Appendices

Appendix E Traffic Impacts Assessment

Appendices

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TRAFFIC AND PARKING IMPACT ANALYSIS

FOR THE PROPOSED

REDLANDS EAST VALLEY HIGH SCHOOL STADIUM

Prepared for

REDLANDS UNIFIED SCHOOL DISTRICT & PLACEWORKS

Prepared by

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I. INTRODUCTION AND STUDY METHODOLOGY

This report summarizes the results of a traffic and parking impact analysis that was conducted for a new track and field/football stadium proposed at Redlands East Valley High School. The high school campus is located on the south side of Colton Avenue between Opal Avenue and King Street in an unincorporated area of San Bernardino County immediately east of Redlands. The stadium would be located at the west end of the campus near the intersection of Colton Avenue and Opal Avenue.

The proposed project involves the construction of the stadium, bleachers with seats for 3,000 people, stadium lighting, two ticket booth/custodial/restrooms/concession buildings, and improvements to the adjacent parking lot. Site plans for each of the three phases of the proposed project are provided in the Appendix. The proposed project would not result in a change in the number of students attending the high school. The stadium would provide the opportunity for Redlands East Valley High School to hold home games at its own campus.

An analysis has been prepared to evaluate the traffic and parking impacts of the proposed project. The methodology for the traffic study, in general, was to 1) establish the existing baseline traffic conditions on the streets that provide access to the school site, 2) project the future baseline traffic conditions for the target year of completion for the proposed project (year 2026), 3) estimate the levels of traffic that would be generated by the stadium for a capacity-level event, 4) conduct a comparative analysis of traffic conditions with and without the stadium, 5) evaluate the vehicle miles traveled (VMT) impacts of the proposed stadium, and 6) evaluate the parking supply and demand during a stadium event. The stadium analysis is based on Friday evening traffic conditions on the streets and intersections in the proposed project vicinity.

The traffic analysis addresses the impacts at 10 intersections in the vicinity of the school site. The study area intersections, the type of traffic control at each intersection, and the public agency with jurisdictional responsibility for the intersection are listed below in Table 1.

TABLE 1 STUDY AREA INTERSECTIONS							
Intersection	Traffic Control	Jurisdiction					
Mentone Blvd/Opal Avenue	Stop Signs on Opal Ave	Caltrans					
Mentone Blvd/Beryl Avenue	Stop Signs on Beryl Ave	Caltrans					
Mentone Blvd/Agate Avenue	Stop Signs on Agate Ave	Caltrans					
Colton Avenue/Wabash Avenue	4-Way Stop Signs	Redlands/San Bernardino County					
Colton Avenue/Opal Avenue	4-Way Stop Signs	San Bernardino County					
Colton Avenue/Beryl Avenue-School Driveway	4-Way Stop Signs	San Bernardino County					
Colton Avenue/Agate Avenue-King Street	4-Way Stop Signs	San Bernardino County					
Colton Avenue/Crafton Avenue	4-Way Stop Signs	San Bernardino County					
Citrus Avenue/Opal Avenue	4-Way Stop Signs	San Bernardino County					
Citrus Avenue/King Street	4-Way Stop Signs	San Bernardino County					

The traffic impact analysis is based on an evaluation of the levels of service at the affected study area intersections. Level of service (LOS) is an industry standard by which the operating conditions

of a roadway segment or an intersection are measured. LOS is defined on a scale of A through F with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS A is characterized as having free flowing traffic conditions with no restrictions on maneuvering or operation speeds, where traffic volumes are low and travel speeds are high. LOS F is characterized as having forced flow with many stoppages and low operating speeds. According to San Bernardino County standards, LOS A through D represents acceptable conditions, while LOS E and F represent congested, over-capacity conditions. According to the San Bernardino County Congestion Management Program, LOS A through E represents acceptable conditions while LOS F represents unacceptable conditions. The levels of service at the study area intersections were determined by using the Highway Capacity Manual methodology, which is consistent with the guidelines for traffic impact studies from the San Bernardino County Congestion Management Program.

The levels of service for the intersections in the vicinity of the proposed project were analyzed for the following scenarios: existing conditions (2021), existing conditions plus the proposed project, future baseline conditions without the proposed project for the target year of 2026, and future conditions with the proposed project. The year 2026 was used for the future target year as that is anticipated to be the year of completion for the third and final phase of the proposed project.

II.

EXISTING AND FUTURE BASELINE TRAFFIC CONDITIONS

The roadway network in the proposed project vicinity, the existing traffic volumes, and the levels of service at the affected study area intersections are described below.

Street Network

The streets that provide access to the proposed project area include Colton Avenue, Opal Avenue, King Street, Agate Avenue, Beryl Avenue, Mentone Boulevard (State Route 38), Citrus Avenue, Wabash Avenue, and Crafton Avenue. The following paragraphs provide a brief description of the characteristics of these streets. A figure showing the existing roadway characteristics is provided as Figure 1 in the Appendix.

Colton Avenue

Colton Avenue is a two to four lane east-west street that abuts the north side of the school campus. It has four lanes west of Agate Avenue/King Street, three lanes between Agate Avenue and Crafton Avenue (one eastbound and two westbound), and two lanes east of Crafton Avenue. The speed limit on Colton Avenue is 35 miles per hour and there are three school access driveways on Colton Avenue.

Opal Avenue

Opal Avenue is a two lane north-south street that abuts the west side of the school campus. It runs along the west side of the stadium site. The speed limit on Opal Avenue is 35 miles per hour and there is a driveway on Opal Avenue that provides access to a parking lot.

King Street/Agate Avenue

King Street/Agate Avenue is a two lane north-south street that abuts the east side of the school campus. This street is called King Street south of Colton Avenue and Agate Avenue north of Colton Avenue. The speed limit on King Street/Agate Avenue is 25 miles per hour and there are two school access driveways on King Street.

Beryl Avenue

Beryl Avenue is a two lane north-south street that extends north from the school's main driveway. The driveway is the south leg of the Beryl Avenue/Colton Avenue intersection. The speed limit on Beryl Avenue is 25 miles per hour.

Mentone Boulevard (State Route 38)

Mentone Boulevard is a two lane east-west State highway that is located one-half mile north of the school campus. The speed limit on Mentone Boulevard is 40 miles per hour.

Citrus Avenue

Citrus Avenue is a two lane east-west street located one-quarter mile south of the school campus. The speed limit on Citrus Avenue is 45 miles per hour.

Wabash Avenue

Wabash Avenue is a four lane north-south street located one-quarter mile west of the school campus. The speed limit on Wabash Avenue is 40 miles per hour.

Crafton Avenue

Crafton Avenue is a two lane north-south street located one-quarter mile east of the school campus. The speed limit on Crafton Avenue is 35 miles per hour.

Existing Traffic Volumes

Manual traffic counts were taken at the 10 study area intersections during the Friday evening peak period on November 12, 2021. The peak hour for this analysis refers to the one-hour time period prior to the beginning of an event at the stadium when patrons are traveling to the stadium. The traffic analysis addresses the pre-event time period because the ambient traffic volumes are substantially higher during the pre-event period (generally between 6:00 and 7:00 p.m.) as compared to the post-event period (after 9:00 p.m.). Most high school football games in this district begin at 7:00 p.m. A figure that illustrates the existing peak hour traffic volumes and turning movements is provided as Figure 2 in the Appendix.

Existing Intersection Levels of Service

To quantify the existing baseline traffic conditions, the 10 study area intersections were analyzed to determine their operating conditions during the Friday evening peak hour. Based on the hourly traffic volumes, the turning movement counts, and the existing number of lanes at each intersection, the average vehicle delay values and corresponding levels of service have been determined for each intersection, as summarized in Table 2.

EXISTING AND FUTURE IN	TABLE 2 TERSECTION LEVELS OI	- SERVICE
	Delay Value (seconds/vel Friday Evening Pre	
Intersection	2026 Without Project	
Mentone Blvd/Opal Avenue	17.8 – C	21.0 – C
Mentone Blvd/Beryl Avenue	18.8 – C	22.5 – C
Mentone Blvd/Agate Avenue	24.5 – C	30.2 – D
Colton Avenue/Wabash Avenue	9.92 – A	10.38 – B
Colton Avenue/Opal Avenue	7.97 – A	8.10 – A
Colton Avenue/Beryl Avenue-School Driveway	7.99 – A	8.10 – A
Colton Avenue/Agate Avenue-King Street	7.86 – A	7.97 – A
Colton Avenue/Crafton Avenue	9.98 – A	10.50 – B
Citrus Avenue/Opal Avenue	7.70 – A	7.81 – A
Citrus Avenue/King Street	7.87 – A	7.97 – A

The levels of service shown in Table 2 are based on the average vehicle delay values that were calculated for each intersection using the Highway Capacity Software. The relationship between the average delay values and levels of service is shown in Table 3.

TABLE 3 RELATIONSHIP BETWEEN DELAY VALUES & LEVELS OF SERVICE						
Level of Service	Delay Value (seconds) Unsignalized Intersections					
A	0.0 to 10.0					
В	> 10.0 to 15.0					
С	> 15.0 to 25.0					
D	> 25.0 to 35.0					
E	> 35.0 to 50.0					
F	> 50.0					

As shown in Table 2, all 10 of the study area intersections currently operate at acceptable levels of service (LOS A through D) during the Friday evening peak hour. Seven intersections operate at LOS A and three intersections operate at LOS C. It should be noted that the delay and LOS values for the intersections with 4-way stop signs represent the average for the entire intersection while the delay and LOS values for the intersections with 2-way stop signs represent the intersection approach that has the highest level of delay at the stop sign.

Future Baseline Traffic Conditions

As the proposed project is expected to be fully completed in the year 2026, the existing (2021) traffic volumes were expanded by a growth factor of 10.4 percent to account for general regional growth and the cumulative impacts of traffic associated with other development projects in the area. This growth factor represents a two percent annual growth rate for five years (compounded annually). The projected traffic volumes for the year 2026 without the proposed project are shown on Figure 3 in the Appendix.

Based on the projected peak hour traffic volumes, the turning movement counts, and the existing lane configuration, the future baseline levels of service were calculated for each study area intersection, as summarized in Table 2.

For the target year of 2026, all 10 of the study area intersections are projected to operate at acceptable levels of service (LOS A through D) as five of the intersections would operate at LOS A, two intersections would operate at LOS B, two intersections would operate at LOS C, and one intersection would operate at LOS D. These traffic conditions represent a Friday evening pre-event peak hour.

III. TRAFFIC IMPACT ANALYSIS

This section summarizes the analysis of the proposed 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. Then the impacts associated with vehicle miles traveled (VMT), construction, parking, and safety are presented.

Standards of Significance

According to the San Bernardino County standards, an intersection would be significantly impacted if a project would result in a change in the level of service from an acceptable LOS A, B, C, or D to an unacceptable LOS E or F. The impacts would not be significant at locations that are projected to operate at LOS A, B, C, or D after project completion. According to the Caltrans standards, Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities, however, Caltrans acknowledges that this may not always be feasible. If an existing State highway facility is operating at less than the appropriate target LOS, an acceptable measure of effectiveness (MOE) should be maintained.

With regard to the CEQA thresholds of significance, Appendix G of the CEQA Guidelines state that a project would normally have a significant effect on the environment if the project could:

- T-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities,
- T-2 Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), which addresses vehicle miles traveled (VMT),
- T-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment), or
- T-4 Result in inadequate emergency access.

Project Generated Traffic

The volume of traffic that would be generated by the stadium for a capacity-level event was determined in order to estimate the impacts of the proposed project on the study area streets and intersections. The trip generation rates and the anticipated volumes of traffic that would be generated by the stadium when operated at capacity are shown in Table 4. The table shows the traffic volumes for a 3,000-seat stadium.

The trip generation rates shown in Table 4 reflect the assumption that the stadium would generate a demand of one vehicle for every four seats (for vehicles that remain parked at the site) and that an additional ten percent of the vehicles arriving at the stadium would drop passengers off then leave. The rate of one vehicle for every four seats is based on the parking requirements for places of public assembly from the City of Redlands Municipal Code, which is one space per five fixed seats, and the parking requirement for stadiums according to San Bernardino County, which is one

PRC		BLE 4 ERATED TRAF	FIC				
Facility Evening Hour – Pre-Event Daily							
E.	Inbound	Outbound	Total	Traffic			
	TRIP GENER	ATION RATES					
Stadium (vehicle trips per seat)	0.275	0.025	0.30	0.60			
G	ENERATED TR	RAFFIC VOLUME	S				
Stadium (3,000 seats)	825	75	900	1,800			

space for every three seats. The average of these two parking requirements is one space for every four seats.

Table 4 indicates that the 3,000-seat stadium would generate an estimated 900 vehicle trips during the peak hour (825 inbound and 75 outbound). The peak hour for this analysis represents the one-hour time period prior to the beginning of an event at the stadium when patrons are traveling to the stadium. Approximately the same level of traffic would be generated at the end of an event when patrons are exiting (with the inbound and outbound traffic volumes reversed). The stadium may also generate traffic at other times of the day; however, such traffic activity would be minor as compared to a capacity-level event represented by the traffic volumes shown in Table 4. The estimated daily traffic volume generated by the stadium on the day of a capacity-level event would be 1,800 vehicle trips per day.

To quantify the increase in traffic at each intersection resulting from an event at the proposed stadium, the project generated traffic was geographically distributed onto the street network using the directional percentages shown on Figure 4 in the Appendix. This distribution assumption is based on the layout of the existing street network, the school attendance boundaries, and the anticipated geographical distribution of the event patrons.

Using the generated traffic volumes shown in Table 4 and the geographical distribution assumptions outlined above, the volumes of proposed project traffic on each access street and at each study area intersection were determined for the traffic impact analysis. The volumes of site generated traffic that would be generated by the 3,000-seat stadium are shown on Figure 4 in the Appendix.

The volumes of traffic for the existing conditions scenario plus the project generated traffic are shown on Figure 5 and the total volumes of traffic projected for the year 2026 scenario with the proposed stadium are shown on Figure 6. These projected traffic volumes are for the Friday evening pre-event peak hour.

Intersection Impact Analysis

The impact analysis for the 10 study area intersections was conducted by comparing the delay values and levels of service (LOS) for the "without project" and "with project" scenarios. For the existing conditions scenario, the analysis compares the existing conditions to the conditions with the proposed project. Similarly, for the year 2026 scenario, the analysis compares the year 2026 baseline conditions without the proposed project to the year 2026 scenario with the proposed

project. The year 2026 was used as the target year for future conditions as that is anticipated to be the year that all three phases of the proposed project would be completed. The peak hour for the analysis represents the time period during which the stadium would generate the heaviest volumes of traffic (typically between 6:00 and 7:00 p.m.), which does not coincide with the peak period for the ambient traffic volumes, which generally occurs between 4:00 and 6:00 p.m.

The comparative levels of service at the study area intersections for the existing conditions scenario are summarized in Table 5 for the Friday evening peak hour. The table shows the before and after delay values and the levels of service that would occur at each study area intersection. Also shown are the increases in the delay values that would occur as a result of the proposed project. The last column in Table 5 indicates if the intersections would be significantly impacted by the project generated traffic.

The intersection of Mentone Boulevard and Opal Avenue, for example, would operate with an average delay value of 17.8 seconds per vehicle and LOS C for existing conditions and with an average delay value of 28.0 seconds and LOS D for the existing plus project scenario, which represents an increase in average delay of 10.2 seconds per vehicle. This impact would be less than significant according to the criteria outlined above because the intersection would continue to operate at an acceptable LOS D. Table 5 indicates that none of the study area intersections would be significantly impacted by the traffic that would be generated by the proposed project for the existing conditions baseline scenario.

	TABLE 5			
PROJECT IMPACT (SERVICE	
EXISTIN	G CONDITIONS A	S BASELINE		
	Delay Value & L	evel of Service		
	Existing	Existing plus	Increase In	Significant
Intersection	Conditions	Project	Delay Value	İmpact
Mentone Blvd/Opal Avenue	17.8 – C	28.0 – D	10.2	No
Mentone Blvd/Beryl Avenue	18.8 – C	23.5 – C	4.7	No
Mentone Blvd/Agate Avenue	24.5 – C	27.0 – D	2.5	No
Colton Avenue/Wabash Avenue	9.92 – A	13.28 – B	3.36	No
Colton Avenue/Opal Avenue	7.97 – A	11.51 – B	3.54	No
Colton Avenue/Beryl Avenue-School Driveway	7.99 – A	15.26 – C	7.27	No
Colton Avenue/Agate Avenue-King Street	7.86 – A	8.56 – A	0.70	No
Colton Avenue/Crafton Avenue	9.98 – A	10.32 – B	0.34	No
Citrus Avenue/Opal Avenue	7.70 – A	8.13 – A	0.43	No
Citrus Avenue/King Street	7.87 – A	8.06 – A	0.19	No

The comparative levels of service for the year 2026 analysis scenario are shown in Table 6. Table 6 indicates that none of the study area intersections would be significantly impacted by the traffic that would be generated by the proposed project for the year 2026 baseline scenario.

	TABLE 6			
PROJECT IMPACT (ON INTERSECTIO	N LEVELS OF S	SERVICE	
YE	EAR 2026 AS BAS	ELINE		
Delay Value & Level of Service				
	2026 Without	2026 With	Increase In	Significant
Intersection	Project	Project	Delay Value	Impact
Mentone Blvd/Opal Avenue	21.0 – C	34.6 – D	13.6	No

Mentone Blvd/Beryl Avenue	22.5 – C	29.3 – D	6.8	No
Mentone Blvd/Agate Avenue	30.2 – D	34.3 – D	4.1	No
Colton Avenue/Wabash Avenue	10.38 – B	14.18 – B	3.80	No
Colton Avenue/Opal Avenue	8.10 – A	11.84 – B	3.74	No
Colton Avenue/Beryl Avenue-School Driveway	8.10 – A	16.15 – C	8.05	No
Colton Avenue/Agate Avenue-King Street	7.97 – A	8.69 – A	0.72	No
Colton Avenue/Crafton Avenue	10.50 – B	10.91 – B	0.41	No
Citrus Avenue/Opal Avenue	7.81 – A	8.26 – A	0.45	No
Citrus Avenue/King Street	7.97 – A	8.18 – A	0.21	No

Tables 5 and 6 indicate that the proposed project would not have a significant impact at any of the study area intersections during the evening peak hour based on the significance criteria presented previously because the intersections would continue to operate at LOS D or better. As there would be no significant impacts, no capacity-related mitigation measures would be required. It should be noted that this conclusion is based on the assumption that an event would begin at 7:00 p.m. If a capacity-level event were scheduled to begin at 6:00 p.m. on a Monday through Friday, the site-generated traffic would coincide with the peak commuter traffic and the event would likely result in a significant impact.

The traffic impacts associated with the stadium would not occur on a daily basis but would occur only when a major event were to be held at the facility, which is typically a high school football game. Such events would occur on a Thursday or Friday evening or on a Saturday afternoon on approximately five to six occasions throughout the year. The analysis addresses the Friday evening scenario because the ambient traffic volumes would typically be higher on Friday as compared to Thursday evening or Saturday afternoon.

In addition to the capacity-level high school events that would be held at the stadium in the fall (primarily football games), the stadium would also be used for track and field events, soccer matches and practice, band activities, and possibly Pop Warner football. As the attendance at these activities would be substantially lower than the capacity-level events that were addressed in the traffic analysis above, it is concluded that such activities would result in a less than significant traffic impact. It is anticipated that there would be approximately 60 events per year, most of which would have relatively minor attendance levels typically ranging from 100 to 200 spectators.

For purposes of comparison to a capacity-level event, the traffic generation levels for an event with 100 and 200 spectators were calculated, as shown in Table 7. A 100-spectator event would generate an estimated 30 trips during the peak arrival time and 60 total daily trips. A 200-spectator event would generate 60 trips during the peak arrival time and 120 total daily trips. These traffic volumes are negligible as compared to the level of traffic that would be generated by a capacity-level event at the stadium.

GENERAT		BLE 7 C FOR MINOF	REVENTS	
Facility	Daily			
	Inbound	Outbound	Total	Traffic
	TRIP GENER	ATION RATES		
Stadium (vehicle trips per seat)	0.275	0.025	0.30	0.60
G	ENERATED TR	RAFFIC VOLUME	S	
Stadium				
100 spectators	27	3	30	60
200 spectators	55	5	60	120

Construction Traffic Impacts

Construction of the proposed stadium would generate various levels of truck and automobile traffic throughout the duration of the construction period. The construction-related traffic includes construction workers traveling to and from the site as well as trucks hauling construction materials to the site and demolition/excavation material away from the site. The construction activities would generate an estimated 50 to 60 workers' trips per day and approximately 20 to 30 truck trips per day. The truck trips would be spread out throughout the workday and would generally occur during non-peak traffic periods. This level of construction-related traffic would not result in a significant traffic impact on the study area roadway network as it would be negligible compared to the volumes of traffic currently generated by the existing high school.

