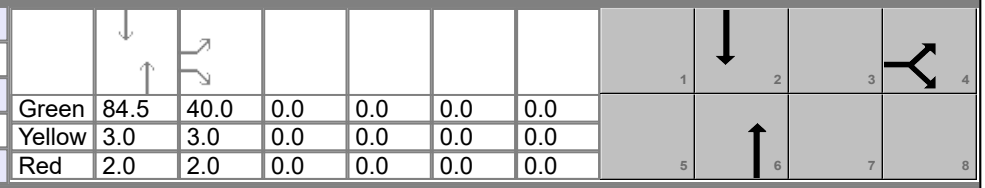
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 SB O	Analysis Year	2040 With Project	Analysis Period	1> 7:00
File Name	Iowa I-215 SB OffRamp 2040 wProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	454		409					1054			423	

Signal Information			
Cycle, s	134.5	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	84.5	40.0	0.0	0.0	0.0	0.0		
Yellow	3.0	3.0	0.0	0.0	0.0	0.0		
Red	2.0	2.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4				6		2
Case Number		9.0				8.0		8.0
Phase Duration, s		45.0				89.5		89.5
Change Period, *(Y+Rc)*, s		5.0				5.0		5.0
Max Allow Headway *(MAH)*, s		3.3				3.0		3.0
Queue Clearance Time *(gs)*, s		41.6				82.3		18.4
Green Extension Time *(ge)*, s		0.0				2.1		0.8
Phase Call Probability		1.00				1.00		1.00
Max Out Probability		1.00				0.30		0.00

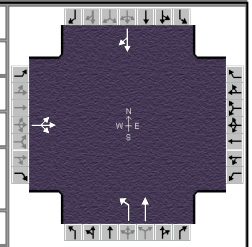
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14					6			2	
Adjusted Flow Rate *(v)*, veh/h	478		431					1109			445	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525					1800			1800	
Queue Service Time *(gs)*, s	39.6		37.1					80.3			16.4	
Cycle Queue Clearance Time *(gc)*, s	39.6		37.1					80.3			16.4	
Capacity *(c)*, veh/h	482		454					1131			1131	
Volume-to-Capacity Ratio *(X)*	0.992		0.949					0.981			0.394	
Available Capacity *(ca)*, veh/h	482		454					1205			1131	
Back of Queue *(Q)*, veh/ln (50th percentile)	25.1		19.2					40.0			6.0	
Overflow Queue *(Q3)*, veh/ln	0.0		0.0					0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00					0.00			0.00	
Uniform Delay *(d1)*, s/veh	47.1		46.2					24.2			12.4	
Incremental Delay *(d2)*, s/veh	72.8		44.3					34.3			0.1	
Initial Queue Delay *(d3)*, s/veh	0.0		0.0					0.0			0.0	
Control Delay *(d)*, s/veh	119.9		90.5					58.6			12.4	
Level of Service (LOS)	F		F					E			B	
Approach Delay, s/veh / LOS	105.9	F		0.0			58.6	E		12.4	B	
Intersection Delay, s/veh / LOS	67.7						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.2	B	2.2	B	0.7	A	1.7	A
Bicycle LOS Score / LOS		F			3.0	C	1.9	A

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HCS 2010 Signalized Intersection Results Summary

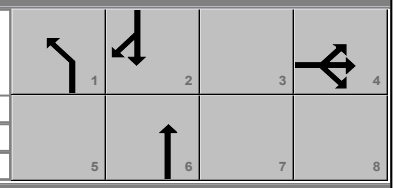
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps 2040 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	52	0	738				182	188			17	639

Signal Information			
Cycle, s	155.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	20.3	60.0	60.0	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		65.0			25.3	90.3		65.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time *(g_s)*, s		62.0			20.1	10.6		62.0
Green Extension Time *(g_e)*, s		0.0			0.2	0.3		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			0.00	0.00		1.00

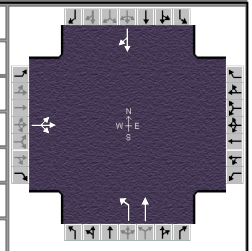
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		832					192	198			691	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1451					1619	1800			1531	
Queue Service Time *(g_s)*, s		60.0					18.1	8.6			60.0	
Cycle Queue Clearance Time *(g_c)*, s		60.0					18.1	8.6			60.0	
Capacity *(c)*, veh/h		561					212	989			592	
Volume-to-Capacity Ratio *(X)*		1.483					0.904	0.200			1.167	
Available Capacity *(c_a)*, veh/h		561					313	989			592	
Back of Queue *(Q)*, veh/ln (50th percentile)		151.0					8.5	3.5			72.1	
Overflow Queue *(Q_3)*, veh/ln		0.0					0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh		47.7					66.5	17.7			47.7	
Incremental Delay *(d_2)*, s/veh		836.4					20.5	0.0			305.8	
Initial Queue Delay *(d_3)*, s/veh		0.0					0.0	0.0			0.0	
Control Delay *(d)*, s/veh		884.1					87.0	17.8			353.5	
Level of Service (LOS)		F					F	B			F	
Approach Delay, s/veh / LOS	884.1	F		0.0			51.8	D		353.5	F	
Intersection Delay, s/veh / LOS	522.8						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	1.9	A	2.1	B
Bicycle LOS Score / LOS	2.5	B			1.8	A	2.3	B

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2040 With Project	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps 2040 wProj AM.xus				
Project Description	Colton Warehouses - La Cadena				

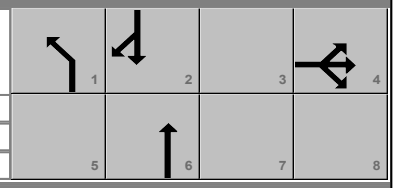


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	52	0	738				182	188			17	648

Signal Information			
Cycle, s	155.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	20.3	60.0	60.0	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		65.0			25.3	90.3		65.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time *(g_s)*, s		62.0			20.1	10.6		62.0
Green Extension Time *(g_e)*, s		0.0			0.2	0.3		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			0.00	0.00		1.00

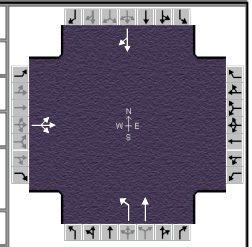
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		832					192	198			700	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1451					1619	1800			1531	
Queue Service Time *(g_s)*, s		60.0					18.1	8.6			60.0	
Cycle Queue Clearance Time *(g_c)*, s		60.0					18.1	8.6			60.0	
Capacity *(c)*, veh/h		561					212	989			592	
Volume-to-Capacity Ratio *(X)*		1.483					0.904	0.200			1.183	
Available Capacity *(c_a)*, veh/h		561					313	989			592	
Back of Queue *(Q)*, veh/ln (50th percentile)		151.0					8.5	3.5			76.4	
Overflow Queue *(Q_3)*, veh/ln		0.0					0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh		47.7					66.5	17.7			47.7	
Incremental Delay *(d_2)*, s/veh		836.4					20.5	0.0			332.0	
Initial Queue Delay *(d_3)*, s/veh		0.0					0.0	0.0			0.0	
Control Delay *(d)*, s/veh		884.1					87.0	17.8			379.7	
Level of Service (LOS)		F					F	B			F	
Approach Delay, s/veh / LOS	884.1	F		0.0			51.8	D		379.7	F	
Intersection Delay, s/veh / LOS	531.5						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	1.9	A	2.1	B
Bicycle LOS Score / LOS	2.5	B			1.8	A	2.3	B

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HCS 2010 Signalized Intersection Results Summary

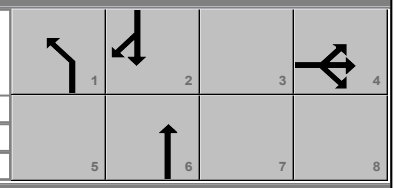
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps 2040 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	100	0	730				309	242			54	741

Signal Information			
Cycle, s	190.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	30.0	80.0	65.0	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		70.0			35.0	120.0		85.0
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time (g_s), s		67.0			32.0	14.4		82.0
Green Extension Time (g_e), s		0.0			0.0	0.3		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	0.00		1.00

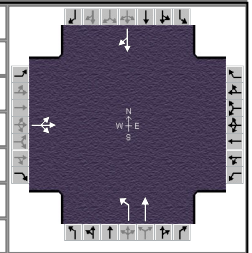
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		684					325	255			837	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1466					1619	1800			1541	
Queue Service Time (g_s), s		65.0					30.0	12.4			80.0	
Cycle Queue Clearance Time (g_c), s		65.0					30.0	12.4			80.0	
Capacity *(c)*, veh/h		501					256	1089			649	
Volume-to-Capacity Ratio *(X)*		1.365					1.272	0.234			1.289	
Available Capacity (c_a), veh/h		501					256	1089			649	
Back of Queue *(Q)*, veh/ln (50th percentile)		112.2					47.6	5.1			121.4	
Overflow Queue (Q_3), veh/ln		0.0					0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay (d_1), s/veh		62.5					80.0	17.2			55.0	
Incremental Delay (d_2), s/veh		636.8					496.6	0.0			506.9	
Initial Queue Delay (d_3), s/veh		0.0					0.0	0.0			0.0	
Control Delay *(d)*, s/veh		699.3					576.6	17.3			561.9	
Level of Service (LOS)		F					F	B			F	
Approach Delay, s/veh / LOS	699.3	F		0.0			330.9	F		561.9	F	
Intersection Delay, s/veh / LOS	542.9						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	1.9	A	2.4	B
Bicycle LOS Score / LOS	2.3	B			2.1	B	2.5	B

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2040 With Project	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps 2040 wProj PM.xus				
Project Description	Colton Warehouses - La Cadena				

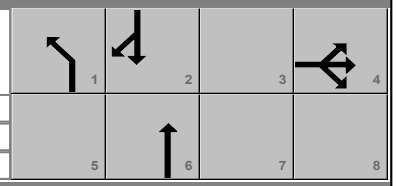


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	100	0	730				309	242			54	745

Signal Information			
Cycle, s	190.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	30.0	80.0	65.0	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		12.0			2.0	4.0		8.3
Phase Duration, s		70.0			35.0	120.0		85.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time *(g_s)*, s		67.0			32.0	14.4		82.0
Green Extension Time *(g_e)*, s		0.0			0.0	0.3		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	0.00		1.00

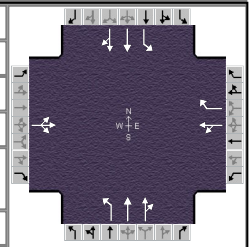
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h		684					325	255			841	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1466					1619	1800			1541	
Queue Service Time *(g_s)*, s		65.0					30.0	12.4			80.0	
Cycle Queue Clearance Time *(g_c)*, s		65.0					30.0	12.4			80.0	
Capacity *(c)*, veh/h		501					256	1089			649	
Volume-to-Capacity Ratio *(X)*		1.365					1.272	0.234			1.296	
Available Capacity *(c_a)*, veh/h		501					256	1089			649	
Back of Queue *(Q)*, veh/ln (50th percentile)		112.2					47.6	5.1			123.4	
Overflow Queue *(Q_3)*, veh/ln		0.0					0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)		0.00					0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh		62.5					80.0	17.2			55.0	
Incremental Delay *(d_2)*, s/veh		636.8					496.6	0.0			518.0	
Initial Queue Delay *(d_3)*, s/veh		0.0					0.0	0.0			0.0	
Control Delay *(d)*, s/veh		699.3					576.6	17.3			573.0	
Level of Service (LOS)		F					F	B			F	
Approach Delay, s/veh / LOS	699.3	F		0.0			330.9	F		573.0	F	
Intersection Delay, s/veh / LOS	547.3						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	1.9	A	2.4	B
Bicycle LOS Score / LOS	2.3	B			2.1	B	2.5	B

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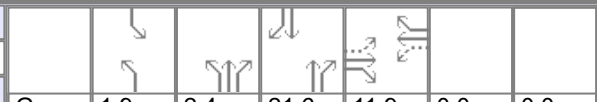
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	Rancho AguaMansa 2040 NoProj AM.xus				
Project Description	Colton Warehouses - La Cadena				

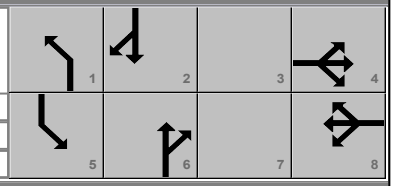


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	99	20	95	0	30	10	97	473	10	30	789	346

Signal Information			
Cycle, s	52.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	1.9	2.4	21.6	11.9	0.0	0.0
Yellow	3.0	0.0	3.0	3.0	0.0	0.0
Red	2.0	0.0	2.0	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		8.0		7.0	2.0	4.0	2.0	4.0
Phase Duration, s		16.9		16.9	9.3	29.0	6.9	26.6
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.1	3.0	2.9	3.0	3.0
Queue Clearance Time *(g_s)*, s		11.6		2.7	5.3	6.8	3.0	19.0
Green Extension Time *(g_e)*, s		0.4		0.1	0.1	0.8	0.0	2.4
Phase Call Probability		0.98		0.98	0.78	1.00	0.37	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.01

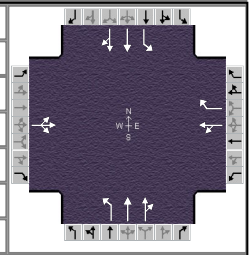
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		225			0	11	102	255	253	32	628	566
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1166			0	1525	1619	1800	1787	1619	1800	1613
Queue Service Time *(g_s)*, s		7.7			0.0	0.3	3.3	4.8	4.8	1.0	16.8	17.0
Cycle Queue Clearance Time *(g_c)*, s		9.6			0.0	0.3	3.3	4.8	4.8	1.0	16.8	17.0
Capacity *(c)*, veh/h		363				345	132	820	814	58	737	661
Volume-to-Capacity Ratio *(X)*		0.620			0.000	0.030	0.773	0.311	0.311	0.545	0.852	0.857
Available Capacity *(c_a)*, veh/h		927				1148	914	1355	1345	914	1355	1215
Back of Queue *(Q)*, veh/ln (50th percentile)		2.4				0.1	1.2	1.3	1.3	0.4	5.2	4.7
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		19.2				16.0	23.9	9.2	9.2	25.2	14.2	14.3
Incremental Delay *(d_2)*, s/veh		0.6			0.0	0.0	3.7	0.1	0.1	3.0	1.1	1.3
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		19.9				16.0	27.6	9.3	9.3	28.2	15.4	15.6
Level of Service (LOS)		B				B	C	A	A	C	B	B
Approach Delay, s/veh / LOS	19.9	B		16.2	B		12.3	B		15.8	B	
Intersection Delay, s/veh / LOS	15.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.2	B	2.1	B
Bicycle LOS Score / LOS	1.5	A	1.2	A	1.6	A	2.1	B

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HCS 2010 Signalized Intersection Results Summary

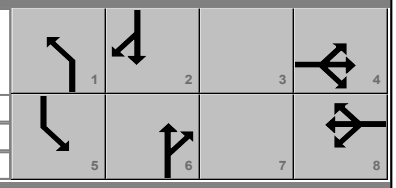
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	2040 With Project	Analysis Period	1> 7:00
File Name	Rancho AguaMansa 2040 wProj AM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	99	20	95	0	30	10	97	474	10	30	793	346

Signal Information			
Cycle, s	53.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	1.9	2.4	21.7	12.0	0.0	0.0						
Yellow	3.0	0.0	3.0	3.0	0.0	0.0						
Red	2.0	0.0	2.0	2.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		8.0		7.0	2.0	4.0	2.0	4.0
Phase Duration, s		17.0		17.0	9.3	29.1	6.9	26.7
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.1	3.0	2.9	3.0	3.0
Queue Clearance Time *(g_s)*, s		11.6		2.7	5.3	6.8	3.0	19.1
Green Extension Time *(g_e)*, s		0.4		0.1	0.1	0.8	0.0	2.5
Phase Call Probability		0.98		0.98	0.78	1.00	0.37	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.01

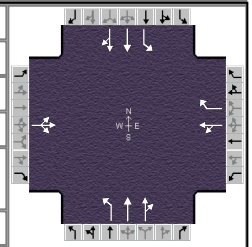
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		225			0	11	102	255	254	32	630	568
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1166			0	1525	1619	1800	1787	1619	1800	1614
Queue Service Time *(g_s)*, s		7.7			0.0	0.3	3.3	4.8	4.8	1.0	16.9	17.1
Cycle Queue Clearance Time *(g_c)*, s		9.6			0.0	0.3	3.3	4.8	4.8	1.0	16.9	17.1
Capacity *(c)*, veh/h		363				345	132	822	816	58	739	663
Volume-to-Capacity Ratio *(X)*		0.621			0.000	0.030	0.773	0.311	0.311	0.545	0.853	0.858
Available Capacity *(c_a)*, veh/h		924				1144	911	1350	1340	911	1350	1211
Back of Queue *(Q)*, veh/ln (50th percentile)		2.4				0.1	1.2	1.3	1.3	0.4	5.2	4.8
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		19.3				16.1	24.0	9.2	9.2	25.3	14.3	14.3
Incremental Delay *(d_2)*, s/veh		0.7			0.0	0.0	3.7	0.1	0.1	3.0	1.1	1.3
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		20.0				16.1	27.7	9.3	9.3	28.3	15.4	15.6
Level of Service (LOS)		B				B	C	A	A	C	B	B
Approach Delay, s/veh / LOS	20.0	B		16.2	B		12.3	B		15.8	B	
Intersection Delay, s/veh / LOS	15.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.8	C	2.2	B	2.1	B
Bicycle LOS Score / LOS	1.5	A	1.2	A	1.6	A	2.1	B

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HCS 2010 Signalized Intersection Results Summary

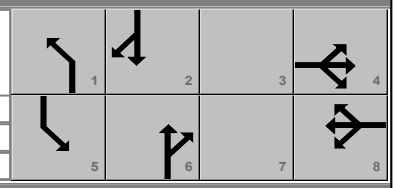
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	2040 Without Project	Analysis Period	1> 7:00
File Name	Rancho AguaMansa 2040 NoProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	497	85	274	5	20	20	112	870	0	10	804	184

Signal Information			
Cycle, s	201.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	2.2	9.4	60.0	100.0	4.6	0.0
Yellow	3.0	3.0	3.0	3.0	3.0	0.0
Red	2.0	2.0	2.0	2.0	2.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		11.0	2.0	4.0	2.0	4.0
Phase Duration, s		105.0		9.6	21.6	79.4	7.2	65.0
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.2	3.0	2.9	3.0	3.0
Queue Clearance Time *(gs)*, s		102.0		4.9	16.5	45.3	3.3	62.0
Green Extension Time *(ge)*, s		0.0		0.0	0.1	2.0	0.0	0.0
Phase Call Probability		1.00		0.93	1.00	1.00	0.44	1.00
Max Out Probability		1.00		0.00	0.00	0.00	0.00	1.00

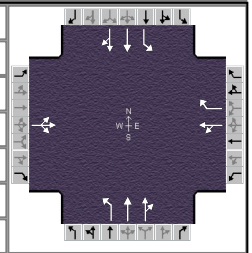
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		901			26	21	118	916	0	11	537	503
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1656			1782	1525	1619	1800	0	1619	1800	1683
Queue Service Time *(gs)*, s		100.0			2.9	2.8	14.5	43.3	0.0	1.3	60.0	60.0
Cycle Queue Clearance Time *(gc)*, s		100.0			2.9	2.8	14.5	43.3	0.0	1.3	60.0	60.0
Capacity *(c)*, veh/h		823			41	35	134	1331		18	537	502
Volume-to-Capacity Ratio *(X)*		1.095			0.639	0.598	0.882	0.688	0.000	0.588	1.001	1.002
Available Capacity *(ca)*, veh/h		823			177	152	241	1331		241	537	502
Back of Queue *(Q)*, veh/ln (50th percentile)		83.1			1.4	1.2	6.4	19.7		0.6	38.7	36.6
Overflow Queue *(Q3)*, veh/ln		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d1)*, s/veh		50.6			97.5	97.4	91.4	53.6		99.1	70.6	70.6
Incremental Delay *(d2)*, s/veh		184.3			6.2	6.0	7.8	1.3	0.0	11.3	77.0	79.8
Initial Queue Delay *(d3)*, s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		234.9			103.6	103.4	99.1	54.9		110.4	147.6	150.5
Level of Service (LOS)		F			F	F	F	D		F	F	F
Approach Delay, s/veh / LOS	234.9	F		103.5	F		59.9	E		148.6	F	
Intersection Delay, s/veh / LOS	143.3						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.9	C	2.3	B	2.1	B
Bicycle LOS Score / LOS	2.6	B	1.2	A	2.0	A	2.0	A