Congestion Management Program

According to the "Guidelines for CMP Traffic Impact Analysis Reports in San Bernardino County" (from the San Bernardino County Congestion Management Program), the minimum level of service standard for the CMP system of highways and roadways is LOS E. There is one CMP arterial roadway in the immediate vicinity of the proposed project site: Mentone Boulevard (State Route 38). The traffic analysis summarized above indicates that the three most-directly affected intersections on Mentone Boulevard would operate at LOS D for the "2026 with project" scenario, which is better than the CMP standard of LOS E. The project generated traffic would not, therefore, result in a significant impact on the CMP roadway network. It should also be pointed out that the evaluation of a development project is typically based on the impacts of the project during the morning and/or afternoon commuter peak periods; i.e., from 7:00 to 9:00 a.m. and/or from 4:00 to 6:00 p.m. The proposed project would have negligible impacts during the morning or afternoon peak commuter periods because the peak stadium traffic would occur between 6:00 and 7:00 p.m., which is outside the afternoon commuter peak periods that are addressed in the CMP. The proposed project would not, therefore, exceed a level of service standard established by the county congestion management agency.

Non-Motorized Transportation and Transit

The proposed project would generate a demand for non-motorized travel as some event patrons would travel to and from the school as pedestrians or on bicycles. The streets adjacent to the school have sidewalks along one or both sides of the street and the intersections along the Colton Avenue

frontage of the school are equipped with four-way stop signs and painted crosswalks. Bike racks are available at the school and bus loading/unloading zones are provided on site.

With regard to public transit, Omnitrans operates Line 8 in the vicinity of the school site on Mentone Boulevard and Crafton Avenue. The proposed project would not adversely affect the performance of these transit or non-motorized transportation facilities and would not conflict with any plans or policies relative to these transportation modes.

The proposed project would be consistent with policies supporting alternative transportation because busing would typically be provided from the opposing schools during football games and bike racks are currently provided at the school. The proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Vehicle Miles Traveled (VMT)

The CEQA Guidelines state that projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact. The events and activities that would occur at the proposed stadium are currently held at Citrus Valley High School or at Redlands High School if the field at Citrus Valley High School is not available. These schools are outside the attendance area of Redlands East Valley High School.

Citrus Valley High School is located 4.9 miles northwest of Redlands East Valley High School (as measured along the travel routes on the streets) and Redlands High School is located 2.8 miles to the west of Redlands East Valley High School. As a comparison, the proposed stadium at Redlands East Valley High School is located within two miles of the majority of the homes within the attendance area. So the proposed project would result in shorter travel distances for most of the people who would be attending games, practices, events, and other activities at the stadium. The proposed project would, therefore, result in a reduction in total vehicle miles traveled and would have a less than significant impact on VMT.

Traffic Hazards and Incompatible Uses

Access to the proposed project site would be provided by existing driveways at Redlands East Valley High School, which includes three driveways along Colton Avenue, two driveways along King Street, and one driveway on Opal Avenue. The increased levels of traffic, the increased number of pedestrians, and the increased number of vehicular turning movements at the school entrances and at the nearby intersections would result in an increased number of traffic conflicts and a corresponding increase in the probability of an accident occurring. These impacts would not be significant, however, because the streets, intersections, and driveways are designed to accommodate the anticipated levels of vehicular and pedestrian activity and have historically been accommodating school-related traffic on a daily basis. The addition of a stadium would be compatible with the design and operation of a high school and the proposed project would not result in any major modifications to the existing access or circulation features at the school.

Most of the streets in the vicinity of the school site have sidewalks adjacent to the street and the intersections along the Colton Avenue frontage of the school are equipped with four-way stop signs and painted crosswalks. These features would enhance pedestrian safety and facilitate

pedestrian access to the school. The proposed project would not, therefore, substantially increase hazards due to a geometric design feature or incompatible uses.

Emergency Access

The existing access and circulation features at the school, including the on-site roadways, parking lots, and fire lanes, would continue to accommodate emergency ingress and egress by fire trucks, police units, and ambulance/paramedic vehicles, and the proposed stadium would be designed to accommodate emergency access to the facility. Any modifications to the access features are subject to and must satisfy the District and the San Bernardino County design requirements and would be subject to approval by the Fire Department. Emergency vehicles could easily access the stadium and all other areas of the school via on-site travel corridors. The proposed project would not, therefore, result in inadequate emergency access.

Parking Impacts

There are two issue areas relative to the proposed project's parking impacts: 1) parking during construction and 2) parking during events at the stadium. These issue areas are presented below.

Parking during Construction

The primary parking impact that would occur during construction is that there would be parking demands associated with the construction vehicles, including workers' vehicles, trucks, and equipment. These parking demands could result in a significant parking impact if the vehicles and equipment were to be parked and stored along the public streets in the proposed project vicinity. This impact can be mitigated by requiring the construction contractor to provide an off-street parking/storage area for vehicles and equipment, as described in Recommendation T-1.

Recommendation:

T-1. Require the construction contractor to provide an off-street staging area that would be used for parking/storage of construction vehicles and equipment. This staging area should be within the school property if possible.

Parking during Stadium Events

According to the parking requirements for the City of Redlands, a place of public assembly (which includes a stadium) has a parking requirement of one space for every five fixed seats. Based on this standard, the proposed 3,000-seat stadium would generate a parking requirement of 600 spaces during a capacity-level event. In the San Bernardino County Development Code, Chapter 83.11, "Parking and Loading Standards," indicates that the parking requirement for a stadium is one space for each 3 fixed seats (Table 83-15, Parking Requirements by Land Use). Based on this rate, the proposed 3,000-seat stadium would require 1,000 parking spaces.

According to the site plan for the proposed project, Redlands East Valley High School would be provided with 1,086 parking spaces, which includes 858 spaces within the school's main campus, 78 spaces in the parking lot adjacent to the football field that is accessed from Opal Avenue, and 150 spaces that would be provided at the outdoor basketball courts adjacent to the stadium at the

southeast corner of Colton Avenue and Opal Avenue. As the on-site parking supply would exceed the parking requirements of the City of Redlands and San Bernardino County, the proposed project would not result in a significant parking impact.

IV. SUMMARY OF IMPACTS AND CONCLUSIONS

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

- The proposed 3,000-seat stadium would generate an estimated 900 vehicle trips during the peak hour (825 inbound and 75 outbound) for a capacity-level event. The peak hour for this analysis represents the one-hour time period prior to the beginning of an event at the stadium when patrons are traveling to the stadium, which would typically occur on a Friday evening between 6:00 and 7:00 p.m. Approximately the same level of traffic would be generated at the end of an event when patrons are exiting (with the inbound and outbound traffic volumes reversed).
- An analysis of 10 intersections in the vicinity of the school indicates that the traffic generated by the stadium would not result in a significant impact at any of the intersections according to the San Bernardino County and Caltrans significance criteria.
- It is projected that the stadium would accommodate 60 events per year, including football practice and games, soccer practice and games, track and field practice and events, band events, and other activities such as Pop Warner football. These events would have an estimated 100 to 200 spectators, which would generate 30 to 60 vehicle trips during the peak hour. This level of project generated traffic would have a negligible impact on traffic conditions.
- CEQA threshold of significance T-1 asks if the proposed project would conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The analysis indicates that the impact would be less than significant because:

-The level of service or CMP thresholds would not be exceeded during construction or operation, and

-The proposed project would not adversely affect the performance or safety of any transit or non-motorized transportation facilities (pedestrians and bicycles) and would not conflict with any adopted plans, policies, or programs relative to these alternative transportation modes.

- CEQA threshold of significance T-2 asks if the proposed project would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), which addresses vehicle miles traveled (VMT). The analysis indicates that the impact would be less than significant because the proposed project would result in a reduction in total vehicle miles traveled as the proposed stadium would be closer to most of the homes in the attendance area as compared to the fields where the activities currently take place.
- CEQA threshold of significance T-3 asks if the proposed project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). The analysis indicates that the streets, intersections, and driveways are designed to accommodate the anticipated levels of vehicular and pedestrian activity and have historically been accommodating school-related traffic. The addition of a stadium would be compatible with the design and operation of a high school and the proposed project would not result in any major modifications to the existing access or circulation features

at the school. So the proposed project would not substantially increase hazards due to a geometric design feature or incompatible uses.

- CEQA threshold of significance T-4 asks if the proposed project would result in inadequate emergency access. The existing access and circulation features at the school, including the on-site roadways, parking lots, and fire lanes, would continue to accommodate emergency ingress and egress by fire trucks, police units, and ambulance/paramedic vehicles, and the proposed stadium would be designed to accommodate emergency access to the facility. The proposed project would not result in inadequate emergency access.
- Construction activities associated with the proposed project would generate parking demands for workers' vehicles, trucks, and equipment. These parking demands could result in a significant parking impact if the vehicles and equipment were to be parked and stored along the public streets in the proposed project vicinity. It is recommended that the construction contractor be required to provide an off-street staging area that would be used for parking/storage of construction vehicles and equipment. This staging area should be within the school property if possible.
- Redlands East Valley High School would be provided with 1,086 parking spaces, which includes 858 spaces within the school's main campus, 78 spaces in the parking lot adjacent to the football field that is accessed from Opal Avenue, and 150 spaces that would be provided at the outdoor basketball courts adjacent to the stadium. As the on-site parking supply would exceed the parking requirements of the City of Redlands (600 spaces) and San Bernardino County (1,000 spaces), the proposed project would not result in a significant parking impact.

APPENDIX

SITE PLANS

SITE PLAN - PHASE 1

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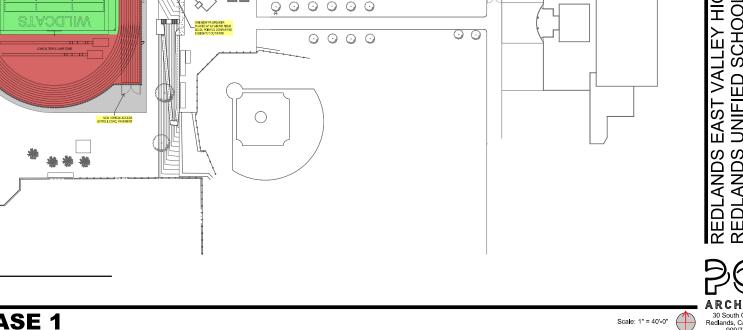
OPAL AVE (\mathbf{D}) PERMETER

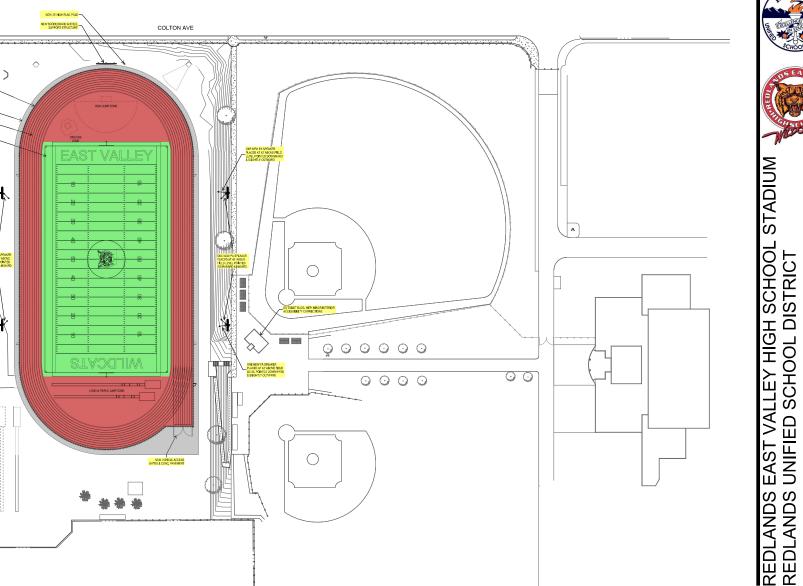
CONC V

RELOCATE (E) METAL STORAGE CONTAINER

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SITE PLAN PHASE 1 SCALE: 1" = 40'-0"



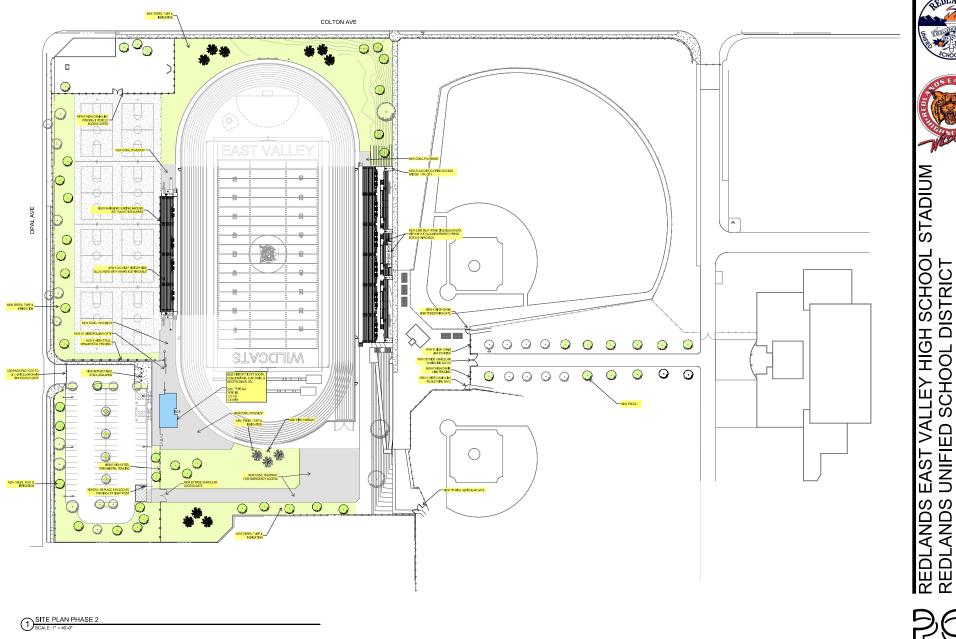




PROJECT STATUS 01/12/2021



SITE PLAN - PHASE 2



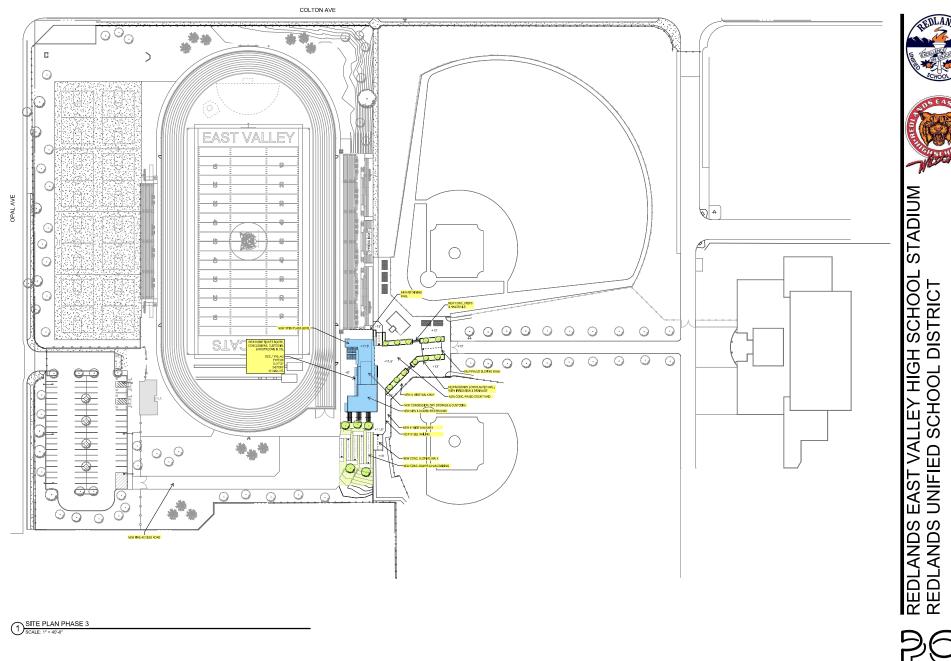
PROJECT STATUS 01/12/2021



 (\square)

Scale: 1" = 40'-0"

SITE PLAN - PHASE 3



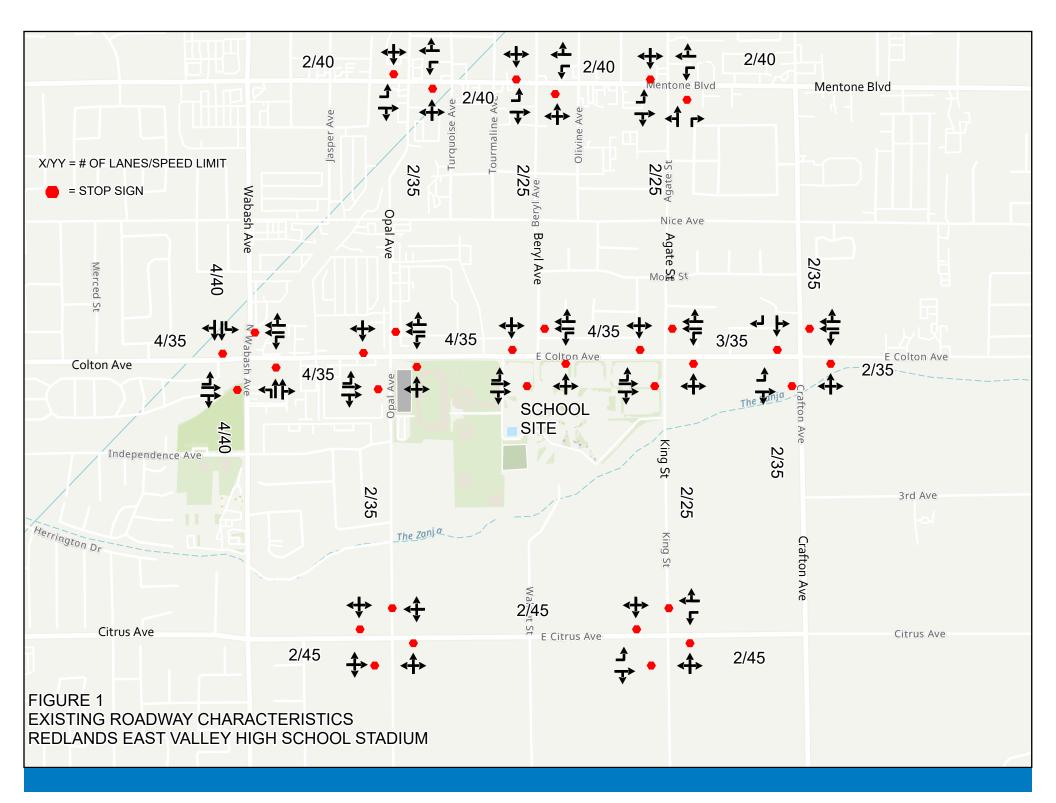
PROJECT STATUS 01/12/2021

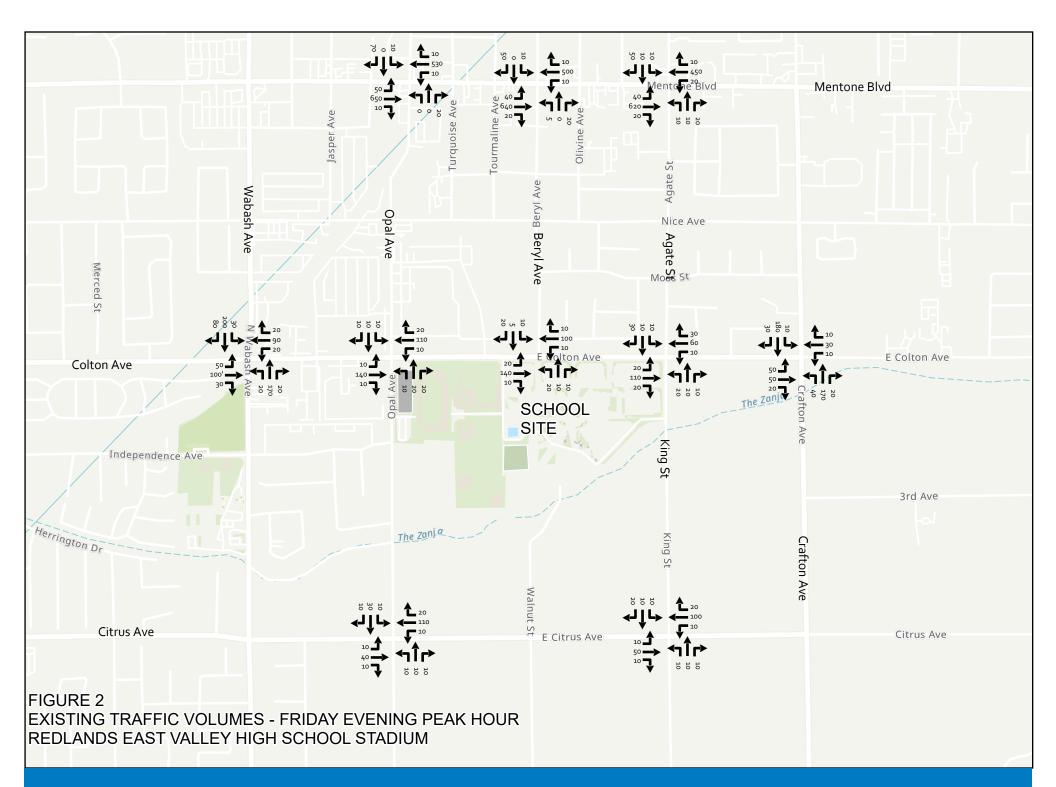
ARCHITECTS 30 South Center Street Redands, California 92373 909/92-7397