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HCS 2010 Signalized Intersection Results Summary

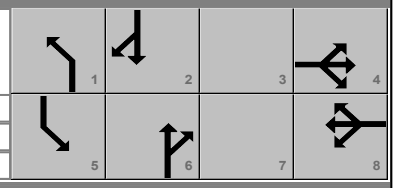
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	2040 With Project	Analysis Period	1> 7:00
File Name	Rancho AguaMansa 2040 wProj PM.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	497	85	274	5	20	20	112	874	0	10	805	184

Signal Information			
Cycle, s	201.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	2.2	9.4	60.0	100.0	4.6	0.0						
Yellow	3.0	3.0	3.0	3.0	3.0	0.0						
Red	2.0	2.0	2.0	2.0	2.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		12.0		11.0	2.0	4.0	2.0	4.0
Phase Duration, s		105.0		9.6	21.6	79.4	7.2	65.0
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.2	3.0	2.9	3.0	3.0
Queue Clearance Time *(gs)*, s		102.0		4.9	16.5	45.6	3.3	62.0
Green Extension Time *(ge)*, s		0.0		0.0	0.1	2.0	0.0	0.0
Phase Call Probability		1.00		0.93	1.00	1.00	0.44	1.00
Max Out Probability		1.00		0.00	0.00	0.01	0.00	1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		901			26	21	118	920	0	11	538	503
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1656			1782	1525	1619	1800	0	1619	1800	1683
Queue Service Time *(gs)*, s		100.0			2.9	2.8	14.5	43.6	0.0	1.3	60.0	60.0
Cycle Queue Clearance Time *(gc)*, s		100.0			2.9	2.8	14.5	43.6	0.0	1.3	60.0	60.0
Capacity *(c)*, veh/h		823			41	35	134	1331		18	537	502
Volume-to-Capacity Ratio *(X)*		1.095			0.639	0.598	0.882	0.691	0.000	0.588	1.002	1.003
Available Capacity *(ca)*, veh/h		823			177	152	241	1331		241	537	502
Back of Queue *(Q)*, veh/ln (50th percentile)		83.1			1.4	1.2	6.4	19.8		0.6	38.9	36.7
Overflow Queue *(Q3)*, veh/ln		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d1)*, s/veh		50.6			97.5	97.4	91.4	53.7		99.1	70.6	70.6
Incremental Delay *(d2)*, s/veh		184.3			6.2	6.0	7.8	1.3	0.0	11.3	77.9	80.7
Initial Queue Delay *(d3)*, s/veh		0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		234.9			103.6	103.4	99.1	55.0		110.4	148.5	151.4
Level of Service (LOS)		F			F	F	F	E		F	F	F
Approach Delay, s/veh / LOS	234.9	F		103.5	F		60.0	E		149.5	F	
Intersection Delay, s/veh / LOS	143.5						F					

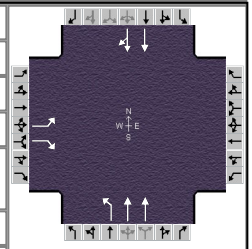
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.9	C	2.3	B	2.1	B
Bicycle LOS Score / LOS	2.6	B	1.2	A	2.0	A	2.0	A

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ATTACHMENT R: LEVEL OF SERVICE ANALYSIS 2019 AND 2040 CONDITIONS WITH MITI ATION

HCS 2010 Signalized Intersection Results Summary

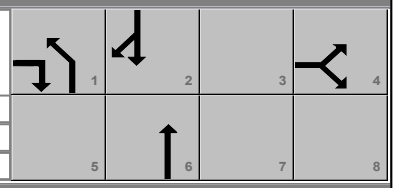
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2019 With Project with Mitigation	Analysis Period	1> 7:00
File Name	La Cadena Rancho 2019 wProj AM wMit.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	12		811				423	482			534	10

Signal Information			
Cycle, s	140.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	40.3	27.1	57.7	0.0	0.0	0.0	
Yellow	3.0	3.0	3.0	0.0	0.0	0.0	
Red	2.0	2.0	2.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		62.7			45.3	77.4		32.1
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		55.5			39.9	13.8		26.7
Green Extension Time *(g_e)*, s		2.2			0.5	1.0		0.4
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.03			0.23	0.00		0.77

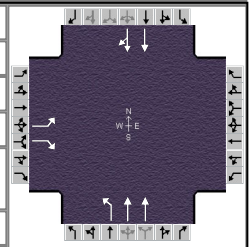
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	13		854				445	507			287	286
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1714			1800	1788
Queue Service Time *(g_s)*, s	0.6		53.5				37.9	11.8			24.7	21.5
Cycle Queue Clearance Time *(g_c)*, s	0.6		53.5				37.9	11.8			24.7	21.5
Capacity *(c)*, veh/h	667		1067				466	1771			348	346
Volume-to-Capacity Ratio *(X)*	0.019		0.800				0.956	0.286			0.825	0.826
Available Capacity *(c_a)*, veh/h	809		1201				520	1771			385	383
Back of Queue *(Q)*, veh/ln (50th percentile)	0.2		16.7				19.9	4.5			10.6	10.6
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	0.00
Uniform Delay *(d_1)*, s/veh	24.4		14.4				49.0	19.2			54.2	54.2
Incremental Delay *(d_2)*, s/veh	0.0		3.1				40.1	0.0			12.4	12.6
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	24.4		17.5				89.1	19.2			66.6	66.8
Level of Service (LOS)	C		B				F	B			E	E
Approach Delay, s/veh / LOS	17.6		B	0.0			51.9		D	66.7		E
Intersection Delay, s/veh / LOS	43.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.8	C	0.7	A	2.3	B
Bicycle LOS Score / LOS		F			1.9	A	1.6	A

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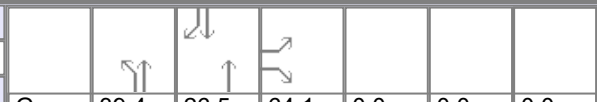
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2019 With Project with Mitigation	Analysis Period	1> 7:00
File Name	La Cadena Rancho 2019 wProj PM wMit.xus				
Project Description	Colton Warehouses - La Cadena				

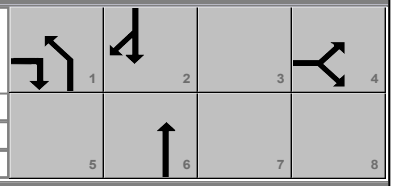


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	35		858				402	574			535	9

Signal Information			
Cycle, s	145.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	39.4	26.5	64.1	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		69.1			44.4	75.9		31.5
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time *(gs)*, s		62.2			39.3	17.9		25.7
Green Extension Time *(ge)*, s		1.9			0.1	1.1		0.7
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.27			1.00	0.00		0.02

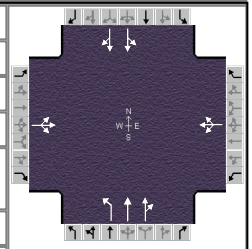
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	37		903				423	604			287	286
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1714			1800	1789
Queue Service Time *(gs)*, s	1.9		60.2				37.3	15.9			23.7	22.5
Cycle Queue Clearance Time *(gc)*, s	1.9		60.2				37.3	15.9			23.7	22.5
Capacity *(c)*, veh/h	716		1089				440	1676			329	327
Volume-to-Capacity Ratio *(X)*	0.051		0.829				0.961	0.361			0.874	0.875
Available Capacity *(ca)*, veh/h	782		1151				447	1676			434	432
Back of Queue *(Q)*, veh/ln (50th percentile)	0.7		19.1				20.9	6.2			11.2	11.1
Overflow Queue *(Q3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	0.00
Uniform Delay *(d1)*, s/veh	23.1		14.5				52.0	23.0			57.6	57.7
Incremental Delay *(d2)*, s/veh	0.0		4.8				51.3	0.0			13.4	13.6
Initial Queue Delay *(d3)*, s/veh	0.0		0.0				0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	23.1		19.3				103.3	23.0			71.0	71.3
Level of Service (LOS)	C		B				F	C			E	E
Approach Delay, s/veh / LOS	19.4		B	0.0			56.1		E	71.2		E
Intersection Delay, s/veh / LOS	45.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.8	C	0.7	A	2.3	B
Bicycle LOS Score / LOS		F			2.0	A	1.6	A

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HCS 2010 Signalized Intersection Results Summary

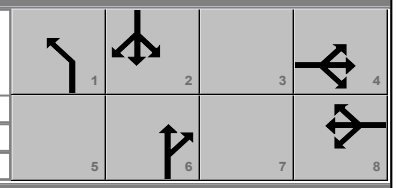
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena at Tropica Ranc	Analysis Year	2019 With Project with Mitigation	Analysis Period	1> 7:00
File Name	La Cadena Tropica Rancho 2019 wProj AM wMit.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	4	0	7	2	0	30	25	866	2	0	1400	12

Signal Information			
Cycle, s	72.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	2.1	47.1	1.0	2.5	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	0.0	0.0
Red	2.0	2.0	2.0	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6		2
Case Number		12.0		12.0	2.0	4.0		8.3
Phase Duration, s		6.0		7.5	7.1	59.1		52.1
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.4		3.5	3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		2.6		3.7	3.2	8.3		44.3
Green Extension Time *(g_e)*, s		0.0		0.0	0.0	1.5		2.8
Phase Call Probability		0.21		0.49	0.41	1.00		1.00
Max Out Probability		0.00		0.00	0.00	0.00		0.05

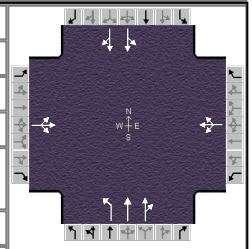
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		12			34		26	457	457	0		742
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1501			1451		1619	1800	1799	0		1795
Queue Service Time *(g_s)*, s		0.6			1.7		1.2	6.3	6.3	0.0		18.0
Cycle Queue Clearance Time *(g_c)*, s		0.6			1.7		1.2	6.3	6.3	0.0		18.0
Capacity *(c)*, veh/h		22			49		46	1341	1340			1163
Volume-to-Capacity Ratio *(X)*		0.537			0.683		0.572	0.341	0.341	0.000		0.638
Available Capacity *(c_a)*, veh/h		310			299		668	1341	1340			1482
Back of Queue *(Q)*, veh/ln (50th percentile)		0.2			0.7		0.5	0.9	0.9			4.3
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0	0.0	0.0		0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00	0.00	0.00		0.00
Uniform Delay *(d_1)*, s/veh		35.6			34.7		34.9	3.2	3.2			7.7
Incremental Delay *(d_2)*, s/veh		7.7			6.3		4.2	0.1	0.1	0.0		0.2
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0	0.0	0.0		0.0
Control Delay *(d)*, s/veh		43.3			41.0		39.0	3.2	3.2			7.9
Level of Service (LOS)		D			D		D	A	A			A
Approach Delay, s/veh / LOS	43.3	D		41.0	D		4.2	A		7.9	A	
Intersection Delay, s/veh / LOS	7.1						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.7	B	2.0	B	2.0	B
Bicycle LOS Score / LOS	1.1	A	1.2	A	1.9	A	2.4	B

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena at Tropica Ranc	Analysis Year	2019 With Project with Mitigation	Analysis Period	1> 7:00
File Name	La Cadena Tropica Rancho 2019 wProj PM wMit.xus				
Project Description	Colton Warehouses - La Cadena				

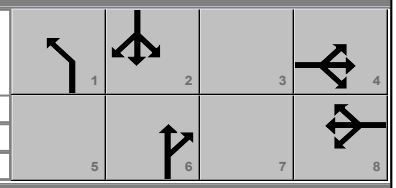


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	12	0	11	1	0	36	10	901	0	0	1352	3

Signal Information			
Cycle, s	61.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	0.8	36.2	1.7	2.4	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	0.0	0.0
Red	2.0	2.0	2.0	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6		2
Case Number		12.0		12.0	2.0	4.0		8.3
Phase Duration, s		6.7		7.4	5.8	47.0		41.2
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.4		3.5	3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		3.0		3.6	2.4	8.8		33.5
Green Extension Time *(g_e)*, s		0.0		0.0	0.0	2.2		2.6
Phase Call Probability		0.34		0.48	0.16	1.00		1.00
Max Out Probability		0.00		0.00	0.00	0.00		0.03

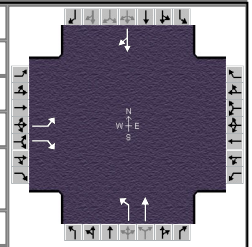
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		24			39		11	948	0	0		713
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1529			1445		1619	1800	0	0		1799
Queue Service Time *(g_s)*, s		1.0			1.6		0.4	6.8	0.0	0.0		16.4
Cycle Queue Clearance Time *(g_c)*, s		1.0			1.6		0.4	6.8	0.0	0.0		16.4
Capacity *(c)*, veh/h		42			57		22	2474				1065
Volume-to-Capacity Ratio *(X)*		0.574			0.680		0.485	0.383	0.000	0.000		0.670
Available Capacity *(c_a)*, veh/h		450			426		398	2947				1472
Back of Queue *(Q)*, veh/ln (50th percentile)		0.4			0.6		0.2	1.0				3.8
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0	0.0	0.0		0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00	0.00	0.00		0.00
Uniform Delay *(d_1)*, s/veh		29.3			29.0		29.9	4.1				8.4
Incremental Delay *(d_2)*, s/veh		4.6			5.3		6.2	0.0	0.0	0.0		0.3
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0	0.0	0.0		0.0
Control Delay *(d)*, s/veh		33.9			34.3		36.1	4.1				8.7
Level of Service (LOS)		C			C		D	A				A
Approach Delay, s/veh / LOS	33.9	C		34.3	C		4.4	A		8.7	A	
Intersection Delay, s/veh / LOS	7.7						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.7	B	2.0	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.2	A	1.9	A	2.3	B

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HCS 2010 Signalized Intersection Results Summary

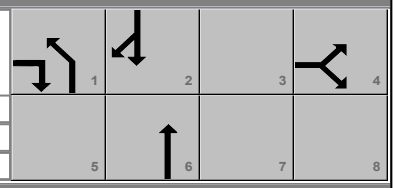
General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2019 With Project with Mitigation	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps 2019 wProj AM wMit.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	231		756				193	414			25	228

Signal Information			
Cycle, s	93.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	13.9	18.4	46.5	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	0.0	0.0	0.0
Red	2.0	2.0	2.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		51.5			18.9	42.3		23.4
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time *(g_s)*, s		43.5			13.5	20.2		17.8
Green Extension Time *(g_e)*, s		2.6			0.3	0.6		0.5
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.00			0.00	0.01		0.00

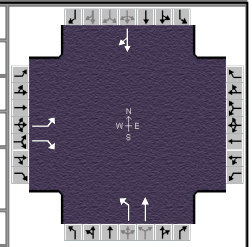
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	243		796				203	436			266	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1441				1619	1800			1549	
Queue Service Time *(g_s)*, s	8.4		41.5				11.5	18.2			15.8	
Cycle Queue Clearance Time *(g_c)*, s	8.4		41.5				11.5	18.2			15.8	
Capacity *(c)*, veh/h	803		928				241	717			305	
Volume-to-Capacity Ratio *(X)*	0.303		0.857				0.845	0.608			0.873	
Available Capacity *(c_a)*, veh/h	1542		1586				514	717			655	
Back of Queue *(Q)*, veh/ln (50th percentile)	2.7		10.1				4.5	7.1			5.8	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	14.1		13.4				39.2	22.6			36.8	
Incremental Delay *(d_2)*, s/veh	0.1		1.0				3.2	1.1			3.2	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	14.2		14.3				42.4	23.6			40.0	
Level of Service (LOS)	B		B				D	C			D	
Approach Delay, s/veh / LOS	14.3		B	0.0			29.6		C	40.0		D
Intersection Delay, s/veh / LOS	22.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.1	B	0.7	A	2.3	B
Bicycle LOS Score / LOS		F			2.2	B	1.6	A

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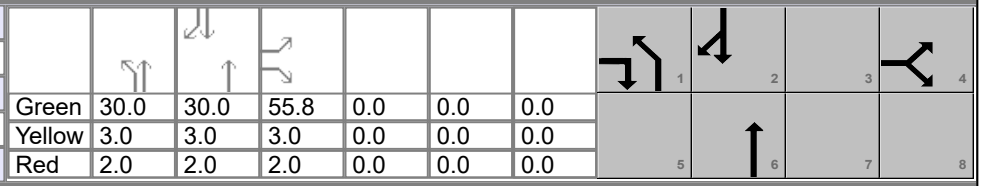
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2019 With Project with Mitigation	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps 2019 wProj PM wMit.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	190		772				378	616			26	324

Signal Information			
Cycle, s	130.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	30.0	30.0	55.8	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		60.8			35.0	70.0		35.0
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time (g_s), s		53.3			32.0	39.0		32.0
Green Extension Time (g_e), s		2.5			0.0	0.0		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.00			1.00	1.00		1.00

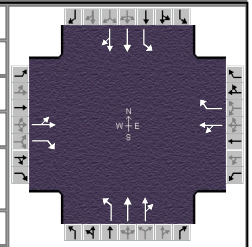
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	200		813				398	648			368	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1619	1800			1543	
Queue Service Time (g_s), s	10.6		51.3				30.0	37.0			30.0	
Cycle Queue Clearance Time (g_c), s	10.6		51.3				30.0	37.0			30.0	
Capacity *(c)*, veh/h	691		1001				371	895			354	
Volume-to-Capacity Ratio *(X)*	0.290		0.812				1.071	0.725			1.041	
Available Capacity (c_a), veh/h	929		1225				371	895			354	
Back of Queue *(Q)*, veh/ln (50th percentile)	3.9		16.0				29.5	15.3			24.5	
Overflow Queue (Q_3), veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay (d_1), s/veh	24.5		16.6				50.4	25.9			50.4	
Incremental Delay (d_2), s/veh	0.1		2.9				173.2	2.6			136.3	
Initial Queue Delay (d_3), s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	24.6		19.5				223.6	28.5			186.7	
Level of Service (LOS)	C		B				F	C			F	
Approach Delay, s/veh / LOS	20.5		C	0.0			102.7		F	186.7		F
Intersection Delay, s/veh / LOS	81.2						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	0.7	A	2.3	B
Bicycle LOS Score / LOS		F			2.9	C	1.7	A

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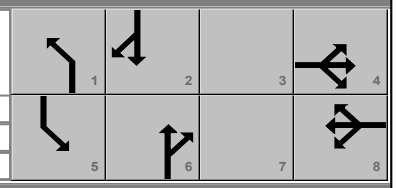
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	2019 With Project with Mitigation	Analysis Period	1> 7:00
File Name	Rancho AguaMansa 2019 wProj PM wMit.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	545	72	129	1	16	17	66	428	0	7	952	199

Signal Information												
Cycle, s	133.7	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	1.2	1.1	49.6	53.1	3.7	0.0		
Uncoordinated	Yes	Simult. Gap E/W	Off	Yellow	3.0	3.0	3.0	3.0	3.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	Off	Red	2.0	2.0	2.0	2.0	2.0	0.0		