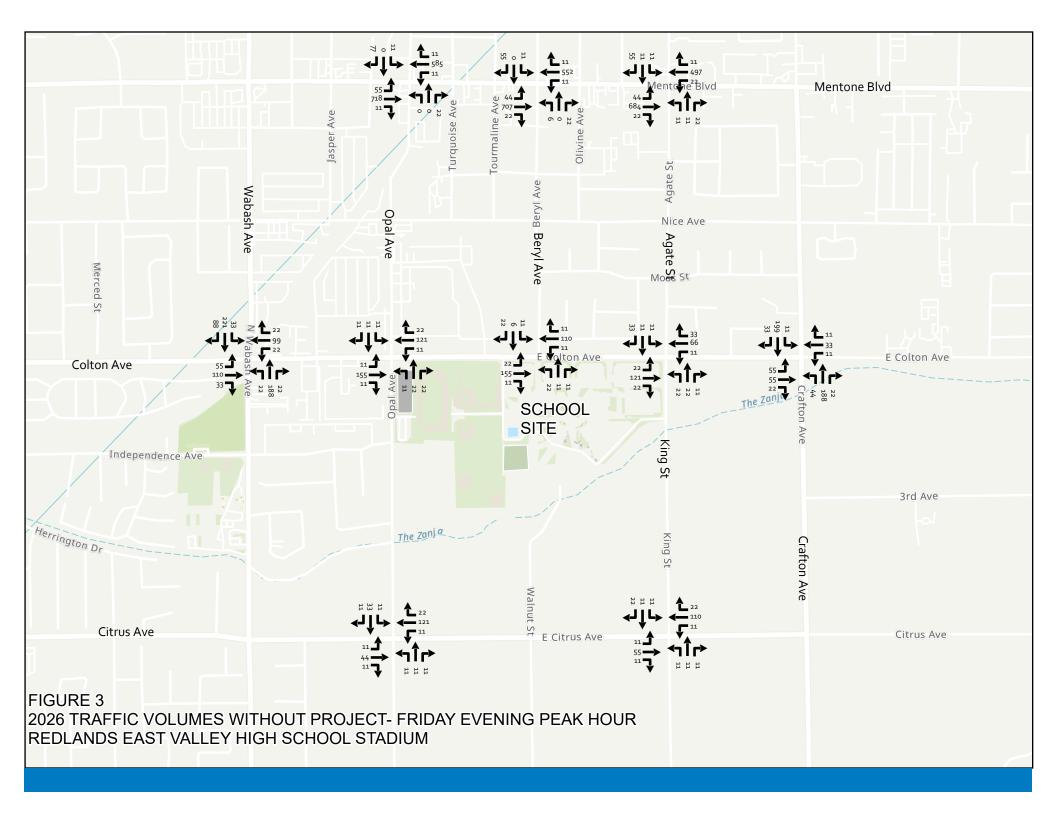
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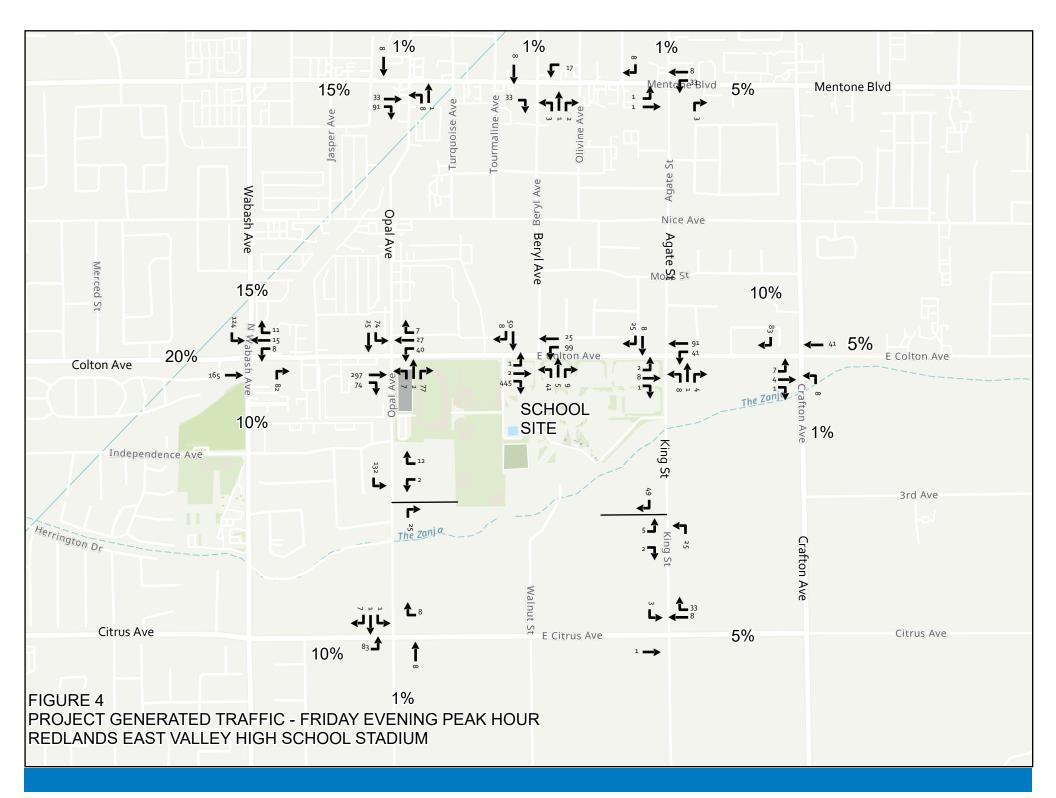
Scale: 1" = 40'-0"

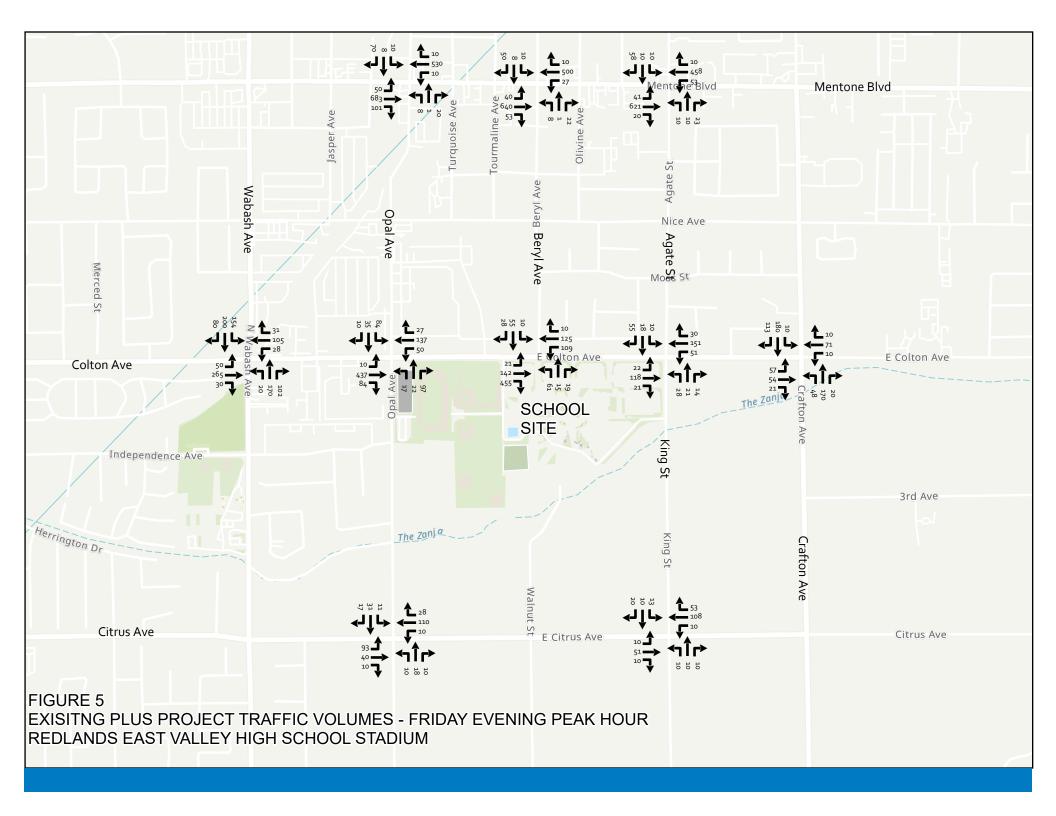
TRAFFIC FIGURES

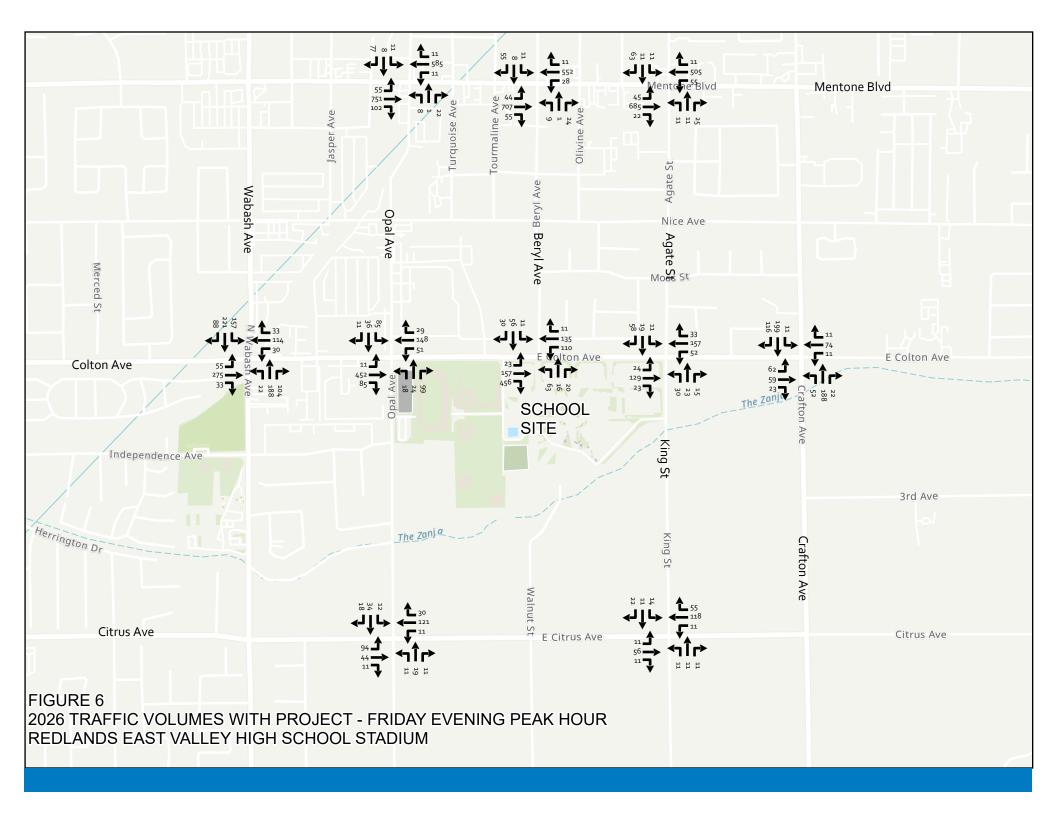












LEVEL OF SERVICE CALCULATION SHEETS

General Information				Site Inforr	nation			
				Intersection		Citrus	Avenue/Kina St	reet
Analyst Agency/Co.	R Garla Redlar	and Ids USD		Intersection Citrus Avenue/King Street Jurisdiction San Bernardino Co				
Date Performed	12/14/2			Analysis Year 2021 Existing				
Analysis Time Period	Friday	Evening Peak I	Hour					
Project ID <i>Redlands East Vall</i>	ey HS Stadium							
East/West Street: Citrus Ave	nue			North/South S	treet: King Stre	eet		
/olume Adjustments	and Site Cl	naracteristi	cs					
Approach			astbound			We	stbound	
Movement	L		T	R	L		T	R
/olume (veh/h)	10	'	50	10	10		100	20
%Thrus Left Lane								
Approach Movement		NO	orthbound	R	L	Sol	uthbound	R
/olume (veh/h)	10)	10	10	10		10	20
6Thrus Left Lane					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			20
	<u> </u>		<u> </u>	4	<u> </u>			-h
		bound		tbound		nbound	-	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	TR	L	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	<u> </u>
Flow Rate (veh/h)	10	62	10	126	30		41	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes		2		2		1	1	
Geometry Group	netry Group 5 5		5 2			2		
Duration, T				0.	25			
Saturation Headway	Adjustment	Workshee	t					
Prop. Left-Turns	1.0	0.0	1.0	0.0	0.3		0.2	
Prop. Right-Turns	0.0	0.2	0.0	0.2	0.3		0.5	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
nLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadj, computed	0.5	-0.1	0.5	-0.1	-0.1	1.7	-0.3	1.7
			0.5	-0.1	-0.1		-0.5	
Departure Headway a				0.00			0.00	
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20	 	3.20	
د, initial	0.01	0.06	0.01	0.11	0.03	 	0.04	
nd, final value (s)	5.26	4.65	5.22	4.60	4.29		4.15	
(, final value	0.01	0.08	0.01	0.16	0.04		0.05	
Move-up time, m (s)	2.	T.		2.3		.0		.0
Service Time, t _s (s)	3.0	2.3	2.9	2.3	2.3		2.2	
Capacity and Level o	f Service							
	East	bound	Wes	tbound	North	nbound	Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	260	312	260	376	280	1	291	<u> </u>
				-	-			
Delay (s/veh)	8.04	7.75	7.99	8.18	7.45		7.36	
.OS	A	A	A	A	A		A	
Approach: Delay (s/veh)	7	7.79	8.	17	7.	45	7.	36
LOS		A		A	/	4	/	4
ntersection Delay (s/veh)	1		-	7.	87		-	
ntersection LOS	1				A			

		ALL-WA	Y STOP C	ONTROL	ANALYSI	S					
General Information				Site Inform	nation						
Analyst	R Gar	land		Intersection		Citrus	Avenue/King St	reet			
Agency/Co.		nds USD		Jurisdiction			ernardino Co				
Date Performed				Analysis Year		2021 E	Existing Plus Pro	oject			
Analysis Time Period	Friday Evening Peak Hour										
Project ID <i>Redlands East Val</i>	ley HS Stadium										
East/West Street: Citrus Ave	enue			North/South S	treet: King Stre	eet					
Volume Adjustments	and Site C										
Approach			astbound T R			1		stbound T R			
Movement	_			R 10	L 10						
/olume (veh/h)	/	10		10	10		108 53				
%Thrus Left Lane							41.1				
Approach Movement				T R		L Sout		thbound T R			
/olume (veh/h)		10		10 10			10 20				
, ,		<u> </u>	10	10	13			20			
6Thrus Left Lane					<u> </u>	<u> </u>					
	Eastbound		Westbound			nbound	Southbound				
	L1	L2	L1	L2	L1	L2	L1	L2			
Configuration	L	TR	L	TR	LTR		LTR				
PHF	0.95	0.95	0.95	0.95	0.95		0.95				
Flow Rate (veh/h)	10	63	10	168	30		44				
% Heavy Vehicles	0	0	0	0	0		0				
No. Lanes		2		2		1		1			
Geometry Group		5		5		2		2			
Duration, T				0.	25		-				
Saturation Headway	Adjustment	t Workshee	t								
Prop. Left-Turns	1.0	0.0	1.0	0.0	0.3		0.3				
Prop. Right-Turns	0.0	0.2	0.0	0.3	0.3		0.5				
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0				
nLT-adj	0.5	0.0	0.0	0.5	0.0	0.2	0.0	0.2			
	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6			
nRT-adj		_	_	-							
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7			
nadj, computed	0.5	-0.1	0.5	-0.2	-0.1		-0.2				
Departure Headway				-	li -		li -	-			
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20				
, initial	0.01	0.06	0.01	0.15	0.03		0.04				
nd, final value (s)	5.30	4.69	5.23	4.50	4.38		4.27				
, final value	0.01	0.08	0.01	0.21	0.04		0.05				
/love-up time, m (s)		2.3	2	2.3	2	.0	2.0				
Service Time, t _s (s)	3.0	2.4	2.9	2.2	2.4		2.3				
Capacity and Level o	of Service										
	Eas	Eastbound West		tbound North		nbound	Sout	Southbound			
	L1	L2	L1	L2	L1	L2	L1	L2			
Capacity (veh/h)	260	313	260	418	280		294				
Delay (s/veh)	8.08	7.81	8.01	8.39	7.55		7.51	1			
.0S	A	A	A	A	A A		A				
Approach: Delay (s/veh)				8.37		7.55		7.51			
LOS	<u> </u>										
-							٩				
ntersection Delay (s/veh)		8.06									
ntersection LOS	A Florida, All Rights Reserved HCS+ TM Version 5.6 Generated: 12/21/2021 2:10 F										

		ALL-WA	Y STOP C	ONTROL	ANALYSI	S			
General Information	Site Information								
Analyst	R Gar	land		Intersection		Avenue/King St	reet		
Agency/Co.		nds USD		Jurisdiction		San B	ernardino Co		
Date Performed				Analysis Year 2026			Without Project		
Analysis Time Period	Friday	/ Evening Peak	Hour						
Project ID <i>Redlands East Val</i> i	ey HS Stadium								
East/West Street: Citrus Ave	nue			North/South S	treet: King Stre	eet			
Volume Adjustments	and Site C								
Approach		Ea		astbound T R				stbound	
Movement				R	L		т R 110 22		
/olume (veh/h)		11		11	11		110		
%Thrus Left Lane									
Approach	<u> </u>	N	Northbound		L Sou		thbound		
Movement	L	1	11	R 11	11		11	R 22	
/olume (veh/h)		<u>,</u>		11				22	
%Thrus Left Lane					<u>_ </u>		<u> </u>		
	Eastbound		Westbound		Northbound		Southbound		
	L1	L2	L1	L2	L1	L2	L1	L2	
Configuration	L	TR	L	TR	LTR		LTR		
PHF	0.95	0.95	0.95	0.95	0.95		0.95		
Flow Rate (veh/h)	11	68	11	138	33		45		
% Heavy Vehicles	0	0	0	0	0		0		
No. Lanes		2		2		1		1	
Geometry Group		5		5		2		2	
Duration, T				0.	25		-		
Saturation Headway	Adjustmen	t Workshee	ət						
Prop. Left-Turns	1.0	0.0	1.0	0.0	0.3		0.2		
Prop. Right-Turns	0.0	0.2	0.0	0.2	0.3		0.5		
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0		
hLT-adj	0.5	0.5	0.5	0.5	0.0	0.2	0.0	0.2	
	-0.7	-0.7		-0.7	-0.6	-	-	-0.6	
nRT-adj	_		-0.7			-0.6	-0.6		
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	
nadj, computed	0.5	-0.1	0.5	-0.1	-0.1		-0.3		
Departure Headway a							1		
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20		
, initial	0.01	0.06	0.01	0.12	0.03		0.04		
nd, final value (s)	5.29	4.68	5.24	4.62	4.34		4.20		
, final value	0.02	0.09	0.02	0.18	0.04		0.05		
/love-up time, m (s)	2	2.3	2	2.3	2	.0	2.0		
Service Time, t _s (s)	3.0	2.4	2.9	2.3	2.3		2.2		
Capacity and Level o	f Service								
	Eas	tbound	Wes	stbound	North	nbound	Southbound		
	L1	L2	L1	L2	L1	L2	L1	L2	
Capacity (veh/h)	261	318	261	388	283		295	1	
Delay (s/veh)	8.08	7.83	8.03	8.32	7.52		7.44		
_OS	A	A	A	A	A		A		
Approach: Delay (s/veh)	-	7.87		8.30		7.52		7.44	
LOS									
	A A A A 7.97						٦		
ntersection Delay (s/veh)					-				
ntersection LOS	A Florida, All Rights Reserved HCS+ TM Version 5.6 Generated: 12/21/2021 2:11								