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		11.0		11.0	2.0	4.0	2.0	4.0
Phase Duration, s		58.1		8.7	12.3	60.7	6.2	54.6
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.2	3.0	2.9	3.0	3.0
Queue Clearance Time *(g_s)*, s		51.0		3.6	7.7	13.2	2.6	47.0
Green Extension Time *(g_e)*, s		1.7		0.0	0.1	0.9	0.0	2.2
Phase Call Probability		1.00		0.74	0.93	1.00	0.24	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.06

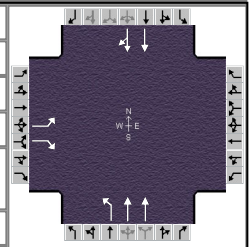
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		649	136		18	18	69	451	0	7	624	588
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1724	1525		1795	1525	1619	1800	0	1619	1800	1692
Queue Service Time *(g_s)*, s		49.0	7.9		1.3	1.6	5.7	11.2	0.0	0.6	44.8	45.0
Cycle Queue Clearance Time *(g_c)*, s		49.0	7.9		1.3	1.6	5.7	11.2	0.0	0.6	44.8	45.0
Capacity *(c)*, veh/h		685	607		50	42	88	1501		15	669	628
Volume-to-Capacity Ratio *(X)*		0.947	0.224		0.361	0.424	0.788	0.300	0.000	0.500	0.932	0.936
Available Capacity *(c_a)*, veh/h		961	851		267	227	361	1501		361	803	755
Back of Queue *(Q)*, veh/ln (50th percentile)		23.3	2.9		0.6	0.6	2.5	4.7		0.3	22.5	21.6
Overflow Queue *(Q_3)*, veh/ln		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		39.2	26.8		64.2	64.3	62.8	26.1		66.3	40.6	40.7
Incremental Delay *(d_2)*, s/veh		16.2	0.1		1.6	2.5	6.0	0.0	0.0	9.7	18.8	20.8
Initial Queue Delay *(d_3)*, s/veh		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		55.3	26.9		65.9	66.9	68.8	26.2		76.0	59.4	61.5
Level of Service (LOS)		E	C		E	E	E	C		E	E	E
Approach Delay, s/veh / LOS	50.4	D		66.4	E		31.9	C		60.6	E	
Intersection Delay, s/veh / LOS	51.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.9	C	2.3	B	2.3	B
Bicycle LOS Score / LOS	2.4	B	1.2	A	1.6	A	2.1	B

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2040 With Project with Mitigation	Analysis Period	1> 7:00
File Name	La Cadena Rancho 2040 wProj AM wMit.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	26		850				550	471			597	19

Signal Information			
Cycle, s	126.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	44.7	30.0	37.0	0.0	0.0	0.0	1	2	3	4		
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0	5	6	7	8		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		42.0			49.7	84.7		35.0
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time (g_s), s		35.2			43.8	9.5		30.0
Green Extension Time (g_e), s		1.8			0.9	1.0		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		0.00			0.01	0.00		1.00

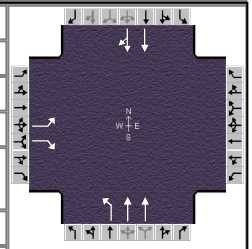
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	27		684				579	496			326	323
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1714		1610				1714	1809			1900	1879
Queue Service Time (g_s), s	1.5		33.2				41.8	7.5			28.0	20.1
Cycle Queue Clearance Time (g_c), s	1.5		33.2				41.8	7.5			28.0	20.1
Capacity *(c)*, veh/h	501		1039				605	2276			449	444
Volume-to-Capacity Ratio *(X)*	0.055		0.659				0.956	0.218			0.725	0.726
Available Capacity (c_a), veh/h	880		1395				744	2276			450	445
Back of Queue *(Q)*, veh/ln (50th percentile)	0.6		10.7				21.3	2.7			9.7	9.6
Overflow Queue (Q_3), veh/ln	0.0		0.0				0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh	32.3		13.9				40.0	10.1			44.6	44.6
Incremental Delay (d_2), s/veh	0.0		0.3				28.0	0.0			5.1	5.2
Initial Queue Delay (d_3), s/veh	0.0		0.0				0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	32.3		14.1				68.1	10.1			49.7	49.8
Level of Service (LOS)	C		B				E	B			D	D
Approach Delay, s/veh / LOS	14.8		B	0.0			41.3		D	49.8		D
Intersection Delay, s/veh / LOS	35.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.8	C	0.7	A	2.6	B
Bicycle LOS Score / LOS		F			2.0	B	1.7	A

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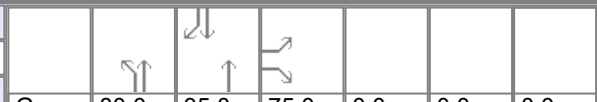
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Ranch	Analysis Year	2040 With Project with Mitigation	Analysis Period	1> 7:00
File Name	La Cadena Rancho 2040 wProj PM wMit.xus				
Project Description	Colton Warehouses - La Cadena				

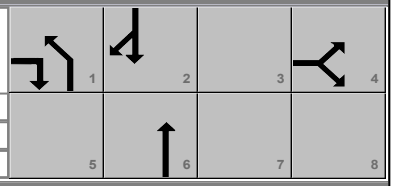


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	22		1051				631	832			640	37

Signal Information			
Cycle, s	205.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	80.0	35.0	75.0	0.0	0.0	0.0
Yellow	3.0	3.0	3.0	0.0	0.0	0.0
Red	2.0	2.0	2.0	0.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		80.0			85.0	125.0		40.0
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.3			3.0	2.9		2.9
Queue Clearance Time (g_s), s		77.0			81.1	29.2		41.7
Green Extension Time (g_e), s		0.0			0.0	1.3		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	0.23		1.00

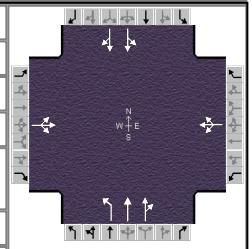
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	23		1106				664	876			360	353
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1714		1610				1714	1809			1900	1863
Queue Service Time (g_s), s	1.8		75.0				79.1	27.2			39.7	35.0
Cycle Queue Clearance Time (g_c), s	1.8		75.0				79.1	27.2			39.7	35.0
Capacity *(c)*, veh/h	627		1217				669	2118			324	318
Volume-to-Capacity Ratio *(X)*	0.037		0.909				0.993	0.414			1.108	1.110
Available Capacity (c_a), veh/h	627		1217				669	2118			324	318
Back of Queue *(Q)*, veh/ln (50th percentile)	0.8		40.4				44.9	11.5			37.8	37.3
Overflow Queue (Q_3), veh/ln	0.0		0.0				0.0	0.0			0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	0.00
Uniform Delay (d_1), s/veh	41.8		19.5				62.2	23.3			85.0	85.0
Incremental Delay (d_2), s/veh	0.0		11.4				61.3	0.0			231.0	234.0
Initial Queue Delay (d_3), s/veh	0.0		0.0				0.0	0.0			0.0	0.0
Control Delay *(d)*, s/veh	41.8		30.9				123.5	23.3			316.0	319.0
Level of Service (LOS)	D		C				F	C			F	F
Approach Delay, s/veh / LOS	31.1	C		0.0			66.5	E		317.5	F	
Intersection Delay, s/veh / LOS	107.6						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.8	C	0.7	A	2.3	B
Bicycle LOS Score / LOS		F			2.4	B	1.7	A

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	La Cadena at Tropica Ranc	Analysis Year	2040 With Project with Mitigation	Analysis Period	1> 7:00
File Name	La Cadena Tropica Rancho 2040 wProj AM wMit.xus				
Project Description	Colton Warehouses - La Cadena				

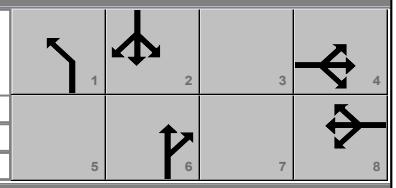


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	4	0	11	2	0	40	25	952	5	0	1411	15

Signal Information			
Cycle, s	74.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	2.1	47.8	1.4	3.0	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	0.0	0.0
Red	2.0	2.0	2.0	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6		2
Case Number		12.0		12.0	2.0	4.0		8.3
Phase Duration, s		6.4		8.0	7.1	59.9		52.8
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.5		3.5	3.0	2.9		2.9
Queue Clearance Time *(g_s)*, s		2.8		4.2	3.2	9.5		45.0
Green Extension Time *(g_e)*, s		0.0		0.1	0.0	1.7		2.8
Phase Call Probability		0.28		0.60	0.42	1.00		1.00
Max Out Probability		0.00		0.00	0.00	0.00		0.06

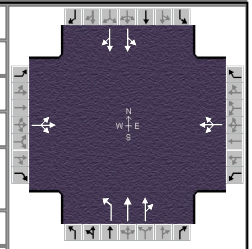
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		16			44		26	504	503	0		750
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1484			1448		1619	1800	1797	0		1793
Queue Service Time *(g_s)*, s		0.8			2.2		1.2	7.5	7.5	0.0		19.0
Cycle Queue Clearance Time *(g_c)*, s		0.8			2.2		1.2	7.5	7.5	0.0		19.0
Capacity *(c)*, veh/h		28			58		46	1330	1328			1154
Volume-to-Capacity Ratio *(X)*		0.567			0.757		0.576	0.379	0.379	0.000		0.649
Available Capacity *(c_a)*, veh/h		399			390		544	1453	1450			1447
Back of Queue *(Q)*, veh/ln (50th percentile)		0.3			0.9		0.5	1.1	1.1			4.7
Overflow Queue *(Q_3)*, veh/ln		0.0			0.0		0.0	0.0	0.0	0.0		0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00	0.00	0.00		0.00
Uniform Delay *(d_1)*, s/veh		36.2			35.3		35.7	3.5	3.5			8.1
Incremental Delay *(d_2)*, s/veh		6.7			7.6		4.3	0.1	0.1	0.0		0.3
Initial Queue Delay *(d_3)*, s/veh		0.0			0.0		0.0	0.0	0.0	0.0		0.0
Control Delay *(d)*, s/veh		42.9			42.9		39.9	3.6	3.6			8.4
Level of Service (LOS)		D			D		D	A	A			A
Approach Delay, s/veh / LOS	42.9	D		42.9	D		4.5	A		8.4	A	
Intersection Delay, s/veh / LOS	7.7						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.7	B	2.0	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.2	A	2.0	A	2.4	B

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena at Tropica Ranc	Analysis Year	2040 With Project with Mitigation	Analysis Period	1> 7:00
File Name	La Cadena Tropica Rancho 2040 wProj PM wMit.xus				
Project Description	Colton Warehouses - La Cadena				

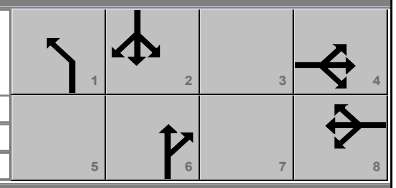


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	12	0	15	1	0	70	10	1576	0	0	1494	7

Signal Information			
Cycle, s	67.3	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	0.9	40.1	2.1	4.2	0.0	0.0
Yellow	3.0	3.0	3.0	3.0	0.0	0.0
Red	2.0	2.0	2.0	2.0	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6		2
Case Number		12.0		12.0	2.0	4.0		8.3
Phase Duration, s		7.1		9.2	5.9	51.0		45.1
Change Period, $(Y+R_c)$, s		5.0		5.0	5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.4		3.5	3.0	2.9		2.9
Queue Clearance Time (g_s), s		3.2		5.4	2.4	20.1		37.3
Green Extension Time (g_e), s		0.0		0.1	0.0	4.8		2.9
Phase Call Probability		0.41		0.75	0.18	1.00		1.00
Max Out Probability		0.00		0.00	0.00	0.00		0.12

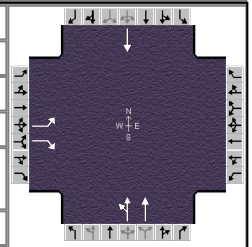
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		28			75		11	1659	0	0		790
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1515			1443		1619	1800	0	0		1797
Queue Service Time (g_s), s		1.2			3.4		0.4	18.1	0.0	0.0		21.3
Cycle Queue Clearance Time (g_c), s		1.2			3.4		0.4	18.1	0.0	0.0		21.3
Capacity *(c)*, veh/h		46			89		22	2464				1073
Volume-to-Capacity Ratio *(X)*		0.612			0.837		0.489	0.673	0.000	0.000		0.736
Available Capacity (c_a), veh/h		338			322		361	2676				1336
Back of Queue *(Q)*, veh/ln (50th percentile)		0.5			1.4		0.2	3.4				5.6
Overflow Queue (Q_3), veh/ln		0.0			0.0		0.0	0.0	0.0	0.0		0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00			0.00		0.00	0.00	0.00	0.00		0.00
Uniform Delay (d_1), s/veh		32.2			31.2		33.0	6.2				9.8
Incremental Delay (d_2), s/veh		4.9			8.1		6.4	0.5	0.0	0.0		1.2
Initial Queue Delay (d_3), s/veh		0.0			0.0		0.0	0.0	0.0	0.0		0.0
Control Delay *(d)*, s/veh		37.1			39.3		39.3	6.7				10.9
Level of Service (LOS)		D			D		D	A				B
Approach Delay, s/veh / LOS	37.1	D		39.3	D		6.9	A		10.9	B	
Intersection Delay, s/veh / LOS	9.7						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.8	C	2.7	B	2.0	B	2.1	B
Bicycle LOS Score / LOS	1.2	A	1.3	A	2.5	B	2.4	B

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	La Cadena Drive at Iowa A	Analysis Year	2040 With Project with Mitigation	Analysis Period	1> 7:00
File Name	La Cadena Iowa 2040 wProj PM wMit.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	400		100				100	1492			323	

Signal Information			
Cycle, s	81.7	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	5.0	37.8	23.8	0.0	0.0	0.0	1	2	3	4		
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0	5	6	7	8		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			0.0	14.0		8.3
Phase Duration, s		28.8			10.0	52.8		42.8
Change Period, $(Y+R_c)$, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.1			0.0	3.0		2.9
Queue Clearance Time (g_s), s		22.6				43.2		12.3
Green Extension Time (g_e), s		0.9			0.0	3.9		0.5
Phase Call Probability		1.00				1.00		1.00
Max Out Probability		0.00				0.00		0.00

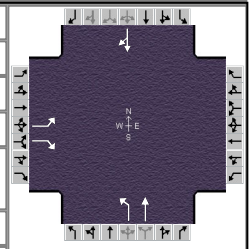
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	
Adjusted Flow Rate *(v)*, veh/h	421		105				839	837			340	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1619		1525				1535	1655			1800	
Queue Service Time (g_s), s	20.6		0.7				5.0	35.0			10.3	
Cycle Queue Clearance Time (g_c), s	20.6		0.7				41.2	35.0			10.3	
Capacity *(c)*, veh/h	474		1341				942	970			838	
Volume-to-Capacity Ratio *(X)*	0.889		0.078				0.891	0.862			0.406	
Available Capacity (c_a), veh/h	685		1540				1841	2000			870	
Back of Queue *(Q)*, veh/ln (50th percentile)	8.3		0.0				7.9	9.9			3.6	
Overflow Queue (Q_3), veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay (d_1), s/veh	28.0		0.6				14.7	14.3			14.6	
Incremental Delay (d_2), s/veh	8.5		0.0				1.2	0.9			0.1	
Initial Queue Delay (d_3), s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	36.4		0.7				16.0	15.2			14.7	
Level of Service (LOS)	D		A				B	B			B	
Approach Delay, s/veh / LOS	29.3	C		0.0			15.6	B		14.7	B	
Intersection Delay, s/veh / LOS	18.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.6	B	0.7	A	1.7	A
Bicycle LOS Score / LOS		F			2.5	B	1.7	A

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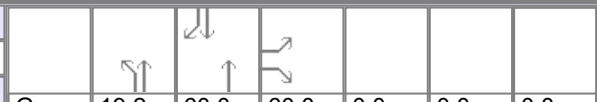
HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	AM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2040 With Project with Mitigation	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps 2040 wProj AM wMit.xus				
Project Description	Colton Warehouses - La Cadena				

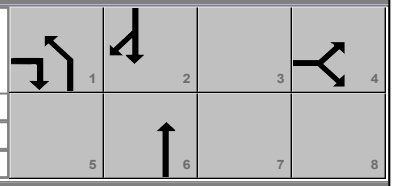


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	52		738				182	188			17	648

Signal Information			
Cycle, s	154.2	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off



Green	19.2	60.0	60.0	0.0	0.0	0.0						
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		65.0			24.2	89.2		65.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time *(g_s)*, s		62.0			19.0	10.1		62.0
Green Extension Time *(g_e)*, s		0.0			0.2	0.3		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			0.00	0.00		1.00

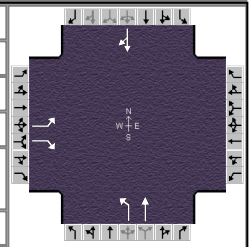
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	55		777				192	198			700	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1714		1610				1714	1900			1616	
Queue Service Time *(g_s)*, s	3.1		60.0				17.0	8.1			60.0	
Cycle Queue Clearance Time *(g_c)*, s	3.1		60.0				17.0	8.1			60.0	
Capacity *(c)*, veh/h	667		827				213	1037			629	
Volume-to-Capacity Ratio *(X)*	0.082		0.939				0.897	0.191			1.113	
Available Capacity *(c_a)*, veh/h	667		827				334	1037			629	
Back of Queue *(Q)*, veh/ln (50th percentile)	1.3		31.2				8.1	3.5			61.1	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	29.7		35.2				66.5	17.7			47.1	
Incremental Delay *(d_2)*, s/veh	0.0		24.3				14.8	0.0			218.1	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	29.7		59.5				81.3	17.8			265.2	
Level of Service (LOS)	C		E				F	B			F	
Approach Delay, s/veh / LOS	57.5	E		0.0			49.0	D		265.2	F	
Intersection Delay, s/veh / LOS	131.5						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	0.7	A	2.3	B
Bicycle LOS Score / LOS		F			1.8	A	2.3	B

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Iowa Avenue at I-215 NB C	Analysis Year	2040 With Project with Mitigation	Analysis Period	1> 7:00
File Name	Iowa I-215 NB Ramps 2040 wProj PM wMit.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	100		730				309	242			54	745

Signal Information			
Cycle, s	190.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	30.0	80.0	65.0	0.0	0.0	0.0	1	2	3	4		
Yellow	3.0	3.0	3.0	0.0	0.0	0.0						
Red	2.0	2.0	2.0	0.0	0.0	0.0	5	6	7	8		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4			1	6		2
Case Number		9.0			2.0	4.0		8.3
Phase Duration, s		70.0			35.0	120.0		85.0
Change Period, *(Y+Rc)*, s		5.0			5.0	5.0		5.0
Max Allow Headway *(MAH)*, s		3.2			3.0	2.9		3.2
Queue Clearance Time *(g_s)*, s		67.0			32.0	13.6		82.0
Green Extension Time *(g_e)*, s		0.0			0.0	0.3		0.0
Phase Call Probability		1.00			1.00	1.00		1.00
Max Out Probability		1.00			1.00	0.00		1.00