General Information				Site Inforn	nation			
				Intersection		Citrus	Avenue/King St	reet
Analyst Agency/Co.	R Garl Redlar	and Ids USD		Jurisdiction			Bernardino Co	1661
Date Performed	12/14/2			Analysis Year			With Project	
Analysis Time Period	Friday	Evening Peak I	Hour					
Project ID Redlands East Vall	ey HS Stadium							
East/West Street: Citrus Ave	nue			North/South St	treet: King Stre	eet		
/olume Adjustments	and Site Cl	naracteristi	cs					
Approach			astbound				estbound	
Novement	L		Т	R	L		Т	R
/olume (veh/h)	11		56	11	11		118	55
%Thrus Left Lane								
Approach		No	orthbound	R		Sou		R
/lovement /olume (veh/h)	11	1	T 11	11	14		11	22
%Thrus Left Lane				11				~~~~
					<u>_</u>		<u> </u>	
	East	bound	Wes	tbound	North	nbound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	TR	L	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	11	69	11	181	33		48	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes		2		2		1		1
Geometry Group		5		5		2		2
Duration, T				0.	25		-	
Saturation Headway	Adjustment	Workshee	t					
Prop. Left-Turns	1.0	0.0	1.0	0.0	0.3		0.3	
Prop. Right-Turns	0.0	0.0	0.0	0.3	0.3		0.5	
Prop. Heavy Vehicle	0.0	0.2	0.0	0.0	0.0		0.0	
			-	-	-	0.0	-	
nLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
adj, computed	0.5	-0.1	0.5	-0.2	-0.1		-0.2	
Departure Headway a	and Service	Time						
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
κ, initial	0.01	0.06	0.01	0.16	0.03		0.04	
nd, final value (s)	5.33	4.72	5.26	4.53	4.44		4.33	
, final value	0.02	0.09	0.02	0.23	0.04		0.06	
Move-up time, m (s)	2	.3	2	2.3	2	.0	2	.0
Service Time, t _s (s)	3.0	2.4	3.0	2.2	2.4		2.3	1
Capacity and Level o		1	1	1	1	1	-	1
Supacity and Level O				4le e :		h a un d		
	-	bound		tbound		nbound	-	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	261	319	261	431	283		298	
Delay (s/veh)	8.12	7.89	8.04	8.57	7.63		7.59	1
.OS	A	A	A	A	A	1	A	1
	-		-			63	-	59
	7.92 8.5						_	
						A		
Approach: Delay (s/veh) LOS ntersection Delay (s/veh)		Α		<u> </u>	18	4	/	4

General Information				Site Inforr	nation			
		and		Intersection		Citrus	Avenue/Opal Av	/enue
Analyst Agency/Co.	R Garl Redlar	and Ids USD		Jurisdiction			Bernardino Co	
Date Performed	12/14/			Analysis Yea	r		Existing	
Analysis Time Period	Friday	Evening Peak	Hour					
Project ID <i>Redlands East Vall</i> e	ey HS Stadium			-				
East/West Street: Citrus Ave	nue			North/South S	Street: Opal Ave	enue		
/olume Adjustments	and Site Cl	naracterist	ics					
Approach		E	astbound			We	estbound	
/ovement /olume (veh/h)	L 1(,	т 40	R 10	L 10		т 110	R 20
%Thrus Left Lane	- /0	<u> </u>	40	10	10		110	20
Approach		I	orthbound			Soi	Ithbound	
Novement	L		T	R	L		Т	R
/olume (veh/h)	10)	10	10	10		30	10
%Thrus Left Lane								
	East	bound	Wes	tbound	Norti	hbound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.95		0.95		0.95		0.95	
Flow Rate (veh/h)	62	<u> </u>	146		30		51	<u> </u>
% Heavy Vehicles	02		0		0		0	1
No. Lanes		1		1		1	-	1
Geometry Group	1			1		1		1
Duration, T				0.	.25			
Saturation Headway	- Adiustment	Workshee	t					
Prop. Left-Turns	0.2	1	0.1		0,3		0.2	
Prop. Right-Turns	0.2		0.1		0.3		0.2	
Prop. Heavy Vehicle	0.2		0.0		0.0		0.2	
	0.0	0.2	0.0	0.0	0.0	0.2	0.0	0.2
nLT-adj			-	0.2	-	0.2	_	-
IRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
adj, computed	-0.1		-0.1		-0.1		-0.1	
Departure Headway a		Time						
nd, initial value (s)	3.20		3.20		3.20		3.20	
د, initial	0.06	ļ	0.13		0.03	ļ	0.05	
id, final value (s)	4.16		4.07		4.27		4.31	
(, final value	0.07		0.17		0.04		0.06	
Move-up time, m (s)		.0		2.0		2.0		.0
Service Time, t _s (s)	2.2		2.1		2.3		2.3	
Capacity and Level o	f Service							
	East	bound	Wes	tbound	North	hbound	South	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	312		396		280		301	
Delay (s/veh)	7.49				7.43		7.58	
			7.88		-			
OS	A		A		A		A	
Approach: Delay (s/veh)	7	7.49	_	88	_	43	7.	58
LOS		Α		A		A	/	4
ntersection Delay (s/veh)				7.70				
ntersection LOS					A			

		ALL-WA	Y STOP CO	ONTROL	ANALYSI	S		
General Information				Site Inforr	nation			
Analyst	R Garl	and		Intersection		Citrus	Avenue/Opal Av	/enue
Agency/Co.	Redlar	nds USD		Jurisdiction			ernardino Co	
Date Performed	12/14/			Analysis Year	ſ	2021	Existing Plus Pro	oject
Analysis Time Period		Evening Peak	Hour					
Project ID Redlands East Vall								
East/West Street: Citrus Ave			-	North/South S	street: Opal Ave	enue		
Volume Adjustments	and Site C							
Approach Movement		<u> </u>	astbound	T R		VVe	stbound	R
/olume (veh/h)	93	3	40	10	L 10		110	28
%Thrus Left Lane								
Approach		N	orthbound			Sou	thbound	
Novement	L		Т	R	L		Т	R
/olume (veh/h)	10)	18	10	11		31	17
6Thrus Left Lane								
	Fast	Eastbound		bound	North	nbound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
`onfiguration				L2	_			
Configuration PHF	LTR		LTR		LTR		LTR	
	0.95		0.95 154		0.95 38		0.95	
Flow Rate (veh/h) % Heavy Vehicles	149 0		0		<u> </u>		60 0	
lo. Lanes	-	1		1	_	1	_	1
Geometry Group		1 1	1		_	1 1		1 1
	-	1			.25	1		I
Duration, T				0.	.20			
Saturation Headway		Workshee						
Prop. Left-Turns	0.7		0.1		0.3		0.2	
rop. Right-Turns	0.1		0.2		0.3		0.3	
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
LT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
iHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
adj, computed	0.1		-0.1		-0.1		-0.1	
Departure Headway a		Timo	•		•		•	
			3.20	1	2 20		2.20	1
nd, initial value (s)	3.20 0.13		0.14		3.20 0.03		3.20 0.05	
, initial Id, final value (s)	4.38		4.20		4.55		4.49	
, final value (s)	<i>4.30</i> <i>0.18</i>		0.18		4.55 0.05	+	0.07	
/love-up time, m (s)		.0	2.	0		.0		.0
	2.4		_	ĭ	-			
Service Time, t _s (s)			2.2		2.5		2.5	
Capacity and Level o	t Service							
	East	bound	West	bound	North	nbound	Sout	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
apacity (veh/h)	399		404		288		310	
elay (s/veh)	8.35		8.11		7.78	1	7.86	1
OS	A		A		A		A	
	-	2.25		11	_	79	_	86
pproach: Delay (s/veh)		3.35	_	.11 7.78				
LOS		Α	A			4	/	4
ntersection Delay (s/veh)					.13			
ntersection LOS					A ^M Version 5.6			

Conorol Information				Cite Inform	nation			
General Information				Site Inform	nation		A	
Analyst	R Garl			Intersection Jurisdiction			Avenue/Opal Av ernardino Co	/enue
Agency/Co. Date Performed	Redlar 12/14/2	nds USD		Analysis Year	r		Without Project	
Analysis Time Period		Evening Peak	Hour	-				
Project ID Redlands East Valle		Z						
East/West Street: Citrus Ave				North/South S	itreet: Opal Ave	nue		
Volume Adjustments		aractorist	ice					
Approach			Eastbound			We		
Vovement	L		Т	R	L		Т	R
/olume (veh/h)	11		44	11	11		121	22
%Thrus Left Lane								
Approach		N	orthbound			Sou	thbound	
Movement	L		T	R	L		T	R
/olume (veh/h)	11		11	11	11		33	11
%Thrus Left Lane								<u></u>
	East	bound	Wes	tbound	North	bound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.95		0.95		0.95		0.95	
Flow Rate (veh/h)	68		161	1	33		56	1
% Heavy Vehicles	0	<u> </u>	0	1	0		0	1
No. Lanes		1	_	1		1		1
Geometry Group	1			1		1		1
Duration, T	1		1		.25	•	1	
Saturation Headway	<u>I</u> Adjuctmont	Workshor	.+	0	.20			
		VUINSILEE						
Prop. Left-Turns	0.2		0.1		0.3		0.2	
Prop. Right-Turns	0.2		0.1		0.3		0.2	ļ
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0	
nLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
nRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
adj, computed	-0.1		-0.1		-0.1		-0.1	
Departure Headway a	nd Service	Time	8					
nd, initial value (s)	3.20	1	3.20		3.20		3.20	1
k, initial	0.06	<u> </u>	0.14	<u> </u>	0.03		0.05	
nd, final value (s)	4.20		4.10		4.33		4.36	
, final value	0.08		0.18		0.04		0.07	
Move-up time, m (s)	_	.0		2.0		.0		.0
	1		2.1	1	2.3	1		. <u> </u>
Service Time, t _s (s)	2.2		2.1		2.3		2.4	
Capacity and Level o	t Service							
	East	bound	Wes	tbound	North	bound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	318		411		283	1	306	1
Delay (s/veh)	7.56		8.02	1	7.51		7.68	
,					-			
OS	A		A	<u> </u>	A	L	A	
Approach: Delay (s/veh)	7	7.56	8.	02	7.	51	7.	68
LOS		Α		A	/	4		4
ntersection Delay (s/veh)				7.	.81		_	
ntersection LOS	T				A			

A				ONTROL	-				
General Information				Site Inforr	mation	<u> </u>			
Analyst	R Gan			Intersection			Avenue/Opal A	venue	
Agency/Co.		nds USD		Jurisdiction Analysis Year	r		ernardino Co With Project		
Date Performed Analysis Time Period	12/14/ Eridov	2021 Evening Peak	Hour		I	2020	With Floject		
*		Evening Peak	пош	4					
Project ID Redlands East Vall									
East/West Street: Citrus Ave			-	North/South S	Street: Opal Ave	enue			
Volume Adjustments	and Site C								
Approach Movement		E	Eastbound T	R	L	We	stbound T	R	
Volume (veh/h)	L 	1	44	11	11		121	30	
%Thrus Left Lane		<u>,</u>	++	11	,,		121	50	
Approach			lorthbound			<u> </u>	Ithbound		
Novement	L		T	R	L	300	Т	R	
/olume (veh/h)	1	1	19	11	12		34	18	
%Thrus Left Lane	_ <u>_</u>							. •	
	<u> </u>	<u> </u>			<u> </u>	<u> </u>			
	East	tbound	Wes	stbound	North	nbound	Sout	hbound	
	L1	L2	L1	L2	L1	L2	L1	L2	
Configuration	LTR		LTR		LTR		LTR		
PHF	0.95		0.95		0.95		0.95		
Flow Rate (veh/h)	155		169		42		65		
% Heavy Vehicles	0		0		0		0		
No. Lanes		1		1		1		1	
Geometry Group		1		1		1		1	
Duration, T				0.	.25				
Saturation Headway	<u>.</u> Adiustment	Workshee	t						
Prop. Left-Turns				1		1			
•	0.6		0.1		0.3		0.2		
Prop. Right-Turns	0.1		0.2		0.3		0.3		
Prop. Heavy Vehicle	0.0		0.0		0.0		0.0		
nLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
nRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	
nadj, computed	0.1		-0.1		-0.1		-0.1		
Departure Headway a		Timo						1	
•	3.20		2 20	1	2 20	T	2 20	T	
nd, initial value (s)			3.20		3.20		3.20		
κ, initial	0.14		0.15		0.04	+	0.06		
nd, final value (s)	4.42		4.23		4.61		4.55		
, final value	0.19		0.20		0.05		0.08		
Move-up time, m (s)		.0	-	2.0		.0		.0	
Service Time, t _s (s)	2.4		2.2		2.6		2.6		
Capacity and Level o	f Service								
	Eas	tbound	Wes	stbound	North	nbound	Sout	hbound	
	L1	L2	L1	L2	L1	L2	L1	L2	
Capacity (yeh/h)	405		_		_	<u> </u>		<u> </u>	
Capacity (veh/h)			419		292	 	315		
Delay (s/veh)	8.46		8.28		7.87	ļ	7.96	 	
OS	A		A		A		A		
Approach: Delay (s/veh)	6	8.46	8.	.28	7.	87	7.	96	
LOS		A	_	A A			A		
ntersection Delay (s/veh)		71			.26	•	,	•	
	1			0.	v				

Page 1 of 1

General Information

Project ID Redlands East Valley HS Stadium

East/West Street: Colton Avenue

R Garland

Redlands USD 12/14/2021

Friday Evening Peak Hour

Analyst

Agency/Co. Date Performed

Analysis Time Period

					Page 1 of			
ALL-V	NAY STOP (NALYSIS					
		Site Informa	tion					
arland		Intersection		Colton Avenue/Aga	te Avenue			
lands USD		Jurisdiction		San Bernardino Co				
4/2021		Analysis Year		2021 Existing				
ay Evening	Peak Hour							
n								
		North/South Stree	et: Agate Avenue	King Street				
Characte	eristics							
	Eastbound			Westbound				
L	Т	R	L	Т	R			
20	110	20	10	60	30			
50			50					
	Northbound			Southbound				
L	Т	R	L	Т	R			
L 20	20	10	10	10	30			
				I I				

and Site Cl	naracteristi	cs					
	E	astbound			We	stbound	
L		T		L		Т	R
		110	20			60	30
50				50			
_ _	No		P		Sou		R
	, 						<u> </u>
	<u> </u>	20	10	10		10	30
<u></u>		<u></u>					
East	bound	Wes	tbound	Norti	hbound	South	nbound
L1	L2	L1	L2	L1	L2	L1	L2
LT	TR	LT	TR	LTR		LTR	
0.95	0.95	0.95	0.95	0.95		0.95	
78	78	41	62	52		51	
0	0	0	0	0		0	
;	2		2		1		1
	5		5		2		2
			0.25				
Adjustment	Workshee	t					
0.3	0.0	0.2	0.0	0.4		0.2	
0.0	0.3	0.0	0.5	0.2		0.6	
0.0	0.0	0.0	0.0	0.0		0.0	
0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
0.1	-0.2	0.1	-0.3	-0.0		-0.3	
Ind Service	Time						
3.20	3.20	3.20	3.20	3.20		3.20	
0.07	0.07	0.04	0.06	0.05		0.05	
4.96	4.64	4.99	4.52	4.51		4.22	
0.11	0.10	0.06	0.08	0.07		0.06	
2	.3	2	2.3	2	2.0	2.	.0
2.7	2.3	2.7	2.2	2.5		2.2	
f Service		<u> </u>		<u> </u>	<u> </u>	<u> </u>	
	bound	Wes	tbound	Norti	hbound	South	nbound
L1	L2	L1	L2	L1	L2	L1	L2
328	328	291	312	302	1	301	
8.26	7.85	-	-		1	7.49	
A	A					-	
-		-		-	82	_	49
<u> </u>							4
+		<u> </u>		86		. ,	
			/.				
	20 50 1 20 20 20 20 20 20 20 20 20 20 20 20 21 22 78 0 23 0 23 0.0 0.5 -0.7 1.7 0.1 md Service 3.20 0.07 4.96 0.11 2.7 f Service East L1 328 8.26 A	20 50 50 No L 20 20 20 L1 L2 LT TR 0.95 0.95 78 78 0 0 2 5 78 78 0.95 0.95 78 78 0 0 2 5 4djustment Workshee 0.3 0.0 0.0 0.3 0.0 0.3 0.0 0.3 0.0 0.3 0.0 0.0 0.1 -0.2 Ind Service Time 3.20 3.20 3.20 0.07 0.07 0.11 0.10 2.3 2.7 2.3 2.7 2.3 2.7 2.3 2.3 2.7 2.3 f Service Eastbound L1 L2 328 328 8.26 <t< td=""><td>20 110 50 Northbound L T 20 20 20 20 20 20 Eastbound Wes L1 L2 L1 LT TR LT 0.95 0.95 0.95 78 78 41 0 0 0 2 5 1 Adjustment Worksheet 0.3 0.0 0.3 0.0 0.2 0.0 0.3 0.0 0.2 0.0 0.3 0.0 0.2 0.1 -0.2 0.1 0.1 -0.2 0.1 md Service Time 3.20 3.20 3.20 3.20 3.20 3.20 3.20 0.11 0.10 0.06 2.3 2.7 2.3 2.7 f Service Eastbound Wes L1 L2 L1</td><td>20 110 20 50 Northbound L T R 20 20 10 L T R 20 20 10 L1 L2 L1 L2 LT TR LT TR 0.95 0.95 0.95 0.95 78 78 41 62 0 0 0 0 0 22 2 2 5 5 4djustment Worksheet 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.5 0.5 0.5 0.5 0.5 -0.7 -0.7 -0.7 -0.7 1.7 1.7 1.7 1.7 1.7 1.7 0.1 -0.2 0.1 -0.3 2.3 2.7 2.3 2.7 2.2 f Service I</td><td>20 110 20 10 50 Northbound 50 L T R L 20 20 10 10 L T R L 20 20 10 10 L Z 20 20 10 L1 L2 L1 L2 L1 LT TR LT TR LTR 0.95 0.95 0.95 0.95 0.95 78 78 41 62 52 0 0 0 0 0 2 2 2 2 2 5 5 5 1 0.25 Adjustment Worksheet 0.0 0.0 0.0 0.0 0.3 0.0 0.2 0.0 0.4 0.0 0.5 0.5 0.5 0.5 0.2 0.0 0.1 -0.2 0.1 -0.</td><td>20 110 20 10 50 Southound T R L Southound Southound 20 20 10 10 10 Southound 20 20 10 10 10 10 L1 L2 L1 L2 L1 L2 L7 TR LT TR LTR 0.95 0.95 0.95 0.95 0.95 0.78 78 41 62 52 0 0 0 0 0 0 2 2 1 5 5 2 0.3 0.0 0.2 0.0 0.4 0.0 0.3 0.0 0.2 0.0 0.4 0.0 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 -0.2 0.1 -0.3 -0.0 0.1 0.1 -0.2 0.1</td><td>20 110 20 10 60 50 T R Southbound Southbound L T R L T 20 20 10 10 10 L T R L T 20 20 10 10 10 L L L L L T L1 L2 L1 L2 L1 L2 L1 0.95 0.95 0.95 0.95 0.95 0.95 0.95 78 78 41 62 52 51 0 0 0 0 0 0 0 0 0 2 2 1 0.25 Adjustment Worksheet 0.3 0.0 0.5 0.5 0.2</td></t<>	20 110 50 Northbound L T 20 20 20 20 20 20 Eastbound Wes L1 L2 L1 LT TR LT 0.95 0.95 0.95 78 78 41 0 0 0 2 5 1 Adjustment Worksheet 0.3 0.0 0.3 0.0 0.2 0.0 0.3 0.0 0.2 0.0 0.3 0.0 0.2 0.1 -0.2 0.1 0.1 -0.2 0.1 md Service Time 3.20 3.20 3.20 3.20 3.20 3.20 3.20 0.11 0.10 0.06 2.3 2.7 2.3 2.7 f Service Eastbound Wes L1 L2 L1	20 110 20 50 Northbound L T R 20 20 10 L T R 20 20 10 L1 L2 L1 L2 LT TR LT TR 0.95 0.95 0.95 0.95 78 78 41 62 0 0 0 0 0 22 2 2 5 5 4djustment Worksheet 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.5 0.5 0.5 0.5 0.5 -0.7 -0.7 -0.7 -0.7 1.7 1.7 1.7 1.7 1.7 1.7 0.1 -0.2 0.1 -0.3 2.3 2.7 2.3 2.7 2.2 f Service I	20 110 20 10 50 Northbound 50 L T R L 20 20 10 10 L T R L 20 20 10 10 L Z 20 20 10 L1 L2 L1 L2 L1 LT TR LT TR LTR 0.95 0.95 0.95 0.95 0.95 78 78 41 62 52 0 0 0 0 0 2 2 2 2 2 5 5 5 1 0.25 Adjustment Worksheet 0.0 0.0 0.0 0.0 0.3 0.0 0.2 0.0 0.4 0.0 0.5 0.5 0.5 0.5 0.2 0.0 0.1 -0.2 0.1 -0.	20 110 20 10 50 Southound T R L Southound Southound 20 20 10 10 10 Southound 20 20 10 10 10 10 L1 L2 L1 L2 L1 L2 L7 TR LT TR LTR 0.95 0.95 0.95 0.95 0.95 0.78 78 41 62 52 0 0 0 0 0 0 2 2 1 5 5 2 0.3 0.0 0.2 0.0 0.4 0.0 0.3 0.0 0.2 0.0 0.4 0.0 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 -0.2 0.1 -0.3 -0.0 0.1 0.1 -0.2 0.1	20 110 20 10 60 50 T R Southbound Southbound L T R L T 20 20 10 10 10 L T R L T 20 20 10 10 10 L L L L L T L1 L2 L1 L2 L1 L2 L1 0.95 0.95 0.95 0.95 0.95 0.95 0.95 78 78 41 62 52 51 0 0 0 0 0 0 0 0 0 2 2 1 0.25 Adjustment Worksheet 0.3 0.0 0.5 0.5 0.2

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		ALL-WA	Y STOP C			3		
General Information				Site Inform	nation			
Analyst	R Garl	and		Intersection			Avenue/Agate	Avenue
Agency/Co.		ids USD		Jurisdiction	-		ernardino Co	inat
Date Performed	12/14/.		110.00	Analysis Year	-	2021 8	Existing Plus Pro	oject
Analysis Time Period		Evening Peak	Hour					
Project ID Redlands East Valle								
East/West Street: Colton Ave			-	North/South S	treet: Agate Av	enue/King Stre	et	
Volume Adjustments	and Site Cl							
Approach Movement		E	astbound	R		We	stbound	R
/olume (veh/h)	22	,	118	21	51		151	30
%Thrus Left Lane	50		110	21	50		101	
Approach			orthbound			Sou	thbound	
Novement	L		T	R	L	300	T	R
/olume (veh/h)	28	3	21	14	10		18	55
%Thrus Left Lane								
		bound	14/	stbound	North	nbound		nbound
		r	_	1	_	1		1
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	85	84	131	111	65		85	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes	2			2		1		1
Geometry Group		5		5		2		2
Duration, T				0.	25			
Saturation Headway	Adjustment	Workshee	t					
Prop. Left-Turns	0.3	0.0	0.4	0.0	0.4		0.1	
Prop. Right-Turns	0.0	0.3	0.0	0.3	0.2		0.7	1
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	<u> </u>
nLT-adj	0.5	0.5	0.5	0.5	0.0	0.2	0.0	0.2
-			-	1	-	-		
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadj, computed	0.1	-0.2	0.2	-0.2	-0.0		-0.4	
Departure Headway a	and Service	Time						
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
κ, initial	0.08	0.07	0.12	0.10	0.06		0.08	
nd, final value (s)	5.25	4.93	5.24	4.84	4.92		4.56	
, final value	0.12	0.11	0.19	0.15	0.09		0.11	
Move-up time, m (s)	2	.3	2	2.3	2	.0	2.	.0
Service Time, t _s (s)	2.9	2.6	2.9	2.5	2.9	1	2.6	
Capacity and Level o					1	<u> </u>		
Sapacity and Level 0	1							
		bound		stbound	-	nbound		nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	335	334	381	361	315		335	
Delay (s/veh)	8.69	8.27	9.18	8.39	8.39		8.10	1
.OS	A	A	A	A	A		A	
	-				-	20	-	10
Approach: Delay (s/veh)		3.48	_	.82		39	-	10
LOS		Α						4
ntersection Delay (s/veh)	ļ			8.	56			
ntersection LOS					A			

General Information				Site Inform	Site Information						
				Intersection	nation	Colton	Avenue/Agate	Διγεριμε			
Analyst Agency/Co.	R Garl Redlar	and nds USD		Jurisdiction			ernardino Co	-veriue			
Date Performed	12/14/			Analysis Year	•		Without Project				
Analysis Time Period		Evening Peak	Hour								
Project ID Redlands East Vall	ey HS Stadium										
East/West Street: Colton Ave	enue			North/South S	treet: Agate Av	/enue/King Stre	et				
Volume Adjustments	and Site C			•							
Approach		E	astbound		_ _	We					
/lovement /olume (veh/h)	L 22	,	121	R 22	L 11		т 66	R 33			
%Thrus Left Lane	50		121	121 22				- 55			
Approach			orthbound		50	Sou	thbound				
Novement	L		T	R	L	300	T	R			
/olume (veh/h)	22	2	22	11	11		11	33			
%Thrus Left Lane											
	Faet	bound	We	stbound	North	nbound	South	nbound			
		L2		L2		L2		1			
Dan finunation.						L2		L2			
Configuration	LT	TR	LT	TR	LTR		LTR	 			
	0.95	0.95	0.95	0.95	0.95		0.95	 			
Flow Rate (veh/h)	86	87	45 0	68	57		56	 			
% Heavy Vehicles	0	0	U U	0	0	1	0	1			
No. Lanes		2 5		2 5		1 2		1 2			
Geometry Group	-	5		-	-	2		2			
Duration, T		<u> </u>		0.	25						
Saturation Headway					1	1	1				
Prop. Left-Turns	0.3	0.0	0.2	0.0	0.4		0.2				
Prop. Right-Turns	0.0	0.3	0.0	0.5	0.2		0.6				
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0				
hLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2			
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6			
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7			
nadj, computed	0.1	-0.2	0.1	-0.3	-0.0		-0.3				
Departure Headway a	and Service	Time									
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20				
k, initial	0.08	0.08	0.04	0.06	0.05		0.05	i			
nd, final value (s)	5.00	4.68	5.04	4.57	4.57		4.29	i			
x, final value	0.12	0.11	0.06	0.09	0.07		0.07	1			
Move-up time, m (s)	2	.3	_	2.3		.0		.0			
Service Time, t _s (s)	2.7	2.4	2.7	2.3	2.6		2.3				
Capacity and Level o		1	1	1	1			1			
E		bound	We	stbound	North	nbound	South	nbound			
	L1	L2	L1	L2	L1	L2	L1	L2			
Capacity (veh/h)	336	337	295	318	307	1	306				
Delay (s/veh)	8.37	7.97	8.08	7.70	7.93	1	7.60	1			
.OS	A	A	A	A	A		A	1			
Approach: Delay (s/veh)		3.17		.85		93		60			
LOS			_	.00 A	-	4	_	4			
Intersection Delay (s/veh)		Α					/	۲ 			
				7.97 A							

General Information				Site Inforr	nation			
				Intersection		Colton	Avenue/Agate	Avenue
Analyst Agency/Co.	R Gar Redla	and Ids USD		Jurisdiction			ernardino Co	wondo
Date Performed	12/14/			Analysis Year	-	2026	With Project	
Analysis Time Period	Friday	Evening Peak	Hour					
Project ID Redlands East Valle	ey HS Stadium							
East/West Street: Colton Ave	enue			North/South S	treet: Agate Av	enue/King Stre	et	
/olume Adjustments	and Site C	haracterist	ics					
Approach		E	astbound			We	stbound	
Novement			T	R	L		T	R
/olume (veh/h)	24		129	23	52		157	33
6Thrus Left Lane	5				50			
Approach Aovement		N	orthbound T	R		Sou	thbound T	R
/olume (veh/h)	3	2	23	15	11		19	58
6Thrus Left Lane		<u> </u>		10	· · · ·			
	<u> </u>	<u> </u>	<u> </u>		<u> </u>			
		bound	-	stbound	North	nbound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	
РНF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	92	92	136	117	70		92	
% Heavy Vehicles	0	0	0	0	0		0	
lo. Lanes		2		2		1		1
Geometry Group		5		5		2		2
Duration, T				0.	25			
Saturation Headway	Adjustment	Workshee	et					
Prop. Left-Turns	0.3	0.0	0.4	0.0	0.4		0.1	
Prop. Right-Turns	0.0	0.3	0.0	0.3	0.2		0.7	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.2		0.0	
. ,					_	0.0		
nLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
adj, computed	0.1	-0.2	0.2	-0.2	-0.0		-0.4	
Departure Headway a	nd Service	Time						
id, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
x, initial	0.08	0.08	0.12	0.10	0.06		0.08	
nd, final value (s)	5.30	4.98	5.30	4.89	4.99		4.63	
, final value	0.14	0.13	0.20	0.16	0.10		0.12	
<i>l</i> love-up time, m (s)	2	.3	2	2.3	2	.0	2	.0
Service Time, t _s (s)	3.0	2.7	3.0	2.6	3.0		2.6	1 <u> </u>
Capacity and Level o					I			
		hound	167-	though	K1,41	abound	0	abourd
	-	bound		stbound		nbound		nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	342	342	386	367	320		342	
Delay (s/veh)	8.83	8.41	9.32	8.51	8.53		8.25	
.OS	A	Α	A	А	A		A	
Approach: Delay (s/veh)	+	3.62		.95	_	53	-	25
							-	
LOS ntersection Delay (s/veh)		Α		<u>A</u>	1	4	/	4
atoreastion Dolay (sluch)				8.69				

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		ALL-WA`	Y STOP C	ONTROL	ANALYSI	S				
General Information				Site Inforr	nation					
Analyst	R Gan	land		Intersection		Coltor	n Avenue/Beryl A	Avenue		
Agency/Co.		nds USD		Jurisdiction			Bernardino Co			
Date Performed	12/14/			Analysis Year	ſ	2021	Existing			
Analysis Time Period		Evening Peak	Hour							
Project ID Redlands East Vall				<u></u>						
East/West Street: Colton Ave				North/South S	itreet: Beryl Ave	enue				
Volume Adjustments	and Site C					10/-	a the accurat			
Approach ⁄Iovement		E	astbound	R		vve	estbound	R		
/olume (veh/h)	20	2	140	10	L 10		100	10		
%Thrus Left Lane	5				50					
Approach			orthbound			Sou	ithbound			
lovement	L		Т	R	L		Т	R		
/olume (veh/h)	20	0	10	10	10		5	20		
6Thrus Left Lane										
	East	tbound	Wes	stbound	North	nbound	Sout	hbound		
	L1	L2	L1	L2	L1	L2	L1	L2		
Configuration	LT	TR		TR	LTR	<u> </u>	LTR			
PHF	0.95	0.95	0.95	0.95	0.95		0.95	+		
Flow Rate (veh/h)	94	83	62	62	41	<u> </u>	36	+		
6 Heavy Vehicles	0	0	02	02	0		0	1		
lo. Lanes	_	2		2		1		1		
Geometry Group		5		5		2		2		
Duration, T		0.25								
Saturation Headway	<u> </u>	Workshee								
Prop. Left-Turns	0.2	0.0	0.2	0.0	0.5	1	0.3	1		
•	-	0.0	-	-	0.5		-			
Prop. Right-Turns	0.0	-	0.0	0.2			0.6			
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0			
ILT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2		
RT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6		
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7		
adj, computed	0.1	-0.1	0.1	-0.1	-0.0		-0.3			
Departure Headway a	and Service	Time								
id, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20			
, initial	0.08	0.07	0.06	0.06	0.04		0.03			
d, final value (s)	4.90	4.70	4.91	4.72	4.57		4.33			
, final value	0.13	0.11	0.08	0.08	0.05		0.04			
/love-up time, m (s)	2	.3	2	2.3	2	.0	2	.0		
Service Time, t _s (s)	2.6	2.4	2.6	2.4	2.6		2.3			
Capacity and Level o	f Service									
		tbound	Wes	stbound	North	nbound	Sout	hbound		
	L1	L2	L1	L2	L1	L2	L1	L2		
Capacity (veh/h)	344	333	312	312	291		286			
Delay (s/veh)	8.31	7.97	8.06	7.83	7.83	1	7.53	1		
OS	0.57 A	A	-	7.05 A	7.05 A					
	-		A			<u> </u>	A	52		
Approach: Delay (s/veh)		8.15	-	.95	-	83	_	53		
LOS		Α	·	A		4	/	4		
ntersection Delay (s/veh)					.99					
ntersection LOS					A					

General Information				Site Inforr	nation			
r		and		Intersection		Colton	Avenue/Beryl A	venue
Analyst Agency/Co.	R Garl Redlar	and Ids USD		Jurisdiction			ernardino Co	
Date Performed	12/14/			Analysis Year	ſ		Existing Plus Pro	oject
Analysis Time Period	Friday	Evening Peak	Hour					
Project ID Redlands East Vall	ey HS Stadium							
East/West Street: Colton Ave	enue			North/South S	treet: Beryl Ave	enue		
Volume Adjustments	and Site Cl							
Approach Movement		E	astbound	R		We	stbound	R
Volume (veh/h)	21	,	142	455	109		125	10
%Thrus Left Lane	50		172	400	50		120	10
Approach			orthbound			Sou	thbound	
Vovement	L		T	R	L		Т	R
Volume (veh/h)	61	1	15	19	10		55	28
%Thrus Left Lane								
	East	bound	Wes	tbound	North	nbound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration		TR		TR	LTR		LTR	<u>↓ ^{∟∠}</u>
Configuration PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	96	552	179	76	99		96	
% Heavy Vehicles	90	0	0	76 0	99		90	╂────
No. Lanes		2		2		1	· · ·	1
Geometry Group		2 5	_	2 5		2		2
Duration, T	`	<i>.</i>		-	.25	<u> </u>	1 4	<u> </u>
Saturation Headway	<u> </u>	Workshee	.+	0.	20			
		1				1		1
Prop. Left-Turns	0.2	0.0	0.6	0.0	0.6	l	0.1	
Prop. Right-Turns	0.0	0.9	0.0	0.1	0.2	ļ	0.3	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
hLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadj, computed	0.1	-0.6	0.3	-0.1	0.0		-0.2	
Departure Headway a	and Service	Time						
hd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
x, initial	0.09	0.49	0.16	0.07	0.09		0.09	
hd, final value (s)	5.57	4.84	6.13	5.72	6.12		5.97	
x, final value	0.15	0.74	0.31	0.12	0.17		0.16	
Move-up time, m (s)	2	.3	2	2.3	2	.0	2	.0
Service Time, t _s (s)	3.3	2.5	3.8	3.4	4.1		4.0	
Capacity and Level o	f Service					<u> </u>		•
	East	bound	Wes	tbound	North	nbound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	346	734	429	326	349		346	
Delay (s/veh)	9.24	20.13	11.51	9.20	10.36		10.09	
LOS	A	С	В	A	В	1	В	1
Approach: Delay (s/veh)		8.52		.82	_	.36		.09
	· · · ·		_		_			
LOS		С		B		3		3
Intersection Delay (s/veh)				15.26 C				

		ALL-WA	STOP C	ONTROL	ANALYSI	S		
General Information				Site Inform	nation			
Analyst	R Gar	land		Intersection		Coltor	n Avenue/Beryl A	lvenue
Agency/Co.		nds USD		Jurisdiction		San B	ernardino Co	
Date Performed	12/14/	2021		Analysis Year	-	2026	Without Project	
Analysis Time Period	Friday	[,] Evening Peak	Hour]				
Project ID <i>Redlands East Val</i> i	ley HS Stadium							
East/West Street: Colton Av	enue			North/South S	treet: Beryl Av	enue		
/olume Adjustments	and Site C							
pproach		E	astbound			We	stbound	
Novement			T	R	L		T	R
/olume (veh/h)	22		155	11	11		110	11
%Thrus Left Lane	5				50		<u> </u>	
Approach Movement		ii'	orthbound T	R	L	Sol	Ithbound	R
/olume (veh/h)	2		11	11	11		6	22
%Thrus Left Lane		<u>-</u>		11		<u> </u>	<u> </u>	~~~
	<u> </u>	4		41	<u> </u>	<u> </u>		
	_	tbound		tbound		hbound	_	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	104	93	68	68	45		40	
% Heavy Vehicles	0	0	0	0	0		0	
lo. Lanes		2		2		1		1
Geometry Group		5		5		2		2
Duration, T				0.	25			
Saturation Headway	Adjustment	t Workshee	t					
Prop. Left-Turns	0.2	0.0	0,2	0.0	0.5		0.3	
Prop. Right-Turns	0.0	0.1	0.0	0.2	0.2		0.6	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
ILT-adj	0.5	0.5	0.5	0.5	0.0	0.2	0.2	0.2
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
	_				_		_	
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadj, computed	0.1	-0.1	0.1	-0.1	-0.0		-0.3	
Departure Headway a				-	10			
id, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
, initial	0.09	0.08	0.06	0.06	0.04		0.04	
nd, final value (s)	4.93	4.74	4.95	4.76	4.65		4.42	
, final value	0.14	0.12	0.09	0.09	0.06		0.05	
/love-up time, m (s)	2	2.3	2	.3	2	2.0	2	.0
Service Time, t _s (s)	2.6	2.4	2.7	2.5	2.7		2.4	
Capacity and Level o	f Service							
	Eas	tbound	Wes	tbound	Norti	hbound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	354	343	318	318	295		290	1
Delay (s/veh)	8.45	8.10	8.16	7.93	7.94		7.64	
	-	-	-	1	-		-	
	A	A	A	A	A		A	
Approach: Delay (s/veh)		8.28	_	04		94	-	64
LOS		Α		4		A		4
ntersection Delay (s/veh)					11			
ntersection LOS		А						

					ANALYSI			
General Information				Site Inforr	nation	r		
Analyst	R Garl			Intersection			Avenue/Beryl A	venue
Agency/Co. Date Performed	Redlar 12/14/	ds USD		Jurisdiction Analysis Year	r		ernardino Co With Project	
Analysis Time Period		Evening Peak I	Hour	-	·			
Project ID Redlands East Val								
East/West Street: Colton Av				North/South S	treet: Beryl Av	enue		
/olume Adjustments		aractoristi	<u></u>		Lioot. Doryr w			
Approach			astbound			We	stbound	
Movement	L		Т	R	L		Т	R
/olume (veh/h)	23		157	456	110		135	11
%Thrus Left Lane	50)			50			
Approach		No	orthbound			Sou	thbound	
Movement		, 	T 16	R	L 11	 	T	R
/olume (veh/h)	63	5	16	20	11		56	30
6Thrus Left Lane								
	East	bound	Wes	stbound	Nort	hbound	South	bound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	1
PHF	0.95	0.95	0.95	0.95	0.95		0.95	1
Flow Rate (veh/h)	106	563	185	82	103		100	
% Heavy Vehicles	0	0	0	0	0		0	1
No. Lanes		2		2		1	1	1
Geometry Group		5		5		2	2	2
Duration, T			8	0.	.25		•	
Saturation Headway	Adiustment	Workshee	t					
Prop. Left-Turns	0.2	0.0	0.6	0.0	0.6	1	0.1	
Prop. Right-Turns	0.2	0.0	0.0	0.0	0.0		0.3	
	0.0	0.9	0.0	0.7	0.2		0.0	
Prop. Heavy Vehicle	-			-	_		_	
nLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
adj, computed	0.1	-0.6	0.3	-0.1	0.0		-0.2	
Departure Headway a	and Service	Time						
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
د, initial	0.09	0.50	0.16	0.07	0.09		0.09	
nd, final value (s)	5.63	4.91	6.21	5.80	6.21		6.06	
κ, final value	0.17	0.77	0.32	0.13	0.18		0.17	
/love-up time, m (s)	2	3	2	2.3	2	2.0	2.	0
Service Time, t _s (s)	3.3	2.6	3.9	3.5	4.2		4.1	
Capacity and Level o	f Service		•				-	
		bound	Wed	stbound	North	hbound	South	bound
	-	1		1	-	1		1
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	356	725	435	332	353	I	350	ļ
)elay (s/veh)	9.44	21.90	11.78	9.38	10.55		10.28	
.OS	A	С	В	Α	В		В	
Approach: Delay (s/veh)	1	9.93	11	.05	10	.55	10.	28
LOS		C		В		В	E	
ntersection Delay (s/veh)	1	~			<u>.</u> 5.15	_		-
					C			