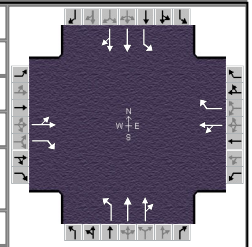
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7		14				1	6			2	12
Adjusted Flow Rate *(v)*, veh/h	105		768				325	255			841	
Adjusted Saturation Flow Rate *(s)*, veh/h/ln	1714		1610				1714	1900			1627	
Queue Service Time *(g_s)*, s	8.2		65.0				30.0	11.6			80.0	
Cycle Queue Clearance Time *(g_c)*, s	8.2		65.0				30.0	11.6			80.0	
Capacity *(c)*, veh/h	586		805				271	1150			685	
Volume-to-Capacity Ratio *(X)*	0.179		0.954				1.202	0.222			1.228	
Available Capacity *(c_a)*, veh/h	586		805				271	1150			685	
Back of Queue *(Q)*, veh/ln (50th percentile)	3.5		40.1				41.7	5.0			108.4	
Overflow Queue *(Q_3)*, veh/ln	0.0		0.0				0.0	0.0			0.0	
Queue Storage Ratio *(RQ)* (50th percentile)	0.00		0.00				0.00	0.00			0.00	
Uniform Delay *(d_1)*, s/veh	43.8		45.4				80.0	17.1			55.0	
Incremental Delay *(d_2)*, s/veh	0.1		30.8				380.7	0.0			403.1	
Initial Queue Delay *(d_3)*, s/veh	0.0		0.0				0.0	0.0			0.0	
Control Delay *(d)*, s/veh	43.9		76.2				460.7	17.1			458.1	
Level of Service (LOS)	D		E				F	B			F	
Approach Delay, s/veh / LOS	72.3		E	0.0			265.9		F	458.1		F
Intersection Delay, s/veh / LOS	262.7						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.3	B	2.2	B	0.7	A	2.3	B
Bicycle LOS Score / LOS		F			2.1	B	2.5	B

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HCS 2010 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Colton Warehouses			Duration, h	0.95
Analyst	R Garland	Analysis Date	5/5/2017	Area Type	Other
Jurisdiction	City of Colton	Time Period	PM Peak Hour	PHF	0.95
Intersection	Rancho Avenue at Agua Ma	Analysis Year	2040 With Project with Mitigation	Analysis Period	1> 7:00
File Name	Rancho AguaMansa 2040 wProj PM wMit.xus				
Project Description	Colton Warehouses - La Cadena				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	497	85	274	5	20	20	112	874	0	10	805	184

Signal Information			
Cycle, s	118.8	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	1.5	4.2	38.8	45.3	4.0	0.0	1	2	3	4		
Yellow	3.0	3.0	3.0	3.0	3.0	0.0	5	6	7	8		
Red	2.0	2.0	2.0	2.0	2.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		4		8	1	6	5	2
Case Number		11.0		11.0	2.0	4.0	2.0	4.0
Phase Duration, s		50.3		9.0	15.6	53.0	6.5	43.8
Change Period, *(Y+Rc)*, s		5.0		5.0	5.0	5.0	5.0	5.0
Max Allow Headway *(MAH)*, s		3.2		3.2	3.0	2.9	3.0	3.0
Queue Clearance Time *(g_s)*, s		42.7		3.7	10.6	26.5	2.8	36.4
Green Extension Time *(g_e)*, s		2.0		0.0	0.2	2.2	0.0	2.0
Phase Call Probability		1.00		0.79	0.98	1.00	0.30	1.00
Max Out Probability		0.00		0.00	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate *(v)*, veh/h		613	288		26	21	118	920	0	11	538	503
Adjusted Saturation Flow Rate *(s)*, veh/h/ln		1726	1525		1782	1525	1619	1800	0	1619	1800	1683
Queue Service Time *(g_s)*, s		40.7	17.3		1.7	1.6	8.6	24.5	0.0	0.8	34.4	34.4
Cycle Queue Clearance Time *(g_c)*, s		40.7	17.3		1.7	1.6	8.6	24.5	0.0	0.8	34.4	34.4
Capacity *(c)*, veh/h		660	583		60	51	146	1457		20	589	551
Volume-to-Capacity Ratio *(X)*		0.928	0.495		0.441	0.412	0.810	0.631	0.000	0.514	0.913	0.913
Available Capacity *(c_a)*, veh/h		1440	1272		297	254	405	1802		405	901	842
Back of Queue *(Q)*, veh/ln (50th percentile)		17.1	6.2		0.8	0.6	3.6	10.1		0.4	15.7	14.8
Overflow Queue *(Q_3)*, veh/ln		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Storage Ratio *(RQ)* (50th percentile)		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay *(d_1)*, s/veh		35.5	28.2		56.8	56.8	53.5	28.5		58.8	38.7	38.7
Incremental Delay *(d_2)*, s/veh		2.8	0.2		1.9	2.0	4.2	0.2	0.0	7.4	7.8	8.4
Initial Queue Delay *(d_3)*, s/veh		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay *(d)*, s/veh		38.2	28.4		58.7	58.8	57.7	28.7		66.2	46.5	47.1
Level of Service (LOS)		D	C		E	E	E	C		E	D	D
Approach Delay, s/veh / LOS	35.1	D		58.8	E		32.0	C		47.0	D	
Intersection Delay, s/veh / LOS	38.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.9	C	2.9	C	2.3	B	2.3	B
Bicycle LOS Score / LOS	2.6	B	1.2	A	2.0	A	2.0	A

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ATTACHMENT S: SCOPIN A REEMENT Y THE CITY OF COLTON FOR TRAFFIC IMPACT ST DY

S A C C P T W P

TO #141
May 3, 2017

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This form acknowledges the City of Colton Engineering Division requirements for traffic impact analysis of the following project. The analysis must comply with SANBAG CMP TIA Guidelines, as applicable.

Case No. _____

Related Cases: _____

APN(S): 0275-192-06, 0275-192-07, 0163-361-14, and 0163-361-15

Project Name: Tropica Warehouse Project

Project Address: Site is located west of La Cadena Drive and South of the Santa Ana River

Project Description: Construction of three (3) new industrial buildings

Project Size: 22.2 acres with 266,030 square feet of High Cube Warehousing and Warehousing in 3 buildings. Building 1: 190,100 sqf, Building 2: 45,160 sqf and Building 3: 30,770 sqf

	Traffic Consultant	Developer
Name:	Jana Robbins, Transtech Engineers	Tropica Ranch LLC
Address:	13367 Benson Avenue Chino, CA 91710	10405 Mt. Vernon Ave. Ste G285 Colton, CA 92324
Telephone:	909-595-8599 ext: 133	(909) 319-2106
e-mail:	jana.robbins@transtech.org	patrick@socalcustom.net

A. Technical Methodology

Technical methodology to comply with SANBAG CMP guidelines. However, mitigation on nonstate facilities to maintain LOS D threshold.

Traffic count data must be current or within previous 12 months. Provide traffic count dates. Count times: (7am -9am, 4pm-6pm) Tue, Wed, or Thu

Counts will separate trucks from the total vehicle count and convert into passenger car equivalents (pce) following cmp guidelines. 2-3 axle=2.0 pce; 4-6 axle=3.0 pce.

B. Trip Generation

Source: 9th Ed. ITE Trip Generation Manual: (152) High Cube Warehouse and (150) Warehouse

Current GP Land Use: Vacant Proposed Land Use: Industrial Warehouse

Current Zoning: Industrial Park Proposed Zoning: Industrial Park

Current Trip Generation	See attached table.			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips:						
PM Trips:						

Internal Trip Allowance:

Pass-By Trip Allowance:

Traffic impact study to quantify change in project trip generation in comparison with pre-existing uses on project site when fully occupied.

C. Trip Geographic Distribution: To be submitted for approval by city staff. Cite source.Attach exhibit of detailed assignment.

D. Scenario Analysis

Project year of completion: 2018/19

Phase Year(s) Full Project Buildout Assumed in 1 Phase

Annual Ambient Growth rate: 1.0% Based on 2040 SBTAM Model volumes.

City staff to provide cumulative background projects list.

Scenarios:

Existing Conditions; Existing Conditions plus Project
Year of project completion: 1) No Project; 2) With Project.
2040 Twenty-year forecast: 1) No Project; 2) With Project.

E. Preliminary Study Intersections: (See SANBAG CMP guidelines or comments from other agencies.)

1. La Cadena Dr. / Tropica Rancho Rd
2. La Cadena Dr. / Barton Rd
3. La Cadena Dr. / Rancho Ave
4. La Cadena Dr. /
5. S. Rancho Ave. / Agua Mansa Rd
6. S. La Cadena Dr. / S. Iowa Ave.
7. S. Iowa Ave. / I-215 SB Off-Ramp
8. S. La Cadena Dr. / Maple St / S. 7th St.
9.
10.

F. Preliminary Study Roadway Segments: (See SANBAG CMP guidelines or comments from other agencies.)

1. La Cadena Dr.: South of Tropica Rancho Rd
2. La Cadena Dr.: North of Tropica Rancho Rd
3.
4.
5.
6.
7.
8.
9.
10.

G. Freeways - See SANBAG CMP guidelines.

H. Other Jurisdictional Impacts

Is this project within a one-mile radius of City or County boundaries? ☒ Yes ☐ No

If so, name of City Jurisdiction: County of San Bernardino, Grand Terrace, County of Riverside

I. Site Plan (please attach reduced copy) Attached

J. Specific issues to be addressed in the Study

- Site access evaluation for trucks

Recommended by:

Neville Pereira, P.E., Transtech Engrs. 02/15/17

Consultant's Representative Date

Approved Scoping Agreement:

City of Colton Engineering Division Date

Trip Generation Rate Summary
Tropica Warehouse - jn#16326

Land Use	Size	ITE Code	DAILY TRIPS	AM PEAK HOUR			PM PEAK HOUR		
				TOTAL	IN	OUT	TOTAL	IN	OUT
RATES									
1. High Cube Warehouse/ Distribution Center[1]	Per 1,000 sqf	152	1.440	0.09	66%	34%	0.10	33%	67%
Passenger Cars-79.5%[3]	1.0	PCE[4]	1.145	0.072	66%	34%	0.080	33%	67%
3 Axle Trucks-8.10%	2.0	PCE[4]	0.117	0.007	67%	33%	0.008	40%	60%
Total PCE									
4-6 Axle Trucks-12.33%	3.0	PCE[4]	0.178	0.011	67%	33%	0.012	33%	67%
Total PCE									
2. Warehouse[2]	Per 1,000 sqf	150	3.560	0.30	79%	21%	0.32	25%	75%
Passenger Cars-62%[3]	1.0	PCE[4]	2.210	0.186	79%	21%	0.198	25%	75%
2-3 Axle Trucks-17%	2.0	PCE[4]	0.605	0.051	75%	25%	0.054	20%	80%
Total PCE									
4-6 Axle Trucks-21%	3.0	PCE[4]	0.748	0.063	75%	25%	0.067	20%	80%
Total PCE									

1. Source: High Cube Warehouse/Distribution Center ITE code (152) Trip Generation, 9th Edition, City of Fontana Truck Trip Generation Study, 2003.
2. Source: Warehousing ITE code (150) Trip Generation, 9th Edition, ITE /Trip Generation Handbook, 2nd Edition, Appendix A, Tables A.4,A.5and A.6.
3. Vehicle Mix Source and Entering/Exiting %: The City of Fontana Truck Trip Generation Study for Warehouse Use, August 2003.
4. All Vehicles Have Been Converted into Passenger Car Equivalents (PCE) Using Values From San Bernardino CMP

Trip Generation For Project Traffic Summary
Tropica Warehouse - jn#16326

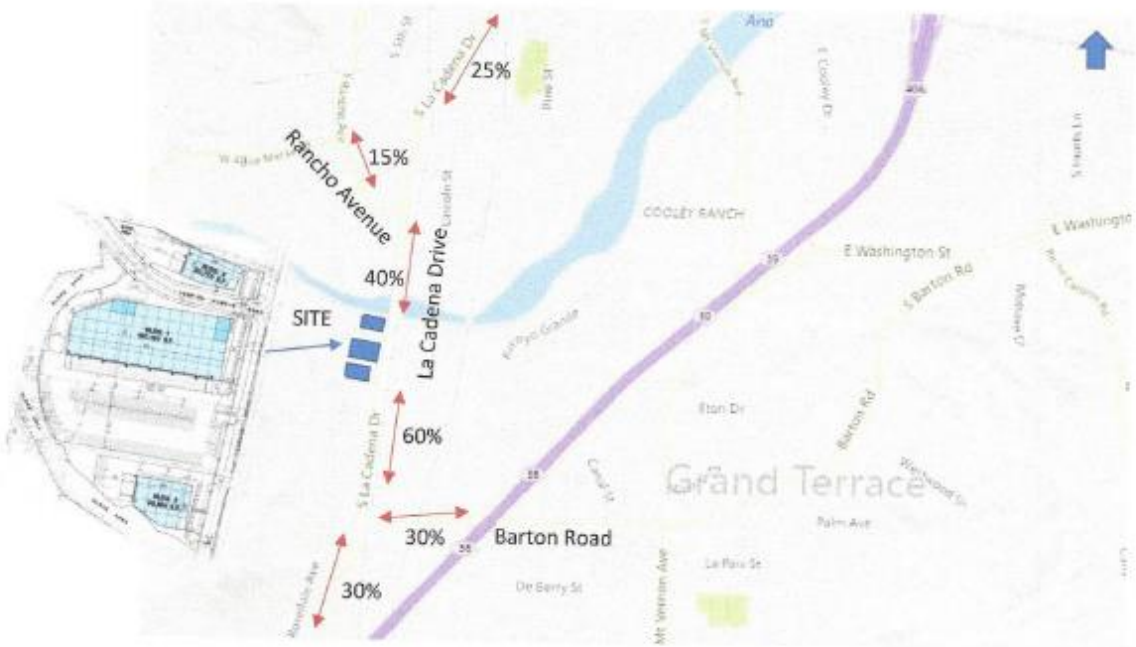
Land Use	Size	ITE Code	DAILY TRIPS	AM PEAK HOUR			PM PEAK HOUR		
				TOTAL	IN	OUT	TOTAL	IN	OUT
VOLUME									
1. Blding 1: High Cube Warehouse[1]	190.100	152							
Passenger Cars-79.5%[3]	1.0	PCE[4]	218	14	9	5	15	5	10
3 Axle Trucks-8.10%	2.0	PCE[4]	22	1			2		
Total PCE			44	3	2	1	3	1	2
4-6 Axle Trucks-12.33%	3.0	PCE[4]	34	2			2		
Total PCE			102	6	4	2	7	2	5
Total PCE Trips for Blding 1			364	23	15	8	25	9	17
2. Blding 2: Warehouse[2]	45.160	150							
Passenger Cars-62%[3]	1.0	PCE[4]	100	8	7	2	9	2	7
2-3 Axle Trucks-17%	2.0	PCE[4]	27	2			2		
Total PCE			55	5	3	1	5	1	4
4-6 Axle Trucks-21%	3.0	PCE[4]	34	3			3		
Total PCE			101	9	6	2	9	2	7
Total PCE Trips for Blding 2			256	22	16	5	23	5	18
3. Blding 3: Warehouse[2]	30.770	150							
Passenger Cars-62%[3]	1.0	PCE[4]	68	6	5	1	6	2	5
2-3 Axle Trucks-17%	2.0	PCE[4]	19	2			2		
Total PCE			37	3	2	1	3	1	3
4-6 Axle Trucks-21%	3.0	PCE[4]	23	2			2		
Total PCE			69	6	4	1	6	1	5
Total PCE Trips for Blding 3			174	15	11	3	16	3	12
TOTAL NEW TRIPS FOR PROJECT			**794**	**59**	**43**	**16**	**64**	**17**	**47**

All numbers were rounded either up or down so some columns may not total

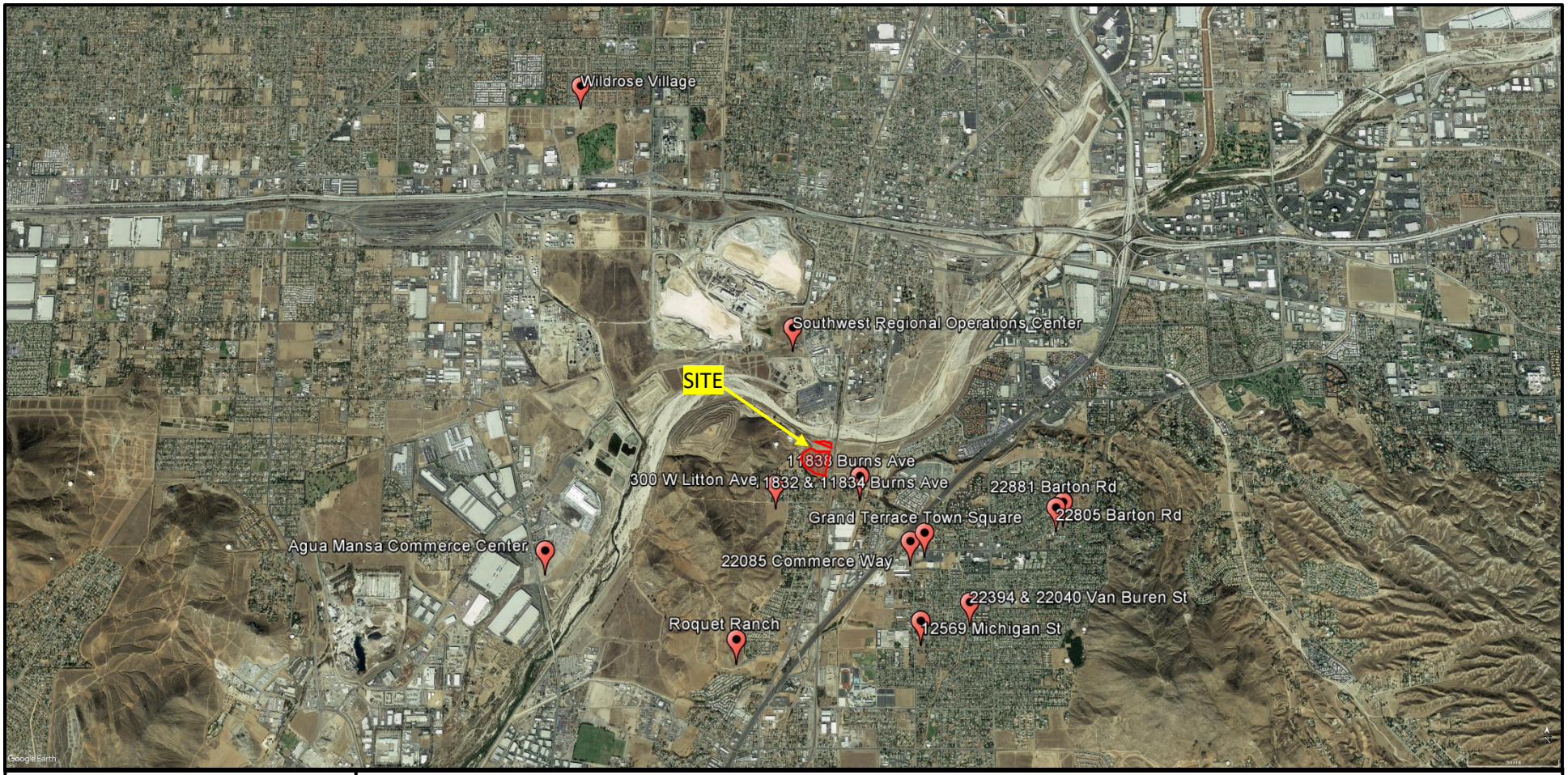
TROPICA WAREHOUSE
PROJECT TRIP DISTRIBUTION - TRUCKS



TROPICA WAREHOUSE
PROJECT TRIP DISTRIBUTION – PASSENGER CARS



ATTACHMENT T: LOCATION OF RELATED PROJECTS



LEGEND

PROJECT SITE

- Tropica Rancho Warehouse Project

LOCATIONS OF RELATED PROJECTS

RELATED PROJECTS:

- Roquet Ranch Specific Plan "Project"
- Southwest Regional Operations Center
- Agua Mansa Commerce Center
- Wildrose Village
- 300 W Litton Ave – Litton Housing
- Grand Terrace Town Square
- 22394 and 22040 Van Buren Street
- 12569 Michigan Street
- 11832 and 11834 Burns Avenue
- 22805 Barton Road
- 22085 Commerce Way
- 11838 Burns Avenue
- 22881 Barton Road

N