		ALL-WA	Y STOP C	ONTROL	ANALYSI	S		
General Information				Site Inform	mation			
Analyst	R Gar	land		Intersection		Colton	Avenue/Craftor	n Avenue
Agency/Co.		nds USD		Jurisdiction			ernardino Co	
Date Performed	12/14/			Analysis Yea	r	2021 8	Existing	
Analysis Time Period		Evening Peak	Hour					
Project ID Redlands East Vall								
East/West Street: Colton Av				North/South S	Street: Crafton A	lvenue		
Volume Adjustments	and Site C		ICS astbound			10/-	- 41	
Approach Movement		<u>_</u>	T	und R L		vve:	stbound	R
/olume (veh/h)	50	2	50	20	10		30	10
%Thrus Left Lane		-		-	50			-
Approach		N	orthbound			Sou	thbound	
Novement	L		Т	R	L		Т	R
/olume (veh/h)	4	0	170	20	10		180	30
6Thrus Left Lane								
	Eas	tbound	Wes	tbound	North	nbound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	TR	LT	TR	LTR	1	LT	R
PHF	0.95	0.95	0.95	0.95	0.95	1	0.95	0.95
Flow Rate (veh/h)	52	73	25	25	241	1	199	31
% Heavy Vehicles	0	0	0	0	0		0	0
No. Lanes		2		2		1		2
Geometry Group		5		5	4	b		5
Duration, T			•	0.	.25		•	
Saturation Headway	Adjustment	t Workshee	t					
Prop. Left-Turns	1.0	0.0	0.4	0.0	0.2		0.1	0.0
Prop. Right-Turns	0.0	0.3	0.0	0.4	0.1		0.0	1.0
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	0.0
hLT-adj	0.5	0.0	0.0	0.0	0.0	0.2	0.5	0.0
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.7	-0.7
,	_			_			_	
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadj, computed	0.5	-0.2	0.2	-0.3	-0.0		0.0	-0.7
Departure Headway a	8			-			li and a second s	-
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	3.20
ر, initial	0.05	0.06	0.02	0.02	0.21	ļ	0.18	0.03
nd, final value (s)	6.30	5.59	6.12	5.63	5.26	ļ	5.28	4.55
, final value	0.09	0.11	0.04	0.04	0.35	Ļ	0.29	0.04
Move-up time, m (s)		2.3		2.3	-	.3		.3
Service Time, t _s (s)	4.0	3.3	3.8	3.3	3.0		3.0	2.2
Capacity and Level o	f Service							
	Eas	tbound	Wes	tbound	North	nbound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	302	323	275	275	491		449	281
Delay (s/veh)	9.63	9.00	9.09	8.56	10.80	1	10.13	7.44
.0S	A	A	A	A	B		В	A
Approach: Delay (s/veh)	-	9.26	-		_	80	-	77
							-	
LOS		Α		<u>A</u> 0		J	/	4
ntersection Delay (s/veh)					.98			
ntersection LOS Copyright © 2010 University o					A Wersion 5.6		enerated: 12/21	

General Information				Site Inforr	nation			
	I			Intersection	nation	Colton	Avenue/Craftor	
Analyst Agency/Co.	R Garla Redian	and ds USD		Jurisdiction			ernardino Co	AVEILUE
Date Performed	12/14/2			Analysis Year	ſ		Existing Plus Pro	oject
Analysis Time Period		Evening Peak	Hour					
Project ID Redlands East Vall	ey HS Stadium							
East/West Street: Colton Ave	enue			North/South S	treet: Crafton A	venue		
/olume Adjustments	and Site Ch	naracterist	ics	-				
Approach		E	astbound			We	stbound	
Movement /olume (veh/h)	L 57	,	54	R 21	L 10		т 71	R 10
%Thrus Left Lane			34	21	50			10
Approach		I	orthbound			Sou	thbound	
Novement	L		T	R	L	000	T	R
/olume (veh/h)	48		170	20	10		180	113
%Thrus Left Lane								
	East	pound	Wes	tbound	North	bound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration		TR		TR	LTR			R
PHF	0.95	0.95	0.95	0.95	0.95		0.95	0.95
Flow Rate (veh/h)	60	78	46	47	249		199	118
% Heavy Vehicles	0	0	- +0		0	<u> </u>	0	0
No. Lanes		<u> </u>	<u> </u>	2		1		2
Geometry Group	5			5	4			5
Duration, T	<u> </u>		H	-	.25	-		-
Saturation Headway	- Adjustment	Workshee	t					
Prop. Left-Turns	1.0	0.0	0.2	0.0	0.2		0.1	0.0
Prop. Right-Turns	0.0	0.3	0.0	0.2	0.1		0.0	1.0
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	0.0
hLT-adj	0.0	0.5	0.5	0.5	0.0	0.2	0.5	0.5
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.7	-0.7
nHV-adj	1.7	-0.7	1.7	1.7	1.7	1.7	1.7	1.7
	0.5	-0.2	0.1	-0.1	-0.0	1.7	0.0	-0.7
nadj, computed			0.1	-0.1	-0.0		0.0	-0.7
Departure Headway a			2 20	2.20	2 20	<u> </u>	2 20	2 20
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	3.20
x, initial hd, final value (s)	0.05 6.62	0.07 5.91	0.04 6.30	0.04 6.04	0.22		0.18 5.51	0.10 4.78
t, final value (s)	0.02	0.13	0.08	0.04	0.38		0.30	4.78
Move-up time, m (s)	2.		_	2.3		3		.3
	4.3	3.6	4.0	3.7	3.2	ĭ	3.2	.5
Service Time, t _s (s) Capacity and Level o		5.0	7.0	3.7	5.2		5.2	2.0
Sapacity and Level O		aund	14/	though	K1-,-41	bound	0	bound
		bound	-	tbound	-	bound		hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	310	328	296	297	499		449	368
Delay (s/veh)	10.13	9.48	9.55	9.26	11.66		10.61	8.37
OS	В	A	A	Α	В		В	A
Approach: Delay (s/veh)	g	.76	9.	41	11.	66	9.	77
LOS		A		A	E	3		4
ntersection Delay (s/veh)	1		<u>R</u>).32			
ntersection LOS	1				B			

General Information				Site Inform	mation			
-	D. Co.	le re el		Intersection		Colton	Avenue/Craftor	Avenue
Analyst Agency/Co.	R Gan Redlai	and nds USD		Jurisdiction			ernardino Co	171101140
Date Performed	12/14/			Analysis Yea	r	2026	Nithout Project	
Analysis Time Period	Friday	Evening Peak	Hour					
Project ID Redlands East Vall	ey HS Stadium			l.				
East/West Street: Colton Ave	enue			North/South S	Street: Crafton A	lvenue		
Volume Adjustments	and Site C	haracterist	ics					
Approach			astbound			We	stbound	
Movement	L		Т	R	L		Т	R
/olume (veh/h)	55	5	55	22	11		33	11
%Thrus Left Lane					50			
Approach		N	orthbound			Sou	thbound	
Movement	L		Т	R	L		Т	R
/olume (veh/h)	44	4	188	22	11		199	33
%Thrus Left Lane								
	East	bound	Wes	stbound	North	ibound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration								
Configuration	L	TR	LT	TR	LTR	ļ	LT 0.05	R
PHF	0.95	0.95	0.95	0.95	0.95		0.95	0.95
Flow Rate (veh/h)	57	80	27	28	266		220	34
% Heavy Vehicles	0	0	0	0	0		0	0
No. Lanes		2		2	-	1		2
Geometry Group		5		5		b		5
Duration, T				0.	.25			
Saturation Headway	Adjustment	Workshee	t					
Prop. Left-Turns	1.0	0,0	0.4	0.0	0.2		0.1	0.0
Prop. Right-Turns	0.0	0.3	0.0	0.4	0.1		0.0	1.0
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	0.0
			_		_	0.0		
nLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.5	0.5
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.7	-0.7
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadj, computed	0.5	-0.2	0.2	-0.3	-0.0		0.0	-0.7
Departure Headway a	and Service	Time						
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	3.20
κ, initial	0.05	0.07	0.02	0.02	0.24		0.20	0.03
nd, final value (s)	6.45	5.75	6.30	5.81	5.36		5.38	4.65
, final value	0.40	0.13	0.05	0.05	0.40		0.33	0.04
Move-up time, m (s)	_	.3	_	2.3	_	.3		.3
		1		1				r
Service Time, t _s (s)	4.2	3.4	4.0	3.5	3.1		3.1	2.4
Capacity and Level o	f Service							
	East	bound	Wes	stbound	North	ibound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	307	330	277	278	516		470	284
	-			-	-		-	-
Delay (s/veh)	9.89	9.28	9.31	8.79	11.53		10.69	7.56
OS	A	A	A	А	В		В	A
Approach: Delay (s/veh)		9.53	9	.04	11.	.53	10	.27
LOS		A	1	A	_	3	ļ ,	3
ntersection Delay (s/veh)		<i>,</i> 1	I).50	-	. ·	
(aven)				10				

		ALL-WA	Y STOP C	ONTROL	ANALYSI	S		
General Information				Site Inform	mation			
Analyst	R Gan	land		Intersection		Colton	Avenue/Craftor	n Avenue
Agency/Co.		nds USD		Jurisdiction			ernardino Co	
Date Performed	12/14/			Analysis Yea	r	2026	Nith Project	
Analysis Time Period	Friday	Evening Peak	Hour					
Project ID <i>Redlands East Val</i>								
East/West Street: Colton Av				North/South S	Street: Crafton A	lvenue		
Volume Adjustments	and Site C							
Approach Movement		E	astbound T	R	L	We	stbound	R
Volume (veh/h)	62	2	59	23	11		74	11
%Thrus Left Lane		-		20	50			
Approach		I	orthbound			Sou	thbound	
Vovement	L		T	R	L		T	R
Volume (veh/h)	5	2	188	22	11		199	116
%Thrus Left Lane								
	East	tbound	Wes	tbound	North	nbound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	L	TR	LT	TR	LTR		LT	R
PHF	0.95	0.95	0.95	0.95	0.95		0.95	0.95
Flow Rate (veh/h)	65	86	49	49	274		220	122
% Heavy Vehicles	0	0	0	+3 0	0		0	0
No. Lanes	-	2		2		1	_	2
Geometry Group	5			5		b		5
Duration, T		5			.25	0	, , , , , , , , , , , , , , , , , , ,	<i>.</i>
Saturation Headway	<u> </u>	Workshoe	ht.	0.	.20			
				0.0				
Prop. Left-Turns	1.0	0.0	0.2	0.0	0.2		0.1	0.0
Prop. Right-Turns	0.0	0.3	0.0	0.2	0.1		0.0	1.0
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	0.0
nLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.5	0.5
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.7	-0.7
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadj, computed	0.5	-0.2	0.1	-0.2	-0.0		0.0	-0.7
Departure Headway a	and Service	Time						
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	3.20
k, initial	0.06	0.08	0.04	0.04	0.24		0.20	0.11
nd, final value (s)	6.78	6.08	6.50	6.22	5.66		5.63	4.90
x, final value	0.12	0.15	0.09	0.08	0.43		0.34	0.17
Move-up time, m (s)		.3		.3		.3		.3
Service Time, t _s (s)	4.5	3.8	4.2	3.9	3.4		3.3	2.6
Capacity and Level o	f Service					1		1
		tbound	Wes	tbound	North	nbound	Sout	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	315	336	299	299	524		470	372
Delay (s/veh)	10.43	9.81	9.82	9.50	12.57		11.25	8.57
	B	A 3.07	A	A	B		B	A
Approach: Delay (s/veh)	-	0.08	-	66 66	_	.57	-	.29
	· · · ·		_		_			
-		В	1 4	4		3		3
ntersection Delay (s/veh)).91 B			
ntersection LOS				HCS+ ^T	_			

General Information				Site Inforn	nation			
Analyst	R Garla			Intersection			n Avenue/Opal A	venue
Agency/Co. Date Performed	Redlan 12/14/2	ds USD		Jurisdiction Analysis Year			ernardino Co Existing	
Analysis Time Period		Evening Peak I	Hour					
Project ID Redlands East Val	-			-1				
East/West Street: Colton Av				North/South S	treet: Opal Ave	nue		
/olume Adjustments		aractoristi	<u></u>	Hora vocali o				
Approach			astbound			We	stbound	
Movement	L		Т	R	L		Т	R
/olume (veh/h)	10		140	10	10		110	20
67hrus Left Lane	50)			50			
Approach		No	orthbound			Sol	thbound	
Movement	L	<u> </u>	T 20	R	L 10		T 10	R
/olume (veh/h)	10	/	20	20	10		10	10
6Thrus Left Lane					<u> </u>			
	East	bound	Wes	stbound	North	nbound	South	bound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	1
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	83	83	67	78	52		30	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes	2	2		2		1		<u>.</u> 1
Geometry Group	Ę	5		5		2	2	2
Duration, T				0.	25			
Saturation Headway	Adjustment	Workshee	t					
Prop. Left-Turns	0.1	0.0	0.1	0.0	0.2		0.3	
Prop. Right-Turns	0.0	0.1	0.0	0.3	0.4		0.3	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
LT-adj	0.5	0.5	0.5	0.5	0.0	0.2	0.0	0.2
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
,	1.7	1.7	1.7	1.7	1.7	1.7	1.7	-0.0
nHV-adj	-			-	-	1.7		1.7
adj, computed	0.1	-0.1	0.1	-0.2	-0.2		-0.1	
Departure Headway a	а.				- ii		-	
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	ļ
د, initial	0.07	0.07	0.06	0.07	0.05		0.03	ļ
nd, final value (s)	4.87	4.73	4.91	4.64	4.43		4.52	ļ
α, final value	0.11	0.11	0.09	0.10	0.06	<u> </u>	0.04	Ļ
Nove-up time, m (s)	2.	T		2.3	-	.0		0
Service Time, t _s (s)	2.6	2.4	2.6	2.3	2.4		2.5	
Capacity and Level o	f Service							
	East	bound	Wes	stbound	North	nbound	South	bound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	333	333	317	328			280	<u> </u>
	-			-	302			
Delay (s/veh)	8.19	8.01	8.10	7.86	7.73		7.70	
OS	A	A	A	A	A		A	
Approach: Delay (s/veh)	8	8.10	7.	.97	7.	73	7.	70
LOS		A		A	/	4	A	1
ntersection Delay (s/veh)					97		-	
ntersection LOS	1				4			

General Information				Site Inform	nation			
				Site Inform	nation	<u> </u>	A	
Analyst	R Garl			Intersection			Avenue/Opal A	venue
Agency/Co.		nds USD		Jurisdiction Analysis Year	r		ernardino Co Existing Plus Pro	piect
Date Performed Analysis Time Period	12/14/ Eridov	2021 Evening Peak I	Hour			20211		<i>Jeer</i>
		Lvening Feak i	Tour					
Project ID Redlands East Vall								
East/West Street: Colton Ave	enue			North/South S	Street: Opal Ave	nue		
Volume Adjustments	and Site C	haracteristi	cs					
Approach		E	astbound			We	stbound	
Novement	L		T	R	L		T	R
/olume (veh/h)	1(437	84	50		137	27
%Thrus Left Lane	50	0			50			
Approach		No	orthbound			Sou	thbound	
Movement	L		Т	R	L		Т	R
/olume (veh/h)	1	7	22	97	84		35	10
%Thrus Left Lane								
	Fast	bound	We	stbound	North	bound	South	nbound
		T			_			1
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	239	318	123	100	142		134	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes		2		2	1	Î		1
Geometry Group		5		5	2	2		2
Duration, T			8	0	.25		B	
Saturation Headway	<u>.</u> Adjustmont	Workshoo	+					
Prop. Left-Turns	0.0	0.0	0.4	0.0	0.1		0.7	
•			-		-			
Prop. Right-Turns	0.0	0.3	0.0	0.3	0.7		0.1	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
nLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadj, computed	0.0	-0.2	0.2	-0.2	-0.4		0.1	<u> </u>
			0.2	-0.2	-0.4		0.1	
Departure Headway a								
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
κ, initial	0.21	0.28	0.11	0.09	0.13		0.12	
nd, final value (s)	5.68	5.46	6.27	5.86	5.55		6.04	
, final value	0.38	0.48	0.21	0.16	0.22		0.22	
Move-up time, m (s)	2	.3		2.3	2.	0	2	.0
Service Time, t _s (s)	3.4	3.2	4.0	3.6	3.6		4.0	
		0.2	7.0	0.0	0.0		7.0	
Capacity and Level o			1				1	
	East	bound	We	stbound	North	bound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	489	568	373	350	392		384	
Delay (s/veh)	11.78	13.15	10.68	9.70	10.10		10.78	
_OS	В	В	В	A	В		В	1
Approach: Delay (s/veh)			-	0.24	10.	10	-	.78
	1	2.56			_			
LOS		В		В	E	5		3
ntersection Delay (s/veh)					1.51			
ntersection LOS	1				В			

General Information				Site Inform	nation			
				_	nation	0-#-	AvonuelOssi	Vonus
Analyst	R Garl			Intersection Jurisdiction			n Avenue/Opal A Bernardino Co	venue
Agency/Co. Date Performed	Redlar 12/14/2	ds USD 2021		Analysis Year			Without Project	
Analysis Time Period		Evening Peak I	Hour					
Project ID Redlands East Vall	ey HS Stadium							
East/West Street: Colton Ave				North/South S	treet: Opal Ave	enue		
/olume Adjustments	and Site Cl	naracteristi	cs	•				
Approach			astbound			We	stbound	
Vovement	L		Т	R	L		Т	R
/olume (veh/h)	11		155	11	11		121	22
6Thrus Left Lane	50				50			
Approach		No	orthbound	D	L	Sol	ithbound	R
Movement /olume (veh/h)	11	1	22	R 22	11		11	<u> </u>
/oldifie (ven/if) //Thrus Left Lane			<u> </u>	22	,,,			11
			r		1			
	East	bound	Wes	tbound	North	nbound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LTR		LTR	
PHF	0.95	0.95	0.95	0.95	0.95		0.95	
Flow Rate (veh/h)	92	93	74	87	57		33	
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes		2		2		1		1
Geometry Group		5		5		2		2
Duration, T				0.	25			
Saturation Headway	Adjustment	Workshee	t					
Prop. Left-Turns	0.1	0.0	0.1	0.0	0.2		0.3	
Prop. Right-Turns	0.0	0.1	0.0	0.3	0.4		0.3	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
nLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
IRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadj, computed	0.1	-0.1	0.1	-0.2	-0.2	1.7	-0.1	1.1
- ·			0.1	-0.2	-0.2		-0.1	
Departure Headway a		F		0.00				
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20		3.20	
, initial	0.08	0.08	0.07	0.08	0.05		0.03	
nd, final value (s)	4.91	4.77	4.95	4.69	4.51		4.61	
k, final value	0.13	0.12	0.10	0.11	0.07		0.04	
Move-up time, m (s)	2	1		2.3		.0		.0
Service Time, t _s (s)	2.6	2.5	2.6	2.4	2.5		2.6	
Capacity and Level o	f Service							
	East	bound	Wes	tbound	North	nbound	Sout	hbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	342	343	324	337	307		283	<u> </u>
,								
Delay (s/veh)	8.32	8.14	8.21	7.99	7.86		7.81	
OS	A	A	A	A	A		A	
Approach: Delay (s/veh)		3.23	8.	09	7.	86	7.	81
LOS		A		A	/	4		4
ntersection Delay (s/veh)					10			
ntersection LOS	1				4			

General Information				Site Infor	mation			
	D Cord	e ve el		Intersection		Coltor	Avenue/Opal A	venue
Analyst Agency/Co.	R Garl Redlar	and Ids USD		Jurisdiction			ernardino Co	Vondo
Date Performed	12/14/2			Analysis Yea	r	2026	With Project	
Analysis Time Period	Friday	Evening Peak	Hour					
Project ID Redlands East Valle	ey HS Stadium							
East/West Street: Colton Ave	enue			North/South S	Street: Opal Ave	nue		
/olume Adjustments	and Site Cl	aracteristi	23		· · · · · · · · · · · · · · · · · · ·			
Approach			astbound			We	stbound	
Novement	L		Т	R	L		Т	R
/olume (veh/h)	11		452	85	51		148	29
%Thrus Left Lane	50)			50			
Approach		N	orthbound			Sou	thbound	
Movement	L		Т	R	L		Т	R
/olume (veh/h)	18	3	24	99	85		36	11
%Thrus Left Lane								
	Fast	bound	Wes	tbound	North	bound	South	bound
		L2	L1	L2	L1	L2	L1	L2
	L1				_			
Configuration		TR		TR	LTR	L	LTR	
PHF	0.95	0.95	0.95	0.95	0.95	ļ	0.95	
Flow Rate (veh/h)	248	326	130	107	147	ļ	137	<u> </u>
% Heavy Vehicles	0	0	0	0	0		0	
No. Lanes		2		2		1	1	1
Geometry Group		5		5		2	2	2
Duration, T				0	.25			
Saturation Headway	Adjustment	Workshee	t					
Prop. Left-Turns	0.0	0.0	0.4	0.0	0.1		0.6	
Prop. Right-Turns	0.0	0.3	0.0	0.3	0.7		0.0	
	-		-				-	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0		0.0	
nLT-adj	0.5	0.5	0.5	0.5	0.2	0.2	0.2	0.2
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
adj, computed	0.0	-0.2	0.2	-0.2	-0.4		0.1	
Departure Headway a	nd Service	Time				8		8
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20	T	3.20	
k, initial	0.22	0.29	0.12	0.10	0.13		0.12	
nd, final value (s)	5.75	5.53	6.34	5.94	5.64		6.12	
(, final value	0.40	0.50	0.23	0.18	0.23		0.23	Ļ
/love-up time, m (s)	+	.3		2.3		0	2.	
Service Time, t _s (s)	3.4	3.2	4.0	3.6	3.6		4.1	
Capacity and Level o	f Service							
		bound	Wes	tbound	North	bound	South	bound
	L1	L2	L1	L2	L1	L2	L1	L2
					_	L2		
Capacity (veh/h)	498	576	380	357	397		387	
)elay (s/veh)	12.16	13.65	10.91	9.90	10.33		10.98	
.OS	В	В	В	Α	В		В	
Approach: Delay (s/veh)	-	3.01		.46		33	_	98
	/						-	
LOS		В		B		3	E	5
ntersection Delay (s/veh)	ļ				1.84			
ntersection LOS					В			

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General Information				Site Inform	nation			
	D Oct	and		Intersection		Colton	Avenue/Wabas	h Avenue
Analyst Agency/Co.	R Garl Redlar	and ds USD		Jurisdiction			nds/San Bernard	
Date Performed	12/14/2			Analysis Year		2021 8	Existing	
Analysis Time Period	Friday	Evening Peak	Hour					
Project ID Redlands East Vall	ey HS Stadium							
East/West Street: Colton Ave	enue			North/South S	treet: Wabash	Avenue		
Volume Adjustments	and Site Cl	naracteristi	ics					
Approach		E	astbound	_		We	stbound	
Movement	L 50		T 100	R 20	L 20		T	R 20
/olume (veh/h) %Thrus Left Lane	50		100	30	50		90	20
			a utila la a conse al		50		the best stand	
Approach Movement			orthbound T	R		Sou	thbound	R
/olume (veh/h)	20)	170	20	30		200	80
%Thrus Left Lane	50				50			
				41 I				
		bound		stbound		hbound		nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LT	TR	LT	TR
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Flow Rate (veh/h)	104	83	68	68	110	110	136	189
% Heavy Vehicles	0	0	0	0	0	0	0	0
No. Lanes	2			2		2		2
Geometry Group	Į	5		5		5		5
Duration, T				0.	25			
Saturation Headway	Adjustment	Workshee	t					
Prop. Left-Turns	0.5	0.0	0.3	0.0	0.2	0.0	0.2	0.0
Prop. Right-Turns	0.0	0.4	0.0	0.3	0.0	0.2	0.0	0.4
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
hLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
nadi, computed	0.3	-0.3	0.2	-0.2	0.1	-0.1	0.1	-0.3
<i>"</i>			0.2	-0.2	0.1	-0.1	0.1	-0.0
Departure Headway a				0.00	0.00	0.00		1 0.00
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.09	0.07	0.06	0.06	0.10	0.10	0.12	0.17
nd, final value (s)	6.31	5.80	6.29	5.92	5.91	5.68	5.81	5.38
(, final value	0.18	0.13	0.12	0.11	0.18	0.17	0.22	0.28
Move-up time, m (s)	2.	T		2.3		2.3		.3
Service Time, t _s (s)	4.0	3.5	4.0	3.6	3.6	3.4	3.5	3.1
Capacity and Level o	f Service							
	East	bound	Wes	stbound	Nort	hbound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	354	333	318	318	360	360	386	439
			-	-	-			
Delay (s/veh)	10.42	9.40	9.84	9.37	9.90	9.56	10.13	10.19
OS	В	A	A	A	A	A	В	В
Approach: Delay (s/veh)	9	.97	9.	.61	9.	73	10	.17
LOS		Α		A		A	E	3
ntersection Delay (s/veh)				9.	92			
ntersection LOS					A			

General Information				Site Inforr	nation			
-		and		Intersection		Colton	Avenue/Wabas	h Avenue
Analyst Agency/Co.	R Garl Redlar	and Ids USD		Jurisdiction			nds/San Bernard	
Date Performed	12/14/2			Analysis Year		2021	Existing Plus Pro	oject
Analysis Time Period	Friday	Evening Peak	Hour					
Project ID Redlands East Vall	ey HS Stadium							
East/West Street: Colton Ave	enue			North/South S	treet: Wabash	Avenue		
/olume Adjustments	and Site Cl	naracterist	ics					
Approach		E	astbound			We	stbound	
Movement	L		Ť	R	L		T	R
/olume (veh/h)	50		265	30	28		105	31
%Thrus Left Lane	50				50	<u> </u>		
Approach Movement		N	orthbound	R	L	Sou	thbound T	R
/olume (veh/h)	20)	170	102	154	!	200	80
6Thrus Left Lane	5				50			
	1				1	<u> </u>		
		bound		stbound		nbound	_	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LT	TR	LT	TR	LT	TR
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Flow Rate (veh/h)	190	171	83	87	110	196	267	189
% Heavy Vehicles	0	0	0	0	0	0	0	0
No. Lanes		2		2		2		2
Geometry Group	5			5		5		5
Duration, T				0.	25			
Saturation Headway	Adjustment	Workshee	t					
Prop. Left-Turns	0.3	0.0	0.3	0.0	0.2	0.0	0.6	0.0
Prop. Right-Turns	0.0	0.2	0.0	0.4	0.0	0.5	0.0	0.4
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
nttradj nHV-adj	1.7	-0.7 1.7	1.7	1.7	1.7	1.7	1.7	-0.7
							-	
nadj, computed	0.1	-0.1	0.2	-0.3	0.1	-0.4	0.3	-0.3
Departure Headway a	and Service	Time		-				
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
κ, initial	0.17	0.15	0.07	0.08	0.10	0.17	0.24	0.17
nd, final value (s)	7.02	6.76	7.40	6.97	6.93	6.46	6.91	6.29
ς, final value	0.37	0.32	0.17	0.17	0.21	0.35	0.51	0.33
Nove-up time, m (s)		.3	-	2.3		.3	2	.3
Service Time, t _s (s)	4.7	4.5	5.1	4.7	4.6	4.2	4.6	4.0
Capacity and Level o	f Service	-	-	-	-	-	-	
		bound	Wes	stbound	Norti	nbound	Sout	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
			_	-				
Capacity (veh/h)	440	421	333	337	360	446	508	439
Delay (s/veh)	13.80	12.63	11.62	11.08	11.49	12.61	16.64	12.07
.0S	В	В	В	В	В	В	С	В
Approach: Delay (s/veh)	1	3.25	11	.34	12	.21	14	.74
LOS		В		В		В	1	3
ntersection Delay (s/veh)		_			.28			
ntersection LOS					. <u>20</u> B			

General Information				Site Inform	nation			
	1			Intersection	nation	Colton	Avenue/Wabas	h Avenue
Analyst	R Garl			Jurisdiction			nds/San Bernard	
Agency/Co. Date Performed	Rediar 12/14/	nds USD 2021		Analysis Year			Vithout Project	
Analysis Time Period		Evening Peak	Hour					
Project ID Redlands East Vall								
East/West Street: Colton Ave				North/South S	treet: Wabash	Avenue		
Volume Adjustments		aractorist	ice					
Approach			astbound			We	stbound	
Movement	L		T	R	L		Т	R
Volume (veh/h)	55	5	110	33	22		99	22
%Thrus Left Lane	50)			50			
Approach		N	orthbound			Sou	thbound	
Movement	L		Т	R	L		Т	R
Volume (veh/h)	22	2	188	22	33		221	88
%Thrus Left Lane	5	0			50			
	Fast	bound	Wes	tbound	North	nbound	South	nbound
		1	-	1				r
	L1	L2		L2		L2		L2
Configuration		TR		TR	LT	TR		TR
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Flow Rate (veh/h)	114	91	74	75	121	121	149	208
% Heavy Vehicles	0	0	0	0	0	0	0	0
No. Lanes		2		2		2		2
Geometry Group		5		5		5		5
Duration, T				0.	25			
Saturation Headway	Adjustment	Workshee	t					
Prop. Left-Turns	0.5	0.0	0.3	0.0	0.2	0.0	0.2	0.0
Prop. Right-Turns	0.0	0.4	0.0	0.3	0.0	0.2	0.0	0.4
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
. ,	<u> </u>	0.0	0.0		0.5	0.5	0.5	0.0
hLT-adj	0.5		-	0.5				-
hRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	0.3	-0.3	0.2	-0.2	0.1	-0.1	0.1	-0.3
Departure Headway a	nd Service	Time						
hd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
x, initial	0.10	0.08	0.07	0.07	0.11	0.11	0.13	0.18
, nd, final value (s)	6.50	5.99	6.49	6.12	6.07	5.85	5.96	5.54
x, final value	0.21	0.15	0.13	0.13	0.20	0.20	0.25	0.32
Move-up time, m (s)		.3		.3		.3		.3
	4.2	3.7	4.2	3.8	3.8	3.5	3.7	3.2
Service Time, t _s (s)		3.7	4.2	5.0	5.0	3.0	3.7	3.2
Capacity and Level o	t Service							
	East	bound	Wes	tbound	Nort	nbound	South	nbound
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity (veh/h)	364	341	324	325	371	371	399	458
				+	-			-
Delay (s/veh)	10.87	9.75	10.19	9.71	10.33	9.97	10.60	10.82
LOS	В	A	В	A	В	A	В	В
Approach: Delay (s/veh)	1	0.37	9.	95	10	.15	10	.73
LOS		В		4		В	E E	3
Intersection Delay (s/veh)		-			.38		_	
	1			10				

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General Information				Site Inforr	nation				
Analyst	R Garl	and		Intersection		Colton	Avenue/Wabas	h Avenue	
Agency/Co.		ds USD		Jurisdiction			nds/San Bernard		
Date Performed	12/14/2	-		Analysis Year	r	2026 1	Nith Project		
Analysis Time Period	Friday	Evening Peak	Hour						
Project ID Redlands East Vall									
East/West Street: Colton Ave				North/South S	treet: Wabash	Avenue			
Volume Adjustments	and Site Cl								
Approach		E	astbound		W		Westbound		
/lovement /olume (veh/h)	L 55	-	275	R 33	30		114	R 33	
%Thrus Left Lane	50		275		50		,,,,		
Approach			orthbound			Sou	thbound		
Vovement	L		T	R	L		Т	R	
/olume (veh/h)	22	2	188	104	157	·	221	88	
6Thrus Left Lane	50	>			50				
		bound	Wes	tbound	T	nbound	South	nbound	
	L1	L2	L1	L2	L1	L2	L1	L2	
Configuration	-								
Configuration	LT	TR	LT	TR	LT	TR	LT 0.05	TR	
PHF	0.95	0.95 179	0.95	0.95	0.95	0.95	0.95	0.95	
Flow Rate (veh/h) % Heavy Vehicles	201 0	179 0	91 0	94 0	0	207 0	280 0	208 0	
% Heavy Venicles		2	-	2		2		2	
Geometry Group	4			2 5		2 5		2 5	
Duration, T)		÷	.25	5)	
	A divetment	Markahaa	4	0.	.20				
Saturation Headway		1							
Prop. Left-Turns	0.3	0.0	0.3	0.0	0.2	0.0	0.6	0.0	
Prop. Right-Turns	0.0	0.2	0.0	0.4	0.0	0.5	0.0	0.4	
Prop. Heavy Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
nLT-adj	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
nRT-adj	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7	
nHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	
nadj, computed	0.1	-0.1	0.2	-0.3	0.1	-0.4	0.3	-0.3	
Departure Headway a	and Service	Time	3					•	
nd, initial value (s)	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	
κ, initial	0.18	0.16	0.08	0.08	0.11	0.18	0.25	0.18	
nd, final value (s)	7.24	6.96	7.62	7.20	7.14	6.68	7.09	6.49	
, final value	0.40	0.35	0.19	0.19	0.24	0.38	0.55	0.37	
Vove-up time, m (s)	2.		_	2.3		.3		.3	
Service Time, t _s (s)	4.9	4.7	5.3	4.9	4.8	4.4	4.8	4.2	
Capacity and Level o		L				<u> </u>	<u> </u>	I	
Sapacity and Level O				41		. I			
		bound		tbound		nbound		nbound	
	L1	L2	L1	L2	L1	L2	L1	L2	
Capacity (veh/h)	451	429	341	344	371	457	496	458	
Delay (s/veh)	14.75	13.30	12.13	11.56	12.09	13.48	18.16	13.02	
.OS	В	В	В	В	В	В	С	В	
Approach: Delay (s/veh)	-	4.07		.84	-	.97	-	.97	
LOS									
		В				J		<i>,</i>	
ntersection Delay (s/veh) ntersection LOS									

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		O-WAY STOP							
General Informatio	n		Site I	nforma	ition				
Analyst	R Garlan	d	Interse	ection		Mentone	Blvd/Agate	e Ave	
Agency/Co.	Redlands	: USD	Jurisdi	ction		Caltrans			
Date Performed	12/14/202	21	Analys	sis Year		Existing 2	2021		
Analysis Time Period	Friday Ev	rening Peak Hour	-						
Project Description Re	edlands East Va	alley HS Stadium	R						
East/West Street: Ment	one Blvd		North/S	South Str	reet: Agate	Avenue			
ntersection Orientation:	East-West		Study I	Period (h	nrs): 0.25				
Vehicle Volumes a	nd Adiustme	ents							
Major Street	1	Eastbound				Westbou	Ind		
Novement	1	2	3		4	5		6	
	L	Т	R		L	Т		R	
/olume (veh/h)	40	620	20		20	450		10	
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95	
Hourly Flow Rate, HFR (veh/h)	42	652	21		21	473		10	
Percent Heavy Vehicles	0				0				
Median Type				Undivid	ded				
RT Channelized			0					0	
anes	1	1	0		1	1		0	
Configuration	L		TR		L			TR	
Jpstream Signal		0				0			
Minor Street		Northbound				Southbou	und		
Movement	7	8	9		10	11		12	
	L	Т	R		L	Т		R	
Volume (veh/h)	10	10	20		10	10		50	
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95	
Hourly Flow Rate, HFR (veh/h)	10	10	21		10	10		52	
Percent Heavy Vehicles	0	0	0		0	0		0	
Percent Grade (%)		0				0			
Flared Approach		N				N			
Storage		0				0			
RT Channelized			0			1		0	
Lanes	0	1	1		0	1		0	
Configuration	LT		R		-	LTR		-	
Delay, Queue Length, a		rvice	II.				1		
Approach	Eastbound	Westbound		Northbou	ind	5	Southbound	d	
Movement	1	4	7	8	9	10	11	12	
Lane Configuration	L	 	LT	L J	R		LTR	+ ' ²	
/ (veh/h)	42	21	20		21	+	72		
· · ·			-						
C (m) (veh/h)	1090	927	134		465		311		
//c	0.04	0.02	0.15		0.05		0.23		
95% queue length	0.12	0.07	0.51		0.14		0.88	<u> </u>	
Control Delay (s/veh)	8.4	9.0	36.5		13.1		20.0		
LOS	A	A	Е		В		С		
Approach Delay (s/veh)				24.5			20.0		
		1	C		C				

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		O-WAY STOP							
General Information	n		Site I	nforma	tion				
Analyst	R Garlan		Interse	ection		Mentone	Blvd/Agate	e Ave	
Agency/Co.	Redlands		Jurisdi			Caltrans			
Date Performed	12/14/202			is Year		Existing I	Plus Projec	ct	
Analysis Time Period	Friday Ev	rening Peak Hour							
Project Description Re		alley HS Stadium							
East/West Street: Ment					eet: <i>Agate</i> .	Avenue			
ntersection Orientation:	East-West		Study I	Period (h	rs): 0.25				
Vehicle Volumes ar	nd Adjustme	ents							
Major Street		Eastbound				Westbou	ind		
Movement	1	2	3		4	5		6	
	L	Т	R		L	Т		R	
/olume (veh/h)	41	621	20		53	458		10	
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95	
Hourly Flow Rate, HFR veh/h)	43	653	21		55	482		10	
Percent Heavy Vehicles	0				0				
Vedian Type				Undivid	led				
RT Channelized			0					0	
_anes	1	1	0		1	1		0	
Configuration	L		TR		L			TR	
Jpstream Signal		0				0			
Minor Street		Northbound				Southbou	und		
Vovement	7	8	9		10	11		12	
	L	Т	R		L	Т		R	
/olume (veh/h)	10	10	23		10	10		58	
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95	
Hourly Flow Rate, HFR [veh/h]	10	10	24		10	10		61	
Percent Heavy Vehicles	0	0	0		0	0		0	
Percent Grade (%)		0				0			
-lared Approach		N				N			
Storage		0				0			
RT Channelized			0					0	
Lanes	0	1	1		0	1		0	
Configuration	LT		R		-	LTR			
Delay, Queue Length, a		rvice	4						
Approach	Eastbound	Westbound	l i	Vorthbou	nd		outhbound	1	
Vovement	1	4	7	8	9	10	11	12	
_ane Configuration	 	L	LT		R		LTR		
/ (veh/h)	43	55	20		24		81		
· · · ·									
C (m) (veh/h)	1082	927	113		464		296		
//c	0.04	0.06	0.18		0.05		0.27		
95% queue length	0.12	0.19	0.61		0.16		1.09		
Control Delay (s/veh)	8.5	9.1	43.6		13.2		21.7		
_OS	А	A	E		В		С		
Approach Delay (s/veh)				27.0			21.7		
			D C			-			

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		O-WAY STOP							
General Informatio	n		Site I	nformat	tion				
Analyst	R Garlan	d	Interse	ection		Mentone	Blvd/Agate	e Ave	
Agency/Co.	Redlands	: USD	Jurisdi	ction		Caltrans			
Date Performed	12/14/202	21	Analys	sis Year		2026 Wit	hout Proje	ct	
Analysis Time Period	Friday Ev	rening Peak Hour	·						
Project Description Re	edlands East Va	alley HS Stadium	•						
East/West Street: Ment			North/S	South Stre	eet: Agate	Avenue			
ntersection Orientation:	East-West		Study I	Period (hi	rs): 0.25				
Vehicle Volumes ar	nd Adjustme	ents							
Major Street		Eastbound				Westbou	Ind		
Novement	1	2	3		4	5		6	
	L	Т	R		L	Т		R	
/olume (veh/h)	44	684	22		22	497		11	
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95	
Hourly Flow Rate, HFR veh/h)	46	720	23		23	523		11	
Percent Heavy Vehicles	0				0				
Vedian Type				Undivid	ed				
RT Channelized			0					0	
_anes	1	1	0		1	1		0	
Configuration	L		TR		L			TR	
Jpstream Signal		0				0			
Minor Street		Northbound				Southbou	und		
Vovement	7	8	9		10	11		12	
	L	Т	R		L	Т		R	
Volume (veh/h)	11	11	22		11	11		55	
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95	
Hourly Flow Rate, HFR veh/h)	11	11	23		11	11		57	
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	1		0	1		0	
Configuration	LT		R			LTR			
Delay, Queue Length, a	and Level of Se	ervice	-				•		
Approach	Eastbound	Westbound		Northbou	nd	S	Southbound	1	
Vovement	1	4	7	8	9	10	11	12	
_ane Configuration	L	L	LT		R	<u> </u>	LTR		
/ (veh/h)	46	23	22		23	1	79		
C (m) (veh/h)	1044	873	107		424		263		
(),(),									
//c	0.04	0.03	0.21		0.05		0.30		
95% queue length	0.14	0.08	0.73		0.17		1.22		
Control Delay (s/veh)	8.6	9.2	47.2		14.0		24.5		
LOS	A	A	E		В		С		
Approach Delay (s/veh)				30.2			24.5		
			D			С			

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		O-WAY STOP						
General Information	n		Site I	nforma	ation			
Analyst	R Garlan	d	Interse	ection		Mentone	Blvd/Agate	e Ave
Agency/Co.	Redlands	: USD	Jurisdi	ction		Caltrans		
Date Performed	12/14/202			sis Year		2026 Wit	h Project	
Analysis Time Period	Friday Ev	rening Peak Hour	·					
Project Description Re		alley HS Stadium						
East/West Street: Ment						te Avenue		
ntersection Orientation:	East-West		Study I	Period (h	nrs): 0.25			
Vehicle Volumes ar	nd Adjustme	ents						
Major Street		Eastbound				Westbou	und	
Movement	1	2	3		4	5		6
	L	Т	R		L	Т		R
/olume (veh/h)	45	685	22		55	505		11
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95
Hourly Flow Rate, HFR veh/h)	47	721	23		57	531		11
Percent Heavy Vehicles	0				0			
vledian Type			u	Undivi	ded	2		
RT Channelized			0					0
anes	1	1	0		1	1		0
Configuration	L		TR		L			TR
Jpstream Signal		0				0		
Minor Street		Northbound				Southbo	und	
Vovement	7	8	9		10	11		12
	L	Т	R		L	Т		R
Volume (veh/h)	11	11	25		11	11		63
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95
Hourly Flow Rate, HFR veh/h)	11	11	26		11	11		66
Percent Heavy Vehicles	0	0	0		0	0		0
Percent Grade (%)		0				0		
-lared Approach		N				N		
Storage		0				0		
RT Channelized			0					0
Lanes	0	1	1		0	1		0
Configuration	LT		R		-	LTR		
Delay, Queue Length, a		rvice	a	1			1	
Approach	Eastbound	Westbound	l 1	Northbou	und		Southbound	2
Vovement	1	4	7	8	9	10	11	12
ane Configuration	L	L	LT	- Ŭ	R		LTR	
/ (veh/h)	47	57	22		26		88	
C (m) (veh/h)	1037	873	89		424		248	
()())								
//c	0.05	0.07	0.25		0.06		0.35	
95% queue length	0.14	0.21	0.89		0.20		1.53	
Control Delay (s/veh)	8.6	9.4	58.2		14.0)	27.3	
_OS	А	A	F		В		D	
Approach Delay (s/veh)				34.3			27.3	
Approach LOS				D			D	

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	TW	O-WAY STOP	CONTR		IMARY			
General Information	n		Site I	nformat	tion			
Analyst	R Garlan	d	Interse	ection		Mentone	Blvd/Beryl	Ave
Agency/Co.	Redlands	: USD	Jurisdi	ction		Caltrans		
Date Performed	12/14/202	21	Analys	is Year		Existing 2	2021	
Analysis Time Period	Friday Ev	rening Peak Hour						
Project Description Re	edlands East Va	alley HS Stadium	•					
East/West Street: Ment					eet: Beryl /	Avenue		
ntersection Orientation:	East-West		Study F	Period (hr	rs): 0.25			
Vehicle Volumes ar	nd Adjustme	ents						
Major Street		Eastbound		1		Westbou	nd	
Movement	1	2	3		4	5		6
	L	Т	R		L	Т		R
/olume (veh/h)	40	640	20		10	500		10
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95
Hourly Flow Rate, HFR veh/h)	42	673	21		10	526		10
Percent Heavy Vehicles	0				0			
Vedian Type				Undivide	ed			
RT Channelized			0					0
_anes	1	1	0		1	1		0
Configuration	L		TR		L			TR
Jpstream Signal		0				0		
Minor Street		Northbound				Southbou	und	
Vovement	7	8	9		10	11		12
	L	Т	R		L	Т		R
Volume (veh/h)	5	0	20		10	0		50
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95
Hourly Flow Rate, HFR [veh/h]	5	0	21		10	0		52
Percent Heavy Vehicles	0	0	0		0	0		0
Percent Grade (%)		0				0		
Flared Approach		N				N		
Storage		0	1			0		
RT Channelized			0			1		0
Lanes	0	1	0		0	1		0
Configuration		LTR			-	LTR	<u> </u>	-
Delay, Queue Length, a	and Level of Se		r.	1		1		
Approach	Eastbound	Westbound	1	Northbour	nd	S	outhbound	3
Novement	1	4	7	8	9	10	11	12
ane Configuration	L	L		LTR			LTR	
/ (veh/h)	42	10		26	1	1	62	
C (m) (veh/h)	1042	911		287		1	352	1
//c	0.04	0.01		0.09		1	0.18	1
95% queue length	0.13	0.03		0.30		+	0.63	+
						+		
Control Delay (s/veh)	8.6	9.0		18.8			17.4	
LOS	A	A		C			C	
Approach Delay (s/veh)				18.8		4	17.4	
Approach LOS				С		1	С	

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General Information	n		Site I	nformat	ion			
Analyst	R Garlan	d	Interse	ection		Mentone	Blvd/Beryl	Ave
Agency/Co.	Redlands	; USD	Jurisdi	ction		Caltrans		
Date Performed	12/14/20	21	Analys	is Year		2021 Exi	sting plus F	Project
Analysis Time Period	Friday Ev	rening Peak Hour						
Project Description Re	edlands East Va	alley HS Stadium						
East/West Street: Ment					et: Beryl	Avenue		
ntersection Orientation:	East-West		Study F	Period (hr	s): 0.25			
Vehicle Volumes ar	nd Adjustme	ents						
Major Street		Eastbound				Westbou	nd	
Movement	1	2	3		4	5		6
	L	Т	R		L	Т		R
Volume (veh/h)	40	640	53		27	500		10
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95
Hourly Flow Rate, HFR [veh/h]	42	673	55		28	526		10
Percent Heavy Vehicles	0				0			
Median Type	_		1	Undivide	ed	1		
RT Channelized			0					0
_anes	1	1	0		1	1		0
Configuration	L		TR		L			TR
Jpstream Signal		0				0		
Minor Street		Northbound				Southbou	und	
Movement	7	8	9		10	11		12
	L	Т	R		L	Т		R
/olume (veh/h)	8	1	22		10	8		50
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95
Hourly Flow Rate, HFR veh/h)	8	1	23		10	8		52
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, a	and Level of Se	ervice		•		•		
Approach	Eastbound	Westbound	1	Northbour	nd	S	outhbound	1
Novement	1	4	7	8	9	10	11	12
_ane Configuration	L	L		LTR			LTR	+
/ (veh/h)	42	28		32			70	1
C (m) (veh/h)	1042	885		226			284	+
//c	0.04	0.03		0.14			0.25	+
						-		
95% queue length	0.13	0.10		0.49			0.95	
Control Delay (s/veh)	8.6	9.2		23.5			21.8	
LOS	A	A		С			С	
Approach Delay (s/veh)				23.5			21.8	
Approach LOS				С		1	С	

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General Information	n		Site I	nformati	ion			
Analyst	R Garlan	d	Interse	ection		Mentone	Blvd/Beryl	Ave
Agency/Co.	Redlands	USD	Jurisdi	ction		Caltrans		
Date Performed	12/14/202	21	Analys	is Year		2026 Wit	hout Projec	ct
Analysis Time Period	Friday Ev	rening Peak Hour						
Project Description Re	edlands East Va	alley HS Stadium						
East/West Street: Ment	one Blvd		North/S	South Stre	et: Beryl /	Avenue		
ntersection Orientation:	East-West		Study F	Period (hrs	s): 0.25			
Vehicle Volumes ar	nd Adjustme	ents						
Major Street		Eastbound				Westbou	nd	
Movement	1	2	3		4	5		6
	L	Т	R		L	Т		R
/olume (veh/h)	44	707	22		11	552		11
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95
Hourly Flow Rate, HFR veh/h)	46	744	23		11	581		11
Percent Heavy Vehicles	0				0			
Vedian Type				Undivide	d			
RT Channelized			0					0
_anes	1	1	0		1	1		0
Configuration	L		TR		L			TR
Jpstream Signal		0				0		
Minor Street		Northbound				Southbou	und	
Vovement	7	8	9		10	11		12
	L	Т	R		L	Т		R
/olume (veh/h)	6	0	22		11	0		55
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95
Hourly Flow Rate, HFR veh/h)	6	0	23		11	0		57
Percent Heavy Vehicles	0	0	0		0	0		0
Percent Grade (%)		0				0		
-lared Approach		N				N		
Storage		0				0		
RT Channelized			0					0
Lanes	0	1	0		0	1		0
Configuration		LTR			-	LTR		
Delay, Queue Length, a	nd Level of Se			I				
Approach	Eastbound	Westbound	1	Northboun	d	s	outhbound	<u>k</u>
Vovement	1	4	7	8	9	10	11	12
ane Configuration	 	L.	· ·	LTR	1	+	LTR	+
/ (veh/h)	46	11		29	1	+	68	+
C (m) (veh/h)	994	856		23	-		302	
//c	0.05	0.01		0.12		+	0.23	╂───
								──
95% queue length	0.15	0.04		0.42			0.85	──
Control Delay (s/veh)	8.8	9.3		22.5	 		20.4	
LOS	A	A		С			С	
Approach Delay (s/veh)				22.5			20.4	
Approach LOS				С			С	

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		O-WAY STOP	CONTR	OL SUM	MARY			
General Information	า		Site II	nformati	ion			
Analyst	R Garlan	d	Interse	ction		Mentone	Blvd/Beryl	Ave
Agency/Co.	Redlands	; USD	Jurisdi	ction		Caltrans		
Date Performed	12/14/20	21	Analys	is Year		2026 Wit	h Project	
Analysis Time Period	Friday Ev	rening Peak Hour						
Project Description Re	dlands East Va	alley HS Stadium						
East/West Street: Mente			North/S	South Stree	et: Beryl /	Avenue		
Intersection Orientation:	East-West		Study F	Period (hrs	s): 0.25			
Vehicle Volumes ar	nd Adiustme	ents						
Major Street		Eastbound					nd	
Movement	1	2	3		4	5		6
	L	Т	R		L	Т		R
/olume (veh/h)	44	707	55		28	552		11
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95
Hourly Flow Rate, HFR veh/h)	46	744	57		29	581		11
Percent Heavy Vehicles	0				0			
Vledian Type			·	Undivide	d	a		
RT Channelized			0					0
anes	1	1	0		1	1		0
Configuration	L		TR		L			TR
Jpstream Signal		0				0		
Minor Street	1	Northbound	•			Southbou	und	
Novement	7	8	9		10	11		12
	L	Т	R		L	Т		R
/olume (veh/h)	9	1	24		11	8		55
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95
Hourly Flow Rate, HFR veh/h)	9	1	25		11	8		57
Percent Heavy Vehicles	0	0	0		0	0		0
Percent Grade (%)		0	•			0		
-lared Approach		N				N		
Storage		0				0		
RT Channelized	1		0			+ <u> </u>		0
Lanes	0	1	0		0	1		0
Configuration		LTR	+ <u> </u>		~	LTR	<u> </u>	<u> </u>
Delay, Queue Length, a				I			1	
Approach	Eastbound	Westbound	N	Northboun	d		outhbound	4
Novement		4	7	8	9	10	11	12
ane Configuration		4 L	- '	0 LTR	3	10	LTR	12
/ (veh/h)	46	29		35			76	
C (m) (veh/h)	994	831		183			243	
//c	0.05	0.03		0.19			0.31	<u> </u>
95% queue length	0.15	0.11		0.68			1.29	
	8.8	9.5		29.3			26.4	
Control Delay (s/veh)	0.0							
Ţ, ,	A	A		D			D	
Control Delay (s/veh) LOS Approach Delay (s/veh)		A 		D 29.3			D 26.4	

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	1 VV	O-WAY STOP	CONTR		MARY			
General Information	n		Site II	nformati	ion			
Analyst	R Garlan	d	Interse	ection		Mentone	Blvd/Opal	Ave
Agency/Co.	Redlands	USD	Jurisdi	ction		Caltrans		
Date Performed	12/14/202	21	Analys	is Year		Existing 2	2021	
Analysis Time Period	Friday Ev	rening Peak Hour						
Project Description Re	edlands East Va	alley HS Stadium	•					
East/West Street: Ment	one Blvd		North/S	South Stre	et: Opal A	lvenue		
ntersection Orientation:	East-West		Study F	Period (hrs	s): 0.25			
Vehicle Volumes ar	nd Adiustme	ents						
Major Street		Eastbound				Westbou	nd	
Novement	1	2	3		4	5		6
	L	Т	R		L	Т		R
/olume (veh/h)	50	650	10		10	530		10
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95
Hourly Flow Rate, HFR veh/h)	52	684	10		10	557		10
Percent Heavy Vehicles	0				0			
Vedian Type				Undivide	d			
RT Channelized			0					0
_anes	1	1	0		1	1		0
Configuration	L		TR		L			TR
Jpstream Signal		0				0		
Minor Street		Northbound				Southbou	und	
Novement	7	8	9		10	11		12
	L	Т	R		L	Т		R
Volume (veh/h)	0	0	20		10	0		70
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95
Hourly Flow Rate, HFR veh/h)	0	0	21		10	0		73
Percent Heavy Vehicles	0	0	0		0	0		0
Percent Grade (%)		0				0		
-lared Approach		N				N		
Storage		0				0		
RT Channelized			0	<u> </u>				0
Lanes	0	1	0		0	1		0
Configuration	1 <u> </u>	LTR	Ť		-	LTR		-
Delay, Queue Length, a			1	I			1	
Approach	Eastbound	Westbound	1	Northboun	d		outhbound	1
Vovement	1	4	7	8	9	10	11	. 12
ane Configuration	 	L	· · · · ·	LTR	Ť		LTR	<u> ''</u>
/ (veh/h)	52	10		21			83	
· /		911				+		
C (m) (veh/h)	1015			449			364	
//c	0.05	0.01		0.05			0.23	
95% queue length	0.16	0.03	L	0.15			0.86	
Control Delay (s/veh)	8.7	9.0		13.4			17.8	
						1	С	
_OS	A	A		В		_		
_OS Approach Delay (s/veh)	A 	A 		<u>В</u> 13.4			17.8	

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	TW	O-WAY STOP	CONTR	OL SUI	MMARY				
General Informatio	n		Site I	nforma	tion				
Analyst	R Garlan	d	Interse	ection		Mentone	Blvd/Opal	Ave	
Agency/Co.	Redlands	; USD	Jurisdi	ction		Caltrans			
Date Performed	12/14/202	21	Analys	sis Year		Existing µ	olus Projec	t	
Analysis Time Period	Friday Ev	rening Peak Hour							
Project Description Re	edlands East Va	alley HS Stadium	•						
East/West Street: Ment	one Blvd		North/S	South Str	eet: Opal /	Avenue			
ntersection Orientation:	East-West		Study I	Period (h	rs): 0.25				
Vehicle Volumes a	nd Adiustme	ents							
Major Street	_	Eastbound				Westbou	nd		
Novement	1	2	3		4	5		6	
	L	Т	R		L	Т		R	
/olume (veh/h)	50	683	101		10	530		10	
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95	
Hourly Flow Rate, HFR veh/h)	52	718	106		10	557		10	
Percent Heavy Vehicles	0				0				
Vedian Type		<u>.</u>	-	Undivid	led				
RT Channelized			0					0	
anes	1	1	0		1	1		0	
Configuration	L		TR		L			TR	
Jpstream Signal		0				0			
Minor Street		Northbound				Southbou	Ind		
Movement	7	8	9		10	11		12	
	L	Т	R		L	Т		R	
/olume (veh/h)	8	1	20		10	8		70	
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95	
Hourly Flow Rate, HFR veh/h)	8	1	21		10	8		73	
Percent Heavy Vehicles	0	0	0		0	0		0	
Percent Grade (%)		0			-	0	•		
Flared Approach		N				N			
Storage	1	0				0			
RT Channelized	+		0					0	
			_		0	1			
_anes Configuration	0	1 LTR	0		0	1 LTR		0	
<u> </u>			I						
Delay, Queue Length, a		i		المسلكات					
Approach	Eastbound	Westbound		Northbou			outhbound	ii .	
Novement	1	4	7	8	9	10	11	12	
ane Configuration	L	L		LTR			LTR		
ν (veh/h)	52	10		30			91		
C (m) (veh/h)	1015	815		186			292		
//c	0.05	0.01		0.16			0.31		
95% queue length	0.16	0.04		0.56			1.29		
Control Delay (s/veh)	8.7	9.5		28.0			22.8		
	A.	A.		 		+	C		
						+		I	
Approach Delay (s/veh)				28.0			22.8		
Approach LOS				D			С		

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	I VV	O-WAY STOP							
General Information	n		Site I	nformat	ion				
Analyst	d	Intersection			Mentone Blvd/Opal Ave				
Agency/Co.	Redlands USD		Jurisdiction			Caltrans			
Date Performed	12/14/20	21	Analysis Ye			2026 Without Projec		ct	
Analysis Time Period	Friday Ev	ening Peak Hour							
Project Description Re	edlands East Va	alley HS Stadium	•						
East/West Street: Ment	one Blvd		North/S	South Stre	et: Opal A	Avenue			
Intersection Orientation:	East-West		Study F	Period (hr	s): 0.25				
Vehicle Volumes ar	nd Adjustme	ents							
Major Street		Eastbound				Westbound			
Movement	1	2	3		4	5		6	
	L	Т	R		L	Т		R	
/olume (veh/h)	55	718	11		11	585		11	
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95	
lourly Flow Rate, HFR veh/h)	57	755	11		11	615		11	
Percent Heavy Vehicles	0				0				
Vedian Type				Undivided					
RT Channelized			0					0	
anes	1	1	0		1	1		0	
Configuration	L		TR		L	7		TR	
Jpstream Signal		0				0			
Minor Street		Northbound				Southbound			
Novement	7	8	9		10	11		12	
	L	Т	R		L	Т		R	
/olume (veh/h)	0	0	22		11	0		77	
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95	
Hourly Flow Rate, HFR veh/h)	0	0	23		11	0		81	
Percent Heavy Vehicles	0	0	0		0	0		0	
ercent Grade (%)		0				0			
-lared Approach		N				N	1		
Storage		0	1			0			
RT Channelized	1		0					0	
_anes	0		0		0	1		0	
Configuration	Ť	1 LTR	† – – – – – – – – – – – – – – – – – – –		~	LTR		~	
Delay, Queue Length, a	and Level of Se		1	I			I I		
Approach	Eastbound	Westbound	Northbound		s	outhbound			
Vovement	1	4	7	8	9	10	11	12	
ane Configuration	L	L		LTR			LTR		
/ (veh/h)	57	11		23			92		
C (m) (veh/h)	965	856		409			316	1	
//c	0.06	0.01		0.06		1	0.29		
95% queue length	0.19	0.04		0.18			1.18		
Control Delay (s/veh)	9.0	9.3		14.3		+	21.0		
· · · · ·						+	21.0 C		
LOS	A	A		B					
Approach Delay (s/veh)			14.3			+	21.0		
Approach LOS			В			С			

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	TW	O-WAY STOP	CONTR		IMARY				
General Information	n		Site I	nformat	ion				
Analyst	d	Intersection			Mentone Blvd/Opal Ave				
Agency/Co.	Redlands	; USD	Jurisdiction			Caltrans			
Date Performed	12/14/202			is Year		2026 With Project			
Analysis Time Period	Friday Ev	rening Peak Hour							
Project Description Re	edlands East Va	alley HS Stadium	•						
East/West Street: Ment	one Blvd				eet: Opal A	Avenue			
ntersection Orientation:	East-West		Study F	Period (hr	s): 0.25				
Vehicle Volumes ar	nd Adiustme	ents							
Major Street	<u>/</u>					Westbound			
Movement	1	Eastbound 2	3		4	5		6	
	L	Т	R		L	Т		R	
/olume (veh/h)	55	751	102		11	585		11	
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95	
Hourly Flow Rate, HFR (veh/h)	57	790	107		11	615		11	
Percent Heavy Vehicles	0				0				
Vedian Type			Undivided						
RT Channelized			0					0	
anes	1	1	0		1	1		0	
Configuration	L		TR		L		Т		
Jpstream Signal		0				0			
Minor Street		Northbound				Southbound			
Novement	7	8	9		10	11		12	
	L	Т	R		L	Т		R	
Volume (veh/h)	8	1	22		11	8		77	
Peak-Hour Factor, PHF	0.95	0.95	0.95		0.95	0.95		0.95	
Hourly Flow Rate, HFR veh/h)	8	1	23		11	8		81	
Percent Heavy Vehicles	0	0	0		0	0		0	
Percent Grade (%)		0				0			
Flared Approach		N				N			
Storage		0	1			0	1		
RT Channelized		-	0			-		0	
Lanes	0	1	0		0	1		0	
Configuration	Ť	LTR	† – – – – – – – – – – – – – – – – – – –		~	LTR		~	
Delay, Queue Length, a	and Lovel of S			I			I		
Approach	Eastbound	Westbound	Northbound		Southbou		4		
Novement	1	4	7	8	9	10	11	12	
ane Configuration	 	L L	· ·	LTR			LTR	<u> '</u>	
/ (veh/h)	57	11		32		+	100	<u> </u>	
C (m) (veh/h)	965	765		153	-		251		
//c	0.06	0.01		0.21		_	0.40		
95% queue length	0.19	0.04		0.76		_	1.81		
Control Delay (s/veh)	9.0	9.8		34.6			28.5	—	
LOS	A	A		D			D		
Approach Delay (s/veh)			34.6			28.5			
Approach LOS				D			D		

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